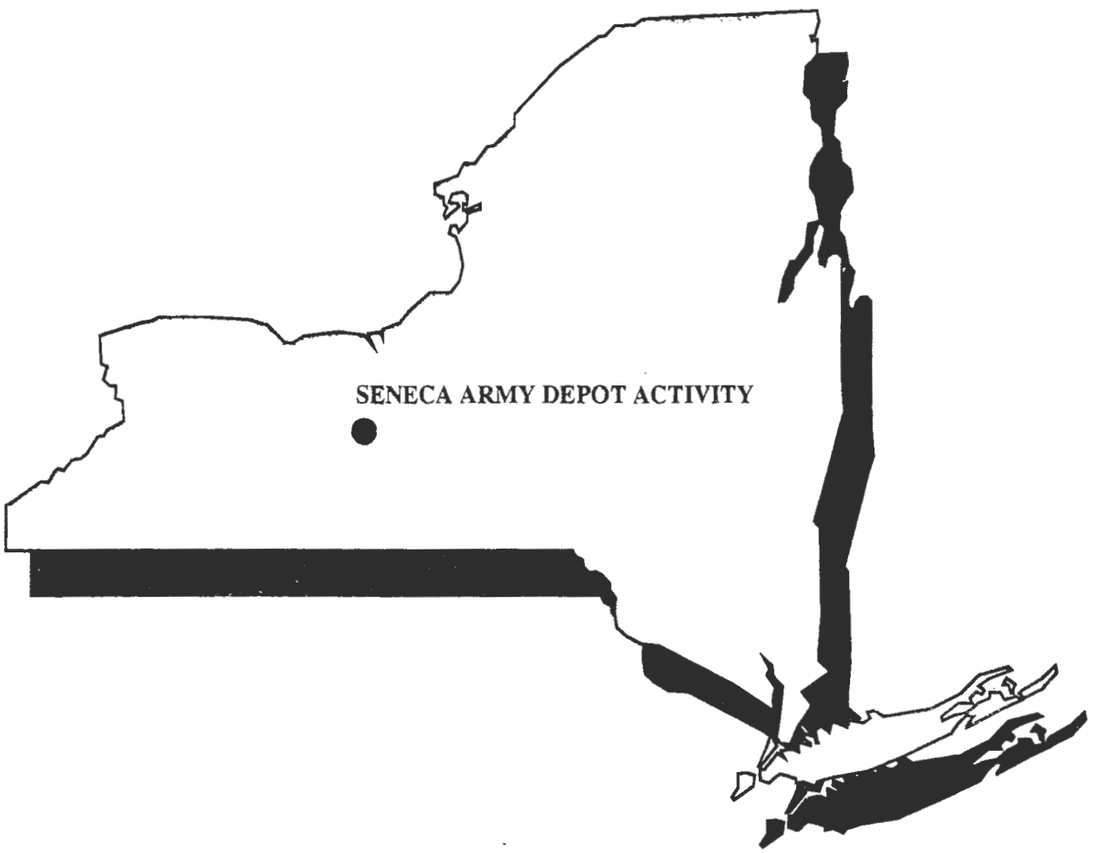
U.S. ARMY ENGINEER DIVISION
HUNTSVILLE, ALABAMA

00707



DRAFT FINAL

REMEDIAL INVESTIGATION REPORT
AT THE ABANDONED DEACTIVATION FURNACE (SEAD -16)
AND THE ACTIVE DEACTIVATION FURNACE (SEAD-17)
APPENDICES

APRIL 1998

APPENDIX A

Underground Storage Tank Report

SENECA ARMY DEPOT
ROMULUS, NEW YORK

CLOSURE REPORT

UNDERGROUND STORAGE TANK REMOVAL

FINAL

Submitted to:

U.S. Army Corps of Engineers
Baltimore District
10 South Howard Street
Baltimore, Maryland 21202

Submitted by:

Science Applications International Corporation
1710 Goodridge Drive
McLean, Virginia 22102

Project Number: 01-0827-04-0506

May 1994

4. CLOSURE ACTIVITIES AT BUILDING 311 - TANK A

4.1 SITE DESCRIPTION AND BACKGROUND INFORMATION

Building 311 is located near the administration area at Seneca Army Depot (SEAD). Building 311 housed a small-arms-ammunition demilitarization furnace and has been closed for an unknown period of time. The underground storage tank (UST) undergoing closure, identified as Tank 311-A, was located at the northwest corner of Building 311, as depicted in Figure 4-1. Tank 311-A, a 1,000-gallon tank installed in 1953, provided No. 2 fuel oil to the boiler used to heat the building. Tank 311-B, also located at Building 311, is discussed in Section 5 of this closure report.

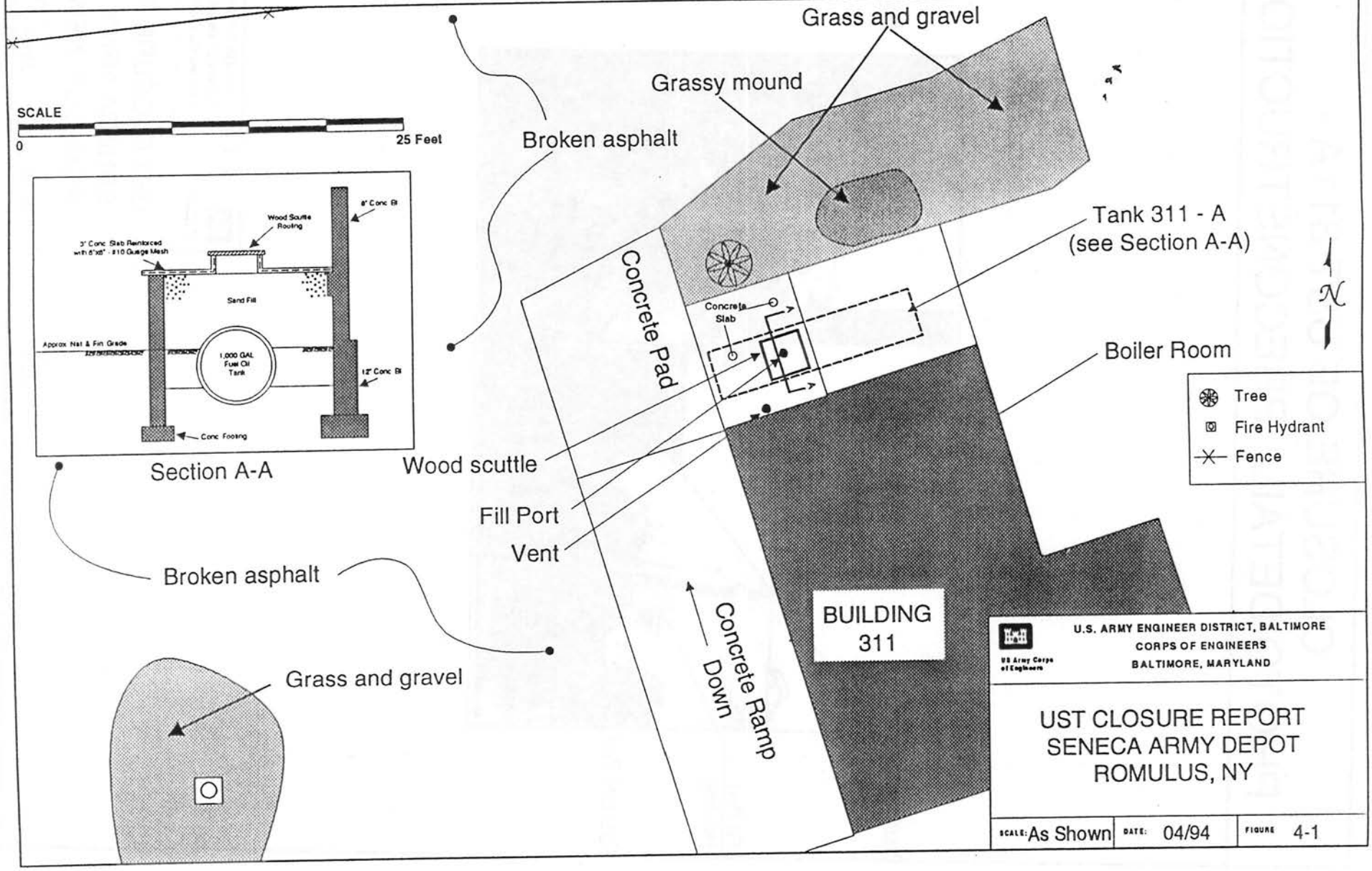
4.2 TANK CONTENTS CHARACTERIZATION

The cross-section in Figure 4-1 depicts the location of the tank in relation to Building 311. During the Tank Contents Characterization phase of the investigation, the tank contained approximately 8 inches of residual material including 7.5 inches of No. 2 fuel oil, with the remainder consisting of water. A sample of the material (SAD-TS4-0001) was collected and forwarded to the laboratory for analyses of total organic halogens (TOX), total recoverable petroleum hydrocarbons (TRPHs), flash point, and total metals. The results of the laboratory analyses confirmed the contents as fuel oil and showed that the material within the tanks did not meet the definition of hazardous waste. Copies of the analytical results are included in Appendix A of this closure report.

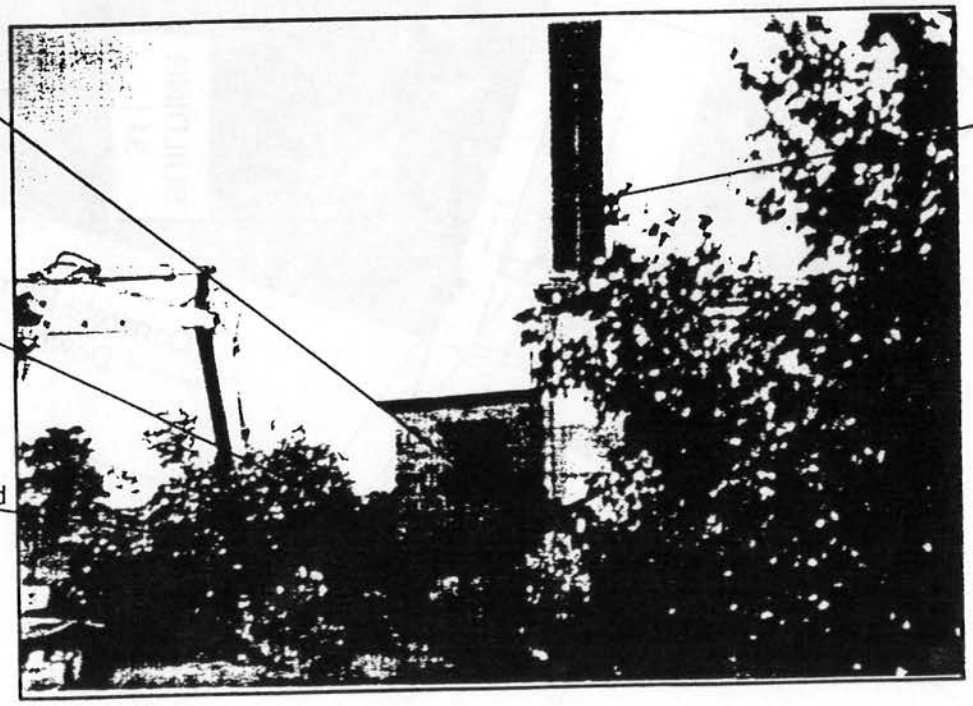
4.3 TANK REMOVAL ACTIVITIES

The tank contents were removed by a vacuum truck prior to pulling the tank. Trees in the excavation area were cleared and the concrete slab above the tank was demolished in order to access the tank. The photograph provided in Figure 4-2 was taken during this stage of removal. Once the concrete pad was demolished and the debris and cover soil removed, the tank and piping up to the building were pulled from the excavation and placed aside for cleaning and disposal. The tank was made of thick (approximately ¼-inch) steel and observed to be in good structural condition (i.e., no holes, cracks, or corrosion). The tank cleaning crew cut a

CLOSURE OF UST 311A - SITE PLAN



CLOSURE OF UST 311A - PHOTO DETAIL: PRECONSTRUCTION



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SCALE As Shown DATE 04/94 FIGURE 4-2

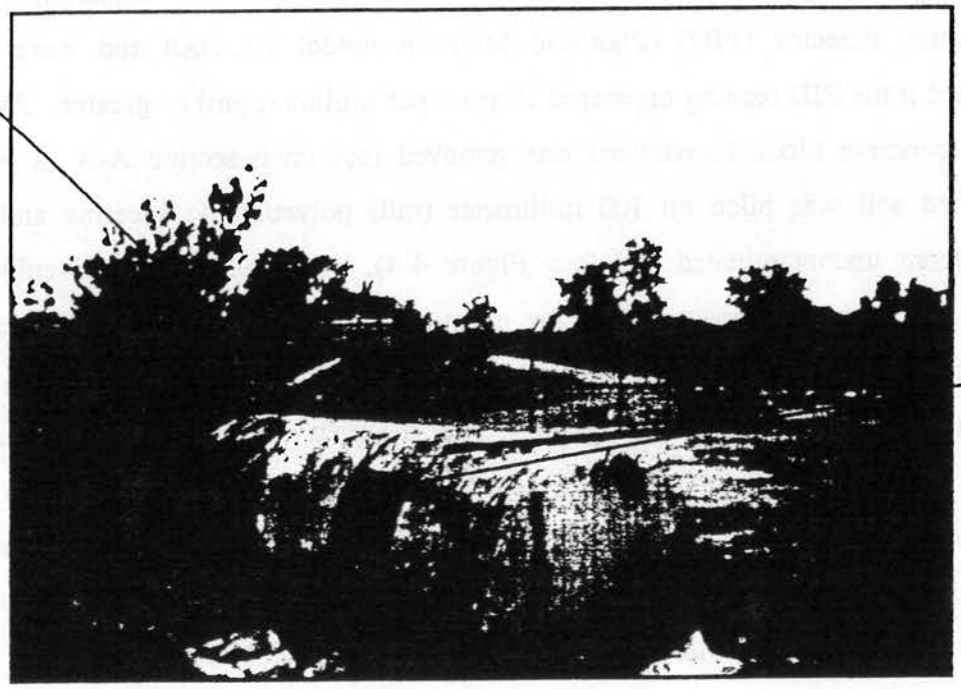
hole in the tank wall to enable thorough cleaning of the tank; a photograph of the tank during cleaning is provided in Figure 4-3. A high-pressure steam was used to clean the inside of the tank. Water from the steam wash was pumped out by the vacuum truck. The tank contents and the steam wash residue were disposed of offsite at Seneca Meadows Landfill, Waterloo, New York. Tank remnants, including the piping, were loaded onto a truck and transported for offsite disposal at Klionsky Scrap Iron and Metal Company Inc., Seneca Falls, New York. The Waste Transporter Permits are included in Appendix C.

During excavation of the tank, soils were screened for contamination with a photoionization detector (PID) (Photovac Microtip model HL-200) and were considered contaminated if the PID reading registered 10 parts per million (ppm) or greater. All of the soil within the concrete block foundations was removed (see cross-section A-A in Figure 4-1). Contaminated soil was piled on 100 millimeter (mil) polyethylene sheeting and physically separated from uncontaminated soil (see Figure 4-4). Approximately 4.5 cubic yards of contaminated soil were removed from the excavation and disposed of at Seneca Meadows Landfill (see Appendix C for Documentation of Disposal). After using the PID to verify that all the contaminated soil had been removed from the excavation, the pit was backfilled, as authorized under *Spill Technology and Remediation Series (STARs)* guidance. Debris from the building on the east side of the tank (including bricks and cinder blocks), the concrete pad, and cinder blocks around the tank were crushed and used, along with the uncontaminated soil from the excavation, as backfill material. Groundwater was not encountered during the removal of this tank.

4.4 RESULTS OF SAMPLING ACTIVITIES DURING CLOSURE

Confirmatory samples were collected from the excavation. Because the excavation was shallow, soil samples from the wall were taken very close to the floor. One floor sample also was collected and submitted for analysis. The photograph provided in Figure 4-5 was taken prior to sample collection (although some soils and the building foundation appear slightly stained in the photograph, the PID readings indicated levels below 10 ppm).

CLOSURE OF UST 311A - PHOTO DETAIL: REMOVED TANK



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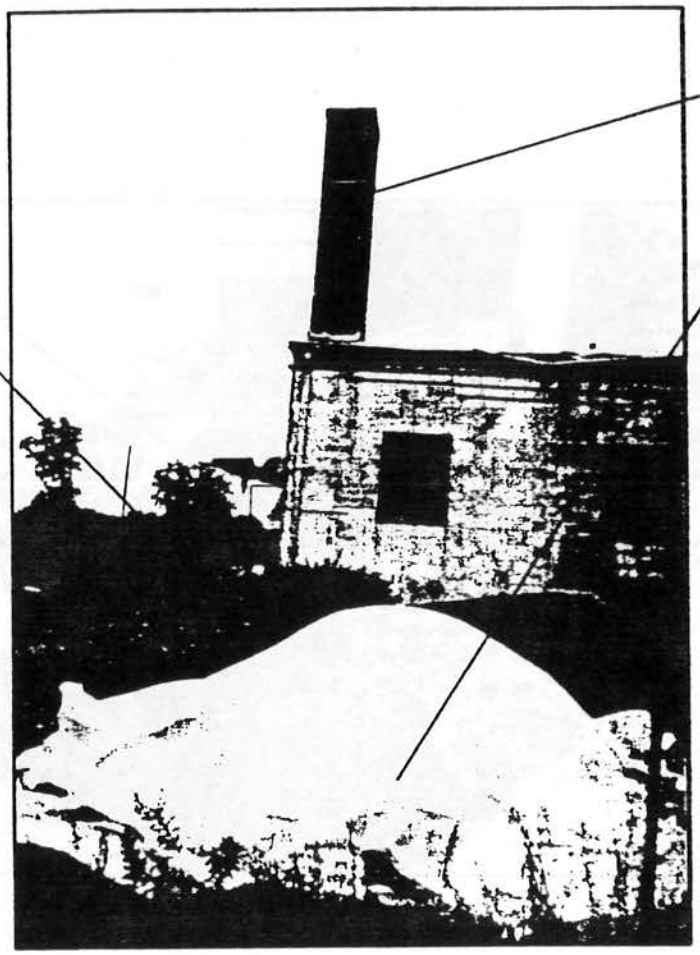
SCALE As Shown | DATE 04/94 | FIGURE 4-3

CLOSURE OF UST 311A - PHOTO DETAIL: CONSTRUCTION COMPLETION ACTIVITY



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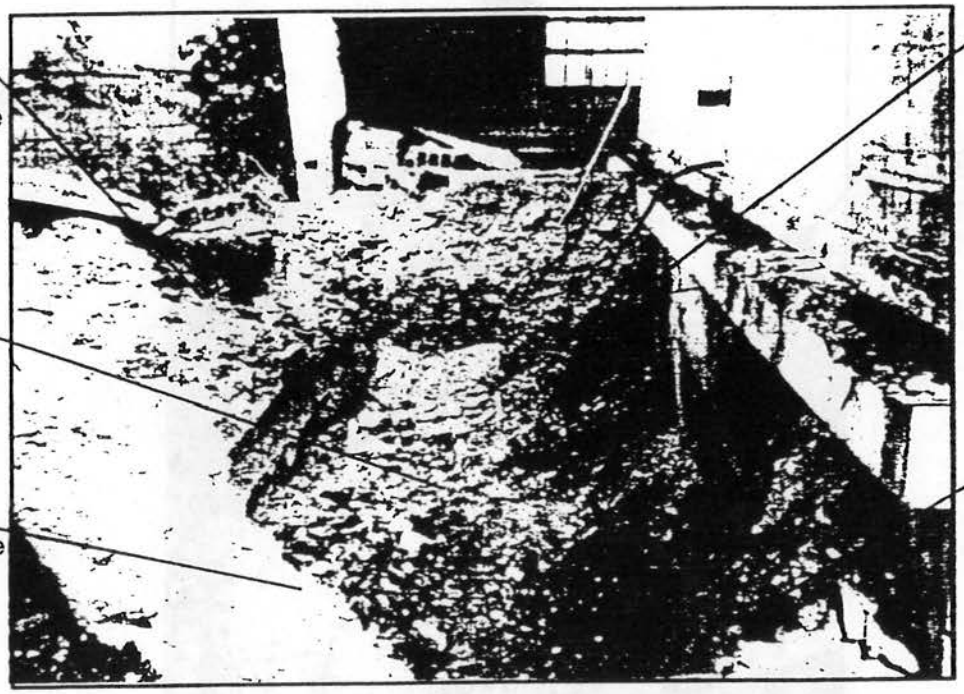
SCALE	DATE	FIGURE
As Shown	04/94	4-4

CLOSURE OF UST 311A - PHOTO DETAIL: EXCAVATION PIT



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SCALE As Shown DATE 04/94 FIGURE 4-5

In total, five soil samples were collected from the excavation and submitted to Upstate Laboratories, Inc. for analyses of volatile aromatic hydrocarbons using U.S. Environmental Protection Agency (EPA) Method 8021 and for base/neutral extractable compounds using EPA Method 8270. Results are summarized and compared with human health and groundwater protection guidance values in Table 4-1. Copies of the analytical data, including detection limits, are provided in Appendix B.

No compounds were detected in samples collected from the southwest corner or the east side of the excavation. Benzo(b)fluoranthene and benzo(a)pyrene were detected in a sample collected from the north wall of the excavation. Concentrations detected in these samples exceed the values for protection of human health, and the toxicity characteristic leaching procedure (TCLP) Alternative Guidance Values for protection of groundwater, as listed in Table 4-1. Several contaminants were detected in samples collected from the northwest corner of the excavation and from the floor. Naphthalene, pyrene, and fluoranthene were not detected at levels exceeding guidance values for protection of human health, but do exceed guidance values for protection of groundwater. The remaining compounds listed in Table 4-1 exceed guidance values for protection of human health and groundwater.

4.5 CONCLUSIONS

The removal of Tank 311-A at the northwest corner of Building 311 was conducted in accordance with New York State Department of Environmental Conservation (NYSDEC) protocols for UST removal and disposal. The tank was removed, cleaned, dismantled, and disposed of following guidance presented in the *STARS* Memo. Soils that were removed from the excavation were screened using a PID. Those soils regarded as contaminated were disposed offsite at Seneca Meadows Landfill.

As specified in *STARS*, soil samples were collected, analyzed, and compared with NYSDEC guidance values for protection of groundwater and human health. Evaluation of the data indicates that the contamination exceeds the state guidance values.

Table 4–1. Analytical Results of Soil Samples Collected from 2,000 Gallon UST Site at North End of Building 311 (Tank 311A), Seneca Army Depot, Romulus, New York

SAIC ID Number ID Number Collection Date Sample Location	Units	SAD–SS311A–01 25793191 9–14–93 Tank A/SW Corner	SAD–SS311A–02 25793192 9–14–93 Tank A/N Wall	SAD–SS311A–03 25793193 9–14–93 Tank A/E Wall	SAD–SS311A–04 25793194 9–14–93 Tank A/NW Corner	SAD–SS311A–05 25793195 9–14–93 Tank A/Floor	Human Health Guidance Value (ppb) [a]	Groundwater Protection Guidance Value (ppb) [a]
VOLATILE AROMATIC COMPOUNDS (SW 8021)								
Naphthalene	µg/kg	<3	<2	<3	4200	5600	3.0×10^5	200
SEMIVOLATILE ORGANIC COMPOUNDS (SW 8270)								
Phenanthrene	µg/kg	<2,000	<2,000	<2,000	2,000	9,000	***	1,000
Pyrene	µg/kg	<2,000	<2,000	<2,000	3,000	2,000	2.0×10^6	1,000
Benzo(a)anthracene	µg/kg	<2,000	<2,000	<2,000	3,000	<2,000	220	0.04
Fluoranthene	µg/kg	<2,000	<2,000	<2,000	3,000	3,000	3.0×10^6	1,000
Benzo(b)fluoranthene	µg/kg	<2,000	3,000	<2,000	3,000	<2,000	220	0.04
Benzo(k)fluoranthene	µg/kg	<2,000	<2,000	<2,000	3,000	<2,000	220	0.04
Chrysene	µg/kg	<2,000	<2,000	<2,000	3,000	<2,000	***	0.04
Benzo(a)pyrene	µg/kg	<2,000	2,000	<2,000	4,000	<2,000	61	0.04

*** – No toxicity measure identified in EPA HEAST Report to derive guidance value.

[a] – Human health and groundwater protection guidance values are defined in *Spill Technology and Remediation Series (STARS) Memo #1: Petroleum–Contaminated Soil Guidance Policy*, Prepared by New York State Department of Environmental Conservation, Division of Spills Management, July 1993

At the time the tank was excavated, it appeared to be in good structural condition (i.e., no holes or corrosion in the tank walls). Prior to excavating the tank, several inches of product remained inside the tank. Although the tank had not been used in several years, there was no visible evidence of contamination, and no contamination detected through the PID screening, indicating that the tank did not leak. Although the detected contaminants may be components of fuel oil, they are usually present in trace concentrations, if at all. The detected components are more characteristic of combustion sources. There are two combustion sources: an industrial boiler and a small arms deactivation furnace at Building 311, which may be the source of the contaminants detected in the shallow soils around Tank 311-A.

Because the tank appeared to be in good structural condition, did not leak, and because of other activities (combustion sources) at the area, and the types of contaminants detected (mostly polycyclic aromatic hydrocarbons), the source of the contamination detected in the confirmatory samples may not be from activities associated with the No. 2 fuel oil UST (Tank 311-A). The contaminants detected in the soil samples may have been introduced by emissions from the nearby boiler stack or the small-arms deactivation furnace stack located on the southern edge of Building 311. The close proximity of the boiler stack to the tank (Figures 4-2 and 4-4) and the types of contaminants detected (i.e., mostly polycyclic aromatic hydrocarbons, which are commonly found around combustion sources such as an industrial boiler). are strong indications that emissions from these stacks may be the likely sources of contamination detected. The types of contaminants that were detected (polycyclic aromatic hydrocarbons) are very immobile in soil due to their low solubilities and hydrophobicity (tendency to bind to organic material).

Although soil contamination was detected in the vicinity of the UST at concentrations exceeding the state guidance levels, it is recommended that Tank 311A be considered closed because the UST source has now been removed. In addition, the tank was in good structural condition, and contained free product at the time of removal; however, the soil below the tank appeared to be dry and was found to be free of volatile compounds as indicated by HNu screening, indicating that the tank had not leaked. Additionally, the detected contaminants are immobile in soils and, thus, are not likely to migrate from the site. For these reasons and

because the tank and most of the contaminated soil has been removed, the tank site at the northwest corner of Building 311 should be considered closed.

5. CLOSURE ACTIVITIES AT BUILDING 311 - TANK B

5.1 SITE DESCRIPTION AND BACKGROUND INFORMATION

Building 311 housed a small-arms-ammunition demilitarization furnace and has been closed for an unknown amount of time. Tank 311-B was located at the southeast corner of Building 311, as depicted in Figure 5-1. This 2,000-gallon tank was installed in 1953 and provided No. 2 fuel oil for the demilitarization furnace. Closure activities associated with this underground storage tank (UST) will be discussed in this section.

5.2 TANK CONTENTS CHARACTERIZATION

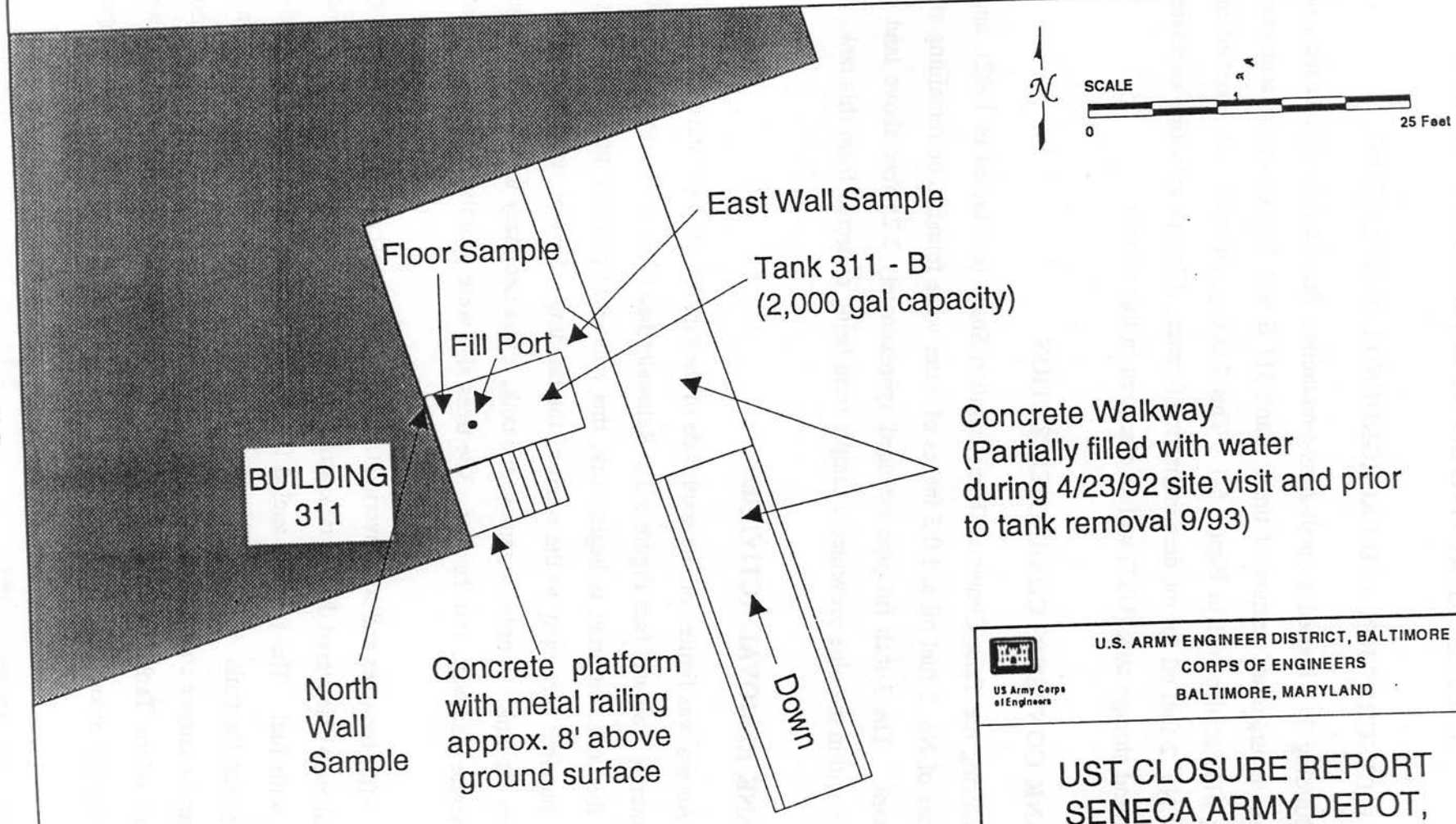
During the Tank Contents Characterization Study (conducted in 1992), approximately 2.5 inches of No. 2 fuel oil and 0.5 inches of water were found to be remaining at the bottom of the tank. The 3-inch fill pipe extended approximately 2.25 feet above land surface. A structure within the pipe prevented a sample from being collected from this tank.

5.3 TANK REMOVAL ACTIVITIES

Access was limited on the south side of the tank by concrete stairs and on the east side by a concrete walkway (see Figure 5-2). Rainwater had filled a concrete walkway on the east side of the tank. In order to begin work, this water was pumped into a ditch outside a fence several hundred feet away to the south of the building. Several small trees also blocked the access to the tank. In order to remove the tank, it was necessary to demolish the stairs, part of the concrete walkway, and the roof. The trees also were demolished and removed.

After the trees and soil covering the tank were removed to access the fill pipes, the tank removal team discovered that the tank was completely full with approximately 22 inches of water mixed with fuel. The fill port angled 90° before feeding into a second fill pipe, which led directly into the tank. This angled fillport explains why an accurate measurement could not be made and a sample could not be collected during the Tank Contents Characterization Study. At the time of the Tank Contents Characterization Study, only 3 inches of liquid was measured. After the fill pipes and feed pipes were removed, the tank contents were pumped out by the

CLOSURE OF UST 311B - SITE PLAN



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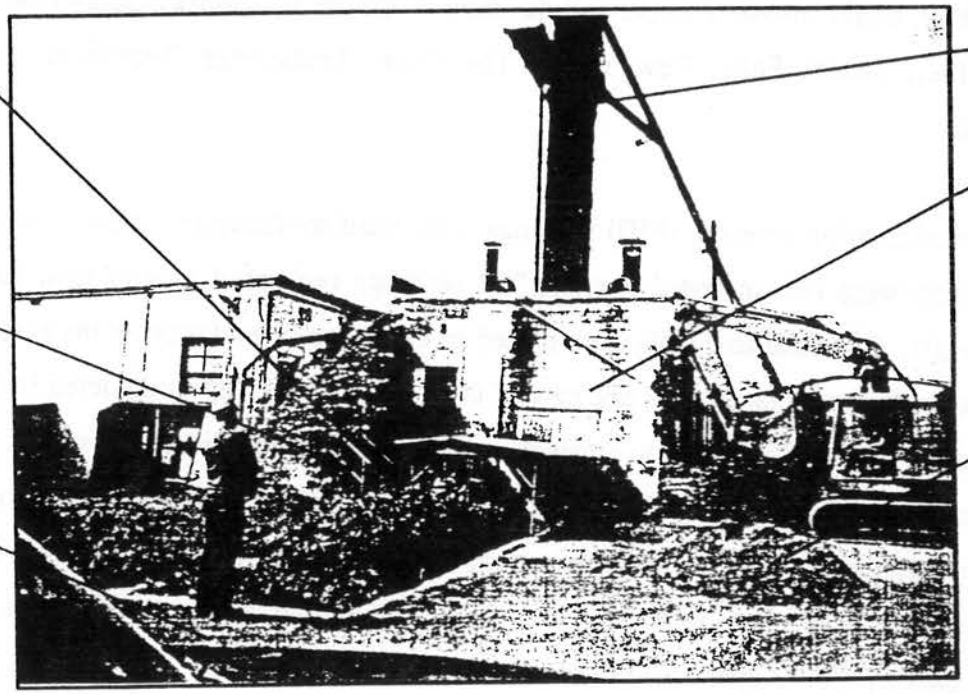
SCALE: As Shown	DATE: 04/94	FIGURE 5-1

CLOSURE OF UST 311B - PHOTO DETAIL: PRECONSTRUCTION



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SCALE: As Shown	DATE: 04/94	FIGURE 5-2

vacuum truck. The anchoring straps and the tank were then removed from the excavation area and placed on the east side of Building 311 for cleaning. A photograph of the excavation is provided in Figure 5-3.

A picture of the tank on the east side of the building is provided in Figure 5-4. An entrance was cut into the tank wall for high-pressure steam cleaning. No sludge had accumulated in the tank. The rinse water was disposed of offsite at Seneca Meadows Landfill, Waterloo, New York. Finally, the tank was cut into several pieces with a cutting torch, loaded onto a lowboy, eighteen-wheel truck, and disposed of offsite at Klionsky Scrap Iron and Metal Company Inc., Seneca Falls, New York. The Waste Transporter Permits are included in Appendix C.

Photoionization detector (PID) readings were used to determine if soils removed from the excavation were contaminated (i.e., if PID readings registered greater than 10 parts per million [ppm]). Contaminated soils were placed in the concrete walkway on the east side of the tank. Clean soils were placed on a pile east of the concrete walkway as depicted in Figure 5-2. Approximately 2 feet of soil used to cover the tank was not contaminated, however, all the soil within 1 to 2 feet of the tank sides was removed and considered contaminated. Bedrock was present approximately 1 foot beneath the bottom of the excavation. A total of 12.3 cubic yards of contaminated soils were removed from Tank 311-B and disposed of offsite at Seneca Meadows Landfill (see Appendix C for Documentation of Disposal).

Groundwater seeped into the excavation pit and partially filled the pit during the tank removal. An oily sheen was clearly evident in the ponded water. Sheets of oil adsorbent material were used to skim the sheen off of the top of the water and to remove some of the more dense fuel that was not floating on the surface. This method proved to be fairly successful in removing visible oil contamination from the ponded groundwater. After skimming the water with the oil adsorbent, the vacuum truck pumped approximately 800 gallons of liquid from the excavation. This water/fuel mixture was disposed of with the tank contents and rinse water from cleaning offsite at Seneca Meadows Landfill, Waterloo, New York. The sheets of oil adsorbent material were disposed of offsite with the 12.3 cubic yards of contaminated soil. The excavation

CLOSURE OF UST 311B - PHOTO DETAIL: EXCAVATION PIT

Note: Square shapes shown in excavation are sheets of oil absorbant material.

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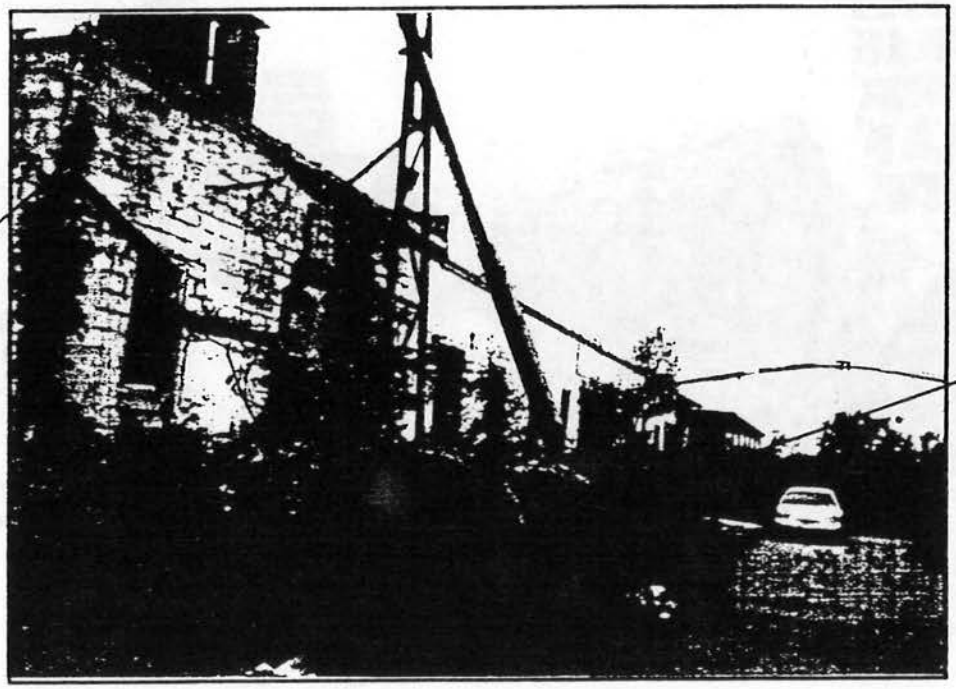
SCALE As Shown | DATE: 04/94 | FIGURE 5-3

CLOSURE OF UST 311B - PHOTO DETAIL: REMOVED TANK PRIOR TO CLEANING



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ROMULUS, NEW YORK

SCALE	DATE	FIGURE
As Shown	04/94	5-4

pit was not backfilled while awaiting a response from the state on further actions at the UST site.

5.4 RESULTS OF SAMPLING ACTIVITIES DURING CLOSURE

Three soil samples and one groundwater sample were collected from the excavation and submitted to Upstate Laboratories, Inc. for chemical analyses. Samples were analyzed for volatile aromatic hydrocarbons using U.S. Environmental Protection Agency (EPA) Method 8021 and base/neutral extractable hydrocarbons using EPA Method 8270. A summary of these results are provided in Tables 5-1 and 5-2. A complete set of results, including detection limits, is included in Appendix B of this closure report.

No contaminants were detected in a sample collected from a layer of soil between the concrete walkway and bedrock on the east side of the tank (see the bottom of Figure 5-3). A cradle had been cut into the bedrock to install this UST, and the bottom and west sides of the excavation were bedrock, not soil. The groundwater had washed in and deposited a sufficient quantity of particulate matter on the bottom of the excavation to collect a sample. Toluene was detected in this sample at 5 μg/kg, which is approximately 6 orders of magnitude below the human health guidance value and a factor of 20 less than the guidance limit for groundwater protection.

One soil sample was collected from a layer of soil atop the bedrock on the north wall of the excavation (i.e., the soil on the right side of Figure 5-3). Toluene and 13 base/neutral extractable compounds were detected in this sample. Guidance limits for protection of human health are not available for 4 of these contaminants, and 6 of these contaminants were detected at levels below the human health guidance limits. All of the levels exceed the toxicity characteristic leaching procedure (TCLP) Alternative Guidance Values for protection of groundwater. Except for naphthalene, all of these contaminants are characteristic byproducts of incomplete petroleum combustion, although they are sometimes found in trace quantities in fuel oil. The stains on the wall to the north of the tank and the position of the demilitarization furnace stack may indicate that these contaminants were deposited onto the roof of Building 311 during small-arms ammunition deactivation and washed into soils near the tank.

Table 5-1. Analytical Results of Soil Samples Collected from 2,000 Gallon UST Site at South End of Building 311 (Tank 311B), Seneca Army Depot, Romulus, New York

SAIC ID Number		311B	311B	311B		Groundwater
ID Number		31293045	31293046	31293045	Human Health	Protection
Collection Date		11-5-93	11-5-93	11-5-93	Guidance Value	Guidance Value
Sample Location	Units	Bottom	North Wall	East Wall	(ppb) [a]	(ppb) [a]
VOLATILE AROMATIC COMPOUNDS (SW 8021)						
Toluene	µg/kg	5	4	<1	2.0×10^7	100
SEMIVOLATILE ORGANIC COMPOUNDS (SW 8270)						
Anthracene	µg/kg	<3800	8100	<4000	2.0×10^7	1,000
Fluorene	µg/kg	<3800	4800	<4000	2.0×10^7	1,000
Phenanthrene	µg/kg	<3800	30000	<4000	***	1,000
Pyrene	µg/kg	<3800	32000	<4000	2.0×10^6	1,000
Acenaphthene	µg/kg	<3800	6800	<4000	5.0×10^6	400
Benzo(a)anthracene	µg/kg	<3800	19000	<4000	220	0.04
Fluoranthene	µg/kg	<3800	3900	<4000	3.0×10^6	1,000
Benzo(b)fluoranthene	µg/kg	<3800	16000	<4000	220	0.04
Benzo(k)fluoranthene	µg/kg	<3800	16000	<4000	220	0.04
Chrysene	µg/kg	<3800	19000	<4000	***	0.04
Benzo(a)pyrene	µg/kg	<3800	14000	<4000	61	0.04
Benzo(g,h,i)perylene	µg/kg	<3800	8900	<4000	***	0.04
Indeno(1,2,3-cd)pyrene	µg/kg	<3800	8700	<4000	***	0.04

*** – No toxicity measure identified in EPA HEAST Report to derive guidance value.

[a] – Human health and groundwater protection guidance values are defined in *Spill Technology and Remediation Series (STARS) Memo #1: Petroleum-Contaminated Soil Guidance Policy*, Prepared by New York State Department of Environmental Conservation, Division of Spills Management, July 1993

Table 5–2. Analytical Results of Water Sample Collected from 2,000 Gallon UST Site at South End of Building 311 (Tank 311B) Seneca Army Depot, Romulus, New York

SAIC ID Number		SAD–GW311B–01	
ID Number		26093118	
Collection Date		9–17–93	Human Health
Sample Location	Units	Groundwater Sample	guidance Value (μg/L) [a]
VOLATILE AROMATIC COMPOUNDS (SW 8021)			
1,2,4–Trimethylbenzene	μg/L	5	***
SEMIVOLATILE ORGANIC COMPOUNDS (SW 8270)			
Anthracene	μg/L	110	***
Fluorene	μg/L	11	***
Pyrene	μg/L	11	***

*** – No federal maximum contaminant level is available for this compound.

ND – Not Detected

[a] – Human health guidance values are defined in *Spill Technology and Remediation Series (STARS) Memo #1: Petroleum–Contaminated Soil Guidance Policy*, Prepared by New York State Department of Environmental Conservation, Division of Spills Management, July 1993

Four compounds were detected in a groundwater sample collected from the excavation. No guidance values are available for these contaminants. Levels of these contaminants detected in soil samples from the excavation did not exceed regulatory limits for protection of human health. Also, these contaminants are incomplete petroleum combustion byproducts. Since groundwater is so shallow in this area, contaminants from the deactivation furnace stack may have washed into the soil and contaminated the groundwater.

5.5 CONCLUSIONS

The tank, fill and feed pipes, tank contents, and contaminated soil (12.3 cubic yards) and groundwater (800 gallons) have been removed from the southwest corner of Building 311 (Tank 311-B) in accordance with New York State Department of Environmental Conservation (NYSDEC) protocols for UST removal and disposal. The tank was removed, cleaned, dismantled, and disposed of following guidance presented in the *STARS* Memo. Soils that were removed from the excavation were screened using a PID. Those soils regarded as contaminated were disposed of offsite at Seneca Meadows Landfill.

As specified in *STARS*, soil samples were collected, analyzed, and compared with NYSDEC guidance values for protection of groundwater and human health. One soil sample and the groundwater sample showed evidence of contamination. Evaluation of the data indicates that some of the detected constituents exceed the groundwater protection guidance values. The detected contaminants are byproducts of incomplete petroleum combustion, indicating a possible source other than the UST. The demilitarization furnace stack may have deposited contaminants in the area around the tank.

Based on the level of contamination detected in the confirmation soil samples, it is recommended that the existing excavation be expanded to remove the shallow soils (less than 1 foot in depth) above bedrock between the existing excavation and the building wall to the north. The oily sheen on groundwater and the groundwater sample indicates that contaminants may have impacted groundwater. At the time of the tank excavation, 800 gallons of groundwater was pumped out of the excavation until the groundwater appeared to be clear. Since that time, Seneca Army Depot (SEAD) personnel have not observed any additional oily

sheen in the excavation pit. To assess possible groundwater contamination, it is recommended that a sample of any water present in the existing excavation be collected and analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs), and that the existing downgradient well from the former location of Tank 311-B be monitored prior to closing this UST site.

APPENDIX B

Soil Boring Logs

- SEAD-16 Soil Boring Logs
- SEAD-17 Soil Boring Logs

SEAD-16 Soil Boring Logs

LOG OF BORING NO. SB16-1

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **08/14/96**
DATE COMPLETED: **08/14/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **N.A.**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F. O'loughlin**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
16037 0-2"	8 8 8 10	2.00 1.20	1.2	BGD	BGD	0.4	FL	Dark gray crushed SHALE, moist.	0.00 0.40	FL	
						1 1.2	ML	Light brown SILT, some CLAY, little fine to medium shale fragments, moist.		TL	
								No recovery. (1.2-2.0')			
16038 2-3.1"	10 7 11 50/.4	1.90	1.1	BGD	BGD	2 2.0	CL	Light Brown to gray CLAY, little SILT, trace fine SHALE fragments, moist.	2.90		
						3 2.9 3.1		Gray weathered SHALE, saturated.	3.10	WSH	
								No recovery. (3.1-3.9')		CSH	
						4 4.0		Augered to 4.0'			
						5					
						6					
						7					
						8					
						9			10.00		

NOTES:

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UNITED STATES ARMY
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Seneca Army Depot
Romulus, New York

LOG OF BORING SB16-1

LOG OF BORING NO. SB16-2

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **08/14/96**
DATE COMPLETED: **08/14/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **2.2'**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
16036	4 9 10 25	2.00	1.3	BGD	BGD	0.3	FL	Black slag material, dry.	0.00	FL	
						1		Light brown SILT, little CLAY, fine to medium SHALE fragments, moist to wet.		TL	
						1.3		No recovery. (1.3-2.0')			
						2.0			2.00		
0-1.3'	100/.2	2.00	.2			2	ML	Gray weathered SHALE.		WSH	
						3					
						4		Augered to 4.0'	4.00	CSH	
									10.00		

NOTES:

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UNITED STATES ARMY
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Seneca Army Depot
Romulus, New York

LOG OF BORING SB16-2

LOG OF BORING NO. SB16-3

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **08/14/96**
DATE COMPLETED: **08/14/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **N.A.**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F.O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations. DESCRIPTION	Depth	Macro	Macro Lithology
16032 16033	22 18 19 20	2.00	1.5	BGD	BGD	1 1.5	ML	Gray to Brown SILT, little CLAY and fine to medium SHALE fragments, moist.	0.00	FL	
								No recovery. (1.5-2.0')	2.00		
								Gray weathered SHALE. Augered to 2.0'		WSH	

NOTES:

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LOG OF BORING SB16-3

LOG OF BORING NO. SB16-4

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **08/14/96**
DATE COMPLETED: **08/14/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **3.0'**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
16030	13	2.00	1.3	BGD	BGD	0.3	ML	Brown SILT and fine SAND. little fine to medium gravel, trace organic material, moist.	0.00	FL	
	14					0.6				FL	
	14							Dark Brown to gray CLAY, some SILT, little fine SHALE fragments, mottled, dense, moist.			
	30					1					
						1.3		Light brown CLAY, some SILT, trace fine SHALE fragments, mottled, dense, moist.	1.30	TL	
						2.0		No Recovery. (1.3-2.0')			
0-1.3'	40	2.00	1.8	BGD	BGD	2	ML	Gray to Brown SILT, little CLAY, trace fine SHALE fragments, moist, saturated at 3.0'.			
16031	50										
	33										
	30					3					
						3.8					
						4.0		No Recovery. (3.8-4.0')	4.00		
2-3.8'						4		Gray weathered SHALE.	4.50	WSH	
								Augered to 4.5'		CSH	
									10.00		

NOTES:

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Romulus, New York

LOG OF BORING SB16-4

LOG OF BORING NO. SB16-5

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **08/14/96**
DATE COMPLETED: **08/14/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **2.5**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
16034 0-1.8'	20 30 45 15	2.00	1.8	BGD	BGD	1	ML	Crushed SHALE (0-0.3') Gray Brown SILT and CLAY, little very fine sand and fine to medium shale fragments, trace organic material, moist.	0.00	FL	
						1.8					
						2.0		No recovery (1.8-2.0')	2.00		
16035 2-3.3'	25 30 100/.3	1.30	1.3	BGD	BGD	2	ML	Gray to brown SILT and CLAY, trace fine sand and gravel.		TL	
						3					
						3.2			3.30		
								Gray weathered SHALE. Augered to 3.3'		WSH	

NOTES:

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Romulus, New York

LOG OF BORING SB16-5

LOG OF BORING NO. MW16-1

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD_16**
PROJECT NO: **729895**
DATE STARTED: **10/25/93**
DATE COMPLETED: **10/25/93**
DRILLING CONTRACTOR: **Empire**
DRILLING METHOD: **Hollow stem auger**
SAMPLING METHOD: **3 inch split spoon**

DEPTH TO WATER (ft):
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **P. Feshbach-Meriney**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
NA	1 2 7 10	2.00	1.8	BGD	BGD	1.0	ML	Brown-black organic SILT and CLAY, roots .1-1.0', some coal chips.	0.00 1.00	FL	
						1.8		Brown to yellow fine SAND and SILT, some CLAY, oxidized areas through out, dry.		TL	
						2.0		No recovery (1.8-2.0')			
NA	12 13 14 15	2.00	1.2	BGD	BGD	3.2	ML	Brown to yellow fine SAND and SILT, some CLAY, oxidized areas through out, some fine gravel size shale fragments, dry.			
						4.0		No recovery. (3.2-4.0')	4.00		
NA	100/.3	0.30	0.3	BGD	BGD	4.3	ML	Gray to Brown SILT and CLAY with some fine gravel size SHALE fragments, wet, loose.	6.00	WSH	
						6		Augerd to 6.0'	10.00	CSH	

NOTES:

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Romulus, New York

LOG OF BORING MW16-1

LOG OF BORING NO. MW16-2

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **10/26/93**
DATE COMPLETED: **10/26/93**
DRILLING CONTRACTOR: **Empire**
DRILLING METHOD: **Hollow stem auger**
SAMPLING METHOD: **3 inch split spoon**

DEPTH TO WATER (ft): **3**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **P. Feshbach-Meriney**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
NA		2.00	1.7	BGD	BGD	1	ML	Black asphalt (0-0.3'). Crushed SHALE bed, fine to coarse SHALE gravel with fine to medium SILT filler in interstices, dry (0.3-2.0).	0.00	FL	
NA		2.00	3.3	BGD	BGD	2.0, 2, 3, 3.3, 4		Gray SHALE weathered and fissile, with little fine SILT in interstices, some coarse gravel to cobble size SHALE fragments at base of spoon, wet.	2.00	WSH	
								Augered to 4.1'.	4.10	CSH	
									10.00		

NOTES:

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Seneca Army Depot
Romulus, New York

LOG OF BORING MW16-2

LOG OF BORING NO. MW16-3

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **10/26/93**
DATE COMPLETED: **10/26/93**
DRILLING CONTRACTOR: **Empire**
DRILLING METHOD: **Hollow stem auger**
SAMPLING METHOD: **3 inch split spoon**

DEPTH TO WATER (ft): **3**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **P. Feshbach-Meriney**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
NA	12 34 22 17	2.00	1.5	3.5	BGD	1 1.5	ML	Asphalt (0-0.3'). Brown to gray fine SAND, SILT, and CLAY, some fine to medium gravel (0.3-0.6'). Gray weathered SHALE, SILT and CLAY in interstices, some coarse gravel size shale (0.6-1.5').	0.00	FL	
						2.0		No Recovery. (1.5-2.0)			
NA	15 8 8 8	2.00	1	BGD	BGD	2 3.0	ML	Gray weathered SHALE, SILT and CLAY in interstices (2.0-2.3'). Brown fine to medium SAND, some coarse shale fragments, wet (2.3-3.0').			
						3		No recovery. (3.0-4.0')			
						4.0			4.00		
NA	100/.3	0.40	0.4	BGD	BGD	4 4.4	ML	Brown to gray SILT and CLAY with fine to coarse gravel size SHALE fragments, wet.	4.40	WSH CSH	
						5		Augered to 5.0'			

NOTES:

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UNITED STATES ARMY
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Romulus, New York

LOG OF BORING MW16-3

LOG OF BORING NO. MW16-4

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **08/14/96**
DATE COMPLETED: **08/14/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **2.7'**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
N.A	8 8 8 10	2.00	1.8	BGD	BGD	1	CL	Dark Gray SHALE, little SILT and organic material, dry (0.0-0.5'). Gray to Brown CLAY, some SILT, little fine to medium SHALE fragments, trace organic material, moist to wet (0.5-1.8').	0.00	FL	
						1.8					
						2.0		No Recovery. (1.8-2.0')	2.00		
N.A.	10 100	1.00	.8	N.A.	N.A.	2	ML	Light brown to gray CLAY and SILT, little fine to medium SHALE fragments, dense, moist (2.0-2.4'). Light brown SILT, CLAY and fine to medium SAND, some medium to coarse Shale fragments (2.4-2.8').		TL	
						2.8					
						3.0			3.00		
						3		No Recovery. (2.8-3.0') Gray weathered SHALE.		WSH	
						4					
						5			5.20		
								Augered to 5.2'		CSH	
									10.00		

NOTES:

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Romulus, New York

LOG OF BORING MW16-4

LOG OF BORING NO. MW16-5

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **08/13/96**
DATE COMPLETED: **08/13/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **N.A.**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
NA	25 63 50/.3	1.30	1.3	BGD	BGD	1 1.3	ML	Olive gray to brown very fine SAND and SILT, some fine to medium SHALE fragments, damp (0-0.5'). Olive gray to dark brown SILT, little fine SHALE fragments, dense, moist (0.5-1.3').	0.00 1.30	TL	
						2 3 4		Dark gray weathered SHALE, dry.	4.00	WSH	
								Augered to 4.0'	10.00	CSH	

NOTES:

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UNITED STATES ARMY
CORPS OF ENGINEERS
Seneca Army Depot
Romulus, New York

LOG OF BORING MW16-5

LOG OF BORING NO. MW16-6

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **08/14/96**
DATE COMPLETED: **08/14/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **3**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F.O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
						0.8		Cement pad.	0.00 0.80	CM	
NA	6 17 17 13	2.00	1	BGD	BGD	1 2 2.0	ML	Gray to brown SILT and CLAY, trace SHALE fragments and very fine SAND, mottled, dense, moist.		FL	
								No recovery. (2.0-3.0')			
NA	50/.3	0.30	.3	BGD	BGD	3 3.0 3.5	ML	Light Brown SILT, some very fine SAND, little fine to medium size SHALE fragments, wet to saturated.	3.00 3.50	TL	
						4 5		Gray Weathered SHALE, dry.	5.10	WSH	
								Augered to 5.1'	10.00	CSH	

NOTES:

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Romulus, New York

LOG OF BORING MW16-6

LOG OF BORING NO. MW16-7

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-16**
PROJECT NO: **729895**
DATE STARTED: **08/13/96**
DATE COMPLETED: **08/13/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **3.2**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F.O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
NA	23 28 13 10	2.00	1.3	BGD	BGD	1 1.3	ML	Dark gray crushed SHALE, dry (0-0.6'). Dark gray crushed SHALE and SILT, moist (0.6-0.9'). Light brown very fine SAND and SILT, little CLAY and trace fine GRAVEL, medium dense, moist to wet. No recovery. (1.3-2.0')	0.00 2.00	FL	
NA	13 22 30 70	2.00	1.7	BGD	BGD	2 3 3.5 4 5	ML	Light brown very fine SAND and SILT, little CLAY, trace fine GRAVEL, medium dense, moist to wet (2.0-2.3'). Light gray and brown SILT and CLAY, little fine to medium SHALE fragments, dry. (wet from 2.3 to 3.5') Weathered Shale, dry.	3.70 5.30	TL WSH	
								Augered to 5.3'	10.00	CSH	

NOTES:

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Romulus, New York

LOG OF BORING MW16-7

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SEAD-17 Soil Boring Logs

Macro Lithology

1

1

LOG OF BORING NO. MW17-2

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-17**
PROJECT NO: **729895**
DATE STARTED: **10/27/93**
DATE COMPLETED: **11/02/93**
DRILLING CONTRACTOR: **Empire**
DRILLING METHOD: **Hollow stem auger**
SAMPLING METHOD: **3 inch split spoon**

DEPTH TO WATER (ft):
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **P. Feshbach-Meriney**
CHECKED BY:

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
17-2.1	6 6 7 7	2.00	1.4	BGD	BGD	0.4	ML	Black to brown top soil and SHALE.	0.00 0.40	FL	
						1 1.4		Black to brown SILT and CLAY with some fine SAND, some oxidized zones.		TL	
						2.0		No recovery (1.4-2.0').			
17-2.2	8 27 50 100/.4	2.00	1.4	BGD	BGD	2 3 3.7	ML	Brown SILT and CLAY with some fine SAND (2.0-2.5'). Gray to green SILT and CLAY with some fine SAND (2.5-3.7').	3.70		
						4.0 4 5		Weathered gray SHALE and some SAND (3.7-4.0').	6.00	WSH	
						6		Augered to 6.0'.	10.00	CSH	

NOTES:

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UNITED STATES ARMY
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Seneca Army Depot
Romulus, New York

LOG OF BORING MW17-2

LOG OF BORING NO. MW17-3

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-17**
PROJECT NO: **729895**
DATE STARTED: **11/30/93**
DATE COMPLETED: **11/30/93**
DRILLING CONTRACTOR: **Empire**
DRILLING METHOD: **Hollow stem auger**
SAMPLING METHOD: **3 inch split spoon**

DEPTH TO WATER (ft): **2**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **E. Schacht**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro
17-3.1	1 4 6 7	2.00	1.7	BGD	BGD	1	SM	Medium brown SAND, some SILT, moist (0-1.0').	0.00	TL
								Light brown SILT, some fine SAND, few SHALE fragments, moist (1-1.7').		
						1.7				
						2.0		No Recovery. (1.7-2.0')		
17-3.2	7 19 36 67	2.00	2	BGD	BGD	2	ML	As Above, wet.		
						2.7			2.70	
						3		Gray weathered SHALE, (fragments to 2.0" diameter), dry.		WSH
						4.0				
NA	67 100/.3	2.00	.7	BGD	BGD	4	ML	As above, wet.		
						4.7				
						5				
									6.00	
						6		Augered to 6.0'		CSH
									10.00	

NOTES:

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Seneca Army Depot
Romulus, New York

LOG OF BORING MW17-3

LOG OF BORING NO. MW17-4

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-17**
PROJECT NO: **729895**
DATE STARTED: **11/30/93**
DATE COMPLETED: **12/01/93**
DRILLING CONTRACTOR: **Empire**
DRILLING METHOD: **Hollow stem auger**
SAMPLING METHOD: **3 inch split spoon**

DEPTH TO WATER (ft): **2**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **E. Schacht**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
13-4.1	3 5 7 7	2.00	2	BGD	BGD	1	ML	Medium brown SILT, some CLAY, trace SHALE fragments, moist.	0.00	TL	
						2.0					
13-4.2	17 48 77 60	1.80	1.8	BGD	BGD	2 3	ML	Medium Brown SILT, some CLAY, trace SHALE fragments, wet.	2.30		
								Weathered SHALE		WSH	
						3.8					
	100/.2	2.00	.2			4 5		No recovery. (3.8-4.0')	4.00	CSH	
						6		Augered to 6.0'	10.00		

NOTES:

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Romulus, New York

LOG OF BORING MW17-4

LOG OF BORING NO. MW17-5

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
ASSOCIATED UNIT/AREA: **SEAD-17**
PROJECT NO: **729895**
DATE STARTED: **08/13/96**
DATE COMPLETED: **08/13/96**
DRILLING CONTRACTOR: **American Auger**
DRILLING METHOD: **Hollow Stem Auger**
SAMPLING METHOD: **3 inch Split Spoon**

DEPTH TO WATER (ft): **4.3**
BORING LOCATION (N/E):
REFERENCE COORDINATE SYSTEM:
GROUND SURFACE ELEVATION (ft):
DATUM: **NGVD 88**
INSPECTOR: **F.O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**

This log is part of a project prepared by Parsons Engineering-Science, Inc. for the named project and should be read together with the report for complete interpretation. This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations.

Sample Number	Blow Counts (# Blows per 6")	Sample Advance	Sample Recovery	VOC Screen-PID (ppm)	Rad Screen (cps)	Depth (ft.)	USCS CLASS	DESCRIPTION	Depth	Macro	Macro Lithology
NA	4 7 8 8	2.00	1.5	BGD	BGD	1 1.5	ML	Brown SILT, trace organic material, moist, loose (0-0.8'). Light brown SILT and CLAY, trace dark gray fine shale fragments, medium dense, moist (0.8-1.3').	0.00	FL	
						2.0		No recovery (1.5-2.0')	2.00		
NA	10 15 22 22	2.00	1.4	BGD	BGD	2 3 3.4	ML	As Above (2.0-2.2') Gray to Brown SILT. some fine sand, trace organic material, loose, wet (2.2-2.6'). Olive to gray-brown SILT and CLAY, little fine to medium SHALE fragments, medium dense, moist (2.6-3.4').		TL	
						4.0		No recovery. (3.4-4.0')			
NA	8 10 10 14	2.00	0.8	BGD	BGD	4 4.8 5	SM ▼	Gray to brown very fine SAND, little SILT, trace fine to medium shale fragmets (weathered SHALE from 4.6-4.8), saturated at 4.3'.			
						6.0		No recovery. (4.8-6.0')	6.00		
NA	50/.3	0.30	.3	BGD	BGD	6 7 8	BR	Dark gray weathered SHALE, dry.	8.30	WSH	
								Augered to 8.3'	10.00	CSH	

NOTES:

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LOG OF BORING MW17-5

APPENDIX C

Monitoring Well Installation Diagrams

- SEAD-16 Well Diagrams
- SEAD-17 Well Diagrams

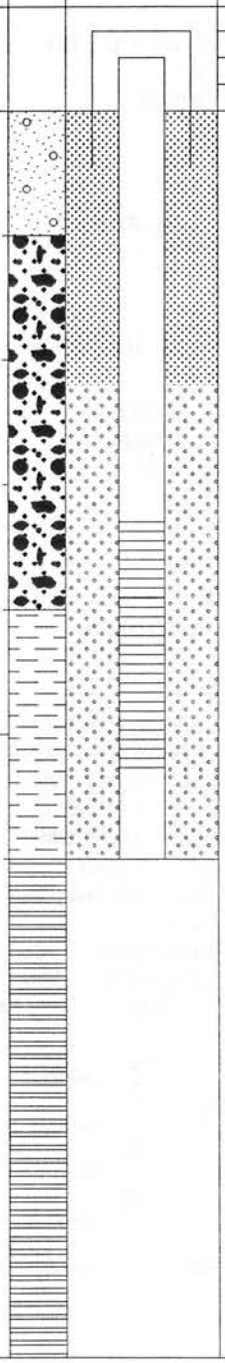
SEAD-16 Well Diagrams

COMPLETION REPORT OF WELL No. MW16-1

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **998717.9 749854.6**
DRILLING CONTRACTOR: **Empire Soils Investigation, Inc.**
DRILLING METHOD: **Hollow stem auger**
WELL INSTALLATION STARTED: **10/25/93**
WELL INSTALLATION COMPLETED: **10/25/93**

GROUND SURFACE ELEVATION: **733.7**
DATUM: **NGVD 88**
GEOLOGIST: **P. Feshbach-Meriney**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA: MACRO DESCRIPTION (from boring log)	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)
				-2.6	TPC	736.4
				-1.8	TR	735.5
					TC	
				0.0	GS	733.7
	0			0.0	TBS	733.7
FL						
TL				2.2	TSP	731.5
				3.3	TSC	730.4
WSH						
	5			5.3	BSC	728.4
	6.0			6.0	POW	727.7
CSH						



WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **5'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval: **5'**

SCREEN
Diameter: **2"**
Type: **SCH. 40-PVC/.010"**
Interval: **2.4'**

SURFACE SEAL
Type: **CEMENT**
Interval: **1'/1'**

GROUT
Type: **NA**
Interval: **NA**

SEAL
Type: **BENTONITE**
Interval: **2.2'**

SANDPACK
Type: **SILICA BERKLEY#1,#3**
Interval: **FINE:0.6', COARSE:3.2'**

WELL DEVELOPMENT DATA
Date: **11/5/93**
Method: **BAIL/PUMP**
Duration: **1 DAY**
Rate: **.07 GAL/MIN**

WATER LEVELS

Date	Time	Depth,TR
11/5/93	08:25	4.2'
11/5/93	09:27	4.24'
11/5/93	10:16	4.28'
11/5/93	11:04	4.28'
11/5/93	11:47	4.28'

Final Measurements:

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
6.78	12.3	600	6.9

LEGEND
SURFACE SEAL
GROUT
SEAL
SANDPACK
GRAVEL
SAND
SILT
CLAY
NO RECOVERY

TPC	TOP OF PROTECTIVE CASING
TR	TOP OF WELL RISER
GS	GROUND SURFACE
TBS	TOP BENTONITE SEAL
TSP	TOP OF SANDPACK
TSC	TOP OF SCREEN
BSC	BOTTOM OF SCREEN
TD	TOTAL DEPTH
POW	POINT OF WELL

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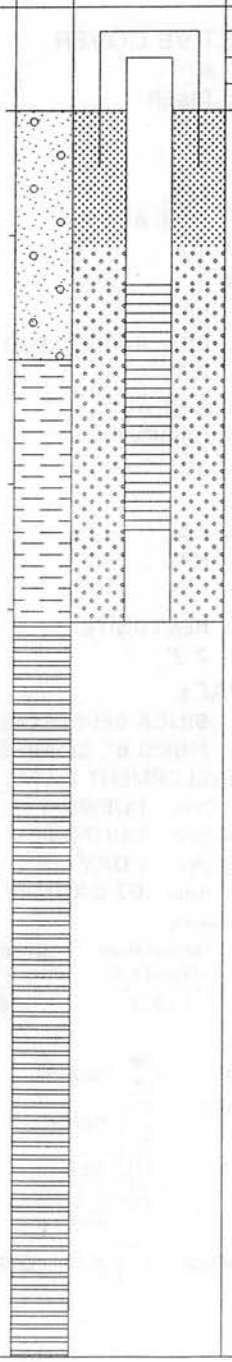
COMPLETION REPORT OF WELL No. MW16-1

COMPLETION REPORT OF WELL No. MW16-2

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **998613.8 749592.5**
DRILLING CONTRACTOR: **Empire Soils Investigation, Inc.**
DRILLING METHOD: **Hollow stem auger**
WELL INSTALLATION STARTED: **10/26/93**
WELL INSTALLATION COMPLETED: **10/26/93**

GROUND SURFACE ELEVATION: **732.8**
DATUM: **NGVD 88**
GEOLOGIST: **P. Feshbach-Meriney**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA: MACRO DESCRIPTION (from boring log)	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)
				-1.8	TPC	734.7
				-1.7	TR	734.6
					TC	
				0.0	GS	732.8
FL	0			0.0	TBS	732.8
				1.1	TSP	731.7
				1.4	TSC	731.4
WSH						
				3.4	BSC	729.4
CSH	4.1			4.1	POW	728.7



WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **5'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval: **2.7'**

SCREEN
Diameter: **2"**
Type: **SCH. 40-PVC/0.010"**
Interval: **2'**

SURFACE SEAL
Type: **CEMENT**
Interval: **.5'/.5'**

GROUT
Type: **NA**
Interval: **NA**

SEAL
Type: **BENTONITE**
Interval: **.9'**

SANDPACK
Type: **SILICA BERKELY #1,#3**
Interval: **FINE:0.6', COARSE:2.4'**

WELL DEVELOPMENT DATA
Date: **11/5/93**
Method: **BAIL/PUMP**
Duration: **1 DAY**
Rate: **.08 GAL/MIN**

WATER LEVELS

Date	Time	Depth,TR
11/5/93	12:57	3.76'
11/5/93	13:25	3.76'
11/5/93	13:53	3.76'
11/5/93	14:23	3.76'
11/5/93	14:54	3.78'

Final Measurements:

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
6.9	9.8	490	0.3

LEGEND
SURFACE SEAL
GROUT
SEAL
SANDPACK
GRAVEL
SAND
SILT
CLAY
NO RECOVERY

TPC TOP OF PROTECTIVE CASING
TR TOP OF WELL RISER
GS GROUND SURFACE
TBS TOP BENTONITE SEAL
TSP TOP OF SANDPACK
TSC TOP OF SCREEN
BSC BOTTOM OF SCREEN
TD TOTAL DEPTH
POW POINT OF WELL

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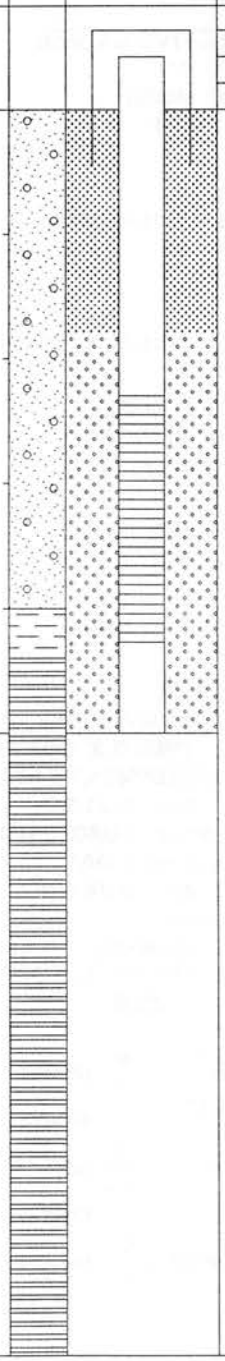
COMPLETION REPORT OF WELL No. MW16-2

COMPLETION REPORT OF WELL No. MW16-3

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **998528.6 749688.9**
DRILLING CONTRACTOR: **Empire Soils Investigation, Inc.**
DRILLING METHOD: **Hollow stem auger**
WELL INSTALLATION STARTED: **10/26/93**
WELL INSTALLATION COMPLETED: **10/26/93**

GROUND SURFACE ELEVATION: **733.0**
DATUM: **NGVD 88**
GEOLOGIST: **E. Schacht/L. Bodo**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA MACRO DESCRIPTION (from boring log)	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)
				-2.5	TPC	735.6
				-2.4	TR	735.5
					TC	
				0.0	GS	733.0
	0			0.0	TBS	733.0
FL						
				1.8	TSP	731.2
				2.3	TSC	730.7
WSH				4.3	BSC	728.7
CSH						
	5.0 5			5.0	POW	728.0



WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **4'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval: **2.5'**

SCREEN
Diameter: **2"**
Type: **SCH. 40-PVC/0.010"**
Interval: **2'**

SURFACE SEAL
Type: **CEMENT**
Interval: **1'/1'**

GROUT
Type: **NA**
Interval: **NA**

SEAL
Type: **BENTONITE**
Interval: **1.8'**

SANDPACK
Type: **BERKELY SILICA #1,#3**
Interval: **FINE:0.2', COARSE:3.0'**

WELL DEVELOPMENT DATA
Date: **11/4/93**
Method: **BAIL/PUMP**
Duration: **1 DAY**
Rate: **.23 GAL/MIN**

WATER LEVELS

Date	Time	Depth,TR
11/4/93	--------	4.7'
11/4/93	14:26	4.7'
11/4/93	15:26	4.62'
11/4/93	15:39	3.64'
11/4/93	15:53	4.66'

Final Measurements:

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
6.87	9.4	265	7.9

LEGEND
SURFACE SEAL
GROUT
SEAL
SANDPACK
GRAVEL
SAND
SILT
CLAY
NO RECOVERY

TPC TOP OF PROTECTIVE CASING
TR TOP OF WELL RISER
GS GROUND SURFACE
TBS TOP BENTONITE SEAL
TSP TOP OF SANDPACK
TSC TOP OF SCREEN
BSC BOTTOM OF SCREEN
TD TOTAL DEPTH
POW POINT OF WELL

PARSONS
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Seneca Army Depot
Romulus, New York

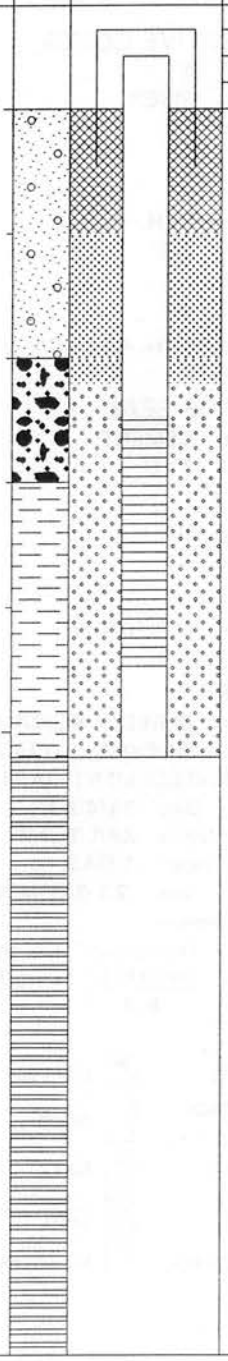
COMPLETION REPORT OF WELL No. MW16-3

COMPLETION REPORT OF WELL No. MW16-4

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **998713.3 749703.3**
DRILLING CONTRACTOR: **American Auger and Ditching, Inc.**
DRILLING METHOD: **Hollow Stem Auger**
WELL INSTALLATION STARTED: **08/14/96**
WELL INSTALLATION COMPLETED: **08/14/96**

GROUND SURFACE ELEVATION: **732.3**
DATUM: **NGVD 88**
GEOLOGIST: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA: MACRO DESCRIPTION (from boring log)	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)
				-1.0	TPC	733.3
				-1.6	TR	733.9
					TC	
				0.0	GS	732.3
FL	0					
				1.0	TBS	731.3
				2.0	TSP	730.3
TL				2.2	TSP	730.1
				2.5	TSC	729.8
WSH						
				4.5	BSC	727.8
	5					
	5.2			5.2	POW	727.1
CSH						



WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **2.5'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval: **4'**

SCREEN
Diameter: **2"**
Type: **SCH.40-PVC/W. WRAP/.01"**
Interval: **2'**

SURFACE SEAL
Type: **CEMENT**
Interval: **1',.3'**

GROUT
Type: **N/A**
Interval: **N/A**

SEAL
Type: **BENTONITE**
Interval: **1'**

SANDPACK
Type: **SILICA MORIE #00,#0**
Interval: **FINE: 0.2' COARSE: 3.0'**

WELL DEVELOPMENT DATA
Date: **8/21/96**
Method: **SURGE/PUMP**
Duration: **1 DAY**
Rate: **0.66 L/MIN**
Final Measurements:

WATER LEVELS

Date	Time	Depth,TR
8/21/96	09:45	4.24'
8/21/96	09:50	
8/21/96	10:00	
8/21/96	11:13	
8/21/96	11:40	
8/21/96	12:15	

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
6.52	25.6	NA	3.38

LEGEND
SURFACE SEAL
GROUT
SEAL
SANDPACK
GRAVEL
SAND
SILT
CLAY
NO RECOVERY

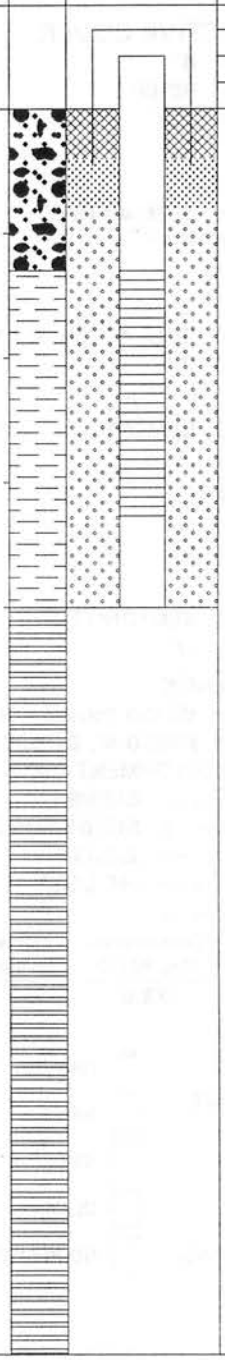
TPC TOP OF PROTECTIVE CASING
TR TOP OF WELL RISER
GS GROUND SURFACE
TBS TOP BENTONITE SEAL
TSP TOP OF SANDPACK
TSC TOP OF SCREEN
BSC BOTTOM OF SCREEN
TD TOTAL DEPTH
POW POINT OF WELL

COMPLETION REPORT OF WELL No. MW16-5

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **998709.5 749602.3**
DRILLING CONTRACTOR: **American Auger and Ditching, Inc.**
DRILLING METHOD: **Hollow Stem Auger**
WELL INSTALLATION STARTED: **08/13/96**
WELL INSTALLATION COMPLETED: **08/13/96**

GROUND SURFACE ELEVATION: **732.1**
DATUM: **NGVD 88**
GEOLOGIST: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA: MACRO DESCRIPTION (from boring log)	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)
				-1.2	TPC	733.3
				-1.3	TR	733.4
					TC	
				0.0	GS	732.1
TL	0			0.4	TBS	731.7
				0.8	TSP	731.3
WSH				1.3	TSC	730.8
				3.3	BSC	728.8
CSH	4.0			4.0	POW	728.1



WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **2.5'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval: **2.6'**

SCREEN
Diameter: **2"**
Type: **SCH.40-PVC/W.WRAP/.01"**
Interval: **2'**

SURFACE SEAL
Type: **CEMENT**
Interval: **4"/.4'**

GROUT
Type: **NA**
Interval: **NA**

SEAL
Type: **BENTONITE**
Interval: **.4'**

SANDPACK
Type: **SILICA MORIE #00,#0**
Interval: **FINE: .3',COARSE:2.9'**

WELL DEVELOPMENT DATA
Date: **DRY WELL**
Method:
Duration:
Rate:
Final Measurements:

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)

WATER LEVELS

Date	Time	Depth, TR

LEGEND
SURFACE SEAL
GROUT
SEAL
SANDPACK
GRAVEL
SAND
SILT
CLAY
NO RECOVERY

TPC	TOP OF PROTECTIVE CASING
TR	TOP OF WELL RISER
GS	GROUND SURFACE
TBS	TOP BENTONITE SEAL
TSP	TOP OF SANDPACK
TSC	TOP OF SCREEN
BSC	BOTTOM OF SCREEN
TD	TOTAL DEPTH
POW	POINT OF WELL

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ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

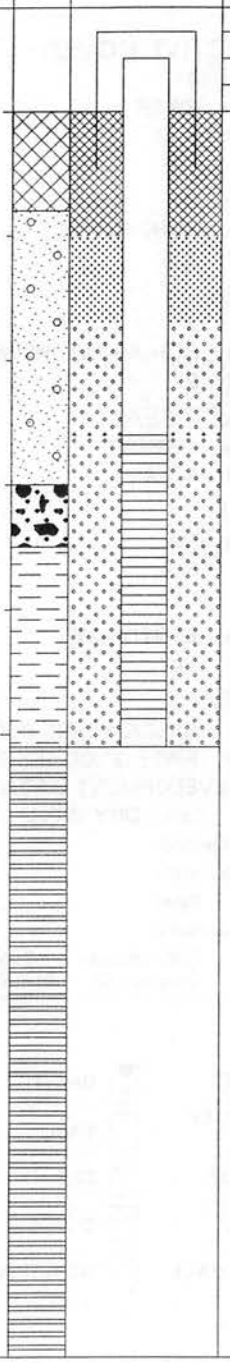
COMPLETION REPORT OF WELL No. MW16-5

COMPLETION REPORT OF WELL No. MW16-6

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **998709.5 749602.3**
DRILLING CONTRACTOR: **American Auger and Ditching, Inc.**
DRILLING METHOD: **Hollow Stem Auger**
WELL INSTALLATION STARTED: **08/14/96**
WELL INSTALLATION COMPLETED: **08/14/96**

GROUND SURFACE ELEVATION: **732.1**
DATUM: **NGVD 88**
GEOLOGIST: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA: MACRO DESCRIPTION (from boring log)	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)
				-1.6	TPC	733.7
				-1.5	TR	733.6
					TC	
				0.0	GS	732.1
CM	0					
FL				1.0	TBS	731.1
				1.7	TSP	730.4
				2.6	TSC	729.5
TL						
WSH						
				4.9	BSC	727.2
	5.1 5			5.1	POW	727.0
CSH						



WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **2.5'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval: **4.1'**

SCREEN
Diameter: **2"**
Type: **SCH. 40-PVC/0.010"**
Interval: **2.3'**

SURFACE SEAL
Type: **CEMENT**
Interval: **.3'/1'**

GROUT
Type: **NA**
Interval: **NA**

SEAL
Type: **BENTONITE**
Interval: **.7'**

SANDPACK
Type: **SILICA MORIE #00, #0**
Interval: **FINE:0.4', COARSE:3.0'**

WELL DEVELOPMENT DATA
Date: **8/20/96**
Method: **SURGE/PUMP**
Duration: **2 DAYS**
Rate: **.45 L/MIN**
Final Measurements:

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
7.06	33.6	NA	>100

WATER LEVELS

Date	Time	Depth,TR
8/20/96	14:15	3.8'
8/20/96	14:35	
8/20/96	14:55	
8/20/96	15:10	
8/20/96	15:20	
8/21/96	10:30	

LEGEND
SURFACE SEAL
GROUT
SEAL
SANDPACK
GRAVEL
SAND
SILT
CLAY
NO RECOVERY

TPC TOP OF PROTECTIVE CASING
TR TOP OF WELL RISER
GS GROUND SURFACE
TBS TOP BENTONITE SEAL
TSP TOP OF SANDPACK
TSC TOP OF SCREEN
BSC BOTTOM OF SCREEN
TD TOTAL DEPTH
POW POINT OF WELL

PARSONS
ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

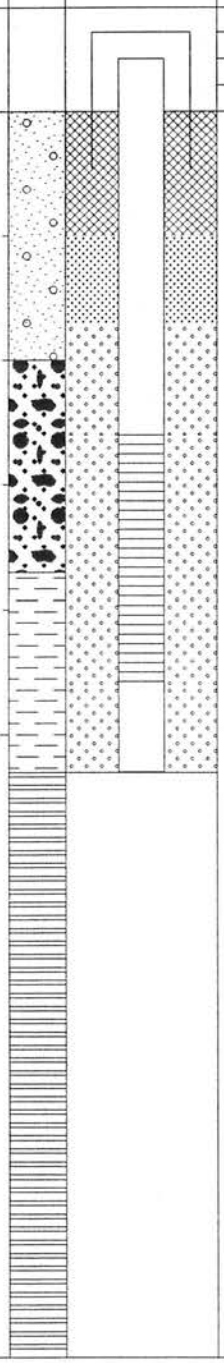
COMPLETION REPORT OF WELL No. MW16-6

COMPLETION REPORT OF WELL No. MW16-7

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **998490.0 749752.9**
DRILLING CONTRACTOR: **American Auger and Ditching, Inc.**
DRILLING METHOD: **Hollow Stem Auger**
WELL INSTALLATION STARTED: **08/13/96**
WELL INSTALLATION COMPLETED: **08/13/96**

GROUND SURFACE ELEVATION: **732.9**
DATUM: **NGVD 88**
GEOLOGIST: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA: MACRO DESCRIPTION (from boring log)	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)
				-1.6	TPC	734.4
				-1.6	TR	734.4
					TC	
				0.0	GS	732.9
FL	0					
				1.0	TBS	731.9
				1.7	TSP	731.2
TL						
				2.6	TSC	730.3
WSH						
				4.6	BSC	728.3
	5					
CSH	5.3			5.3	POW	727.6



WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **2.5'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval: **3.5'**

SCREEN
Diameter: **2"**
Type: **SCH.40-PVC/W. WRAP/.01"**
Interval: **2'**

SURFACE SEAL
Type: **CEMENT**
Interval: **4"/ 1'**

GROUT
Type: **N/A**
Interval: **N/A**

SEAL
Type: **BENTONITE**
Interval: **.7"**

SANDPACK
Type: **SILICA MORIE #0,#00**
Interval: **FINE:.3' COARSE: 3.3'**

WELL DEVELOPMENT DATA
Date: **8/15/96**
Method: **SURGE/PUMP**
Duration: **1 DAY**
Rate: **.17 GAL/MIN**
Final Measurements:

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
			4.87

WATER LEVELS

Date	Time	Depth, TR
8/15	1335	5.98'

LEGEND
SURFACE SEAL, GROUT, SEAL, SANDPACK, GRAVEL, SAND, SILT, CLAY, NO RECOVERY

TPC	TOP OF PROTECTIVE CASING
TR	TOP OF WELL RISER
GS	GROUND SURFACE
TBS	TOP BENTONITE SEAL
TSP	TOP OF SANDPACK
TSC	TOP OF SCREEN
BSC	BOTTOM OF SCREEN
TD	TOTAL DEPTH
POW	POINT OF WELL

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Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW16-7

SEAD-17 Well Diagrams

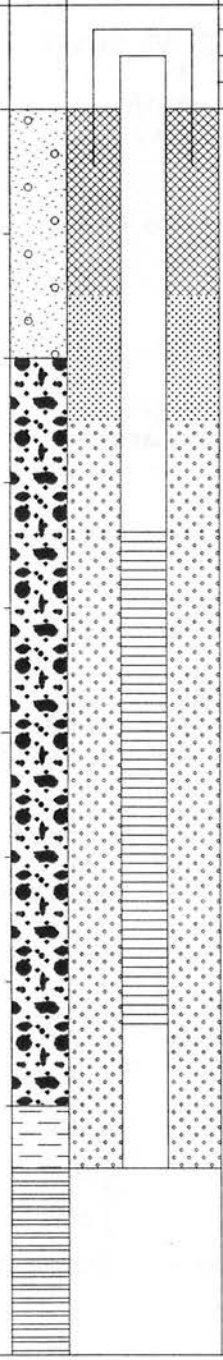
COMPLETION REPORT OF WELL No. MW17-1

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **998097.0 749245.2**
DRILLING CONTRACTOR: **Empire Soils Investigation, Inc.**
DRILLING METHOD: **Hollow stem auger**
WELL INSTALLATION STARTED: **12/01/93**
WELL INSTALLATION COMPLETED: **12/01/93**

GROUND SURFACE ELEVATION: **734.5**
DATUM: **NGVD 88**
GEOLOGIST: **E. Schacht/L. Bodo**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA: MACRO DESCRIPTION (from boring log)	DEPTH (ft.)
FL	0
TL	
	5
WSH	8.5
CSH	

SYMBOL / WELL DETAILS



DEPTH (ft.)		ELEVATION (ft.)
-2.1	TPC	736.6
-1.9	TR	736.3
	TC	
0.0	GS	734.5
1.5	TBS	733.0
2.5	TSP	732.0
3.4	TSC	731.1
7.4	BSC	727.1
8.5	POW	726.0

WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **2.5'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval: **3'**

SCREEN
Diameter: **2"**
Type: **SCH. 40-PVC/0.010" SLOT**
Interval: **4'**

SURFACE SEAL
Type: **CEMENT**
Interval: **1'/1'**

GROUT
Type: **CEMENT-BENTONITE**
Interval: **1.5'**

SEAL
Type: **BENTONITE**
Interval: **1'**

SANDPACK
Type: **SILICA BERKLEY #1,#3**
Interval: **FINE:0.5', COARSE:.4'**

WELL DEVELOPMENT DATA
Date: **1/6/94**
Method: **BAIL/PUMP**
Duration: **2 DAYS**
Rate: **.29 GAL/MIN**

WATER LEVELS

Date	Time	Depth,TR
1/6/96	15:40	6.6'
1/7/96	10:35	7.4'
1/7/96	10:50	8.0'
1/7/96	11:15	8.3'
1/7/96	11:38	8.6'

Final Measurements:

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
7	6	390	2.35

LEGEND
SURFACE SEAL
GROUT
SEAL
SANDPACK
GRAVEL
SAND
SILT
CLAY
NO RECOVERY

TPC	TOP OF PROTECTIVE CASING
TR	TOP OF WELL RISER
GS	GROUND SURFACE
TBS	TOP BENTONITE SEAL
TSP	TOP OF SANDPACK
TSC	TOP OF SCREEN
BSC	BOTTOM OF SCREEN
TD	TOTAL DEPTH
POW	POINT OF WELL

PARSONS
ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

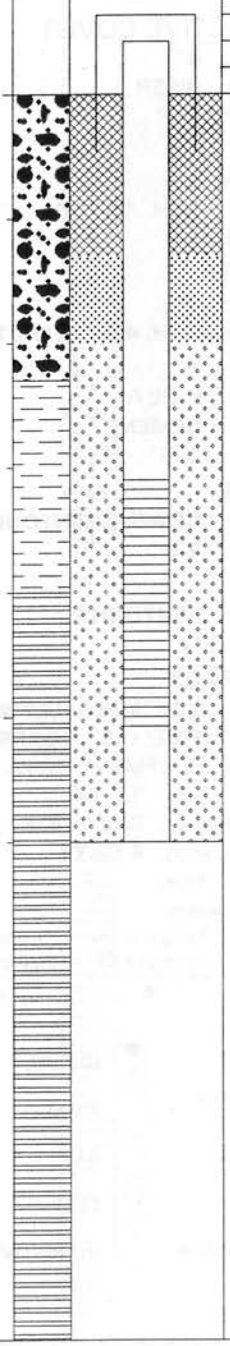
COMPLETION REPORT OF WELL No. MW17-1

COMPLETION REPORT OF WELL No. MW17-4

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **997936.5 749076.4**
DRILLING CONTRACTOR: **Empire Soils Investigation, Inc.**
DRILLING METHOD: **Hollow stem auger**
WELL INSTALLATION STARTED: **12/01/93**
WELL INSTALLATION COMPLETED: **12/01/93**

GROUND SURFACE ELEVATION: **732.5**
DATUM: **NGVD 88**
GEOLOGIST: **E. Schacht/L. Bodo**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA MACRO DESCRIPTION (from boring log)	DEPTH (ft.)	SYMBOL	WELL DETAILS	DEPTH (ft.)		ELEVATION (ft.)
				-2.4	TPC	734.9
				-2.1	TR	734.6
					TC	
				0.0	GS	732.5
TL	0					
				1.3	TBS	731.2
				2.0	TSP	730.5
WSH						
				3.1	TSC	729.4
CSH						
	5			5.1	BSC	727.4
	6.0			6.0	POW	726.5



WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **2.5'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval:

SCREEN
Diameter: **2"**
Type: **SCH. 40-PVC/.010" SLOT**
Interval: **2'**

SURFACE SEAL
Type: **CEMENT**
Interval: **1'/1'**

GROUT
Type: **CEMENT-BENTONITE**
Interval: **1.3'**

SEAL
Type: **BENTONITE**
Interval: **.7'**

SANDPACK
Type: **SILICA BERKELY #1,#3**
Interval: **FINE:0.5', COARSE:3.5'**

WELL DEVELOPMENT DATA
Date: **8/19/96**
Method: **SURGE/PUMP**
Duration: **1 DAY**
Rate:
Final Measurements:

WATER LEVELS

Date	Time	Depth,TR
8/19/96	1330	6.4'
8/19/96	1400	6.4'
8/19/96	1500	6.4'

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
			8.12

LEGEND
SURFACE SEAL
GROUT
SEAL
SANDPACK
GRAVEL
SAND
SILT
CLAY
NO RECOVERY

TPC TOP OF PROTECTIVE CASING
TR TOP OF WELL RISER
GS GROUND SURFACE
TBS TOP BENTONITE SEAL
TSP TOP OF SANDPACK
TSC TOP OF SCREEN
BSC BOTTOM OF SCREEN
TD TOTAL DEPTH
POW POINT OF WELL

PARSONS
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Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF
WELL No. MW17-4

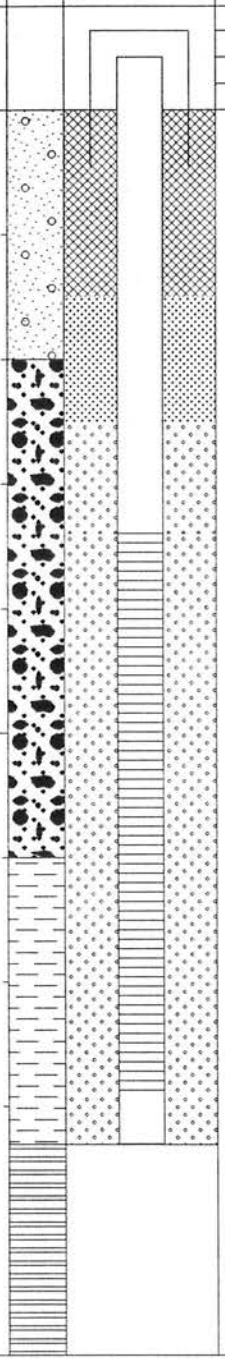
COMPLETION REPORT OF WELL No. MW17-5

PROJECT: **SEAD-16 & SEAD-17 RI/FS**
PROJECT LOCATION: **Seneca Army Depot Activity, Romulus, NY 14541**
WELL LOCATION (N/E): **997914.8 749118.0**
DRILLING CONTRACTOR: **American Auger and Ditching, Inc.**
DRILLING METHOD: **Hollow Stem Auger**
WELL INSTALLATION STARTED: **08/13/96**
WELL INSTALLATION COMPLETED: **08/13/96**

GROUND SURFACE ELEVATION: **731.5**
DATUM: **NGVD 88**
GEOLOGIST: **F. O'Loughlin**
CHECKED BY: **P. Feshbach-Meriney**
CONSULTANT:

STRATA: MACRO DESCRIPTION (from boring log)	DEPTH (ft.)
FL	0
TL	
WSH	5
CSH	8.3

SYMBOL / WELL DETAILS



DEPTH (ft.)		ELEVATION (ft.)
-2.1	TPC	733.6
-2.1	TR	733.6
	TC	
0.0	GS	731.5
1.5	TBS	730.0
2.5	TSP	729.0
3.4	TSC	728.1
7.9	BSC	723.6
8.3	POW	723.2

WELL CONSTRUCTION DETAILS

PROTECTIVE COVER
Diameter: **4"**
Type: **RISER**
Interval: **3.5'**

RISER
Diameter: **2"**
Type: **SCH. 40-PVC**
Interval: **5'**

SCREEN
Diameter: **2"**
Type: **SCH.40-PVC/W. WRAP/.01"**
Interval: **4.5'**

SURFACE SEAL
Type: **CEMENT**
Interval: **4"/1.5'**

GROUT
Type: **N/A**
Interval: **N/A**

SEAL
Type: **BENTONITE**
Interval: **1'**

SANDPACK
Type: **SILICA MORIE #00,#0**
Interval: **FINE:0.5', COARSE:5.3'**

WELL DEVELOPMENT DATA
Date: **8/19/96**
Method: **SURGE/PUMP**
Duration: **1 DAY**
Rate: **.16GAL/MIN**
Final Measurements:

WATER LEVELS

Date	Time	Depth,TR
8/19	1400	6.02'
8/19	1420	6.02'
8/19	1525	6.7'
8/19	1530	6.76'
8/19	1545	6.82'
8/19	1555	6.87'

pH	Temperature (degrees C)	Conductivity (micromhos/cm)	Turbidity (NTU)
6.84	19.7	35	7.9

LEGEND
SURFACE SEAL
GROUT
SEAL
SANDPACK
GRAVEL
SAND
SILT
CLAY
NO RECOVERY

TPC	TOP OF PROTECTIVE CASING
TR	TOP OF WELL RISER
GS	GROUND SURFACE
TBS	TOP BENTONITE SEAL
TSP	TOP OF SANDPACK
TSC	TOP OF SCREEN
BSC	BOTTOM OF SCREEN
TD	TOTAL DEPTH
POW	POINT OF WELL

PARSONS
ENGINEERING-SCIENCE, INC.

Seneca Army Depot
Romulus, New York

COMPLETION REPORT OF WELL No. MW17-5

APPENDIX D

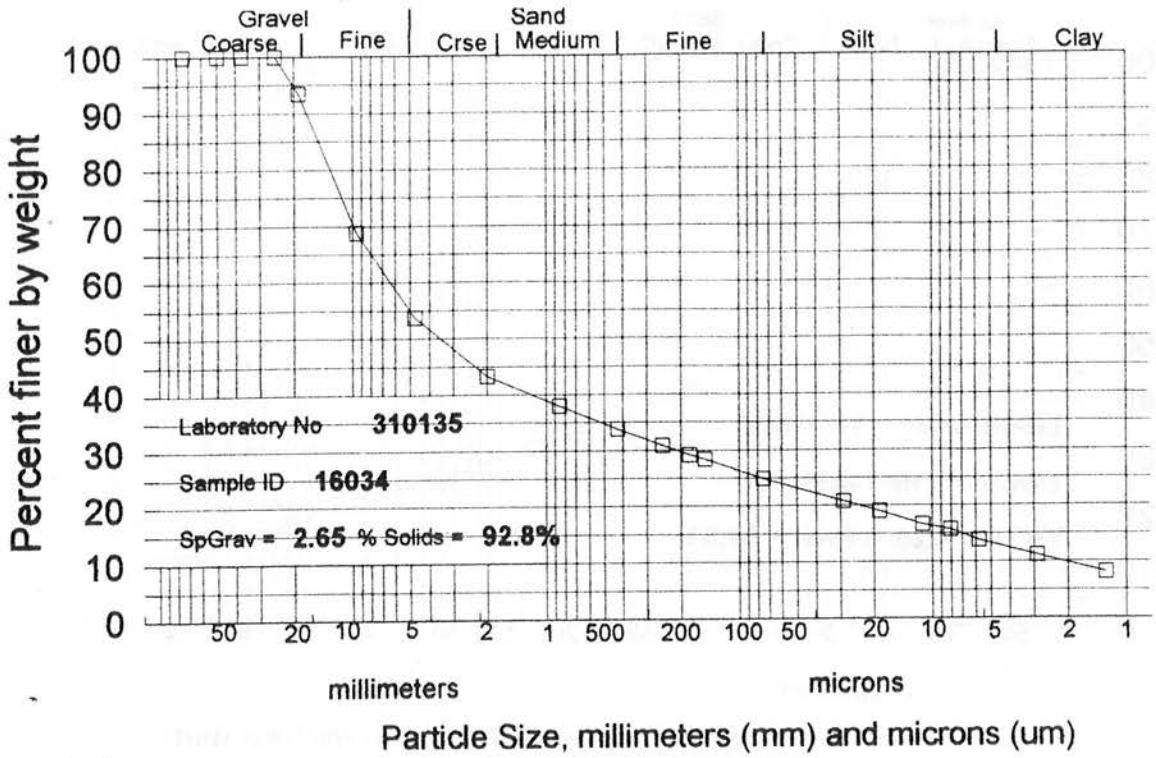
Grain Size Analysis Results

- Soils
- Sediments

Soils

Inchcape ASTM D422 Particle Size Analysis Sample ID **16034**

Sample preparation by: D421



Maximum particle size: 25 mm

Shape and hardness (>#10):

Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	93.4	6.6	
3/8 inch	9.50	68.8	24.6	
#4	4.75	53.7	15.1	
#10	2.00	43.3	10.4	
#20	850.0 um	38.0	5.3	
#40	425.0	33.7	4.2	
#60	250.0	30.9	2.8	
#80	180.0	29.2	1.7	
#100	150.0	28.4	0.8	
#200	75.0	24.8	3.6	
Hydrometer	29.0	20.9	4.0	Dispersion of soil
|	18.8	19.0	1.9	for hydrometer test
|	11.2	16.7	2.3	by mechanical mixer
|	8.0	15.7	0.9	with metal paddle
|	5.8	13.9	1.8	operated for at least
|	2.9	11.2	2.8	one minute within a
V	1.3	8.1	3.0	dispersion cup

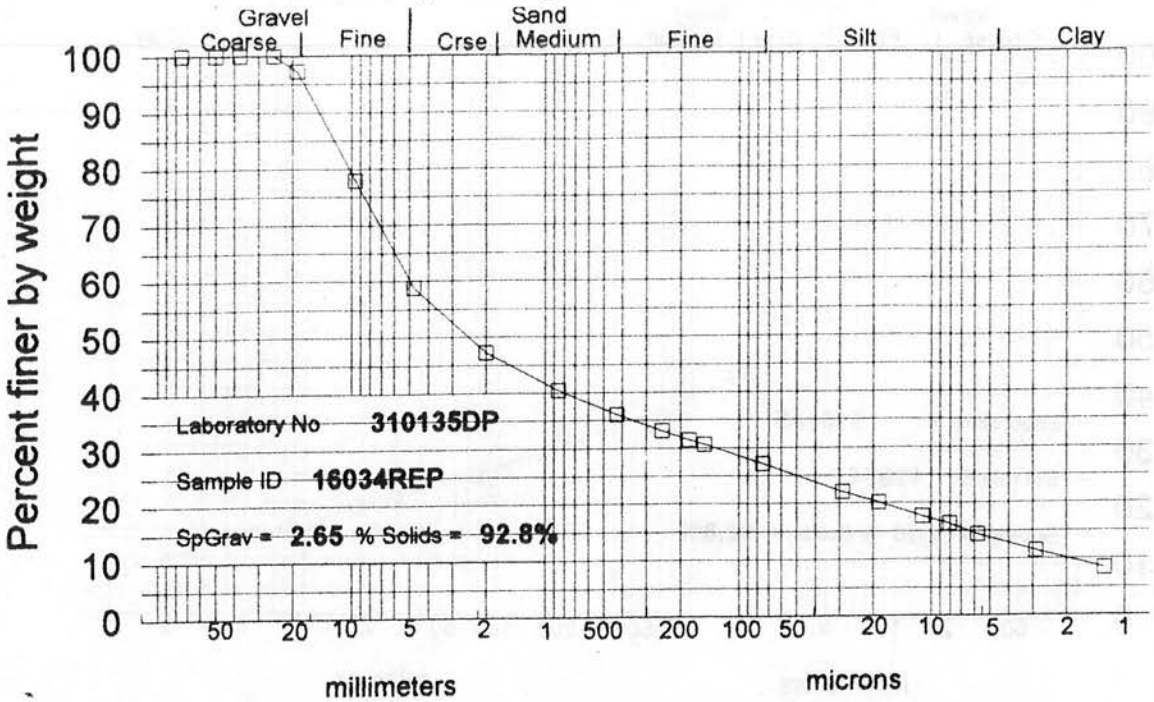
Printed by [signature] 07:57 on 28-Aug-96

Set 210
Lab No. 310135

0013A

Inchcape ASTM D422 Particle Size Analysis Sample ID **16034REP**

Sample preparation by: D421



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 25 mm

Shape and hardness (>#10):

Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	97.3	2.7	
3/8 inch	9.50	78.0	19.3	
#4	4.75	58.8	19.2	
#10	2.00	47.2	11.6	
#20	850.0 um	40.4	6.7	
#40	425.0	36.1	4.3	
#60	250.0	33.2	2.9	
#80	180.0	31.5	1.7	
#100	150.0	30.6	0.8	
#200	75.0	27.1	3.5	
Hydrometer	28.8	22.1	5.0	Dispersion of soil
|	18.7	20.1	1.9	for hydrometer test
|	11.2	17.7	2.4	by mechanical mixer
|	8.0	16.3	1.4	with metal paddle
|	5.8	14.4	1.9	operated for at least
|	2.9	11.6	2.8	one minute within a
V	1.3	8.4	3.2	dispersion cup

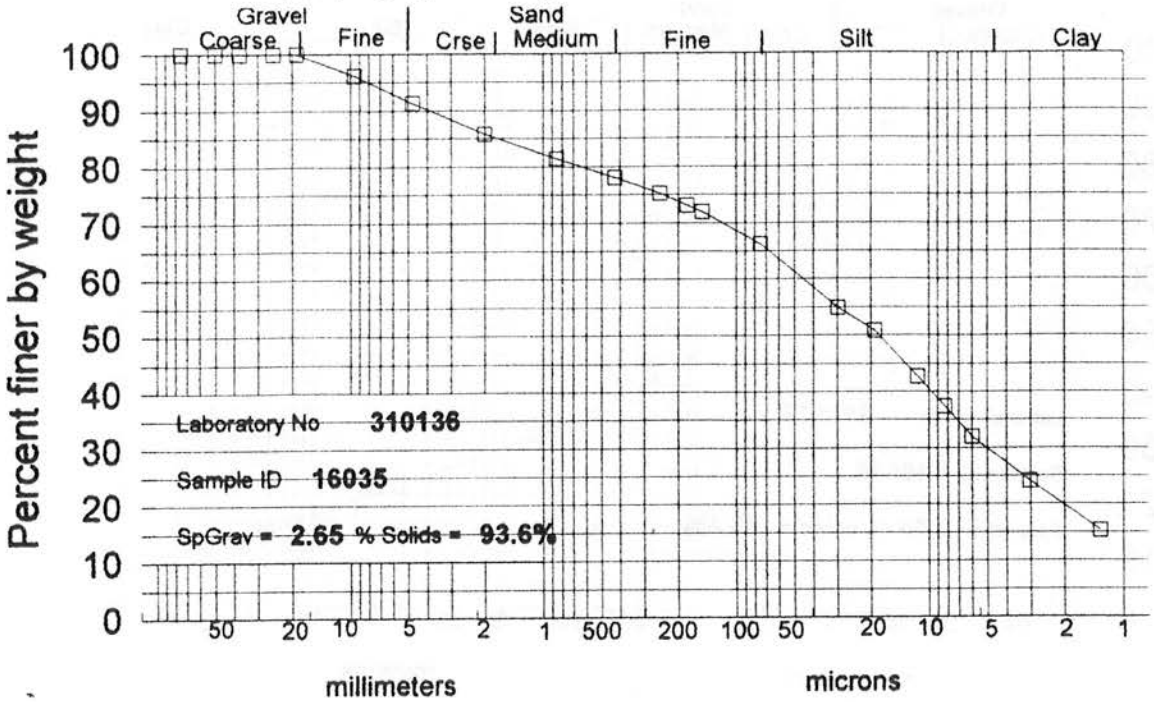
Printed by [signature] 08:21 on 28-Aug-96

Set 210
Lab No. 310135DP

0013B

Inchcape ASTM D422 Particle Size Analysis Sample ID **16035**

Sample preparation by: D421



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10):

Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	96.2	3.8	
#4	4.75	91.3	4.9	
#10	2.00	85.8	5.5	
#20	850.0 um	81.4	4.4	
#40	425.0	78.0	3.4	
#60	250.0	75.2	2.8	
#80	180.0	73.1	2.1	
#100	150.0	72.0	1.1	
#200	75.0	66.2	5.8	
Hydrometer	29.8	54.9	11.3	Dispersion of soil
|	19.2	50.8	4.1	for hydrometer test
|	11.5	42.7	8.1	by mechanical mixer
|	8.3	37.4	5.4	with metal paddle
|	6.0	32.0	5.3	operated for at least
|	3.0	24.1	8.0	one minute within a
V	1.3	15.3	8.8	dispersion cup

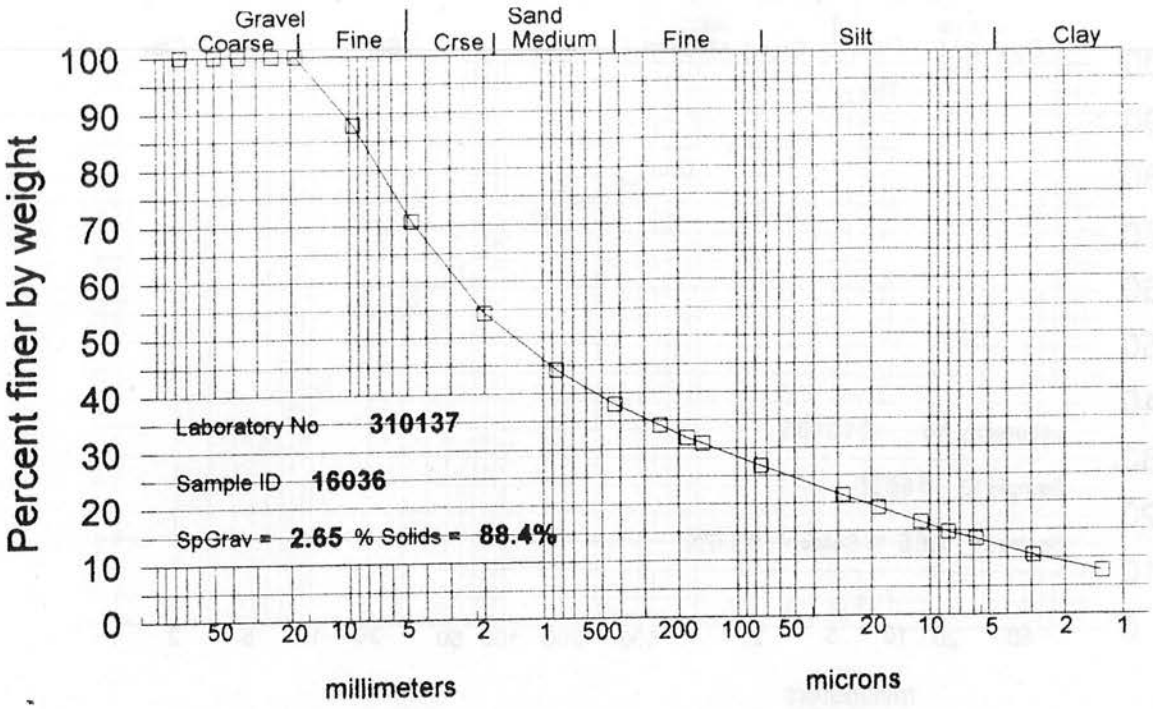
Printed by [illegible] 08:38 on 28-Aug-96

Set 210
Lab No. 310136

0013C

Inchcape ASTM D422 Particle Size Analysis Sample ID **16036**

Sample preparation by: D421



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10):

Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	87.9	12.1	
#4	4.75	70.7	17.1	
#10	2.00	54.3	16.4	
#20	850.0 um	44.2	10.1	
#40	425.0	38.0	6.2	
#60	250.0	34.1	3.8	
#80	180.0	31.9	2.2	
#100	150.0	30.8	1.1	
#200	75.0	26.8	4.0	
Hydrometer	28.2	21.4	5.4	Dispersion of soil
|	18.5	19.2	2.2	for hydrometer test
|	11.1	16.5	2.6	by mechanical mixer
|	8.0	14.8	1.7	with metal paddle
|	5.8	13.5	1.3	operated for at least
|	2.9	10.5	3.0	one minute within a
V	1.3	7.6	2.9	dispersion cup

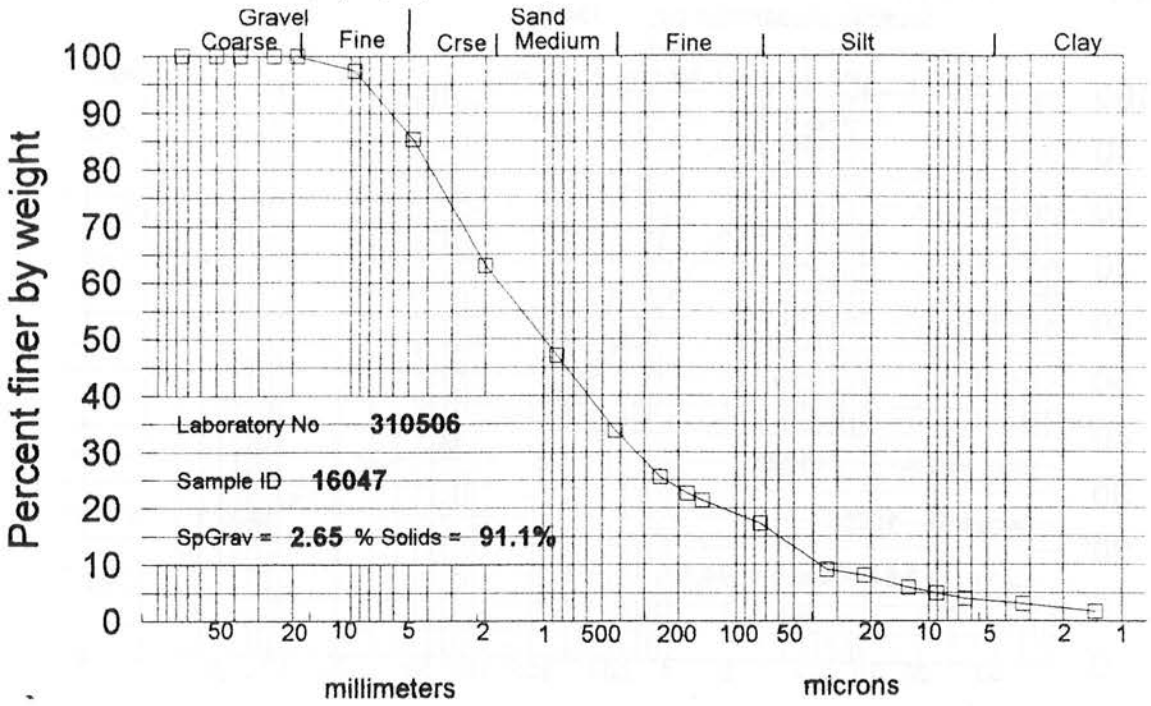
Printed by [signature] 09:18 on 28-Aug-96

Set 210
Lab No. 310137

0013D

Inchcape ASTM D422 Particle Size Analysis Sample ID **16047**

Sample preparation by: D421



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10):

Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	97.3	2.7	
#4	4.75	85.3	12.0	
#10	2.00	62.9	22.4	
#20	850.0 um	47.1	15.8	
#40	425.0	33.8	13.3	
#60	250.0	25.6	8.2	
#80	180.0	22.6	3.0	
#100	150.0	21.4	1.2	
#200	75.0	17.4	4.1	
Hydrometer	34.0	9.1	8.2	Dispersion of soil
|	21.7	8.1	1.0	for hydrometer test
|	12.8	6.0	2.1	by mechanical mixer
|	9.1	5.0	1.0	with metal paddle
|	6.5	4.0	1.0	operated for at least
|	3.3	3.0	1.0	one minute within a
V	1.4	1.7	1.3	dispersion cup

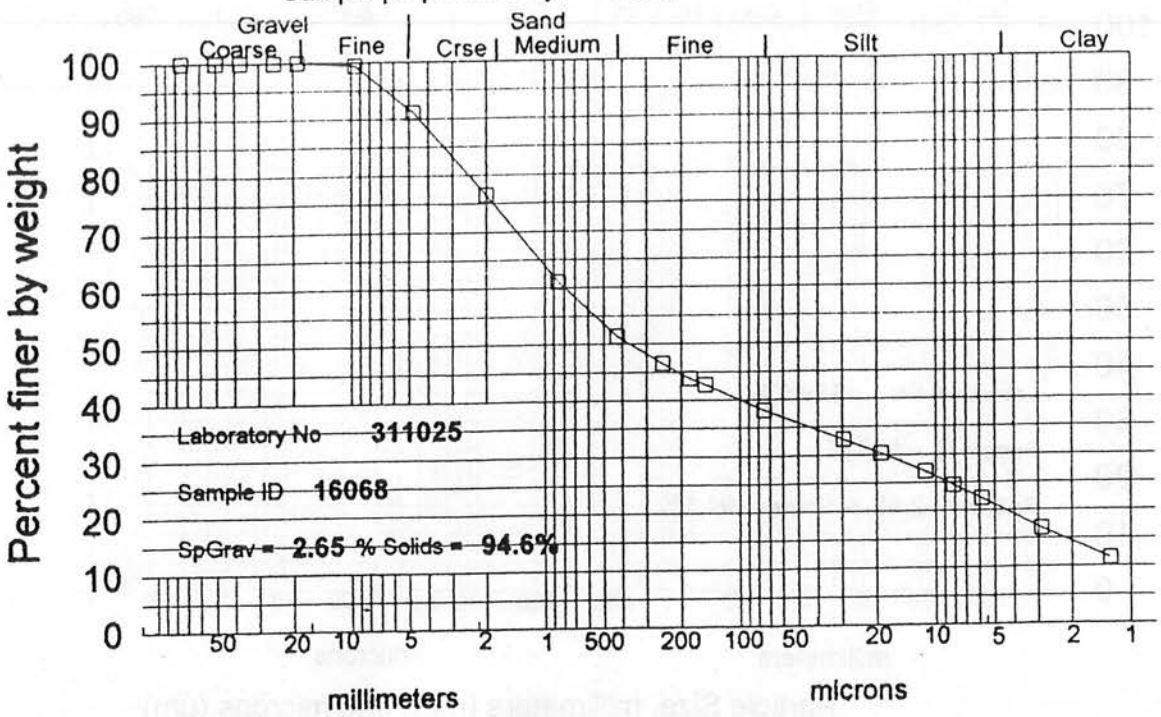
Printed by [signature] 09:25 on 28-Aug-96

Set 210
Lab No. 310506

0013E

Inchcape ASTM D422 Particle Size Analysis Sample ID 16068

Sample preparation by: D421



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10):

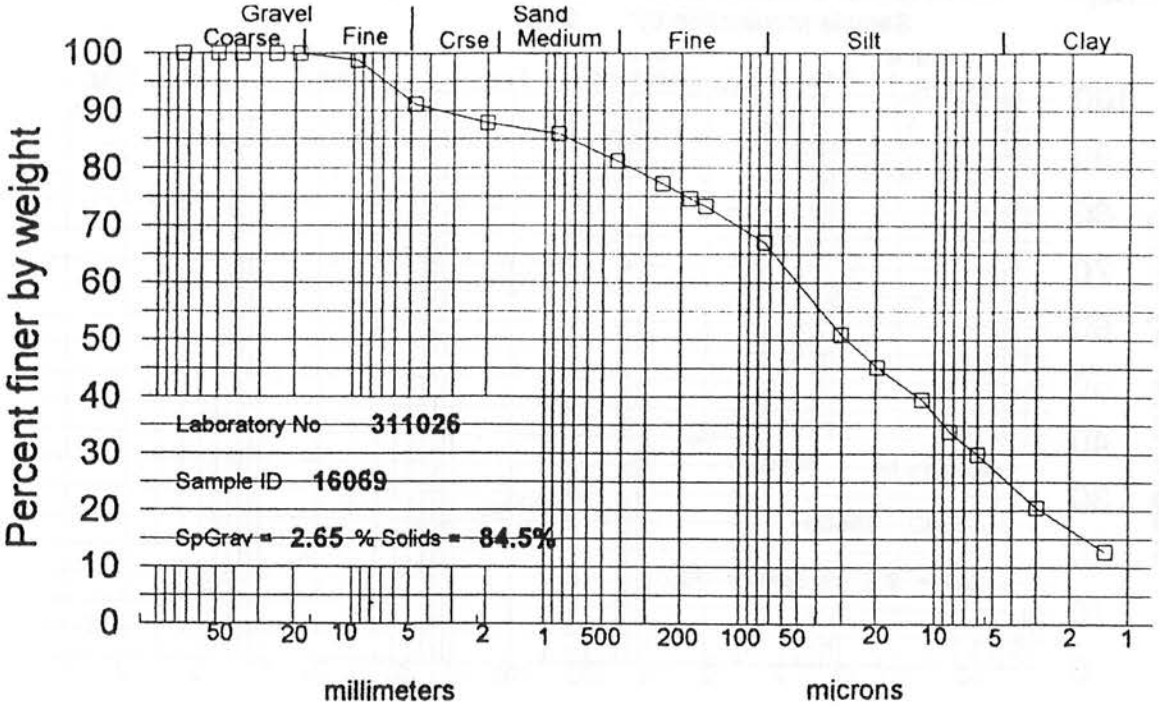
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	99.4	0.6	
#4	4.75	91.2	8.2	
#10	2.00	76.5	14.7	
#20	850.0 um	61.0	15.5	
#40	425.0	51.4	9.6	
#60	250.0	46.5	5.0	
#80	180.0	43.8	2.6	
#100	150.0	42.7	1.2	
#200	75.0	38.1	4.6	
Hydrometer	29.7	32.8	5.3	Dispersion of soil
|	19.1	30.3	2.4	for hydrometer test
|	11.3	27.0	3.3	by mechanical mixer
|	8.1	24.6	2.4	with metal paddle
|	5.8	22.2	2.4	operated for at least
|	2.9	16.8	5.4	one minute within a
V	1.3	11.5	5.4	dispersion cup

Printed by [signature] 07:31 on 06-Sep-96

Set 211
Lab No. 311025

Inchcape ASTM D422 Particle Size Analysis Sample ID 16069

Sample preparation by: D421



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10):

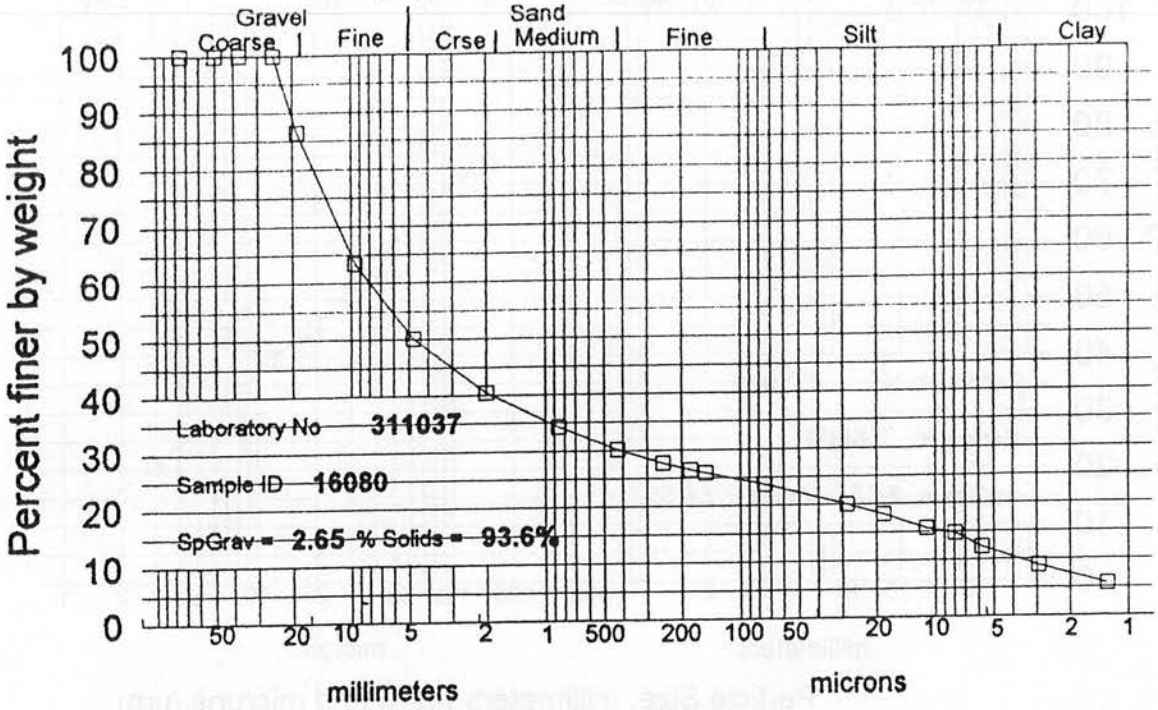
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	98.8	1.2	
#4	4.75	91.1	7.6	
#10	2.00	87.8	3.3	
#20	850.0 um	85.9	1.9	
#40	425.0	81.2	4.7	
#60	250.0	77.3	3.9	
#80	180.0	74.6	2.7	
#100	150.0	73.3	1.3	
#200	75.0	67.0	6.3	
Hydrometer	30.4	50.9	16.2	Dispersion of soil
|	19.7	45.2	5.7	for hydrometer test
|	11.6	39.6	5.6	by mechanical mixer
|	8.4	34.0	5.6	with metal paddle
|	6.0	29.8	4.1	operated for at least
|	3.0	20.6	9.3	one minute within a
V	1.3	12.7	7.8	dispersion cup

Printed by 07:43 on 06-Sep-96

Set 211
Lab No. 311026

Inchcape ASTM D422 Particle Size Analysis Sample ID 16080

Sample preparation by: D421



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 25 mm

Shape and hardness (>#10):

Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	86.4	13.6	
3/8 inch	9.50	63.4	23.1	
#4	4.75	50.2	13.2	
#10	2.00	40.5	9.7	
#20	850.0 um	34.2	6.2	
#40	425.0	30.1	4.1	
#60	250.0	27.8	2.4	
#80	180.0	26.5	1.3	
#100	150.0	25.9	0.5	
#200	75.0	23.8	2.1	
Hydrometer	28.5	20.0	3.8	Dispersion of soil
|	18.5	18.3	1.7	for hydrometer test
|	11.1	15.7	2.6	by mechanical mixer
|	7.9	14.8	0.9	with metal paddle
|	5.8	12.2	2.6	operated for at least
|	2.9	8.9	3.3	one minute within a
V	1.3	5.6	3.3	dispersion cup

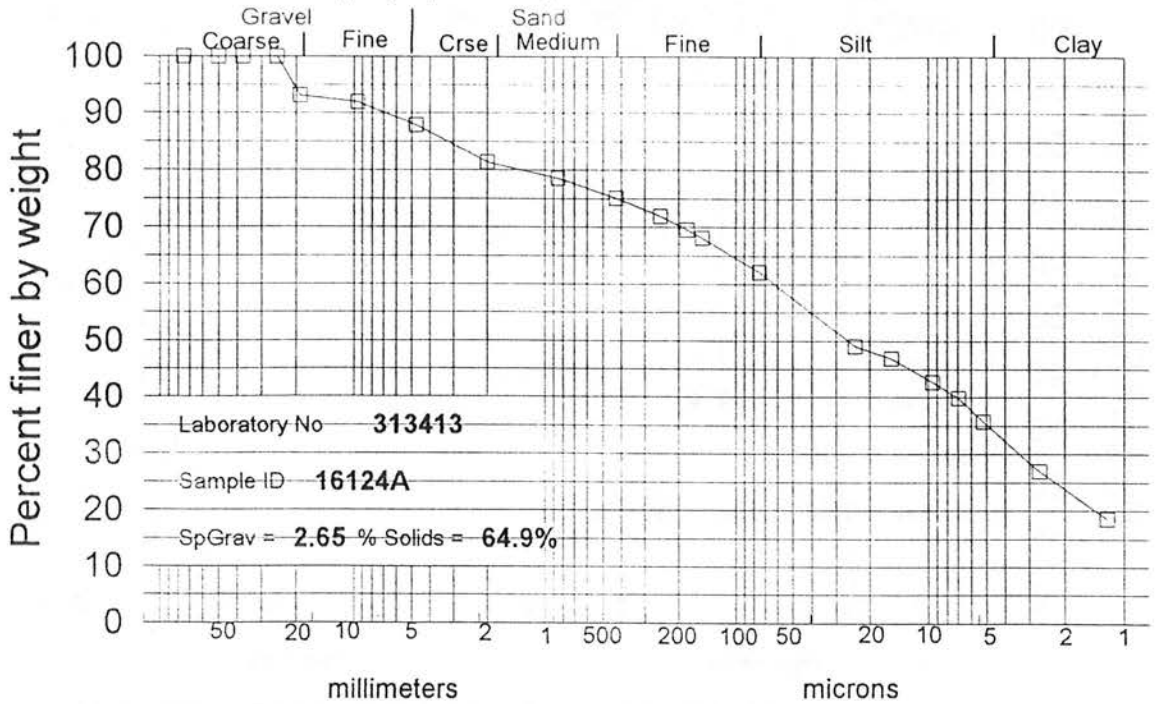
Printed by [signature] 07:57 on 06-Sep-96

Set 211
Lab No. 311037

Sediments

Inchcape ASTM D422 Particle Size Analysis Sample ID **16124A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 25 mm

Shape and hardness (>#10): rounded hard to brittle

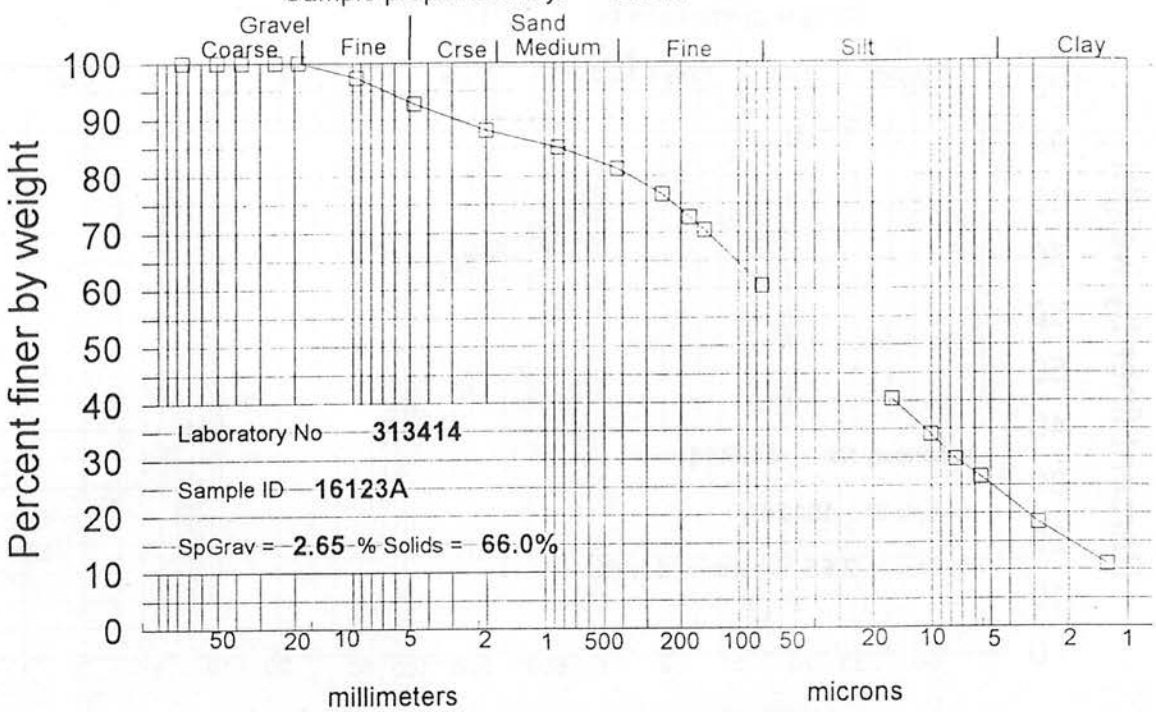
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	93.1	6.9	
3/8 inch	9.50	91.9	1.2	
#4	4.75	87.9	4.0	
#10	2.00	81.3	6.6	
#20	850.0 um	78.5	2.8	
#40	425.0	75.1	3.4	
#60	250.0	72.0	3.1	
#80	180.0	69.5	2.5	
#100	150.0	68.1	1.4	
#200	75.0	62.2	6.0	
Hydrometer	23.9	49.0	13.1	Dispersion of soil
|	15.6	46.9	2.1	for hydrometer test
|	9.5	42.7	4.2	by mechanical mixer
|	7.0	39.9	2.8	with metal paddle
|	5.2	35.7	4.2	operated for at least
|	2.7	27.0	8.8	one minute within a
V	1.2	18.6	8.4	dispersion cup

Printed by [illegible] 09:15 on 01-Oct-96

Set 214
Lab No. 313413

Inchcape ASTM D422 Particle Size Analysis Sample ID **16123A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10): rounded hard to brittle

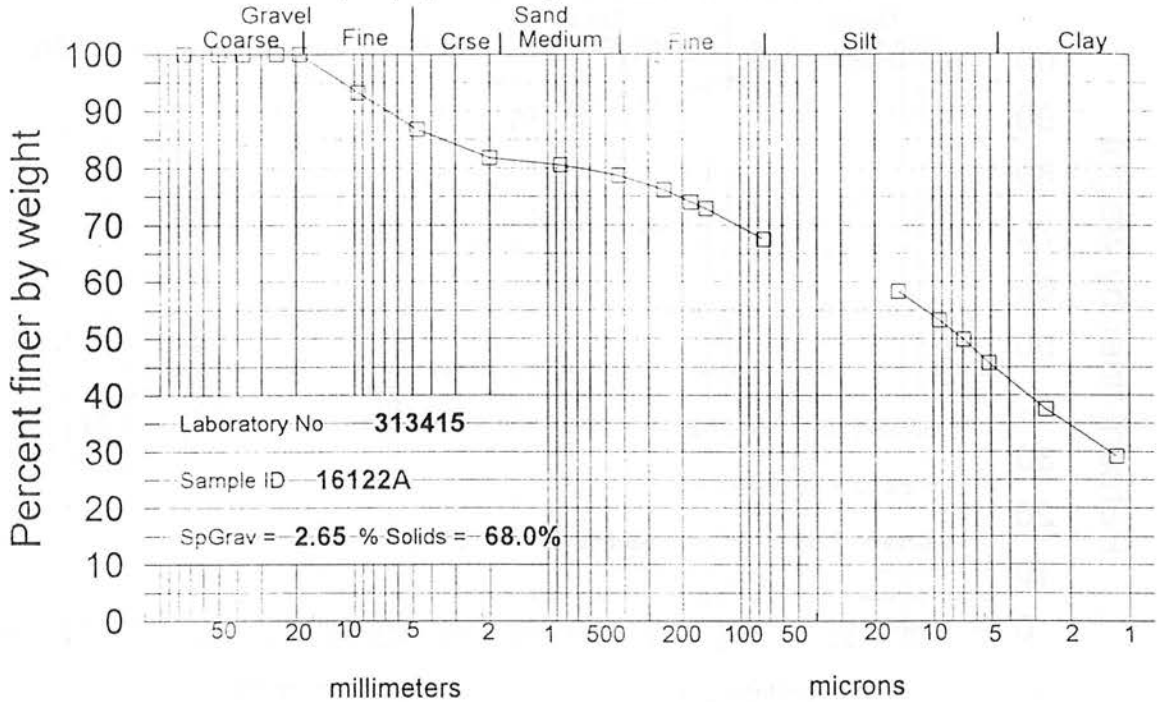
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	97.5	2.5	
#4	4.75	92.8	4.7	
#10	2.00	88.0	4.7	
#20	850.0 um	85.0	3.0	
#40	425.0	81.2	3.8	
#60	250.0	76.7	4.5	
#80	180.0	72.7	4.0	
#100	150.0	70.3	2.3	
#200	75.0	60.6	9.8	
Hydrometer				
|	16.0	40.5	20.1	for hydrometer test
|	10.1	34.1	6.3	by mechanical mixer
|	7.5	29.7	4.4	with metal paddle
|	5.6	26.5	3.2	operated for at least
|	2.9	18.5	8.0	one minute within a
V	1.3	11.0	7.5	dispersion cup

Printed by [signature] 14:53 on 03-Oct-96

Set 214
Lab No. 313414

Inchcape ASTM D422 Particle Size Analysis Sample ID **16122A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10): rounded soft to brittle

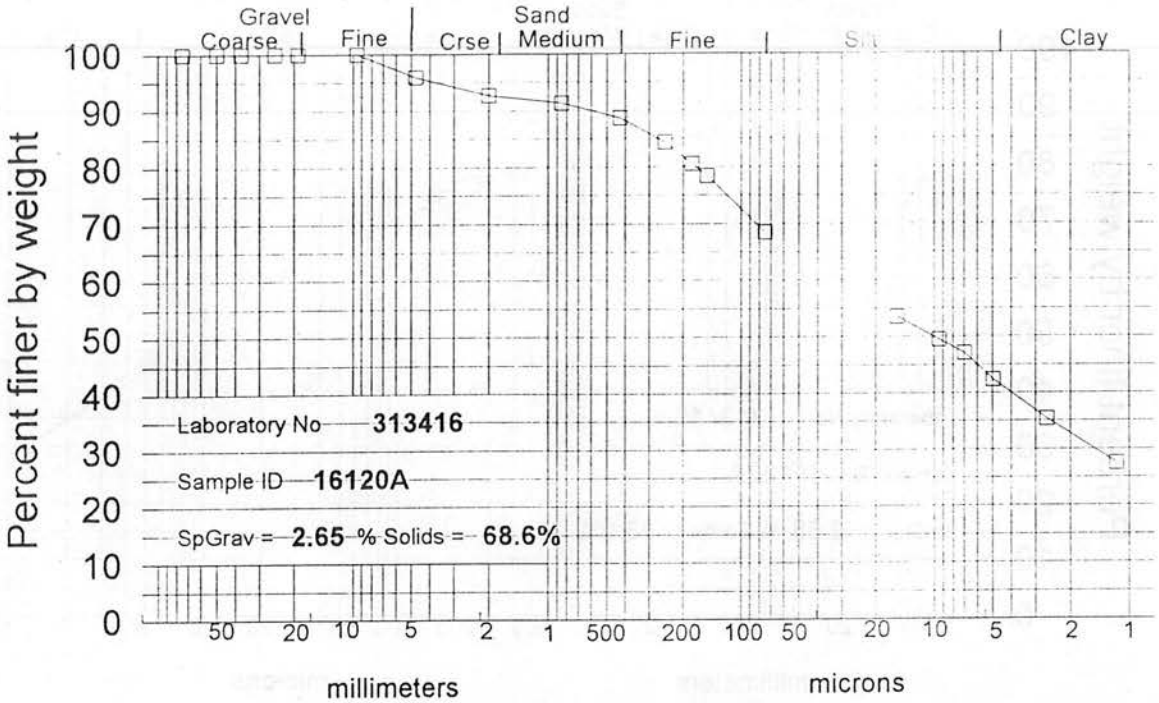
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	93.2	6.8	
#4	4.75	86.8	6.4	
#10	2.00	81.7	5.1	
#20	850.0 um	80.5	1.2	
#40	425.0	78.6	1.9	
#60	250.0	76.1	2.4	
#80	180.0	74.0	2.1	
#100	150.0	72.9	1.1	
#200	75.0	67.5	5.4	
Hydrometer				
|	15.2	58.3	9.2	for hydrometer test
|	9.3	53.3	5.1	by mechanical mixer
|	6.9	49.9	3.4	with metal paddle
|	5.1	45.7	4.2	operated for at least
|	2.6	37.5	8.2	one minute within a
V	1.2	29.2	8.4	dispersion cup

Printed by 14:53 on 03-Oct-96

Set 214
Lab No. 313415

Inchcape ASTM D422 Particle Size Analysis Sample ID 16120A

Sample preparation by: D2217



Maximum particle size: 9.5 mm

Shape and hardness (>#10): subrounded hard to brittle

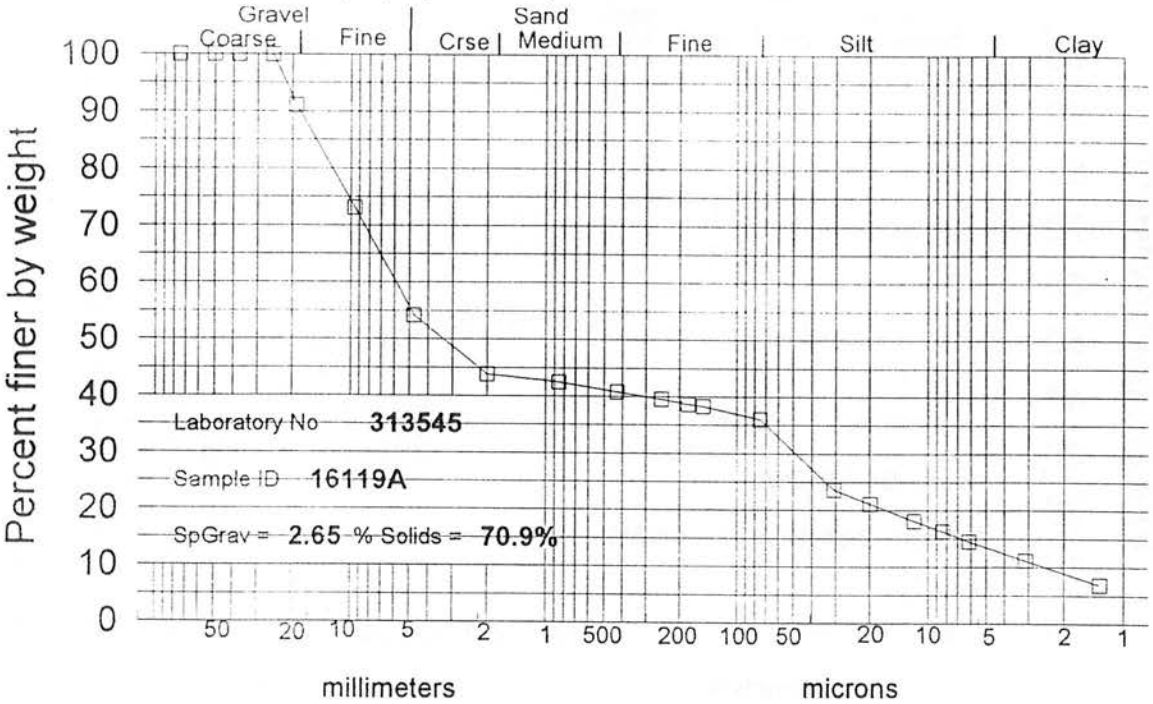
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	100.0	0.0	
#4	4.75	96.0	4.0	
#10	2.00	92.6	3.4	
#20	850.0 um	91.3	1.3	
#40	425.0	88.6	2.7	
#60	250.0	84.4	4.2	
#80	180.0	80.6	3.8	
#100	150.0	78.4	2.2	
#200	75.0	68.5	9.9	
Hydrometer				
|	15.5	53.5	15.0	for hydrometer test
|	9.4	49.4	4.0	by mechanical mixer
|	6.9	47.1	2.4	with metal paddle
|	4.9	42.3	4.8	operated for at least
|	2.6	35.4	6.9	one minute within a
V	1.2	27.5	7.9	dispersion cup

Set 214

Printed by [signature] 14:53 on 03-Oct-96 Lab No. 313416

Inchcape ASTM D422 Particle Size Analysis Sample ID **16119A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 25 mm

Shape and hardness (>#10): rounded soft to brittle

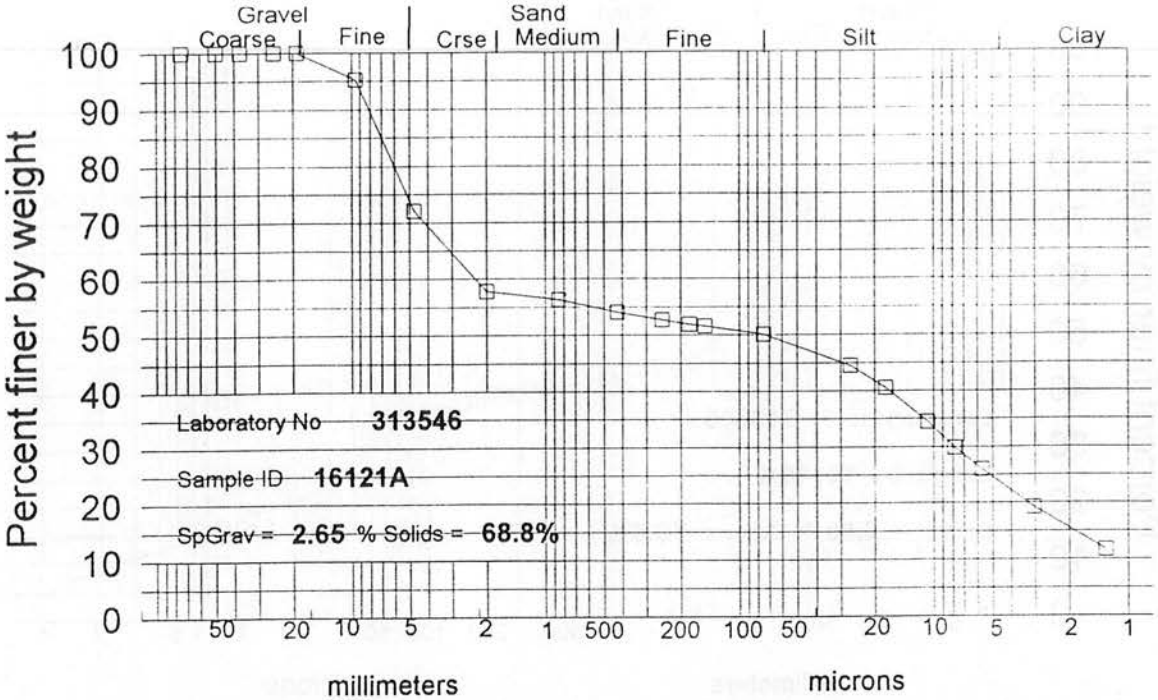
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	91.1	8.9	
3/8 inch	9.50	73.1	18.0	
#4	4.75	54.2	18.9	
#10	2.00	43.8	10.3	
#20	850.0 um	42.4	1.4	
#40	425.0	40.7	1.7	
#60	250.0	39.5	1.2	
#80	180.0	38.7	0.9	
#100	150.0	38.2	0.4	
#200	75.0	36.0	2.2	
Hydrometer	30.7	23.7	12.4	Dispersion of soil
|	19.9	21.2	2.4	for hydrometer test
|	11.8	18.2	3.0	by mechanical mixer
|	8.4	16.4	1.8	with metal paddle
|	6.1	14.5	1.8	operated for at least
|	3.1	11.1	3.4	one minute within a
V	1.3	6.9	4.2	dispersion cup

Printed by [illegible] 09:44 on 02-Oct-96

Set 214
Lab No. 313545

Inchcape ASTM D422 Particle Size Analysis Sample ID 16121A

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10): rounded soft to brittle

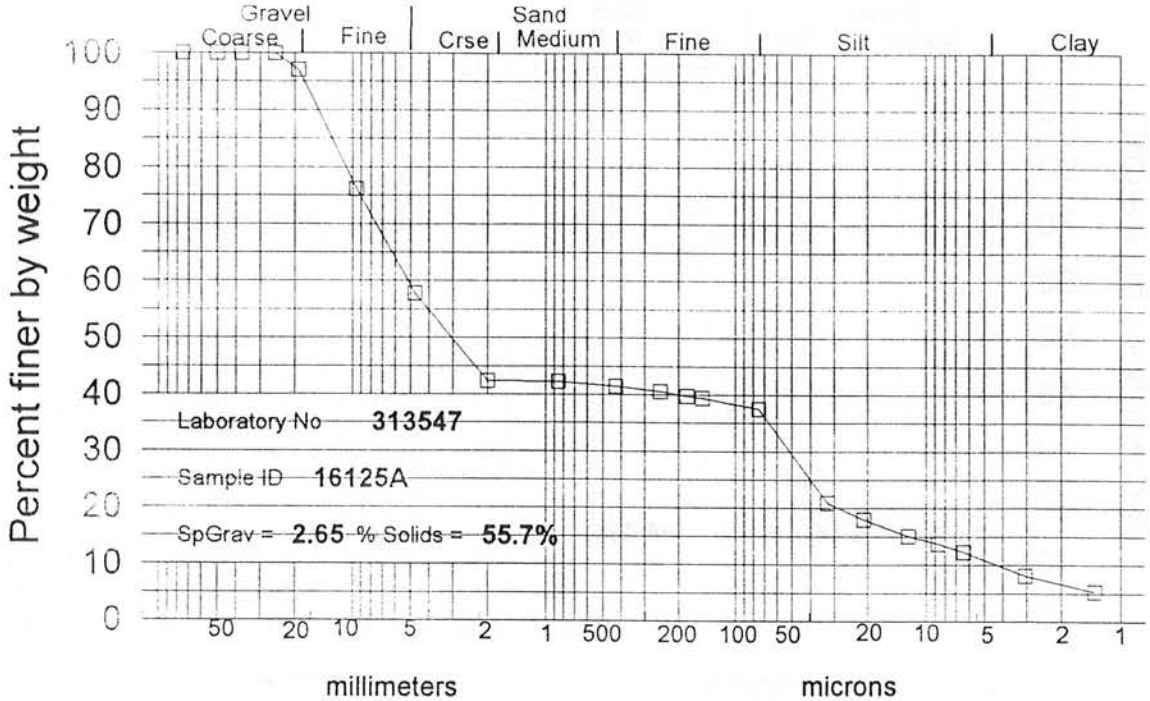
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	95.3	4.7	
#4	4.75	72.1	23.1	
#10	2.00	57.8	14.4	
#20	850.0 um	56.3	1.5	
#40	425.0	54.1	2.2	
#60	250.0	52.7	1.4	
#80	180.0	51.9	0.8	
#100	150.0	51.6	0.3	
#200	75.0	50.1	1.5	
Hydrometer	26.7	44.4	5.7	Dispersion of soil
|	17.6	40.6	3.8	for hydrometer test
|	10.8	34.4	6.2	by mechanical mixer
|	7.8	29.8	4.6	with metal paddle
|	5.7	26.0	3.8	operated for at least
|	3.1	19.3	6.7	one minute within a
V	1.3	11.8	7.5	dispersion cup

Printed by [illegible] 09:45 on 02-Oct-96

Set 214
Lab No. 313546

Inchcape ASTM D422 Particle Size Analysis Sample ID **16125A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 25 mm

Shape and hardness (>#10): rounded soft to brittle

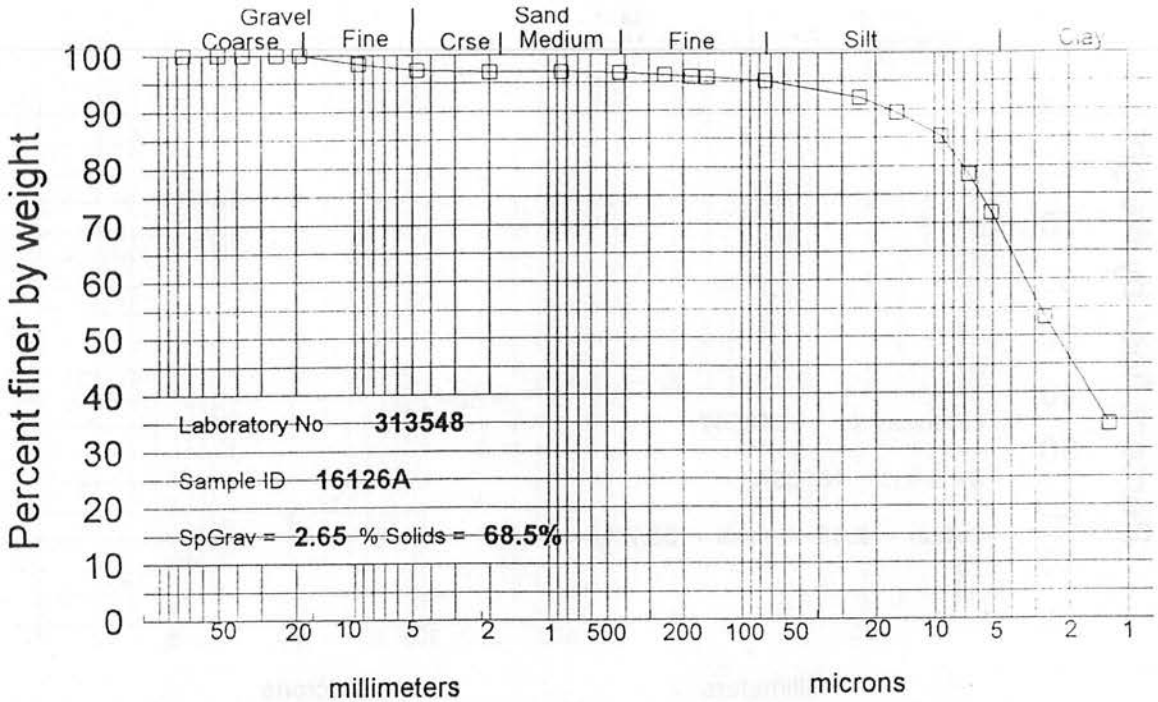
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	97.1	2.9	
3/8 inch	9.50	76.1	20.9	
#4	4.75	57.8	18.3	
#10	2.00	42.4	15.4	
#20	850.0 um	42.3	0.1	
#40	425.0	41.5	0.8	
#60	250.0	40.5	1.0	
#80	180.0	39.8	0.7	
#100	150.0	39.4	0.4	
#200	75.0	37.5	1.9	
Hydrometer	32.5	20.9	16.5	Dispersion of soil
|	21.0	18.0	2.9	for hydrometer test
|	12.4	15.2	2.9	by mechanical mixer
|	8.7	13.7	1.4	with metal paddle
|	6.4	12.3	1.4	operated for at least
|	3.1	8.2	4.1	one minute within a
V	1.4	5.3	2.8	dispersion cup

Printed by [signature] 09:55 on 02-Oct-96

Set 214
Lab No. 313547

Inchcape ASTM D422 Particle Size Analysis Sample ID 16126A

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10): subrounded soft

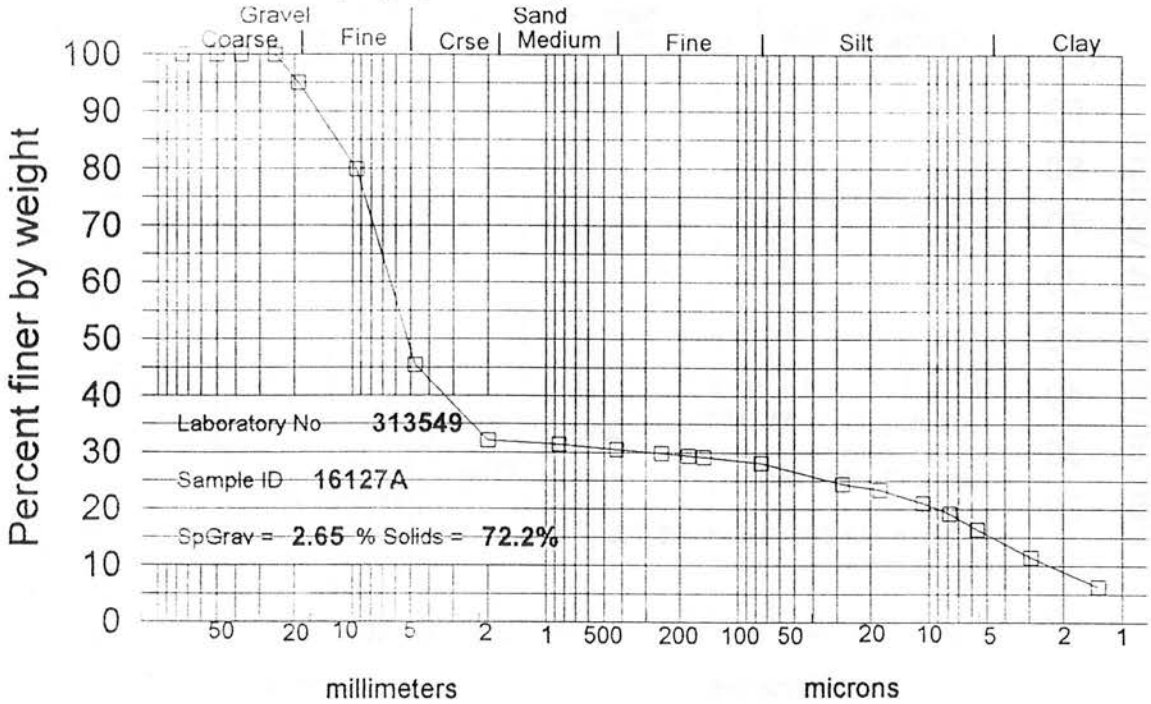
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	98.4	1.6	
#4	4.75	97.3	1.1	
#10	2.00	97.0	0.4	
#20	850.0 um	97.0	0.0	
#40	425.0	96.7	0.2	
#60	250.0	96.3	0.4	
#80	180.0	96.0	0.4	
#100	150.0	95.8	0.2	
#200	75.0	95.1	0.7	
Hydrometer	24.3	92.1	3.0	Dispersion of soil
|	15.7	89.4	2.7	for hydrometer test
|	9.3	85.3	4.1	by mechanical mixer
|	6.7	78.6	6.7	with metal paddle
|	5.1	71.8	6.8	operated for at least
|	2.7	53.2	18.5	one minute within a
V	1.2	34.4	18.9	dispersion cup

Printed by [illegible] 09:57 on 02-Oct-96

Set 214
Lab No. 313548

Inchcape ASTM D422 Particle Size Analysis Sample ID **16127A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 25 mm

Shape and hardness (>#10): rounded soft to brittle

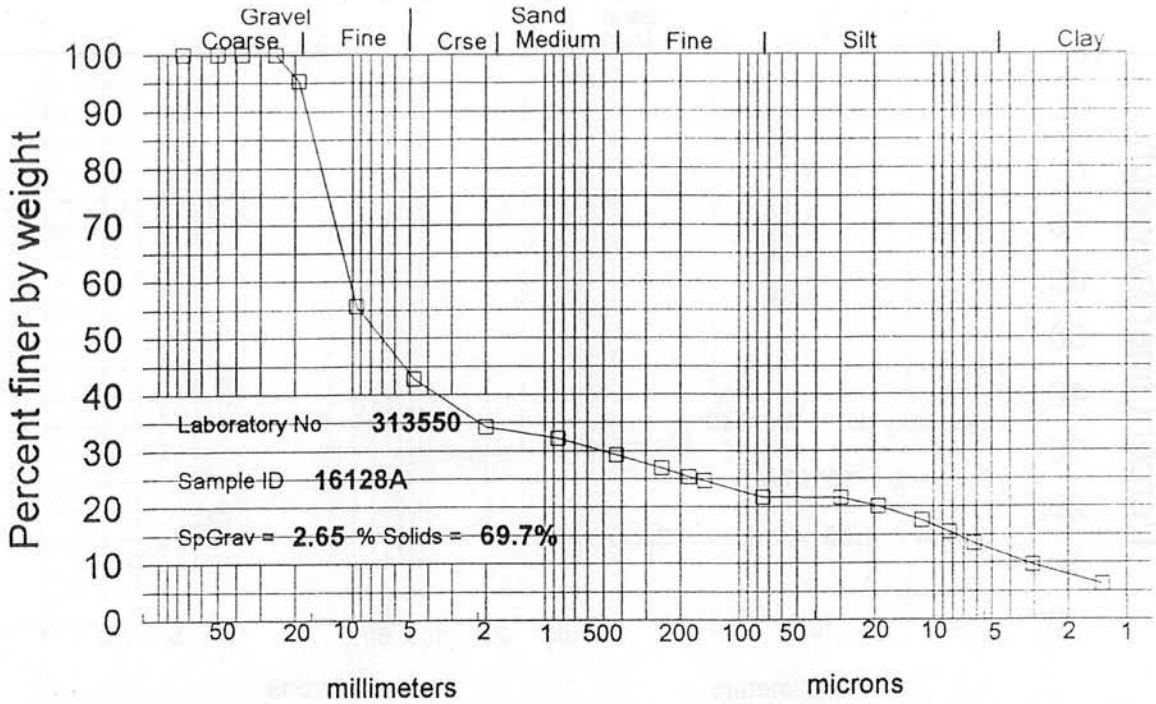
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	95.1	4.9	
3/8 inch	9.50	79.9	15.2	
#4	4.75	45.4	34.5	
#10	2.00	32.1	13.3	
#20	850.0 um	31.4	0.7	
#40	425.0	30.5	0.9	
#60	250.0	29.8	0.6	
#80	180.0	29.4	0.5	
#100	150.0	29.2	0.2	
#200	75.0	28.2	0.9	
Hydrometer	28.0	24.4	3.8	Dispersion of soil
|	18.0	23.5	0.9	for hydrometer test
|	10.8	21.1	2.4	by mechanical mixer
|	7.8	19.3	1.9	with metal paddle
|	5.6	16.5	2.8	operated for at least
|	2.9	11.5	5.0	one minute within a
V	1.3	6.3	5.2	dispersion cup

Printed by [signature] 10:00 on 02-Oct-96

Set 214
Lab No. 313549

Inchcape ASTM D422 Particle Size Analysis Sample ID 16128A

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 25 mm Shape and hardness (>#10): rounded hard to brittle

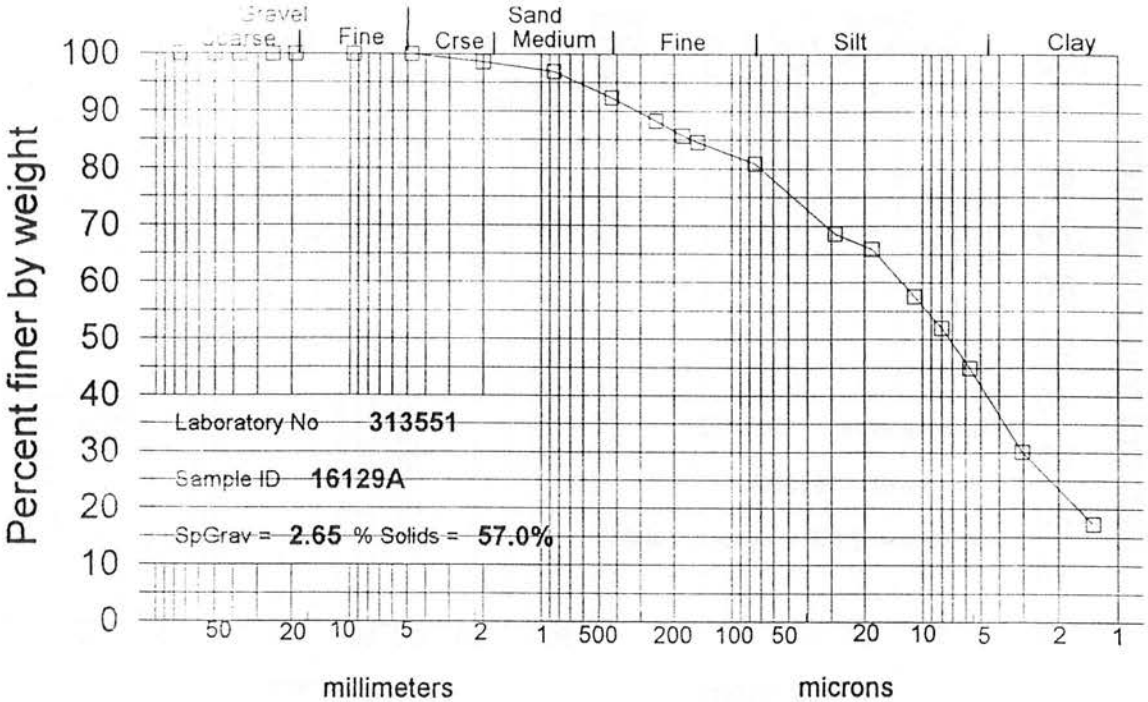
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	95.3	4.7	
3/8 inch	9.50	55.6	39.7	
#4	4.75	42.7	12.9	
#10	2.00	34.3	8.4	
#20	850.0 um	32.2	2.1	
#40	425.0	29.2	3.0	
#60	250.0	26.9	2.3	
#80	180.0	25.4	1.5	
#100	150.0	24.7	0.7	
#200	75.0	21.8	2.9	
Hydrometer	29.8	21.6	0.2	Dispersion of soil
|	19.2	20.1	1.5	for hydrometer test
|	11.5	17.6	2.5	by mechanical mixer
|	8.3	15.6	2.0	with metal paddle
|	6.2	13.6	2.0	operated for at least
|	3.1	9.7	3.9	one minute within a
V	1.3	6.2	3.5	dispersion cup

Printed by 10:01 on 02-Oct-96

Set 214
Lab No. 313550

Inchcape ASTM D422 Particle Size Analysis Sample ID **16129A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: Crs sand

Shape and hardness (>#10): subrounded soft to brittle

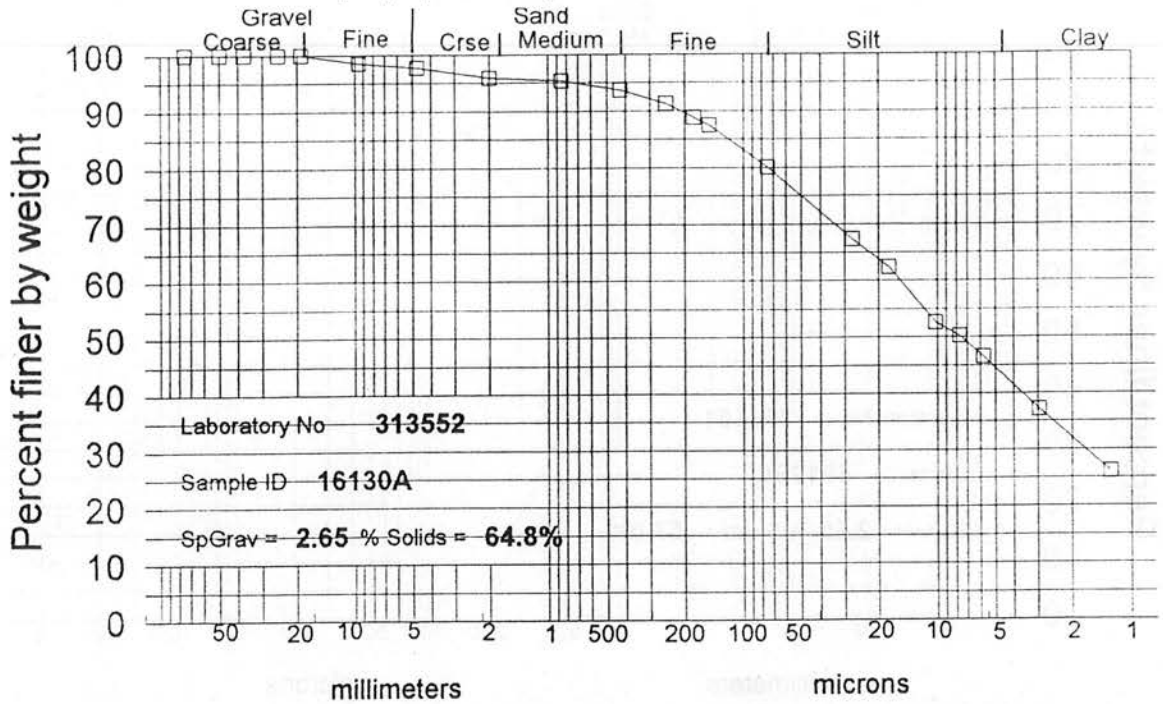
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	100.0	0.0	
#4	4.75	100.0	0.0	
#10	2.00	98.7	1.3	
#20	850.0 um	96.9	1.8	
#40	425.0	92.4	4.6	
#60	250.0	88.3	4.1	
#80	180.0	85.7	2.6	
#100	150.0	84.6	1.1	
#200	75.0	80.9	3.7	
Hydrometer	28.6	68.6	12.3	Dispersion of soil
|	18.3	65.9	2.7	for hydrometer test
|	11.0	57.5	8.4	by mechanical mixer
|	8.0	52.0	5.6	with metal paddle
|	5.7	44.9	7.0	operated for at least
|	3.1	30.0	14.9	one minute within a
V	1.3	17.4	12.7	dispersion cup

Printed by 10:03 on 02-Oct-96

Set 214
Lab No. 313551

Inchcape ASTM D422 Particle Size Analysis Sample ID **16130A**

Sample preparation by: D2217



Maximum particle size: 19 mm

Shape and hardness (>#10): subrounded soft to brittle

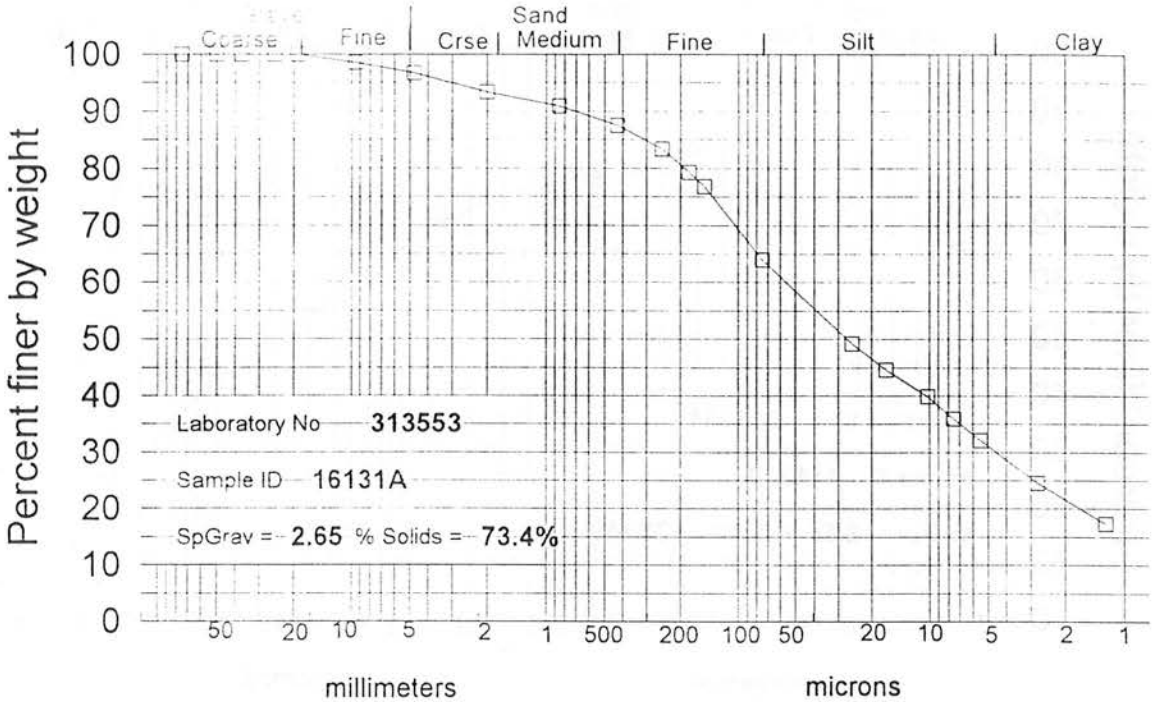
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	98.5	1.5	
#4	4.75	97.7	0.8	
#10	2.00	95.9	1.7	
#20	850.0 um	95.4	0.6	
#40	425.0	93.7	1.7	
#60	250.0	91.3	2.4	
#80	180.0	88.8	2.4	
#100	150.0	87.5	1.3	
#200	75.0	80.1	7.4	
Hydrometer	27.3	67.3	12.8	Dispersion of soil
|	17.8	62.4	4.9	for hydrometer test
|	10.2	52.6	9.8	by mechanical mixer
|	7.7	50.2	2.4	with metal paddle
|	5.8	46.6	3.7	operated for at least
|	3.0	37.1	9.4	one minute within a
V	1.3	26.2	11.0	dispersion cup

Printed by [signature] 10:04 on 02-Oct-96

Set 214
Lab No. 313552

Inchcape ASTM D422 Particle Size Analysis Sample ID **16131A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10): rounded hard to brittle

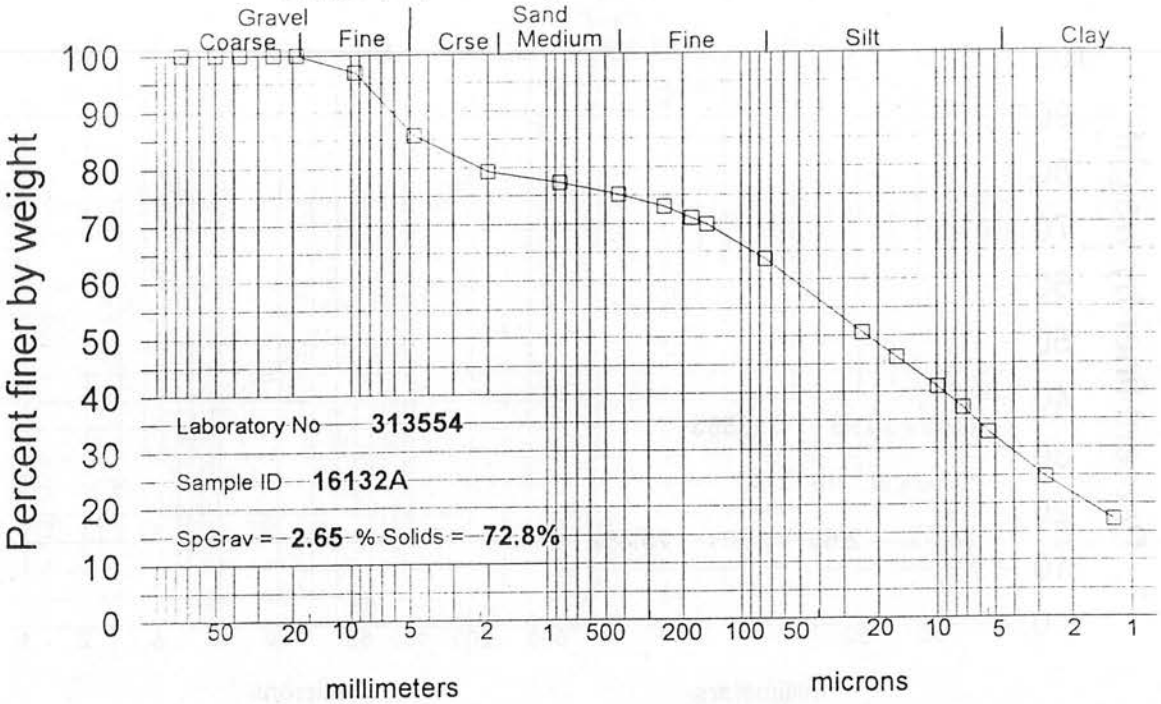
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	98.5	1.5	
#4	4.75	96.7	1.7	
#10	2.00	93.3	3.4	
#20	850.0 um	90.9	2.5	
#40	425.0	87.5	3.4	
#60	250.0	83.4	4.1	
#80	180.0	79.3	4.0	
#100	150.0	76.8	2.6	
#200	75.0	63.9	12.8	
Hydrometer	25.3	49.2	14.7	Dispersion of soil
|	16.9	44.6	4.7	for hydrometer test
|	10.2	39.9	4.7	by mechanical mixer
|	7.5	36.0	3.9	with metal paddle
|	5.5	32.1	3.9	operated for at least
|	2.8	24.6	7.5	one minute within a
V	1.2	17.3	7.3	dispersion cup

Printed by 13:47 on 02-Oct-96

Set 215
Lab No. 313553

Inchcape ASTM D422 Particle Size Analysis Sample ID 16132A

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10): rounded hard to brittle

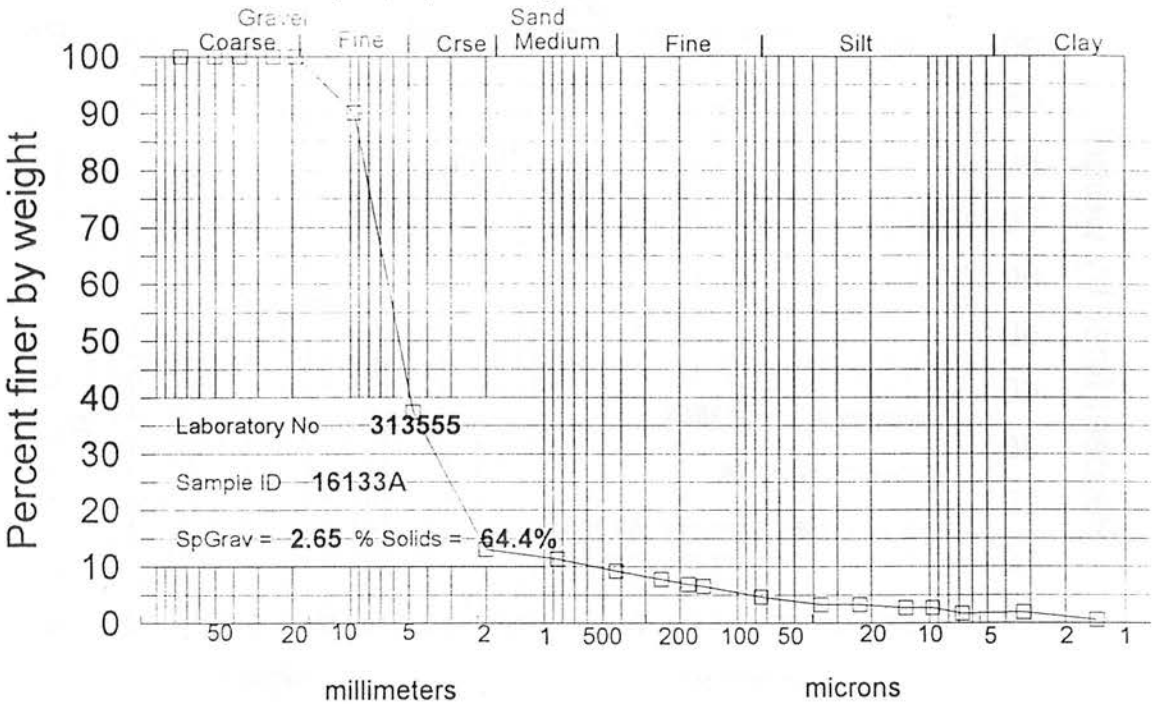
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	96.9	3.1	
#4	4.75	85.6	11.3	
#10	2.00	79.3	6.3	
#20	850.0 um	77.3	2.1	
#40	425.0	75.1	2.1	
#60	250.0	72.9	2.2	
#80	180.0	70.9	2.0	
#100	150.0	69.8	1.1	
#200	75.0	63.6	6.2	
Hydrometer	24.1	50.6	13.0	Dispersion of soil
|	16.1	46.1	4.5	for hydrometer test
|	9.9	40.9	5.2	by mechanical mixer
|	7.3	37.2	3.7	with metal paddle
|	5.4	32.8	4.4	operated for at least
|	2.7	24.8	8.0	one minute within a
V	1.2	17.3	7.6	dispersion cup

Printed by [signature] 13:47 on 02-Oct-96

Set 215
Lab No. 313554

Inchcape ASTM D422 Particle Size Analysis Sample ID **16133A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10): rounded hard to soft

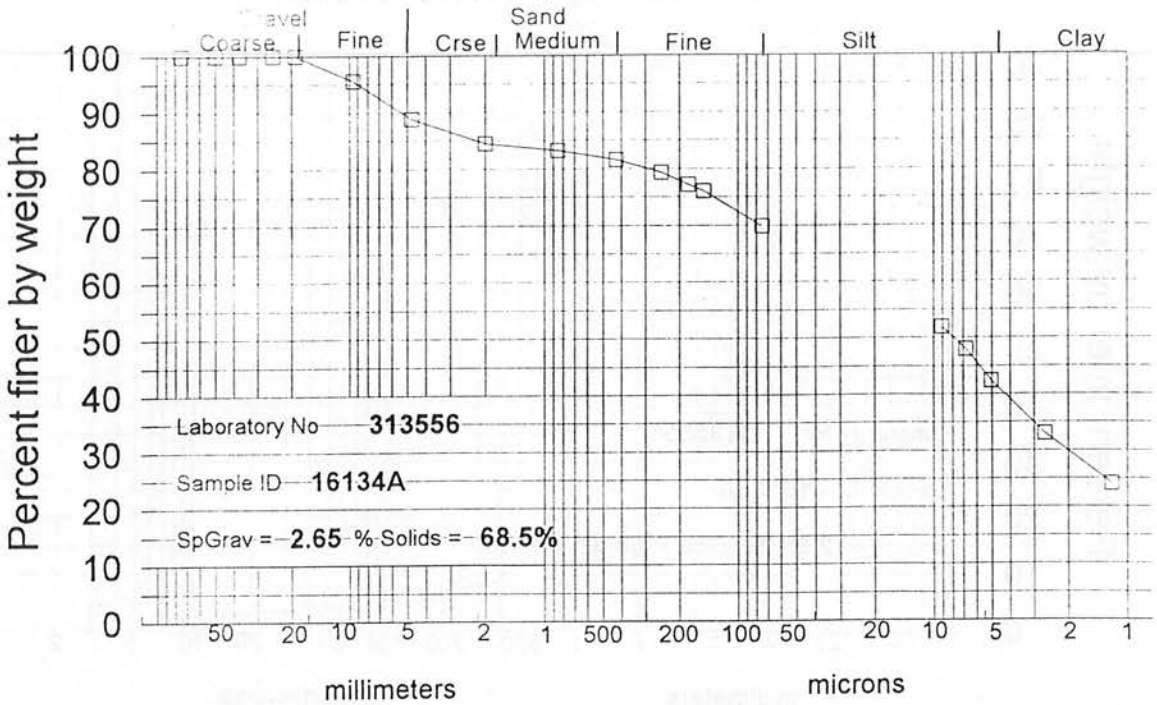
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	90.1	9.9	
#4	4.75	37.4	52.7	
#10	2.00	13.1	24.3	
#20	850.0 um	11.4	1.7	
#40	425.0	9.3	2.1	
#60	250.0	7.8	1.5	
#80	180.0	6.9	0.9	
#100	150.0	6.5	0.4	
#200	75.0	4.6	1.9	
Hydrometer	36.5	3.3	1.3	Dispersion of soil
|	23.1	3.3	0.0	for hydrometer test
|	13.4	2.8	0.6	by mechanical mixer
|	9.6	2.8	0.0	with metal paddle
|	6.7	1.7	1.1	operated for at least
|	3.2	1.9	-0.2	one minute within a
V	1.4	0.6	1.3	dispersion cup

Printed by 13:47 on 02-Oct-96

Set 215
Lab No. 313555

Inchcape ASTM D422 Particle Size Analysis Sample ID **16134A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10): rounded hard to brittle

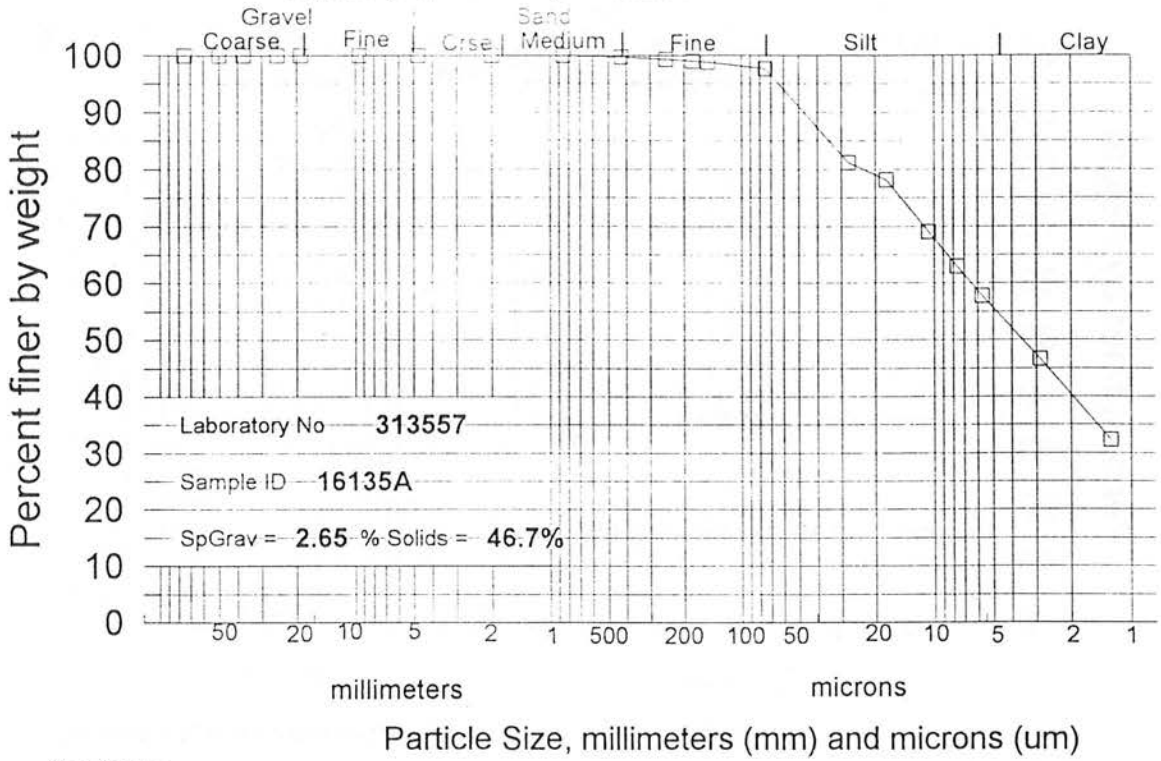
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	95.6	4.4	
#4	4.75	88.9	6.8	
#10	2.00	84.5	4.4	
#20	850.0 um	83.2	1.3	
#40	425.0	81.5	1.7	
#60	250.0	79.3	2.2	
#80	180.0	77.2	2.1	
#100	150.0	76.0	1.2	
#200	75.0	69.8	6.2	
Hydrometer				
|				
|	9.1	51.9	17.9	by mechanical mixer
|	6.8	47.9	4.0	with metal paddle
|	5.0	42.4	5.6	operated for at least
|	2.6	33.0	9.3	one minute within a
V	1.2	24.1	9.0	dispersion cup

Printed by _____ 14:32 on 03-Oct-96

Set 215
Lab No. 313556

Inchcape ASTM D422 Particle Size Analysis **Sample ID** **16135A**

Sample preparation by: D2217



Maximum particle size: Med sand

Shape and hardness (>#10):

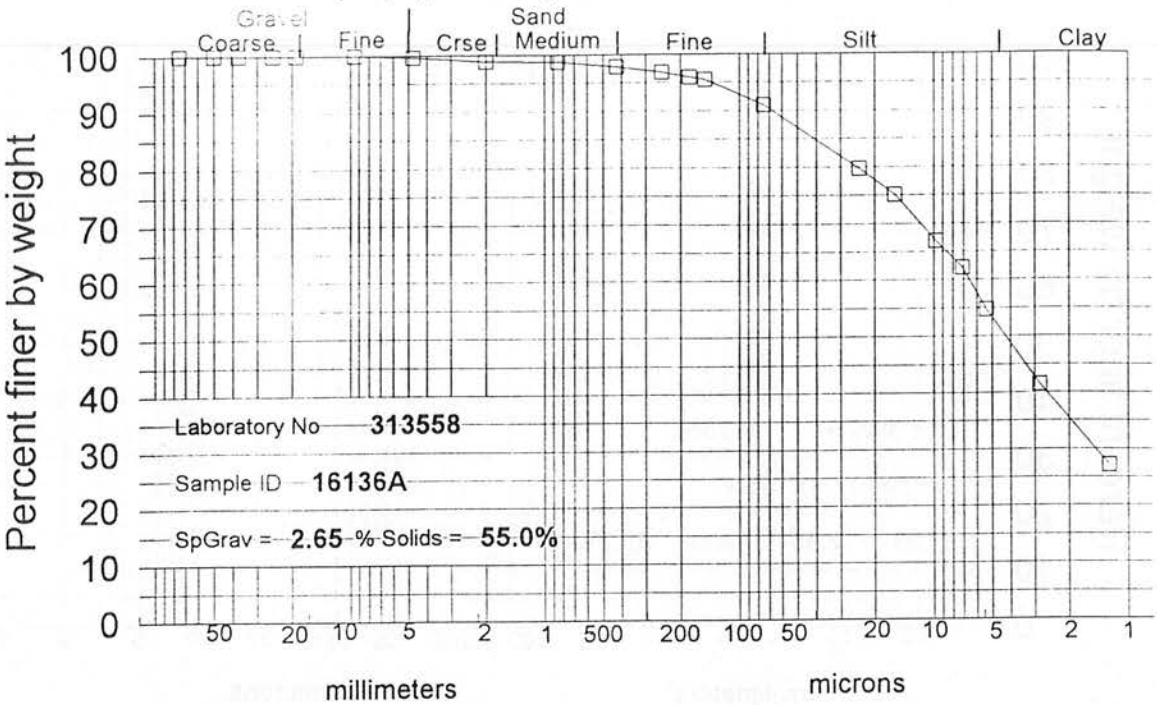
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	100.0	0.0	
#4	4.75	100.0	0.0	
#10	2.00	100.0	0.0	
#20	850.0 um	100.0	0.0	
#40	425.0	99.7	0.3	
#60	250.0	99.4	0.4	
#80	180.0	99.0	0.3	
#100	150.0	98.8	0.2	
#200	75.0	97.6	1.2	
Hydrometer	27.6	81.2	16.4	Dispersion of soil
|	17.7	78.2	3.1	for hydrometer test
|	10.7	69.0	9.2	by mechanical mixer
|	7.6	62.9	6.1	with metal paddle
|	5.7	57.7	5.2	operated for at least
|	2.9	46.7	11.1	one minute within a
V	1.3	32.4	14.3	dispersion cup

Printed by _____ 13:51 on 02-Oct-96

Set 215
Lab No. 313557

Inchcape ASTM D422 Particle Size Analysis Sample ID **16136A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 9.5 mm

Shape and hardness (>#10): rounded brittle

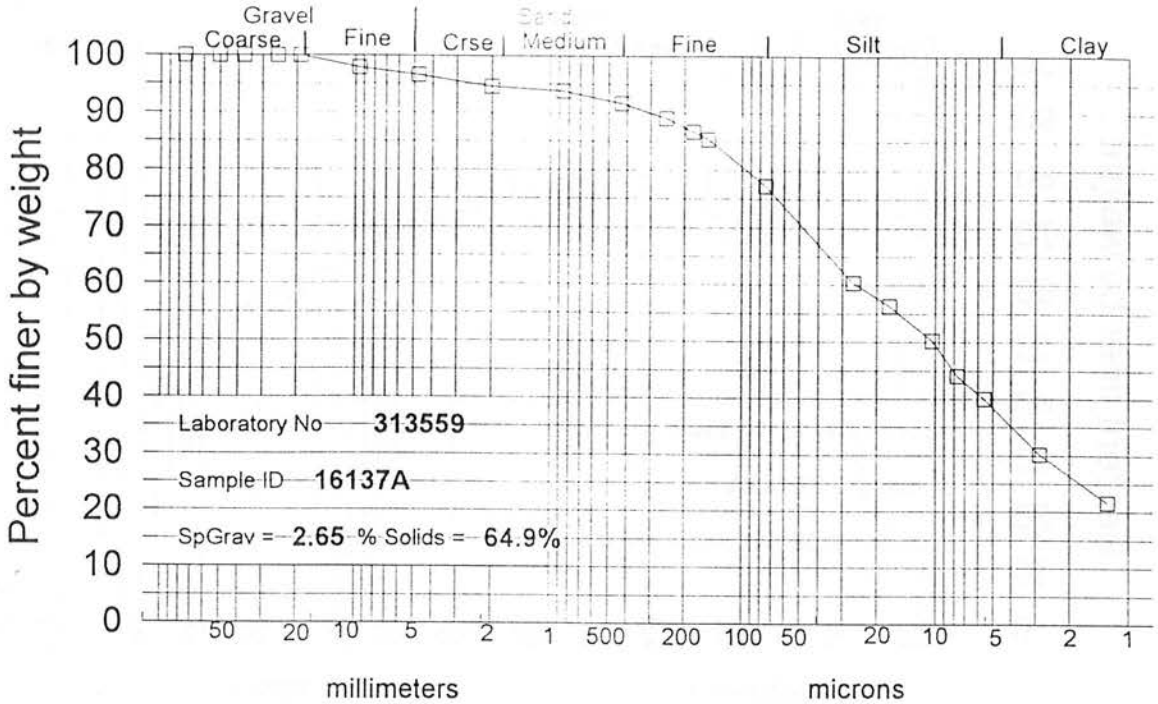
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	100.0	0.0	
#4	4.75	99.7	0.3	
#10	2.00	98.9	0.8	
#20	850.0 um	98.8	0.1	
#40	425.0	97.9	0.9	
#60	250.0	96.8	1.1	
#80	180.0	95.9	0.9	
#100	150.0	95.4	0.5	
#200	75.0	91.0	4.4	
Hydrometer	24.1	79.8	11.3	Dispersion of soil
|	15.9	75.1	4.7	for hydrometer test
|	9.8	66.9	8.2	by mechanical mixer
|	7.1	62.2	4.7	with metal paddle
|	5.3	54.8	7.4	operated for at least
|	2.8	41.5	13.3	one minute within a
V	1.3	27.1	14.3	dispersion cup

Printed by [signature] 13:51 on 02-Oct-96

Set 215
Lab No. 313558

Inchcape ASTM D422 Particle Size Analysis Sample ID **16137A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 19 mm

Shape and hardness (>#10): rounded hard to brittle

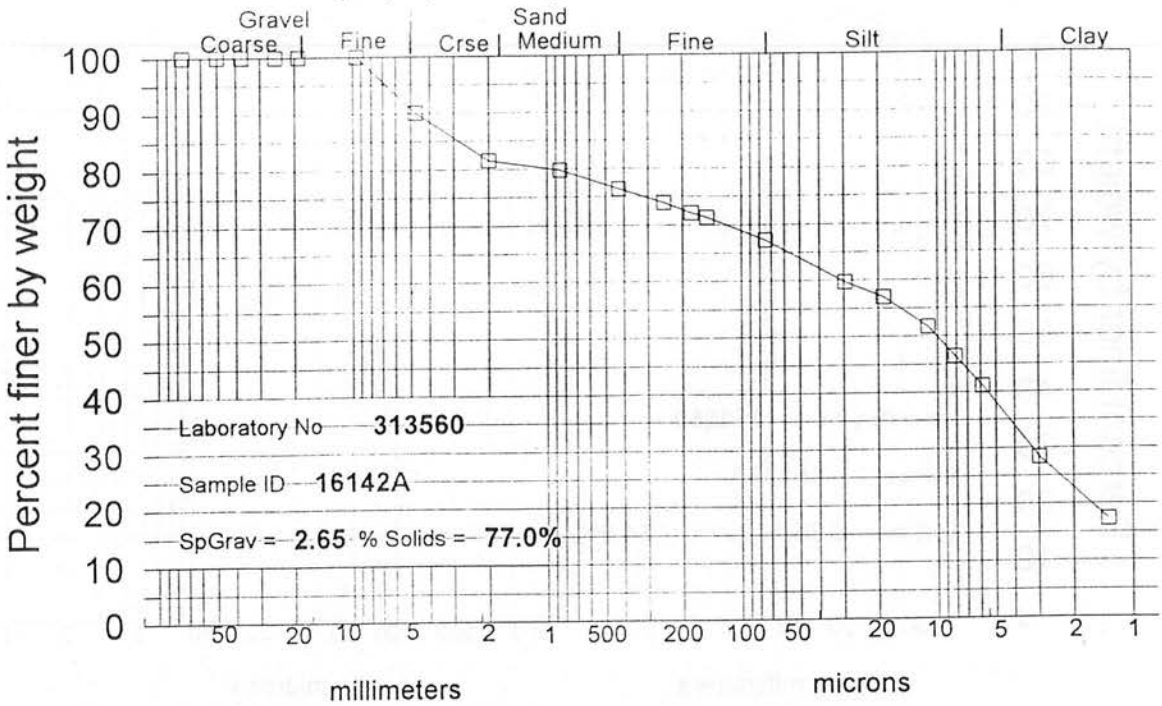
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	97.9	2.1	
#4	4.75	96.7	1.2	
#10	2.00	94.6	2.0	
#20	850.0 um	93.7	0.9	
#40	425.0	91.7	2.1	
#60	250.0	89.1	2.6	
#80	180.0	86.7	2.4	
#100	150.0	85.4	1.3	
#200	75.0	77.3	8.1	
Hydrometer	26.3	60.4	16.9	Dispersion of soil
|	17.2	56.3	4.1	for hydrometer test
|	10.4	50.2	6.1	by mechanical mixer
|	7.7	44.1	6.1	with metal paddle
|	5.6	40.0	4.1	operated for at least
|	2.9	30.2	9.8	one minute within a
V	1.3	21.6	8.6	dispersion cup

Printed by 13:52 on 02-Oct-96

Set 215
Lab No. 313559

Inchcape ASTM D422 Particle Size Analysis **Sample ID** **16142A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 9.5 mm

Shape and hardness (>#10): rounded hard to brittle

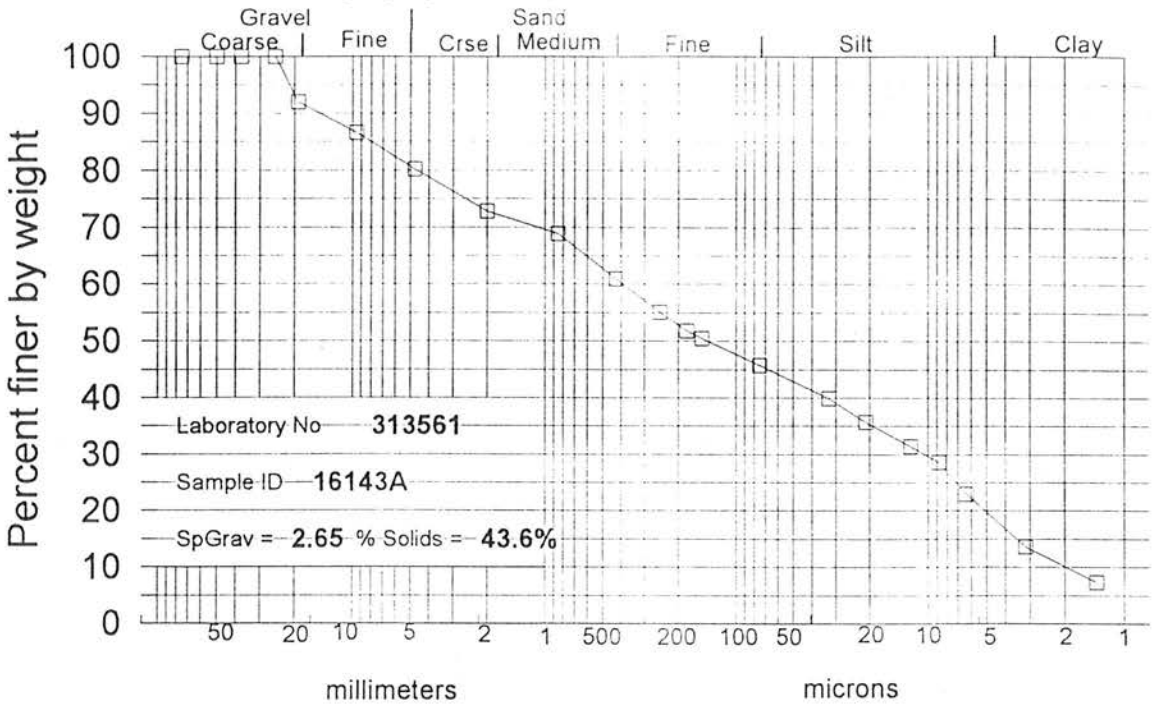
Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	100.0	0.0	
3/8 inch	9.50	100.0	0.0	
#4	4.75	90.1	9.9	
#10	2.00	81.5	8.5	
#20	850.0 um	79.8	1.8	
#40	425.0	76.3	3.4	
#60	250.0	73.9	2.4	
#80	180.0	72.1	1.8	
#100	150.0	71.3	0.8	
#200	75.0	67.2	4.1	
Hydrometer	29.4	59.7	7.6	Dispersion of soil
|	18.8	57.0	2.7	for hydrometer test
|	11.2	51.7	5.3	by mechanical mixer
|	8.1	46.4	5.3	with metal paddle
|	5.9	41.2	5.3	operated for at least
|	3.0	28.4	12.7	one minute within a
V	1.3	17.4	11.0	dispersion cup

Printed by [signature] 13:52 on 02-Oct-96

Set 215
Lab No. 313560

Inchcape ASTM D422 Particle Size Analysis Sample ID **16143A**

Sample preparation by: D2217



Particle Size, millimeters (mm) and microns (um)

Maximum particle size: 25 mm

Shape and hardness (>#10): rounded hard to brittle

Sieve size	Particle Size	Percent finer	Incremental percent	Specific Gravity assumed
3 inch	75.00 mm	100.0	0.0	
2 inch	50.00	100.0	0.0	
1.5 inch	37.50	100.0	0.0	
1 inch	25.00	100.0	0.0	
3/4 inch	19.00	92.0	8.0	
3/8 inch	9.50	86.6	5.4	
#4	4.75	80.2	6.4	
#10	2.00	72.7	7.5	
#20	850.0 um	68.8	4.0	
#40	425.0	60.9	7.9	
#60	250.0	55.1	5.8	
#80	180.0	51.8	3.3	
#100	150.0	50.5	1.3	
#200	75.0	45.7	4.8	
Hydrometer	32.7	39.9	5.8	Dispersion of soil
|	21.0	35.7	4.2	for hydrometer test
|	12.3	31.4	4.3	by mechanical mixer
|	8.8	28.6	2.8	with metal paddle
|	6.3	22.9	5.7	operated for at least
|	3.2	13.6	9.4	one minute within a
V	1.4	7.3	6.3	dispersion cup

Printed by 13:52 on 02-Oct-96

Set 215
Lab No. 313561

APPENDIX E

Slug Test Data and Hydraulic Conductivity Results

- SEAD-16 Input Data and Results
- SEAD-17 Input Data and Results

SEAD-16 Input Data and Results

MW16-1
Hand-run Slug test with Stopwatch and Electronic
Water Level Meter
9/05/96 1:03pm

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

seconds	Elapsed Time	static is: **6.95** water level is:	INPUT 1
9	0.15	7.45	0.50
12	0.20	7.36	0.41
14	0.23	7.32	0.37
16	0.27	7.28	0.33
20	0.33	7.25	0.30
22	0.37	7.22	0.27
25	0.42	7.18	0.23
28	0.47	7.16	0.21
30	0.50	7.14	0.19
33	0.55	7.12	0.17
37	0.62	7.1	0.15
42	0.70	7.09	0.14
48	0.80	7.08	0.13
73	1.22	7.06	0.11
132	2.20	7.04	0.09
209	3.48	7.02	0.07
348	5.80	7	0.05
610	10.17	6.98	0.03
930	15.50	6.97	0.02

```
MW16-1 Rising Head Slug Test
slugt1
0.5
0.083
0.35
slugt2
1.07
0.37
1.07
tsdata
0.15   0.5   1
0.2   0.41   1
0.23   0.37   1
0.27   0.33   1
0.33   0.3   1
0.37   0.27   1
0.42   0.23   1
0.47   0.21   1
0.5   0.19   1
0.55   0.17   1
0.62   0.15   1
0.7   0.14   1
0.8   0.13   1
1.22   0.11   1
2.2   0.09   1
3.48   0.07   1
5.8   0.05   1
10.17   0.03   1
15.5   0.02   1
```

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S

Version 1.10

09/11/96 13:02:18

==

TEST DESCRIPTION

Data set........... mw161.inp
Data set title..... Rising Head Slug Test for M

Knowns and Constants:
No. of data points................. 19
Radius of well casing.............. 0.083
Radius of well..................... 0.35
Aquifer saturated thickness......... 1.07
Well screen length................. 0.37
Static height of water in well...... 1.07
Log(Re/Rw)......................... 0.6266
A, B, C............................ 0.000, 0.000, 0.647

==

ANALYTICAL METHOD

ouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.3317E-002	+/-	1.4835E-003
y0 =	6.4481E-001	+/-	5.4615E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals.............. 19
Number of estimated parameters.... 2
Degrees of freedom............... 17
Residual mean.................... 0.01585
Residual standard deviation....... 0.03829
Residual variance................ 0.001466

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.15	0.5	0.45783	0.042169	1
0.2	0.41	0.40844	0.0015582	1
0.23	0.37	0.3814	-0.011404	1
0.27	0.33	0.34812	-0.018117	1
0.33	0.3	0.30355	-0.0035528	1
0.37	0.27	0.27706	-0.0070601	1
0.42	0.23	0.24717	-0.017172	1
0.47	0.21	0.22051	-0.010508	1
0.5	0.19	0.20591	-0.01591	1
0.55	0.17	0.1837	-0.013697	1
0.62	0.15	0.15657	-0.006566	1
0.7	0.14	0.13043	0.0095702	1
0.8	0.13	0.10381	0.026193	1
1.22	0.11	0.039792	0.070208	1
2.2	0.09	0.0042473	0.085753	1
3.48	0.07	0.00022855	0.069771	1
5.8	0.05	1.1447E-006	0.049999	1
10.17	0.03	5.3187E-011	0.03	1
15.5	0.02	2.7611E-016	0.02	1

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.3317E-002
y0 =	6.4481E-001

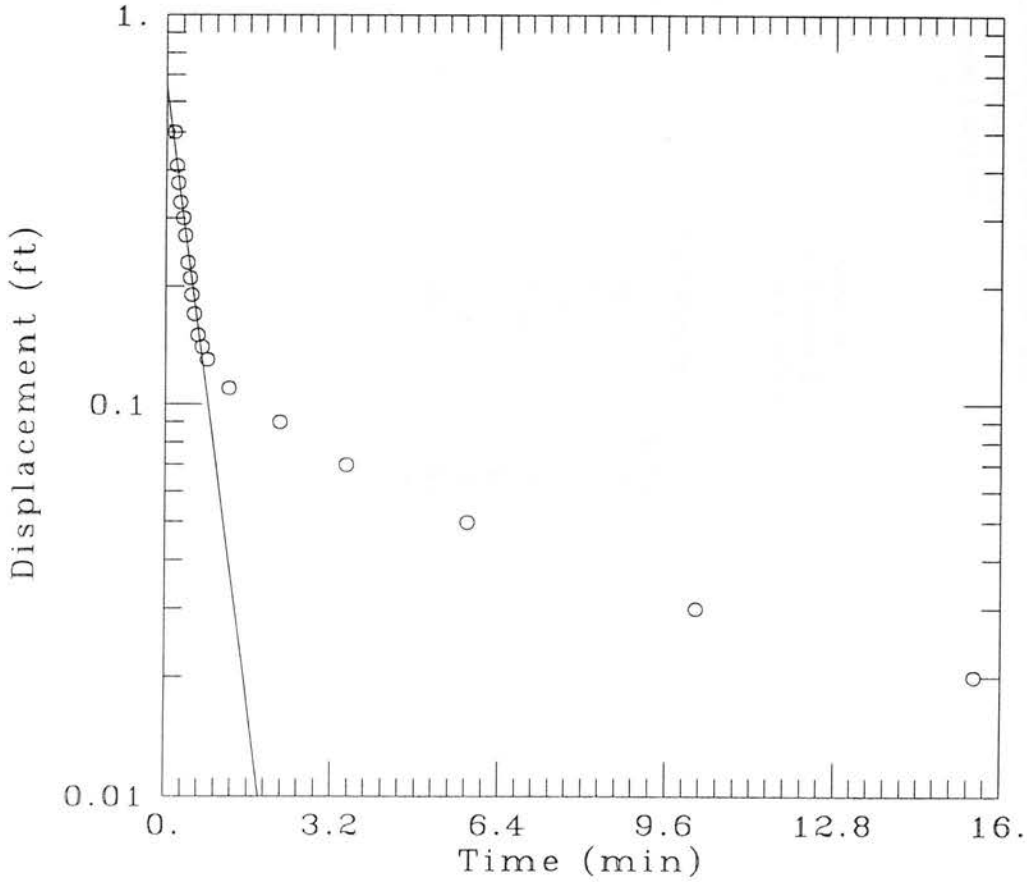
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 1.33175E-002
y0 = 6.44810E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	6.448E-001	1.600E+001	8.817E-017		

MW16-1 Rising Head Slug Test



DATA SET:

mw161.inp

08/11/96

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.01332 ft/min

y0 = 0.6448 ft

TEST DATA:

H0 = 0.5 ft

rc = 0.083 ft

rw = 0.35 ft

L = 0.37 ft

b = 1.07 ft

H = 1.07 ft

MW16-2
Hand-run Slug test with Stopwatch and Electronic
Water Level Meter
9/04/96 3:48pm

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from

		static is:	
	Elapsed Time	**4.94**	INPUT 1
seconds	---	water level is:	---
5	0.08	5.3	0.36
11	0.18	5.16	0.22
15	0.25	5.04	0.10
20	0.33	4.98	0.04
26	0.43	4.95	0.01
35	0.58	4.94	0.00
180	3.00	4.94	0.00

```
MW16-2 Rising Head Slug Test
slugt1
0.36
0.083
0.35
slugt2
1.14
0.44
1.14
tsdata
0.08    0.36    1
0.18    0.22    1
0.25    0.1    1
0.33    0.04    1
0.43    0.01    1
0.58    0.0001    1
3    0.0001    1
```

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

09/11/96 14:42:10

==

TEST DESCRIPTION

Data set........... mw162.inp
Data set title..... MW16-2 Rising Head Slug Test

Knowns and Constants:
No. of data points................. 7
Radius of well casing.............. 0.083
Radius of well..................... 0.35
Aquifer saturated thickness........ 1.14
Well screen length................. 0.44
Static height of water in well..... 1.14
Log(Re/Rw)......................... 0.6764
A, B, C............................ 0.000, 0.000, 0.687

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	3.8351E-002	+/-	4.4144E-003
y0 =	6.6335E-001	+/-	7.2557E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals............... 7
Number of estimated parameters.... 2
Degrees of freedom................ 5
Residual mean..................... -0.004322
Residual standard deviation....... 0.02326
Residual variance................. 0.000541

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.08	0.36	0.37164	-0.011636	1
0.18	0.22	0.18013	0.039868	1
0.25	0.1	0.1085	-0.0084978	1
0.33	0.04	0.060785	-0.020785	1
0.43	0.01	0.029463	-0.019463	1
0.58	0.0001	0.0099421	-0.0098421	1
3	0.0001	2.4317E-010	0.0001	1

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	3.8351E-002
y0 =	6.6335E-001

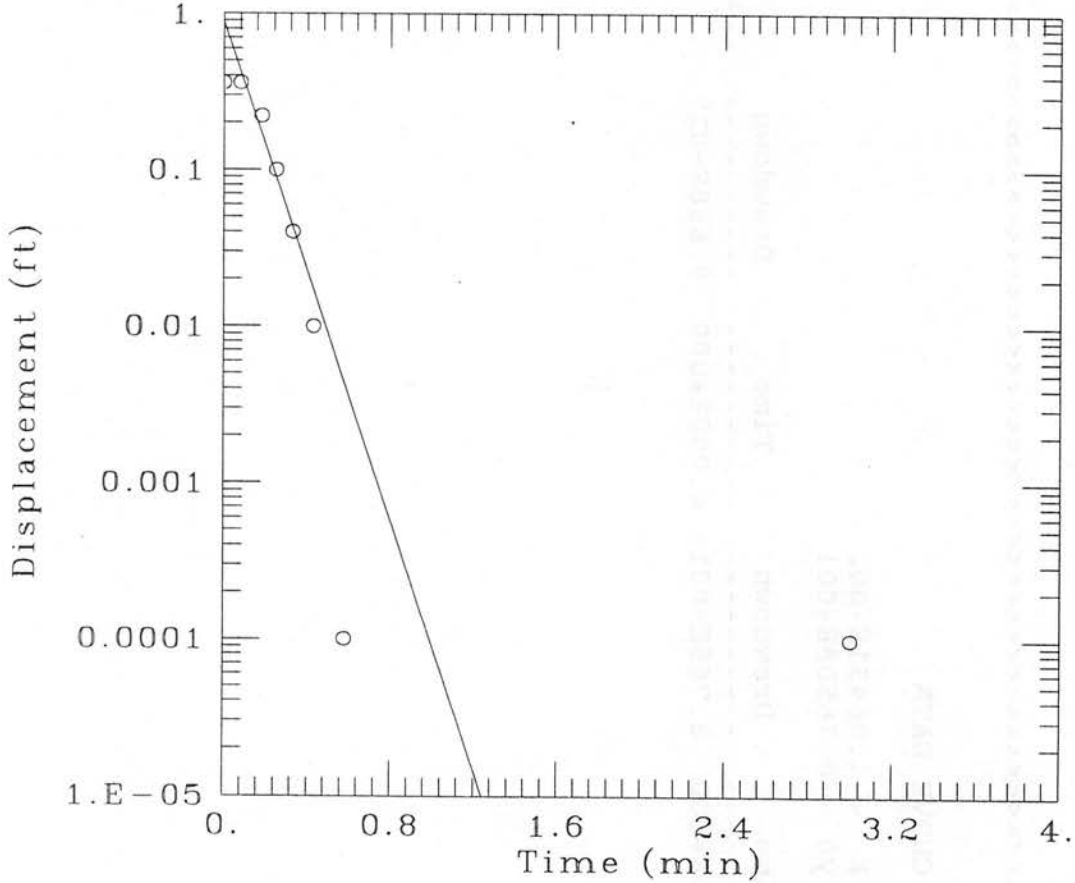
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 4.86431E-002
y0 = 8.76508E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	8.765E-001	4.000E+000	9.668E-017		

MW16-2 Rising Head Slug Test



DATA SET:

mw162.inp

09/11/98

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.04864 ft/min

y0 = 0.8765 ft

TEST DATA:

H0 = 0.36 ft

rc = 0.083 ft

rw = 0.35 ft

L = 0.44 ft

b = 1.14 ft

H = 1.14 ft

MW16-3, First Run
Hand-run Slug test with Stopwatch and Electronic
Water Level Meter
9/04/96 11:03pm

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

		static is:	
	Elapsed Time	**5.78**	INPUT 1
seconds	----------	water level is:	----------
9	0.15	6.13	0.35
14	0.23	6	0.22
18	0.30	5.91	0.13
25	0.42	5.88	0.10
29	0.48	5.86	0.08
58	0.97	5.84	0.06
270	4.50	5.83	0.05

```
MW16-3 First Run of Slug Test
slugt1
0.35
0.083
0.35
slugt2
1.64
0.94
1.64
tsdata
0.15   0.35   1
0.23   0.22   1
0.3   0.13   1
0.42   0.1   1
0.48   0.08   1
0.97   0.06   1
4.5   0.05   1
```

A Q T E S O L V

A Program for Automatic Estimation of Aquifer Coefficients From Aquifer Test Data

By:

Glenn M. Duffield
and
James O. Rumbaugh, III

Geraghty & Miller Modeling Group
1895 Preston White Drive, Suite 301
Reston, VA 22091

(703) 476 - 0335

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Features:

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A Q T E S O L V R E S U L T S

Version 1.10

09/13/96 08:34:24

==

TEST DESCRIPTION

Data set........... MW163A.INP
Data set title..... MW16-3 First Run of Slug Test

Knowns and Constants:
No. of data points.................. 7
Radius of well casing............... 0.083
Radius of well...................... 0.35
Aquifer saturated thickness......... 1.64
Well screen length.................. 0.94
Static height of water in well...... 1.64
Log(Re/Rw).......................... 1.058
A, B, C............................. 0.000, 0.000, 0.626

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.9307E-002	+/-	4.0372E-003
y0 =	7.1323E-001	+/-	1.6341E-001

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals................ 7
Number of estimated parameters.... 2
Degrees of freedom................ 5
Residual mean..................... 0.01513
Residual standard deviation....... 0.03716
Residual variance................. 0.001381

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.15	0.35	0.33794	0.012059	1
0.23	0.22	0.2269	-0.0068989	1
0.3	0.13	0.16012	-0.030122	1
0.42	0.1	0.088092	0.011908	1
0.48	0.08	0.06534	0.01466	1
0.97	0.06	0.0056952	0.054305	1
4.5	0.05	1.3229E-010	0.05	1

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

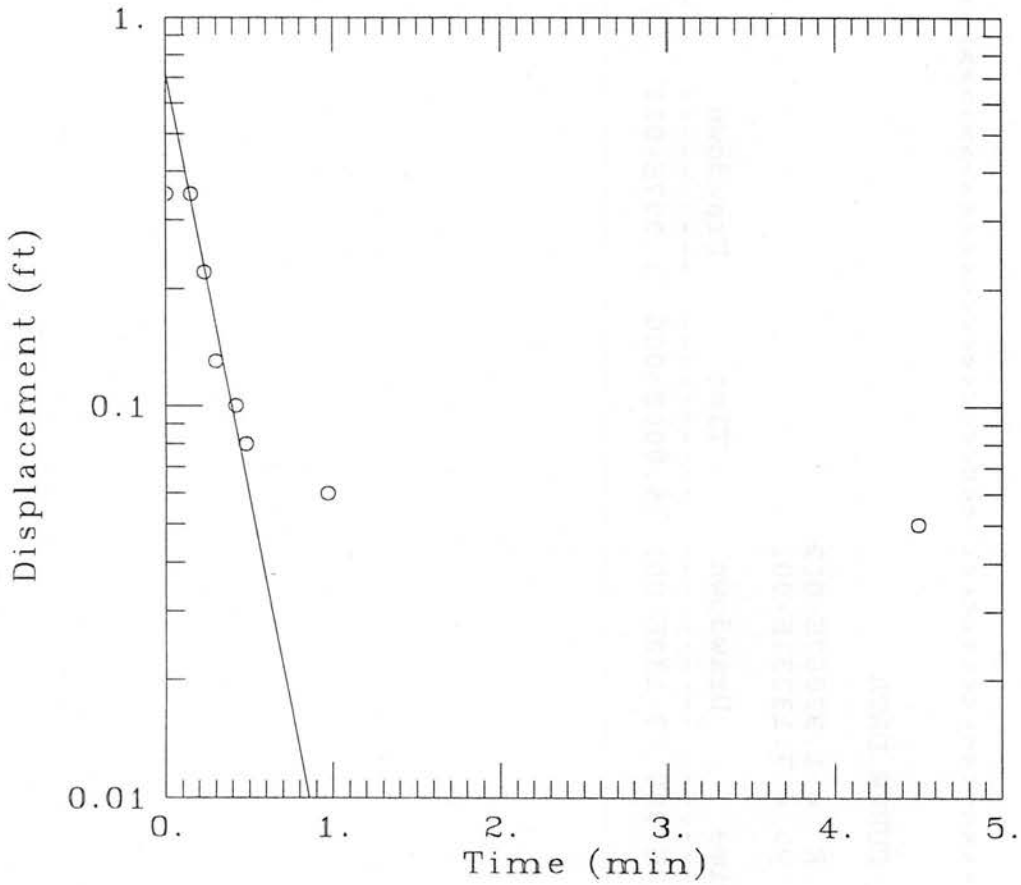
	Estimate
K =	1.9307E-002
y0 =	7.1323E-001

TYPE CURVE DATA

K = 1.93067E-002
y0 = 7.13233E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	7.132E-001	5.000E+000	1.097E-011		

MW16-3 First Run of Slug Test



DATA SET:

MW163A.INP

09/13/96

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.01931 ft/min

y0 = 0.7132 ft

TEST DATA:

H0 = 0.35 ft

rc = 0.083 ft

rw = 0.35 ft

L = 0.94 ft

b = 1.64 ft

H = 1.64 ft

MW16-3, Second Run
Hand-run Slug test with Stopwatch and Electronic
Water Level Meter
9/06/96 8:56 am

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

		static is:	
	Elapsed Time	**5.46**	INPUT 1
seconds	----------	water level is:	----------
3	0.05	6.24	0.78
8	0.13	5.9	0.44
18	0.30	5.6	0.14
25	0.42	5.54	0.08
35	0.58	5.52	0.06
88	1.47	5.5	0.04
436	7.27	5.49	0.03
1070	17.83	5.48	0.02

```
MW16-3 Second Run of Slug Test
slugt1
    0.78
   0.083
    0.35
slugt2
    1.96
    1.26
    1.96
tsdata
    0.05      0.78        1
    0.13      0.44        1
    0.30      0.14        1
    0.42      0.08        1
    0.58      0.06        1
    1.47      0.04        1
    7.27      0.03        1
   17.83      0.02        1
```

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A Q T E S O L V

A Program for Automatic Estimation of Aquifer Coefficients From Aquifer Test Data

By:

Glenn M. Duffield
and
James O. Rumbaugh, III

Geraghty & Miller Modeling Group
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Reston, VA 22091

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A Q T E S O L V R E S U L T S
Version 1.10

09/13/96 08:39:03

==

TEST DESCRIPTION

Data set........... mw163b.inp
Data set title..... MW16-3 Second Run of Slug Test

Knowns and Constants:
- No. of data points................... 8
- Radius of well casing................ 0.083
- Radius of well....................... 0.35
- Aquifer saturated thickness.......... 1.96
- Well screen length................... 1.26
- Static height of water in well....... 1.96
- Log(Re/Rw)........................... 1.197
- A, B, C.............................. 0.000, 0.000, 0.709

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	2.1702E-002	+/-	1.7812E-003
y0 =	1.0763E+000	+/-	5.6746E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals.................. 8
- Number of estimated parameters....... 2
- Degrees of freedom................... 6
- Residual mean........................ 0.01583
- Residual standard deviation.......... 0.02819
- Residual variance.................... 0.0007944

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.05	0.78	0.77246	0.0075406	1
0.13	0.44	0.45437	-0.014371	1
0.3	0.14	0.14712	-0.0071205	1
0.42	0.08	0.066371	0.013629	1
0.58	0.06	0.022964	0.037036	1
1.47	0.04	6.2679E-005	0.039937	1
7.27	0.03	1.2258E-021	0.03	1
17.83	0.02	4.6459E-052	0.02	1

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

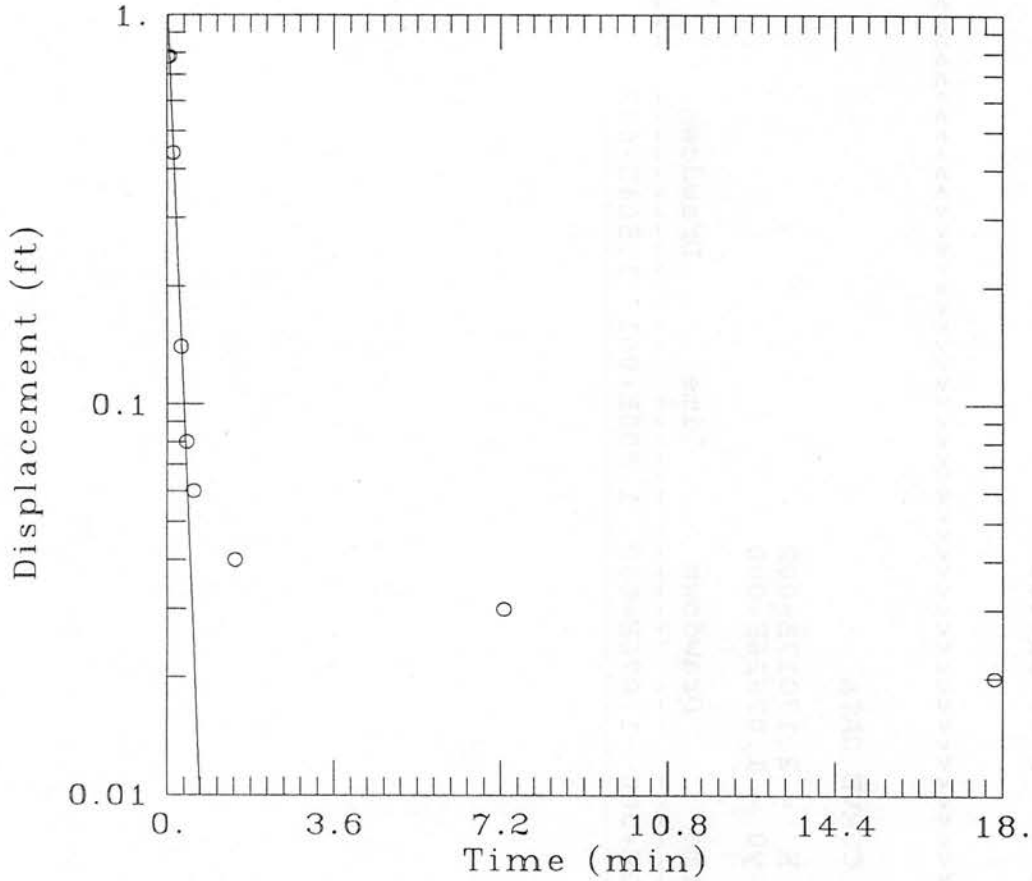
	Estimate
K =	2.1702E-002
y0 =	1.0763E+000

TYPE CURVE DATA

K = 2.17017E-002
y0 = 1.07626E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.076E+000	1.800E+001	1.504E-052		

MW16-3 Second Run of Slug Test



DATA SET:

mw163b.inp

09/13/98

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.0217 ft/min

y0 = 1.076 ft

TEST DATA:

H0 = 0.76 ft

ro = 0.083 ft

rw = 0.35 ft

L = 1.26 ft

b = 1.96 ft

H = 1.96 ft

MW16-4, First Run
Hand-run Slug test with Stopwatch and Electronic
Water Level Meter
9/06/96 8:10 am

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

	Elapsed Time	**static is:** **5.15** water level is:	INPUT 1
seconds	---		---
5	0.08	5.68	0.53
9	0.15	5.58	0.43
13	0.22	5.52	0.37
20	0.33	5.46	0.31
27	0.45	5.38	0.23
30	0.50	5.34	0.19
36	0.60	5.32	0.17
42	0.70	5.31	0.16
46	0.77	5.3	0.15
66	1.10	5.29	0.14
113	1.88	5.27	0.12
206	3.43	5.26	0.11
264	4.40	5.24	0.09
465	7.75	5.22	0.07
840	14.00	5.2	0.05

```
MW16-4 First Run of Slug Test
slugt1
0.53
0.083
0.33
slugt2
1.98
1.28
1.98
tsdata
0.08    0.53    1
0.15    0.43    1
0.22    0.37    1
0.33    0.31    1
0.45    0.23    1
0.5    0.19    1
0.6    0.17    1
0.7    0.16    1
0.77    0.15    1
1.1    0.14    1
1.88    0.12    1
3.43    0.11    1
4.4    0.09    1
7.75    0.07    1
14    0.05    1
```

A Q T E S O L V

A Program for

Automatic Estimation of Aquifer Coefficients

From Aquifer Test Data

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A Q T E S O L V   R E S U L T S
Version 1.10

09/13/96 08:57:28

==

TEST DESCRIPTION

Data set........... mw164a.inp
Data set title..... MW16-4 First Run of Slug Test

Knowns and Constants:
No. of data points.................. 15
Radius of well casing............... 0.083
Radius of well...................... 0.33
Aquifer saturated thickness......... 1.98
Well screen length.................. 1.28
Static height of water in well...... 1.98
Log(Re/Rw).......................... 1.242
A, B, C............................. 0.000, 0.000, 0.742

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	5.9933E-003	+/-	1.0484E-003
y0 =	5.6677E-001	+/-	5.8700E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals................ 15
Number of estimated parameters.... 2
Degrees of freedom................. 13
Residual mean...................... 0.02794
Residual standard deviation....... 0.05926
Residual variance.................. 0.003512

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.08	0.53	0.49103	0.038972	1
0.15	0.43	0.4331	-0.0031033	1
0.22	0.37	0.38201	-0.012012	1
0.33	0.31	0.31362	-0.0036246	1
0.45	0.23	0.2529	-0.022904	1
0.5	0.19	0.23122	-0.041215	1
0.6	0.17	0.19326	-0.023258	1
0.7	0.16	0.16153	-0.0015322	1
0.77	0.15	0.14248	0.0075232	1
1.1	0.14	0.07884	0.06116	1
1.88	0.12	0.019467	0.10053	1
3.43	0.11	0.0012083	0.10879	1
4.4	0.09	0.0002122	0.089788	1
7.75	0.07	5.2218E-007	0.069999	1
14	0.05	7.0861E-012	0.05	1

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

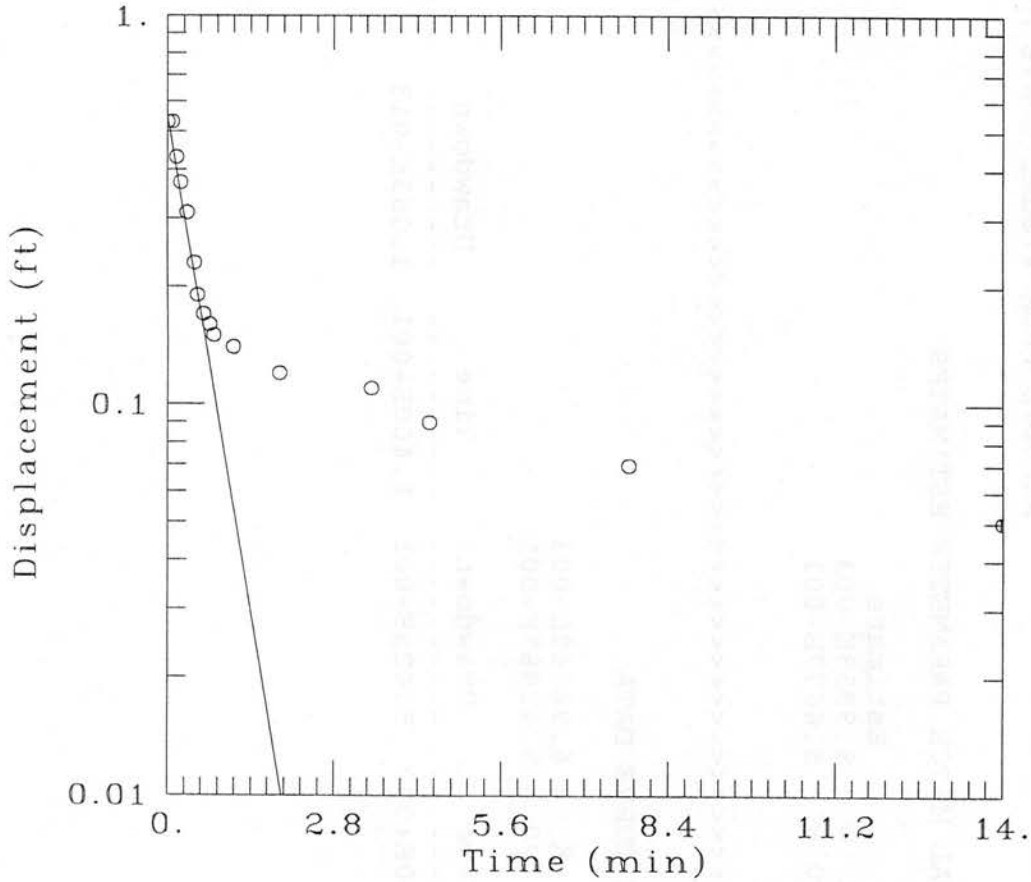
	Estimate
K =	5.9933E-003
y0 =	5.6677E-001

TYPE CURVE DATA

K = 6.98562E-003
y0 = 5.42883E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	5.429E-001	1.400E+001	1.063E-013		

MW16-4 First Run of Slug Test



DATA SET:

mw164a.inp

09/13/96

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.006986 ft/min

y0 = 0.5429 ft

TEST DATA:

H0 = 0.53 ft

rc = 0.083 ft

rw = 0.33 ft

L = 1.28 ft

b = 1.98 ft

H = 1.98 ft

MW16-4, Second Run
Hand-run Slug test with Stopwatch and Electronic
Water Level Meter
9/04/96 11:07 am

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

static is:
5.26

seconds	Elapsed Time	water level is:	INPUT 1
11	0.18	5.64	0.38
18	0.30	5.58	0.32
22	0.37	5.52	0.26
25	0.42	5.49	0.23
27	0.45	5.48	0.22
32	0.53	5.47	0.21
39	0.65	5.45	0.19
50	0.83	5.44	0.18
58	0.97	5.43	0.17
75	1.25	5.42	0.16
94	1.57	5.41	0.15
155	2.58	5.4	0.14
191	3.18	5.39	0.13
298	4.97	5.38	0.12
516	8.60	5.37	0.11
657	10.95	5.36	0.10
1050	17.50	5.35	0.09

```
MW16-4 Second Run of Slug Test
slugt1
0.38
0.083
0.33
slugt2
1.87
1.17
1.87
tsdata
0.18   0.38   1
0.3   0.32   1
0.37   0.26   1
0.42   0.23   1
0.45   0.22   1
0.53   0.21   1
0.65   0.19   1
0.83   0.18   1
0.97   0.17   1
1.25   0.16   1
1.57   0.15   1
2.58   0.14   1
3.18   0.13   1
4.97   0.12   1
8.6   0.11   1
10.95   0.1   1
17.5   0.09   1
```

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V

A Program for
Automatic Estimation of Aquifer Coefficients
From Aquifer Test Data

By:

Glenn M. Duffield
and
James O. Rumbaugh, III

Geraghty & Miller Modeling Group
1895 Preston White Drive, Suite 301
Reston, VA 22091

(703) 476 - 0335

A Q T E S O L V is a user-friendly program designed to analyze data from aquifer tests automatically. Aquifer coefficients for a variety of aquifer test conditions can be estimated by A Q T E S O L V , including the following:

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Features:

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- o Nonlinear least-squares estimation of aquifer coefficients
- o Statistical analysis of results
- o Complete graphical display of results

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A Q T E S O L V   R E S U L T S
Version 1.10

09/13/96 15:15:15

TEST DESCRIPTION

Data set........... mw164b.inp
Data set title..... MW16-4 Second Run of Slug Test

Knowns and Constants:
- No. of data points.................... 17
- Radius of well casing................. 0.083
- Radius of well........................ 0.33
- Aquifer saturated thickness........... 1.87
- Well screen length.................... 1.17
- Static height of water in well........ 1.87
- Log(Re/Rw)............................ 1.201
- A, B, C............................... 0.000, 0.000, 0.703

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	4.6741E-004	+/-	1.6492E-004
y0 =	2.4550E-001	+/-	2.1236E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 17
- Number of estimated parameters.... 2
- Degrees of freedom................ 15
- Residual mean..................... 0.003841
- Residual standard deviation....... 0.05594
- Residual variance................. 0.003129

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.18	0.38	0.23973	0.14027	1
0.3	0.32	0.23596	0.084041	1
0.37	0.26	0.23379	0.026214	1
0.42	0.23	0.23225	-0.0022456	1
0.45	0.22	0.23133	-0.011327	1
0.53	0.21	0.22889	-0.018893	1
0.65	0.19	0.22529	-0.035291	1
0.83	0.18	0.21999	-0.039994	1
0.97	0.17	0.21596	-0.045961	1
1.25	0.16	0.20811	-0.048114	1
1.57	0.15	0.1995	-0.049495	1
2.58	0.14	0.17456	-0.034564	1
3.18	0.13	0.16125	-0.031254	1
4.97	0.12	0.12728	-0.0072792	1
8.6	0.11	0.078773	0.031227	1
10.95	0.1	0.05774	0.04226	1
17.5	0.09	0.024293	0.065707	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	4.6741E-004
y0 =	2.4550E-001

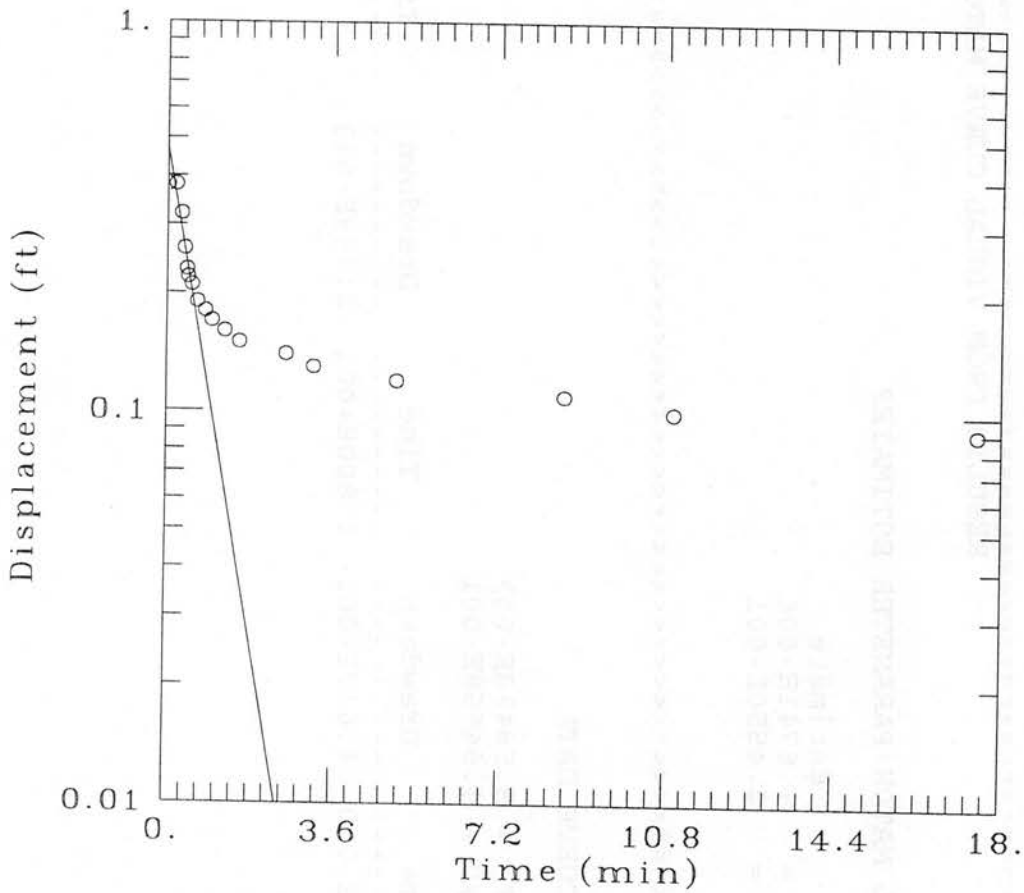
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 5.58438E-003
y0 = 4.64668E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	4.647E-001	1.800E+001	2.099E-013		

MW16-4 Second Run of Slug Test



DATA SET:

mw164b.inp

09/13/98

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.005584 ft/min

y0 = 0.4647 ft

TEST DATA:

H0 = 0.38 ft

ro = 0.083 ft

rw = 0.33 ft

L = 1.17 ft

b = 1.87 ft

H = 1.87 ft

MW16-6
Hand-run Slug test with Stopwatch and Electronic
Water Level Meter
9/06/96 8:37 am

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

		static is:	
	Elapsed Time	**4.84**	INPUT 1
seconds	----------	water level is:	----------
5	0.08	5.3	0.46
10	0.17	5.12	0.28
16	0.27	5.04	0.20
19	0.32	5	0.16
22	0.37	4.98	0.14
28	0.47	4.96	0.12
34	0.57	4.94	0.10
44	0.73	4.92	0.08
135	2.25	4.9	0.06
404	6.73	4.88	0.04
840	14.00	4.86	0.02
1680	28.00	4.85009	0.01

```
MW16-6 Rising Head Slug Test
slugt1
0.2
0.083
0.33
slugt2
1.82
1.62
1.82
tsdata
0.08    0.46    1
0.17    0.28    1
0.27    0.2    1
0.32    0.16    1
0.37    0.14    1
0.47    0.12    1
0.57    0.1    1
0.73    0.08    1
2.25    0.06    1
6.73    0.04    1
14    0.02    1
28    0.01    1
```

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```
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                     A Q T E S O L V   R E S U L T S
                              Version 1.10

09/13/96                                                               15:18:29

================================================================================
                            TEST DESCRIPTION

Data set........... mw166.inp
Data set title..... MW16-6 Rising Head Slug Test

Knowns and Constants:
   No. of data points.................. 12
   Radius of well casing............... 0.083
   Radius of well...................... 0.33
   Aquifer saturated thickness......... 1.82
   Well screen length.................. 1.62
   Static height of water in well...... 1.82
   Log(Re/Rw).......................... 1.219
   A, B, C.............................  0.000,   0.000,   0.864

================================================================================
                             ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

================================================================================
                  RESULTS FROM STATISTICAL CURVE MATCHING


STATISTICAL MATCH PARAMETER ESTIMATES

           Estimate          Std. Error
   K  =   9.4893E-003 +/-   1.1232E-003
   y0 =   5.7844E-001 +/-   5.3640E-002


ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
   Number of residuals............... 12
   Number of estimated parameters.... 2
   Degrees of freedom................ 10
   Residual mean..................... 0.01405
   Residual standard deviation....... 0.03283
   Residual variance................. 0.001078


Model Residuals:

     Time         Observed       Calculated      Residual        Weight
```

0.08	0.46	0.4316	0.028404	1
0.17	0.28	0.31046	-0.030457	1
0.27	0.2	0.21529	-0.015293	1
0.32	0.16	0.17928	-0.019285	1
0.37	0.14	0.1493	-0.0092989	1
0.47	0.12	0.10353	0.016466	1
0.57	0.1	0.071798	0.028202	1
0.73	0.08	0.039972	0.040028	1
2.25	0.06	0.00015324	0.059847	1
6.73	0.04	1.1572E-011	0.04	1
14	0.02	3.2068E-023	0.02	1
28	0.01	1.7779E-045	0.01	1

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	9.4893E-003
y0 =	5.7844E-001

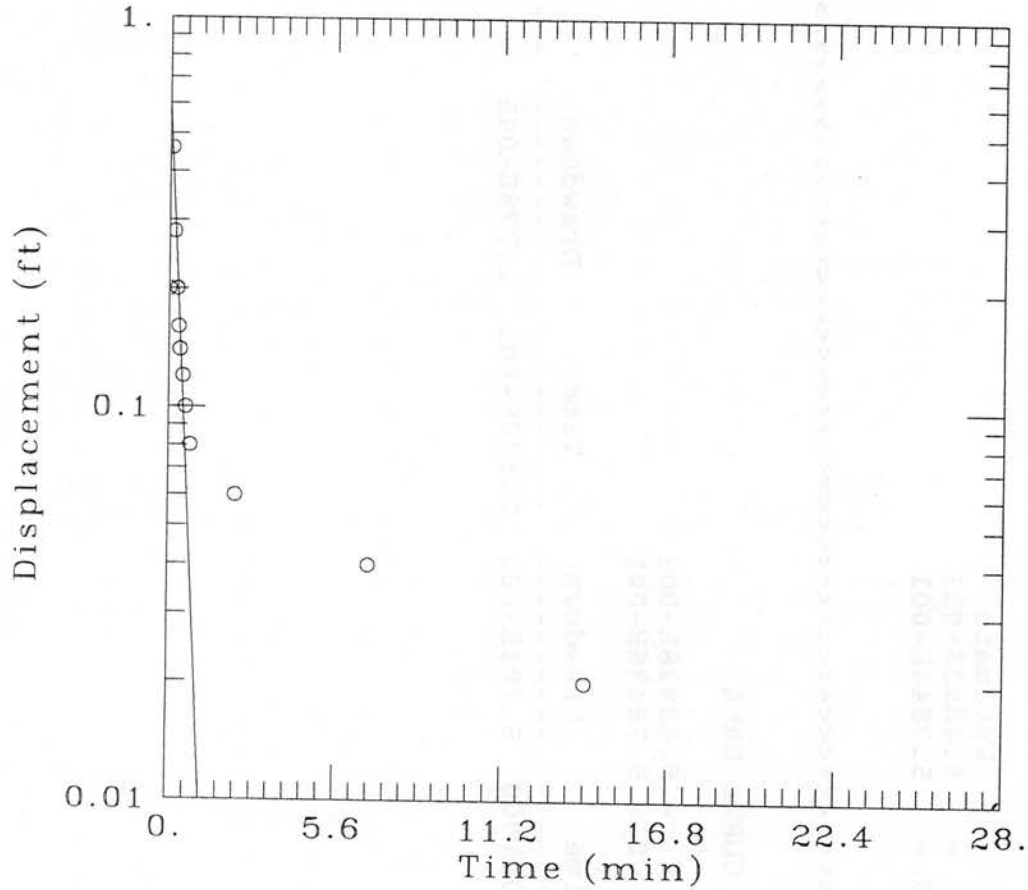
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 9.48928E-003
y0 = 5.78436E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	5.784E-001	2.800E+001	1.778E-045		

MW16-6 Rising Head Slug Test



DATA SET:

mw166.inp

09/13/96

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.009489 ft/min

y0 = 0.5784 ft

TEST DATA:

H0 = 0.2 ft

rc = 0.083 ft

rw = 0.33 ft

L = 1.62 ft

b = 1.62 ft

H = 1.62 ft

MW16-7
Hand-run Slug test with Stopwatch and Electronic
Water Level Meter
9/04/96 4:01 am

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

seconds	Elapsed Time	**static is:** **5.44** water level is:	INPUT 1
5	0.08	5.84	0.40
13	0.22	5.62	0.18
16	0.27	5.58	0.14
22	0.37	5.55	0.11
31	0.52	5.54	0.10
40	0.67	5.52	0.08
65	1.08	5.5	0.06
79	1.32	5.49	0.05
111	1.85	5.48	0.04
164	2.73	5.47	0.03
216	3.60	5.46	0.02
390	6.50	5.45	0.01
530	8.83	5.451	0.01
600	10.00	5.451	0.01

```
MW16-7 Rising Head Slug Test
slugt1
0.4
0.083
0.33
slugt2
1.46
0.76
1.46
tsdata
0.08    0.4    1
0.22    0.18    1
0.27    0.14    1
0.37    0.11    1
0.52    0.1    1
0.67    0.08    1
1.08    0.06    1
1.32    0.05    1
1.85    0.04    1
2.73    0.03    1
3.6    0.02    1
6.5    0.01    1
8.83    0.01    1
10    0.01    1
```

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<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

09/13/96 15:30:32

==

TEST DESCRIPTION

Data set........... mw167.inp
Data set title..... MW16-7 Rising Head Slug Test

Knowns and Constants:
No. of data points.................. 14
Radius of well casing............... 0.083
Radius of well...................... 0.33
Aquifer saturated thickness......... 1.46
Well screen length.................. 0.76
Static height of water in well...... 1.46
Log(Re/Rw).......................... 0.9941
A, B, C............................. 0.000, 0.000, 0.613

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.7859E-002	+/-	2.9048E-003
y0 =	5.1197E-001	+/-	6.4388E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
Number of residuals................ 14
Number of estimated parameters.... 2
Degrees of freedom................ 12
Residual mean..................... 0.01772
Residual standard deviation....... 0.03487
Residual variance................. 0.001216

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.08	0.4	0.37284	0.027155	1
0.22	0.18	0.21405	-0.034054	1
0.27	0.14	0.17557	-0.03557	1
0.37	0.11	0.11812	-0.008115	1
0.52	0.1	0.065176	0.034824	1
0.67	0.08	0.035964	0.044036	1
1.08	0.06	0.0070806	0.052919	1
1.32	0.05	0.0027348	0.047265	1
1.85	0.04	0.00033462	0.039665	1
2.73	0.03	1.0225E-005	0.02999	1
3.6	0.02	3.2508E-007	0.02	1
6.5	0.01	3.3095E-012	0.01	1
8.83	0.01	3.2268E-016	0.01	1
10	0.01	3.1236E-018	0.01	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.7859E-002
y0 =	5.1197E-001

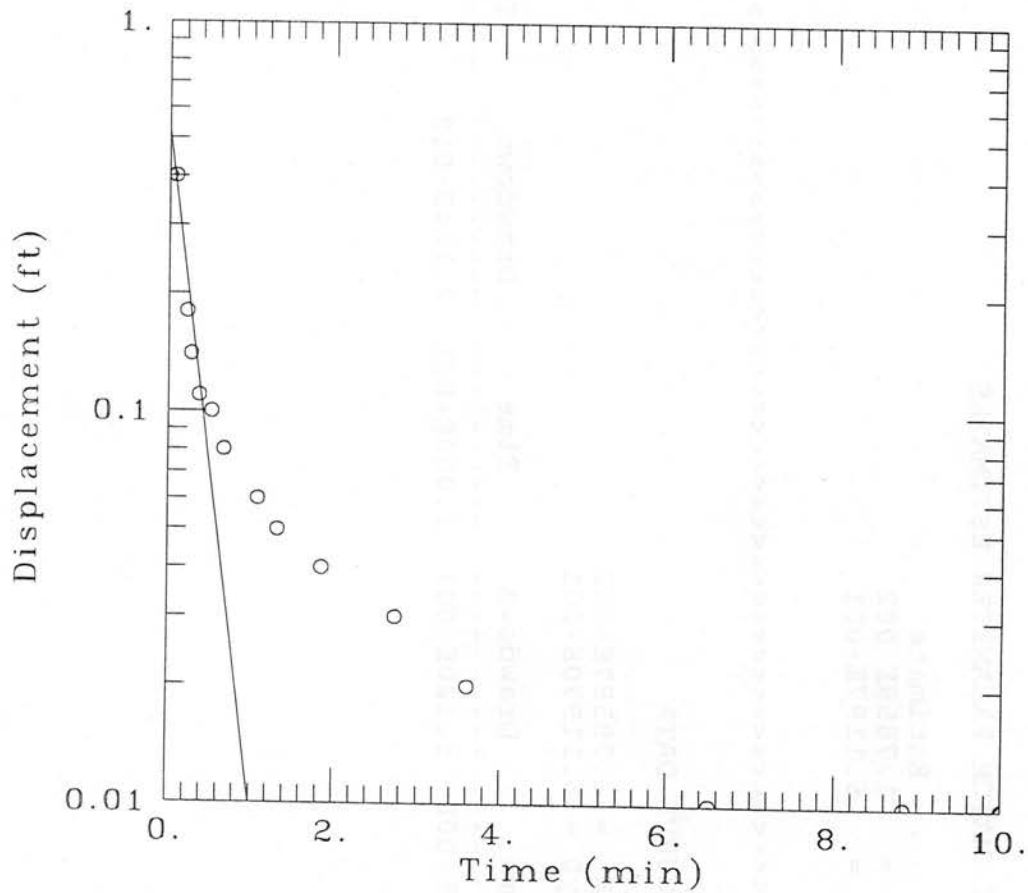
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 1.78587E-002
y0 = 5.11970E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	5.120E-001	1.000E+001	3.124E-018		

MW16-7 Rising Head Slug Test



DATA SET:

mw167.inp

09/13/96

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.01786 ft/min

y0 = 0.512 ft

TEST DATA:

H0 = 0.4 ft

rc = 0.083 ft

rw = 0.33 ft

L = 0.76 ft

b = 1.46 ft

H = 1.46 ft

SEAD-17 Input Data and Results

MW17-1
Slug test run with In-Situ Hermit 1000C 2-Channel Data Logger
and pressure transducer
9/05/96 1:03pm

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1
0	0.545	0.0833	0.241	0.1666	0.19	0.25	0.168	0.3333	0.158	0.75	0.117	3	0.057	8	0.009	40	0
0.0033	0.402	0.0866	0.237	0.17	0.19	0.2533	0.168	0.35	0.152	0.7666	0.117	3.2	0.053	8.2	0.009	42	0.003
0.0066	0.377	0.09	0.234	0.1733	0.187	0.2566	0.168	0.3666	0.149	0.7833	0.117	3.4	0.05	8.4	0.009	44	0.003
0.01	0.355	0.0933	0.231	0.1766	0.187	0.26	0.168	0.3833	0.145	0.8	0.117	3.6	0.047	8.6	0.006	46	0.006
0.0133	0.352	0.0966	0.228	0.18	0.187	0.2633	0.164	0.4	0.142	0.8166	0.114	3.8	0.044	8.8	0.006	48	0.009
0.0166	0.348	0.1	0.228	0.1833	0.184	0.2666	0.164	0.4166	0.139	0.8333	0.117	4	0.041	9	0.006		
0.02	0.339	0.1033	0.225	0.1866	0.184	0.27	0.161	0.4333	0.139	0.85	0.114	4.2	0.041	9.2	0.006		
0.0233	0.304	0.1066	0.218	0.19	0.184	0.2733	0.161	0.45	0.139	0.8666	0.114	4.4	0.038	9.4	0.003		
0.0266	0.323	0.11	0.215	0.1933	0.18	0.2766	0.161	0.4666	0.139	0.8833	0.114	4.6	0.034	9.6	0.006		
0.03	0.304	0.1133	0.218	0.1966	0.18	0.28	0.161	0.4833	0.139	0.9	0.114	4.8	0.031	9.8	0.003		
0.0333	0.307	0.1166	0.215	0.2	0.18	0.2833	0.161	0.5	0.136	0.9166	0.114	5	0.031	10	0.003		
0.0366	0.304	0.12	0.209	0.2033	0.177	0.2866	0.161	0.5166	0.136	0.9333	0.114	5.2	0.025	12	-0.012		
0.04	0.291	0.1233	0.209	0.2066	0.177	0.29	0.161	0.5333	0.136	0.95	0.111	5.4	0.025	14	-0.015		
0.0433	0.285	0.1266	0.209	0.21	0.177	0.2933	0.158	0.55	0.136	0.9666	0.111	5.6	0.022	16	-0.015		
0.0466	0.285	0.13	0.206	0.2133	0.177	0.2966	0.161	0.5666	0.133	0.9833	0.111	5.8	0.022	18	-0.015		
0.05	0.279	0.1333	0.203	0.2166	0.174	0.3	0.161	0.5833	0.133	1	0.111	6	0.022	20	-0.015		
0.0533	0.275	0.1366	0.203	0.22	0.174	0.3033	0.161	0.6	0.133	1.2	0.098	6.2	0.019	22	-0.015		
0.0566	0.269	0.14	0.203	0.2233	0.174	0.3066	0.161	0.6166	0.133	1.4	0.095	6.4	0.019	24	-0.012		
0.06	0.266	0.1433	0.199	0.2266	0.174	0.31	0.161	0.6333	0.133	1.6	0.085	6.6	0.015	26	-0.009		
0.0633	0.263	0.1466	0.196	0.23	0.174	0.3133	0.161	0.65	0.13	1.8	0.079	6.8	0.015	28	-0.009		
0.0666	0.256	0.15	0.196	0.2333	0.174	0.3166	0.158	0.6666	0.13	2	0.076	7	0.015	30	-0.009		
0.07	0.253	0.1533	0.196	0.2366	0.171	0.32	0.161	0.6833	0.13	2.2	0.072	7.2	0.012	32	-0.006		
0.0733	0.25	0.1566	0.193	0.24	0.171	0.3233	0.161	0.7	0.13	2.4	0.066	7.4	0.012	34	-0.006		
0.0766	0.247	0.16	0.193	0.2433	0.171	0.3266	0.158	0.7166	0.117	2.6	0.063	7.6	0.012	36	-0.003		
0.08	0.244	0.1633	0.193	0.2466	0.171	0.33	0.158	0.7333	0.12	2.8	0.06	7.8	0.009	38	0		

```
MW17-1 Rising Head Slug Test
slugt1
0.545
0.083
0.35
slugt2
2.01
0.91
2.01
tsdata
0.0033    0.402    1
0.0066    0.377    1
0.01    0.355    1
0.0133    0.352    1
0.0166    0.348    1
0.02    0.339    1
0.0233    0.304    1
0.0266    0.323    1
0.03    0.304    1
0.0333    0.307    1
0.0366    0.304    1
0.04    0.291    1
0.0433    0.285    1
0.0466    0.285    1
0.05    0.279    1
0.0533    0.275    1
0.0566    0.269    1
0.06    0.266    1
0.0633    0.263    1
0.0666    0.256    1
0.07    0.253    1
0.0733    0.25    1
0.0766    0.247    1
0.08    0.244    1
0.0833    0.241    1
0.0866    0.237    1
0.09    0.234    1
0.0933    0.231    1
0.0966    0.228    1
0.1    0.228    1
0.1033    0.225    1
0.1066    0.218    1
0.11    0.215    1
0.1133    0.218    1
0.1166    0.215    1
0.12    0.209    1
0.1233    0.209    1
0.1266    0.209    1
0.13    0.206    1
0.1333    0.203    1
0.1366    0.203    1
```

```
0.14    0.203    1
0.1433    0.199    1
0.1466    0.196    1
0.15    0.196    1
0.1533    0.196    1
0.1566    0.193    1
0.16    0.193    1
0.1633    0.193    1
0.1666    0.19    1
0.17    0.19    1
0.1733    0.187    1
0.1766    0.187    1
0.18    0.187    1
0.1833    0.184    1
0.1866    0.184    1
0.19    0.184    1
0.1933    0.18    1
0.1966    0.18    1
0.2    0.18    1
0.2033    0.177    1
0.2066    0.177    1
0.21    0.177    1
0.2133    0.177    1
0.2166    0.174    1
0.22    0.174    1
0.2233    0.174    1
0.2266    0.174    1
0.23    0.174    1
0.2333    0.174    1
0.2366    0.171    1
0.24    0.171    1
0.2433    0.171    1
0.2466    0.171    1
0.25    0.168    1
0.2533    0.168    1
0.2566    0.168    1
0.26    0.168    1
0.2633    0.164    1
0.2666    0.164    1
0.27    0.161    1
0.2733    0.161    1
0.2766    0.161    1
0.28    0.161    1
0.2833    0.161    1
0.2866    0.161    1
0.29    0.161    1
0.2933    0.158    1
0.2966    0.161    1
0.3    0.161    1
0.3033    0.161    1
0.3066    0.161    1
```

```
0.31    0.161    1
0.3133    0.161    1
0.3166    0.158    1
0.32    0.161    1
0.3233    0.161    1
0.3266    0.158    1
0.33    0.158    1
0.3333    0.158    1
0.35    0.152    1
0.3666    0.149    1
0.3833    0.145    1
0.4    0.142    1
0.4166    0.139    1
0.4333    0.139    1
0.45    0.139    1
0.4666    0.139    1
0.4833    0.139    1
0.5    0.136    1
0.5166    0.136    1
0.5333    0.136    1
0.55    0.136    1
0.5666    0.133    1
0.5833    0.133    1
0.6    0.133    1
0.6166    0.133    1
0.6333    0.133    1
0.65    0.13    1
0.6666    0.13    1
0.6833    0.13    1
0.7    0.13    1
0.7166    0.117    1
0.7333    0.12    1
0.75    0.117    1
0.7666    0.117    1
0.7833    0.117    1
0.8    0.117    1
0.8166    0.114    1
0.8333    0.117    1
0.85    0.114    1
0.8666    0.114    1
0.8833    0.114    1
0.9    0.114    1
0.9166    0.114    1
0.9333    0.114    1
0.95    0.111    1
0.9666    0.111    1
0.9833    0.111    1
1    0.111    1
1.2    0.098    1
1.4    0.095    1
1.6    0.085    1
```

```
1.8    0.079    1
2    0.076    1
2.2    0.072    1
2.4    0.066    1
2.6    0.063    1
2.8    0.06    1
3    0.057    1
3.2    0.053    1
3.4    0.05    1
3.6    0.047    1
3.8    0.044    1
4    0.041    1
4.2    0.041    1
4.4    0.038    1
4.6    0.034    1
4.8    0.031    1
5    0.031    1
5.2    0.025    1
5.4    0.025    1
5.6    0.022    1
5.8    0.022    1
6    0.022    1
6.2    0.019    1
6.4    0.019    1
6.6    0.015    1
6.8    0.015    1
7    0.015    1
7.2    0.012    1
7.4    0.012    1
7.6    0.012    1
7.8    0.009    1
8    0.009    1
8.2    0.009    1
8.4    0.009    1
8.6    0.006    1
8.8    0.006    1
9    0.006    1
9.2    0.006    1
9.4    0.003    1
9.6    0.006    1
9.8    0.003    1
10    0.003    1
42    0.003    1
44    0.003    1
46    0.006    1
48    0.009    1
```

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A Q T E S O L V

A Program for
Automatic Estimation of Aquifer Coefficients
From Aquifer Test Data

By:

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and
James O. Rumbaugh, III

Geraghty & Miller Modeling Group
1895 Preston White Drive, Suite 301
Reston, VA 22091

(703) 476 - 0335

A Q T E S O L V is a user-friendly program designed to analyze data from aquifer tests automatically. Aquifer coefficients for a variety of aquifer test conditions can be estimated by A Q T E S O L V , including the following:

- o confined aquifers, unconfined aquifers, and leaky aquifers
- o pumping tests, injection tests, recovery tests, and slug tests

Features:

- o Interactive, menu-driven program design
- o Nonlinear least-squares estimation of aquifer coefficients
- o Statistical analysis of results
- o Complete graphical display of results

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A Q T E S O L V   R E S U L T S
Version 1.10

09/13/96 16:01:06

==

TEST DESCRIPTION

```
Data set........... mw171.inp
Data set title..... MW17-1 Rising Head Slug Test

Knowns and Constants:
   No. of data points................. 189
   Radius of well casing.............. 0.083
   Radius of well..................... 0.35
   Aquifer saturated thickness........ 2.01
   Well screen length................. 0.91
   Static height of water in well..... 2.01
   Log(Re/Rw)......................... 1.152
   A, B, C............................ 0.000, 0.000, 0.621
```

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

```
          Estimate          Std. Error
   K  =   5.7941E-003 +/-   3.3546E-004
   y0 =   2.6934E-001 +/-   5.3705E-003
```

ANALYSIS OF MODEL RESIDUALS

```
residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
   Number of residuals............... 189
   Number of estimated parameters.... 2
   Degrees of freedom................ 187
   Residual mean..................... 0.006523
   Residual standard deviation....... 0.03131
   Residual variance................. 0.0009804
```

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0033	0.402	0.26816	0.13384	1
0.0066	0.377	0.26699	0.11001	1
0.01	0.355	0.26578	0.089215	1
0.0133	0.352	0.26462	0.087378	1
0.0166	0.348	0.26346	0.084536	1
0.02	0.339	0.26228	0.076724	1
0.0233	0.304	0.26113	0.042872	1
0.0266	0.323	0.25999	0.063014	1
0.03	0.304	0.25881	0.045186	1
0.0333	0.307	0.25768	0.049319	1
0.0366	0.304	0.25655	0.047447	1
0.04	0.291	0.2554	0.035603	1
0.0433	0.285	0.25428	0.030721	1
0.0466	0.285	0.25317	0.031833	1
0.05	0.279	0.25203	0.026975	1
0.0533	0.275	0.25092	0.024078	1
0.0566	0.269	0.24982	0.019176	1
0.06	0.266	0.2487	0.017302	1
0.0633	0.263	0.24761	0.01539	1
0.0666	0.256	0.24653	0.0094737	1
0.07	0.253	0.24541	0.0075851	1
0.0733	0.25	0.24434	0.005659	1
0.0766	0.247	0.24327	0.0037282	1
0.08	0.244	0.24218	0.001825	1
0.0833	0.241	0.24112	-0.0001153	1
0.0866	0.237	0.24006	-0.0030602	1
0.09	0.234	0.23898	-0.004978	1
0.0933	0.231	0.23793	-0.0069322	1
0.0966	0.228	0.23689	-0.008891	1
0.1	0.228	0.23582	-0.0078231	1
0.1033	0.225	0.23479	-0.0097911	1
0.1066	0.218	0.23376	-0.015764	1
0.11	0.215	0.23271	-0.01771	1
0.1133	0.218	0.23169	-0.013692	1
0.1166	0.215	0.23068	-0.015678	1
0.12	0.209	0.22964	-0.020638	1
0.1233	0.209	0.22863	-0.019633	1
0.1266	0.209	0.22763	-0.018632	1
0.13	0.206	0.22661	-0.020606	1
0.1333	0.203	0.22561	-0.022615	1
0.1366	0.203	0.22463	-0.021627	1
0.14	0.203	0.22361	-0.020615	1
0.1433	0.199	0.22264	-0.023636	1
0.1466	0.196	0.22166	-0.025662	1
0.15	0.196	0.22066	-0.024662	1
0.1533	0.196	0.2197	-0.023697	1
0.1566	0.193	0.21874	-0.025736	1
0.16	0.193	0.21775	-0.024749	1
0.1633	0.193	0.2168	-0.023797	1
0.1666	0.19	0.21585	-0.025848	1
0.17	0.19	0.21487	-0.024875	1
0.1733	0.187	0.21393	-0.026934	1
0.1766	0.187	0.213	-0.025998	1
0.18	0.187	0.21204	-0.025038	1
0.1833	0.184	0.21111	-0.02711	1
0.1866	0.184	0.21019	-0.026186	1
0.19	0.184	0.20924	-0.025239	1
0.1933	0.18	0.20832	-0.028323	1
0.1966	0.18	0.20741	-0.027412	1

0.2	0.18	0.20648	-0.026477	1
0.2033	0.177	0.20557	-0.028573	1
0.2066	0.177	0.20467	-0.027673	1
0.21	0.177	0.20375	-0.026751	1
0.2133	0.177	0.20286	-0.025859	1
0.2166	0.174	0.20197	-0.027971	1
0.22	0.174	0.20106	-0.027061	1
0.2233	0.174	0.20018	-0.026181	1
0.2266	0.174	0.19931	-0.025305	1
0.23	0.174	0.19841	-0.024407	1
0.2333	0.174	0.19754	-0.023538	1
0.2366	0.171	0.19667	-0.025674	1
0.24	0.171	0.19579	-0.024787	1
0.2433	0.171	0.19493	-0.023931	1
0.2466	0.171	0.19408	-0.023078	1
0.25	0.168	0.1932	-0.025203	1
0.2533	0.168	0.19236	-0.024357	1
0.2566	0.168	0.19152	-0.023515	1
0.26	0.168	0.19065	-0.022652	1
0.2633	0.164	0.18982	-0.025818	1
0.2666	0.164	0.18899	-0.024987	1
0.27	0.161	0.18814	-0.027135	1
0.2733	0.161	0.18731	-0.026312	1
0.2766	0.161	0.18649	-0.025492	1
0.28	0.161	0.18565	-0.024651	1
0.2833	0.161	0.18484	-0.023839	1
0.2866	0.161	0.18403	-0.02303	1
0.29	0.161	0.1832	-0.022201	1
0.2933	0.158	0.1824	-0.024399	1
0.2966	0.161	0.1816	-0.020601	1
0.3	0.161	0.18078	-0.019782	1
0.3033	0.161	0.17999	-0.018991	1
0.3066	0.161	0.1792	-0.018203	1
0.31	0.161	0.1784	-0.017395	1
0.3133	0.161	0.17761	-0.016615	1
0.3166	0.158	0.17684	-0.018838	1
0.32	0.161	0.17604	-0.01504	1
0.3233	0.161	0.17527	-0.01427	1
0.3266	0.158	0.1745	-0.016503	1
0.33	0.158	0.17372	-0.015716	1
0.3333	0.158	0.17296	-0.014956	1
0.35	0.152	0.16916	-0.01716	1
0.3666	0.149	0.16547	-0.016469	1
0.3833	0.145	0.16184	-0.016837	1
0.4	0.142	0.15828	-0.016285	1
0.4166	0.139	0.15483	-0.015831	1
0.4333	0.139	0.15143	-0.012433	1
0.45	0.139	0.14811	-0.0091092	1
0.4666	0.139	0.14488	-0.0058776	1
0.4833	0.139	0.1417	-0.0026977	1
0.5	0.136	0.13859	-0.0025876	1
0.5166	0.136	0.13556	0.00043628	1
0.5333	0.136	0.13259	0.0034118	1
0.55	0.136	0.12968	0.0063219	1
0.5666	0.133	0.12685	0.0061514	1
0.5833	0.133	0.12406	0.0089356	1
0.6	0.133	0.12134	0.011659	1
0.6166	0.133	0.11869	0.014306	1
0.6333	0.133	0.11609	0.016911	1
0.65	0.13	0.11354	0.016459	1

0.6666	0.13	0.11106	0.018937	1
0.6833	0.13	0.10863	0.021375	1
0.7	0.13	0.10624	0.023759	1
0.7166	0.117	0.10392	0.013077	1
0.7333	0.12	0.10164	0.018358	1
0.75	0.117	0.099411	0.017589	1
0.7666	0.117	0.097242	0.019758	1
0.7833	0.117	0.095108	0.021892	1
0.8	0.117	0.09302	0.02398	1
0.8166	0.114	0.090991	0.023009	1
0.8333	0.117	0.088994	0.028006	1
0.85	0.114	0.08704	0.02696	1
0.8666	0.114	0.085141	0.028859	1
0.8833	0.114	0.083272	0.030728	1
0.9	0.114	0.081445	0.032555	1
0.9166	0.114	0.079668	0.034332	1
0.9333	0.114	0.077919	0.036081	1
0.95	0.111	0.076209	0.034791	1
0.9666	0.111	0.074546	0.036454	1
0.9833	0.111	0.07291	0.03809	1
1	0.111	0.071309	0.039691	1
1.2	0.098	0.054666	0.043334	1
1.4	0.095	0.041907	0.053093	1
1.6	0.085	0.032126	0.052874	1
1.8	0.079	0.024628	0.054372	1
2	0.076	0.01888	0.05712	1
2.2	0.072	0.014473	0.057527	1
2.4	0.066	0.011095	0.054905	1
2.6	0.063	0.0085055	0.054495	1
2.8	0.06	0.0065203	0.05348	1
3	0.057	0.0049985	0.052002	1
3.2	0.053	0.0038318	0.049168	1
3.4	0.05	0.0029375	0.047063	1
3.6	0.047	0.0022519	0.044748	1
3.8	0.044	0.0017263	0.042274	1
4	0.041	0.0013234	0.039677	1
4.2	0.041	0.0010145	0.039986	1
4.4	0.038	0.00077771	0.037222	1
4.6	0.034	0.0005962	0.033404	1
4.8	0.031	0.00045704	0.030543	1
5	0.031	0.00035037	0.03065	1
5.2	0.025	0.00026859	0.024731	1
5.4	0.025	0.0002059	0.024794	1
5.6	0.022	0.00015785	0.021842	1
5.8	0.022	0.000121	0.021879	1
6	0.022	9.2762E-005	0.021907	1
6.2	0.019	7.1112E-005	0.018929	1
6.4	0.019	5.4514E-005	0.018945	1
6.6	0.015	4.1791E-005	0.014958	1
6.8	0.015	3.2037E-005	0.014968	1
7	0.015	2.4559E-005	0.014975	1
7.2	0.012	1.8827E-005	0.011981	1
7.4	0.012	1.4433E-005	0.011986	1
7.6	0.012	1.1064E-005	0.011989	1
7.8	0.009	8.4819E-006	0.0089915	1
8	0.009	6.5022E-006	0.0089935	1
8.2	0.009	4.9846E-006	0.008995	1
8.4	0.009	3.8212E-006	0.0089962	1
8.6	0.006	2.9293E-006	0.0059971	1
8.8	0.006	2.2456E-006	0.0059978	1

9	0.006	1.7215E-006	0.0059983	1
9.2	0.006	1.3197E-006	0.0059987	1
9.4	0.003	1.0117E-006	0.002999	1
9.6	0.006	7.7556E-007	0.0059992	1
9.8	0.003	5.9454E-007	0.0029994	1
10	0.003	4.5578E-007	0.0029995	1
42	0.003	1.5481E-025	0.003	1
44	0.003	1.0851E-026	0.003	1
46	0.006	7.6062E-028	0.006	1
48	0.009	5.3316E-029	0.009	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	5.7941E-003
y0 =	2.6934E-001

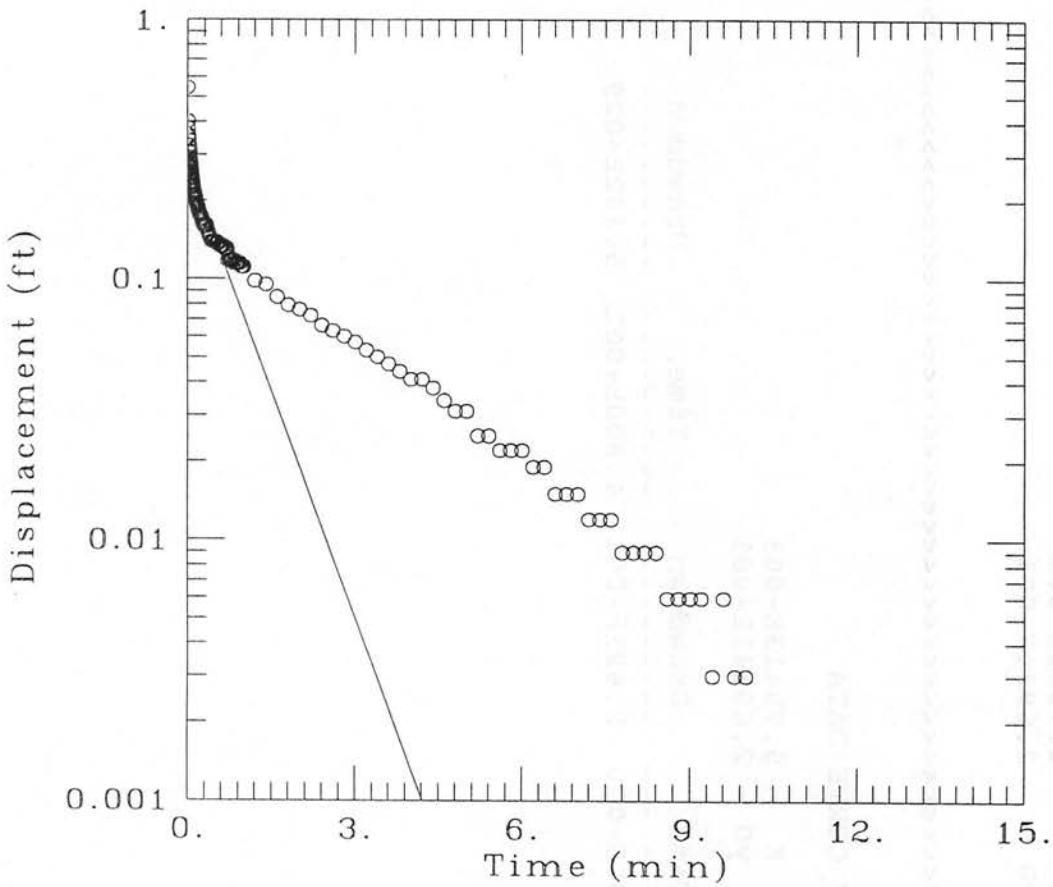
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 5.79413E-003
y0 = 2.69341E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.693E-001	4.800E+001	5.332E-029		

MW17-1 Rising Head Slug Test



DATA SET:

mw171.inp

10/10/98

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.005794 ft/min

y0 = 0.2693 ft

TEST DATA:

H0 = 0.545 ft

ro = 0.083 ft

rw = 0.35 ft

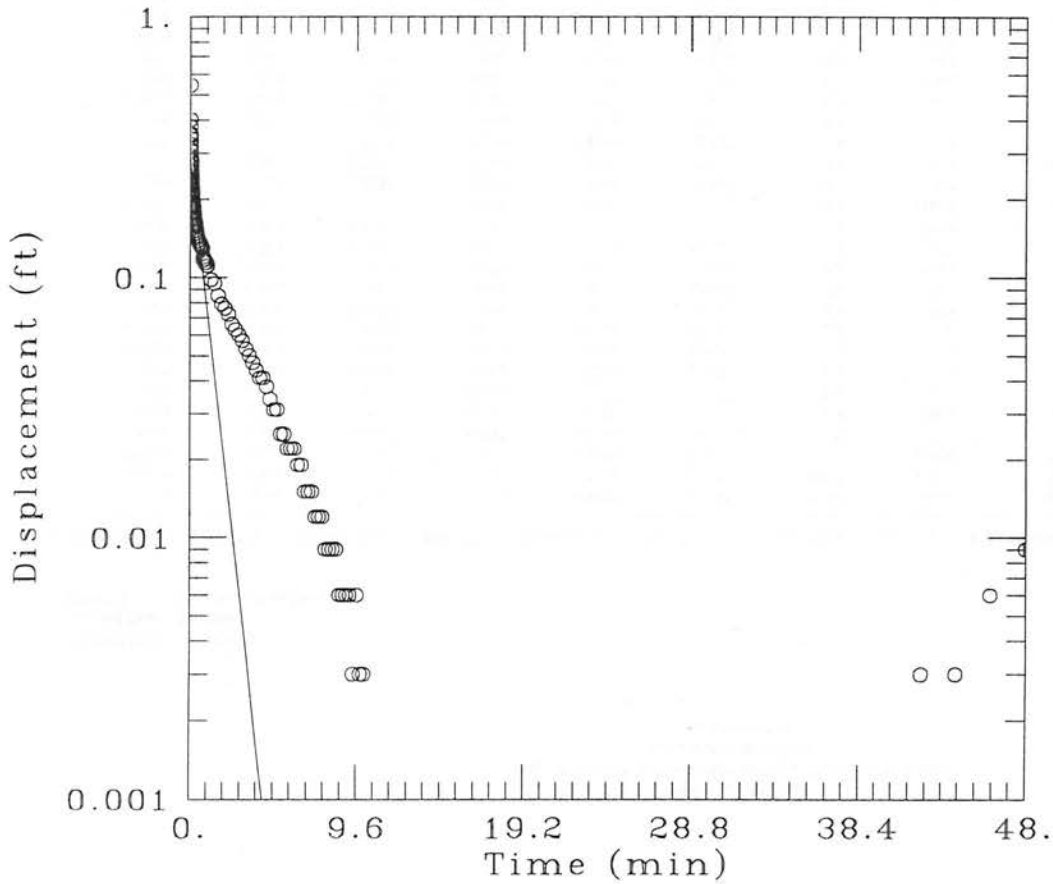
L = 0.91 ft

b = 2.01 ft

H = 2.01 ft

MW171.wpd

MW17-1 Rising Head Slug Test



DATA SET:

mw171.inp

09/13/98

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.005794 ft/min

y0 = 0.2693 ft

TEST DATA:

H0 = 0.545 ft

rc = 0.083 ft

rw = 0.35 ft

L = 0.91 ft

b = 2.01 ft

H = 2.01 ft

MW17-5, First Run
Slug test run with In-Situ Hermit 1000C 2-Channel Data Logger
and pressure transducer
9/03/96 4:45 pm

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1
0	-1.06	0.1533	0.063	0.3066	0.031	0.9666	0.009	9.8	-0.003	100	0.015
0.0033	0.335	0.1566	0.06	0.31	0.028	0.9833	0.009	10	-0.003	120	0.015
0.0066	0.424	0.16	0.057	0.3133	0.031	1	0.009	12	-0.003	140	0.019
0.01	0.421	0.1633	0.057	0.3166	0.031	1.2	0.006	14	-0.003	160	0.019
0.0133	0.417	0.1666	0.057	0.32	0.028	1.4	0.003	16	-0.003	180	0.022
0.0166	0.417	0.17	0.053	0.3233	0.028	1.6	0.003	18	-0.003	200	0.022
0.02	0.417	0.1733	0.053	0.3266	0.028	1.8	0	20	-0.003	220	0.022
0.0233	0.414	0.1766	0.053	0.33	0.028	2	0	22	0	240	0.025
0.0266	0.414	0.18	0.05	0.3333	0.028	2.2	0	24	0	260	0.025
0.03	0.414	0.1833	0.05	0.35	0.028	2.4	-0.003	26	0	280	0.025
0.0333	0.414	0.1866	0.05	0.3666	0.028	2.6	-0.003	28	0	300	0.028
0.0366	0.414	0.19	0.047	0.3833	0.025	2.8	-0.003	30	0	320	0.028
0.04	0.414	0.1933	0.047	0.4	0.025	3	-0.003	32	0.003	340	0.028
0.0433	0.411	0.1966	0.047	0.4166	0.025	3.2	-0.003	34	0.003	360	0.031
0.0466	0.414	0.2	0.044	0.4333	0.025	3.4	-0.003	36	0.003	380	0.031
0.05	0.411	0.2033	0.044	0.45	0.022	3.6	-0.003	38	0.006	400	0.031
0.0533	0.411	0.2066	0.044	0.4666	0.022	3.8	-0.003	40	0.006	420	0.034
0.0566	0.411	0.21	0.044	0.4833	0.022	4	-0.003	42	0.006	440	0.034
0.06	0.411	0.2133	0.044	0.5	0.022	4.2	-0.003	44	0.006	460	0.034
0.0633	0.408	0.2166	0.044	0.5166	0.019	4.4	-0.003	46	0.009	480	0.037
0.0666	0.408	0.22	0.041	0.5333	0.019	4.6	-0.003	48	0.009	500	0.037
0.07	0.395	0.2233	0.041	0.55	0.019	4.8	-0.003	50	0.009	520	0.041
0.0733	0.357	0.2266	0.041	0.5666	0.019	5	-0.003	52	0.009	540	0.041
0.0766	0.357	0.23	0.041	0.5833	0.015	5.2	-0.003	54	0.009	560	0.041
0.08	0.357	0.2333	0.041	0.6	0.019	5.4	-0.003	56	0.009	580	0.044
0.0833	0.357	0.2366	0.037	0.6166	0.015	5.6	-0.003	58	0.009	600	0.044
0.0866	0.354	0.24	0.037	0.6333	0.015	5.8	-0.006	60	0.009	620	0.044
0.09	0.354	0.2433	0.037	0.65	0.015	6	-0.006	62	0.009	640	0.044
0.0933	0.354	0.2466	0.037	0.6666	0.015	6.2	-0.003	64	0.012	660	0.047
0.0966	0.354	0.25	0.037	0.6833	0.015	6.4	-0.006	66	0.012	680	0.05
0.1	0.354	0.2533	0.037	0.7	0.015	6.6	-0.006	68	0.012	700	0.05
0.1033	0.354	0.2566	0.037	0.7166	0.012	6.8	-0.003	70	0.012	720	0.05
0.1066	0.354	0.26	0.034	0.7333	0.012	7	-0.003	72	0.012	740	0.05
0.11	0.354	0.2633	0.037	0.75	0.012	7.2	-0.006	74	0.012	760	0.053
0.1133	0.354	0.2666	0.034	0.7666	0.012	7.4	-0.003	76	0.012	780	0.053
0.1166	0.354	0.27	0.034	0.7833	0.012	7.6	-0.003	78	0.012	800	0.053
0.12	0.354	0.2733	0.034	0.8	0.012	7.8	-0.003	80	0.015	820	0.057
0.1233	0.354	0.2766	0.034	0.8166	0.012	8	-0.006	82	0.015	840	0.057
0.1266	0.354	0.28	0.034	0.8333	0.012	8.2	-0.003	84	0.015	860	0.06
0.13	0.354	0.2833	0.031	0.85	0.012	8.4	-0.003	86	0.015	880	0.06
0.1333	0.354	0.2866	0.034	0.8666	0.009	8.6	-0.003	88	0.015	900	0.06
0.1366	0.101	0.29	0.031	0.8833	0.009	8.8	-0.003	90	0.015		
0.14	0.076	0.2933	0.031	0.9	0.009	9	-0.003	92	0.015		
0.1433	0.069	0.2966	0.031	0.9166	0.009	9.2	-0.003	94	0.015		
0.1466	0.066	0.3	0.031	0.9333	0.009	9.4	-0.003	96	0.015		
0.15	0.063	0.3033	0.031	0.95	0.009	9.6	-0.003	98	0.015		

```
MW17-5 First Rising Head Slug Test
slugt1
0.424
0.083
0.33
slugt2
2.88
2.48
2.88
tsdata
0        -1.06   0
0.0033   0.335   0
0.0066   0.424   1
0.01     0.421   1
0.0133   0.417   1
0.0166   0.417   1
0.02     0.417   1
0.0233   0.414   1
0.0266   0.414   1
0.03     0.414   1
0.0333   0.414   1
0.0366   0.414   1
0.04     0.414   1
0.0433   0.411   1
0.0466   0.414   1
0.05     0.411   1
0.0533   0.411   1
0.0566   0.411   1
0.06     0.411   1
0.0633   0.408   1
0.0666   0.408   1
0.07     0.395   1
0.0733   0.357   1
0.0766   0.357   1
0.08     0.357   1
0.0833   0.357   1
0.0866   0.354   1
0.09     0.354   1
0.0933   0.354   1
0.0966   0.354   1
0.1      0.354   1
0.1033   0.354   1
0.1066   0.354   1
0.11     0.354   1
0.1133   0.354   1
0.1166   0.354   1
0.12     0.354   1
0.1233   0.354   1
0.1266   0.354   1
0.13     0.354   1
0.1333   0.354   1
```

0.1366	0.101	1
0.14	0.076	1
0.1433	0.069	1
0.1466	0.066	1
0.15	0.063	1
0.1533	0.063	1
0.1566	0.06	1
0.16	0.057	1
0.1633	0.057	1
0.1666	0.057	1
0.17	0.053	1
0.1733	0.053	1
0.1766	0.053	1
0.18	0.05	1
0.1833	0.05	1
0.1866	0.05	1
0.19	0.047	1
0.1933	0.047	1
0.1966	0.047	1
0.2	0.044	1
0.2033	0.044	1
0.2066	0.044	1
0.21	0.044	1
0.2133	0.044	1
0.2166	0.044	1
0.22	0.041	1
0.2233	0.041	1
0.2266	0.041	1
0.23	0.041	1
0.2333	0.041	1
0.2366	0.037	1
0.24	0.037	1
0.2433	0.037	1
0.2466	0.037	1
0.25	0.037	1
0.2533	0.037	1
0.2566	0.037	1
0.26	0.034	1
0.2633	0.037	1
0.2666	0.034	1
0.27	0.034	1
0.2733	0.034	1
0.2766	0.034	1
0.28	0.034	1
0.2833	0.031	1
0.2866	0.034	1
0.29	0.031	1
0.2933	0.031	1
0.2966	0.031	1
0.3	0.031	1
0.3033	0.031	1

0.3066	0.031	1
0.31	0.028	1
0.3133	0.031	1
0.3166	0.031	1
0.32	0.028	1
0.3233	0.028	1
0.3266	0.028	1
0.33	0.028	1
0.3333	0.028	1
0.35	0.028	1
0.3666	0.028	1
0.3833	0.025	1
0.4	0.025	1
0.4166	0.025	1
0.4333	0.025	1
0.45	0.022	1
0.4666	0.022	1
0.4833	0.022	1
0.5	0.022	1
0.5166	0.019	1
0.5333	0.019	1
0.55	0.019	1
0.5666	0.019	1
0.5833	0.015	1
0.6	0.019	1
0.6166	0.015	1
0.6333	0.015	1
0.65	0.015	1
0.6666	0.015	1
0.6833	0.015	1
0.7	0.015	1
0.7166	0.012	1
0.7333	0.012	1
0.75	0.012	1
0.7666	0.012	1
0.7833	0.012	1
0.8	0.012	1
0.8166	0.012	1
0.8333	0.012	1
0.85	0.012	1
0.8666	0.009	1
0.8833	0.009	1
0.9	0.009	1
0.9166	0.009	1
0.9333	0.009	1
0.95	0.009	1
0.9666	0.009	1
0.9833	0.009	1
1	0.009	1
1.2	0.006	1
1.4	0.003	1

1.6	0.003	1
1.8	0	1
2	0	1
2.2	0	1
2.4	-0.003	0
2.6	-0.003	0
2.8	-0.003	0
3	-0.003	0
3.2	-0.003	0
3.4	-0.003	0
3.6	-0.003	0
3.8	-0.003	0
4	-0.003	0
4.2	-0.003	0
4.4	-0.003	0
4.6	-0.003	0
4.8	-0.003	0
5	-0.003	0
5.2	-0.003	0
5.4	-0.003	0
5.6	-0.003	0
5.8	-0.006	0
6	-0.006	0
6.2	-0.003	0
6.4	-0.006	0
6.6	-0.006	0
6.8	-0.003	0
7	-0.003	0
7.2	-0.006	0
7.4	-0.003	0
7.6	-0.003	0
7.8	-0.003	0
8	-0.006	0
8.2	-0.003	0
8.4	-0.003	0
8.6	-0.003	0
8.8	-0.003	0
9	-0.003	0
9.2	-0.003	0
9.4	-0.003	0
9.6	-0.003	0
9.8	-0.003	0
10	-0.003	0
12	-0.003	0
14	-0.003	0
16	-0.003	0
18	-0.003	0
20	-0.003	0
22	0	0
24	0	0
26	0	0

28	0	0
30	0	0
32	0.003	0
34	0.003	0
36	0.003	0
38	0.006	0
40	0.006	0
42	0.006	0
44	0.006	0
46	0.009	0
48	0.009	0
50	0.009	0
52	0.009	0
54	0.009	0
56	0.009	0
58	0.009	0
60	0.009	0
62	0.009	0
64	0.012	0
66	0.012	0
68	0.012	0
70	0.012	0
72	0.012	0
74	0.012	0
76	0.012	0
78	0.012	0
80	0.015	0
82	0.015	0
84	0.015	0
86	0.015	0
88	0.015	0
90	0.015	0
92	0.015	0
94	0.015	0
96	0.015	0
98	0.015	0
100	0.015	0
120	0.015	0
140	0.019	0
160	0.019	0
180	0.022	0
200	0.022	0
220	0.022	0
240	0.025	0
260	0.025	0
280	0.025	0
300	0.028	0
320	0.028	0
340	0.028	0
360	0.031	0
380	0.031	0

400	0.031	0
420	0.034	0
440	0.034	0
460	0.034	0
480	0.037	0
500	0.037	0
520	0.041	0
540	0.041	0
560	0.041	0
580	0.044	0
600	0.044	0
620	0.044	0
640	0.044	0
660	0.047	0
680	0.05	0
700	0.05	0
720	0.05	0
740	0.05	0
760	0.053	0
780	0.053	0
800	0.053	0
820	0.057	0
840	0.057	0
860	0.06	0
880	0.06	0
900	0.06	0

A Q T E S O L V

A Program for

Automatic Estimation of Aquifer Coefficients

From Aquifer Test Data

By:

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and
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Reston, VA 22091

(703) 476 - 0335

A Q T E S O L V is a user-friendly program designed to analyze data from aquifer tests automatically. Aquifer coefficients for a variety of aquifer test conditions can be estimated by A Q T E S O L V , including the following:

- confined aquifers, unconfined aquifers, and leaky aquifers
- pumping tests, injection tests, recovery tests, and slug tests

Features:

- Interactive, menu-driven program design
- Nonlinear least-squares estimation of aquifer coefficients
- Statistical analysis of results
- Complete graphical display of results

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

10/15/96 13:54:01

==

TEST DESCRIPTION

Data set........... MW175A.INP
Data set title..... MW17-5 First Rising Head Slug Test

Knowns and Constants:
- No. of data points.................. 218
- Radius of well casing............... 0.083
- Radius of well...................... 0.33
- Aquifer saturated thickness......... 2.88
- Well screen length.................. 2.48
- Static height of water in well...... 2.88
- Log(Re/Rw).......................... 1.523
- A, B, C............................. 0.000, 0.000, 1.118

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

	Estimate		Std. Error
K =	1.7981E-002	+/-	1.0072E-003
y0 =	5.7826E-001	+/-	2.3006E-002

ANALYSIS OF MODEL RESIDUALS

residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
- Number of residuals............... 142
- Number of estimated parameters.... 2
- Degrees of freedom................ 140
- Residual mean..................... -0.002772
- Residual standard deviation....... 0.06139
- Residual variance................. 0.003768

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.0066	0.424	0.54672	-0.12272	1
0.01	0.421	0.53115	-0.11015	1
0.0133	0.417	0.51646	-0.099456	1
0.0166	0.417	0.50217	-0.085172	1
0.02	0.417	0.48787	-0.070868	1
0.0233	0.414	0.47438	-0.060375	1
0.0266	0.414	0.46126	-0.047255	1
0.03	0.414	0.44812	-0.034117	1
0.0333	0.414	0.43572	-0.021723	1
0.0366	0.414	0.42367	-0.009672	1
0.04	0.414	0.4116	0.0023957	1
0.0433	0.411	0.40022	0.01078	1
0.0466	0.414	0.38915	0.024849	1
0.05	0.411	0.37807	0.032933	1
0.0533	0.411	0.36761	0.04339	1
0.0566	0.411	0.35744	0.053557	1
0.06	0.411	0.34726	0.063738	1
0.0633	0.408	0.33766	0.070342	1
0.0666	0.408	0.32832	0.079681	1
0.07	0.395	0.31897	0.076033	1
0.0733	0.357	0.31015	0.046855	1
0.0766	0.357	0.30157	0.055433	1
0.08	0.357	0.29298	0.064022	1
0.0833	0.357	0.28487	0.072125	1
0.0866	0.354	0.277	0.077004	1
0.09	0.354	0.26911	0.084894	1
0.0933	0.354	0.26166	0.092337	1
0.0966	0.354	0.25443	0.099574	1
0.1	0.354	0.24718	0.10682	1
0.1033	0.354	0.24034	0.11366	1
0.1066	0.354	0.2337	0.1203	1
0.11	0.354	0.22704	0.12696	1
0.1133	0.354	0.22076	0.13324	1
0.1166	0.354	0.21465	0.13935	1
0.12	0.354	0.20854	0.14546	1
0.1233	0.354	0.20277	0.15123	1
0.1266	0.354	0.19716	0.15684	1
0.13	0.354	0.19155	0.16245	1
0.1333	0.354	0.18625	0.16775	1
0.1366	0.101	0.1811	-0.080099	1
0.14	0.076	0.17594	-0.099941	1
0.1433	0.069	0.17107	-0.10207	1
0.1466	0.066	0.16634	-0.10034	1
0.15	0.063	0.16161	-0.098605	1
0.1533	0.063	0.15714	-0.094136	1
0.1566	0.06	0.15279	-0.09279	1
0.16	0.057	0.14844	-0.091438	1
0.1633	0.057	0.14433	-0.087332	1
0.1666	0.057	0.14034	-0.08334	1
0.17	0.053	0.13634	-0.083343	1
0.1733	0.053	0.13257	-0.079572	1
0.1766	0.053	0.12891	-0.075905	1
0.18	0.05	0.12523	-0.075234	1
0.1833	0.05	0.12177	-0.07177	1
0.1866	0.05	0.1184	-0.068402	1
0.19	0.047	0.11503	-0.06803	1
0.1933	0.047	0.11185	-0.064848	1
0.1966	0.047	0.10875	-0.061755	1
0.2	0.044	0.10566	-0.061657	1

0.2033	0.044	0.10273	-0.058735	1
0.2066	0.044	0.099894	-0.055894	1
0.21	0.044	0.097048	-0.053048	1
0.2133	0.044	0.094364	-0.050364	1
0.2166	0.044	0.091754	-0.047754	1
0.22	0.041	0.089141	-0.048141	1
0.2233	0.041	0.086675	-0.045675	1
0.2266	0.041	0.084278	-0.043278	1
0.23	0.041	0.081878	-0.040878	1
0.2333	0.041	0.079613	-0.038613	1
0.2366	0.037	0.077411	-0.040411	1
0.24	0.037	0.075206	-0.038206	1
0.2433	0.037	0.073126	-0.036126	1
0.2466	0.037	0.071104	-0.034104	1
0.25	0.037	0.069078	-0.032078	1
0.2533	0.037	0.067168	-0.030168	1
0.2566	0.037	0.06531	-0.02831	1
0.26	0.034	0.06345	-0.02945	1
0.2633	0.037	0.061695	-0.024695	1
0.2666	0.034	0.059989	-0.025989	1
0.27	0.034	0.05828	-0.02428	1
0.2733	0.034	0.056668	-0.022668	1
0.2766	0.034	0.055101	-0.021101	1
0.28	0.034	0.053531	-0.019531	1
0.2833	0.031	0.052051	-0.021051	1
0.2866	0.034	0.050611	-0.016611	1
0.29	0.031	0.04917	-0.01817	1
0.2933	0.031	0.04781	-0.01681	1
0.2966	0.031	0.046487	-0.015487	1
0.3	0.031	0.045163	-0.014163	1
0.3033	0.031	0.043914	-0.012914	1
0.3066	0.031	0.0427	-0.0117	1
0.31	0.028	0.041483	-0.013483	1
0.3133	0.031	0.040336	-0.0093361	1
0.3166	0.031	0.03922	-0.0082205	1
0.32	0.028	0.038103	-0.010103	1
0.3233	0.028	0.037049	-0.0090495	1
0.3266	0.028	0.036025	-0.0080248	1
0.33	0.028	0.034999	-0.0069987	1
0.3333	0.028	0.034031	-0.0060307	1
0.35	0.028	0.029528	-0.0015277	1
0.3666	0.028	0.025642	0.0023577	1
0.3833	0.025	0.022249	0.0027508	1
0.4	0.025	0.019305	0.0056949	1
0.4166	0.025	0.016765	0.0082352	1
0.4333	0.025	0.014546	0.010454	1
0.45	0.022	0.012622	0.0093784	1
0.4666	0.022	0.010961	0.011039	1
0.4833	0.022	0.0095105	0.01249	1
0.5	0.022	0.008252	0.013748	1
0.5166	0.019	0.0071662	0.011834	1
0.5333	0.019	0.0062179	0.012782	1
0.55	0.019	0.0053951	0.013605	1
0.5666	0.019	0.0046852	0.014315	1
0.5833	0.015	0.0040653	0.010935	1
0.6	0.019	0.0035273	0.015473	1
0.6166	0.015	0.0030632	0.011937	1
0.6333	0.015	0.0026579	0.012342	1
0.65	0.015	0.0023062	0.012694	1
0.6666	0.015	0.0020027	0.012997	1

0.6833	0.015	0.0017377	0.013262	1
0.7	0.015	0.0015078	0.013492	1
0.7166	0.012	0.0013094	0.010691	1
0.7333	0.012	0.0011361	0.010864	1
0.75	0.012	0.00098577	0.011014	1
0.7666	0.012	0.00085606	0.011144	1
0.7833	0.012	0.00074278	0.011257	1
0.8	0.012	0.0006445	0.011356	1
0.8166	0.012	0.00055969	0.01144	1
0.8333	0.012	0.00048563	0.011514	1
0.85	0.012	0.00042137	0.011579	1
0.8666	0.009	0.00036592	0.0086341	1
0.8833	0.009	0.0003175	0.0086825	1
0.9	0.009	0.00027549	0.0087245	1
0.9166	0.009	0.00023924	0.0087608	1
0.9333	0.009	0.00020758	0.0087924	1
0.95	0.009	0.00018011	0.0088199	1
0.9666	0.009	0.00015641	0.0088436	1
0.9833	0.009	0.00013572	0.0088643	1
1	0.009	0.00011776	0.0088822	1
1.2	0.006	2.1516E-005	0.0059785	1
1.4	0.003	3.9313E-006	0.0029961	1
1.6	0.003	7.1831E-007	0.0029993	1

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.7981E-002
y0 =	5.7826E-001

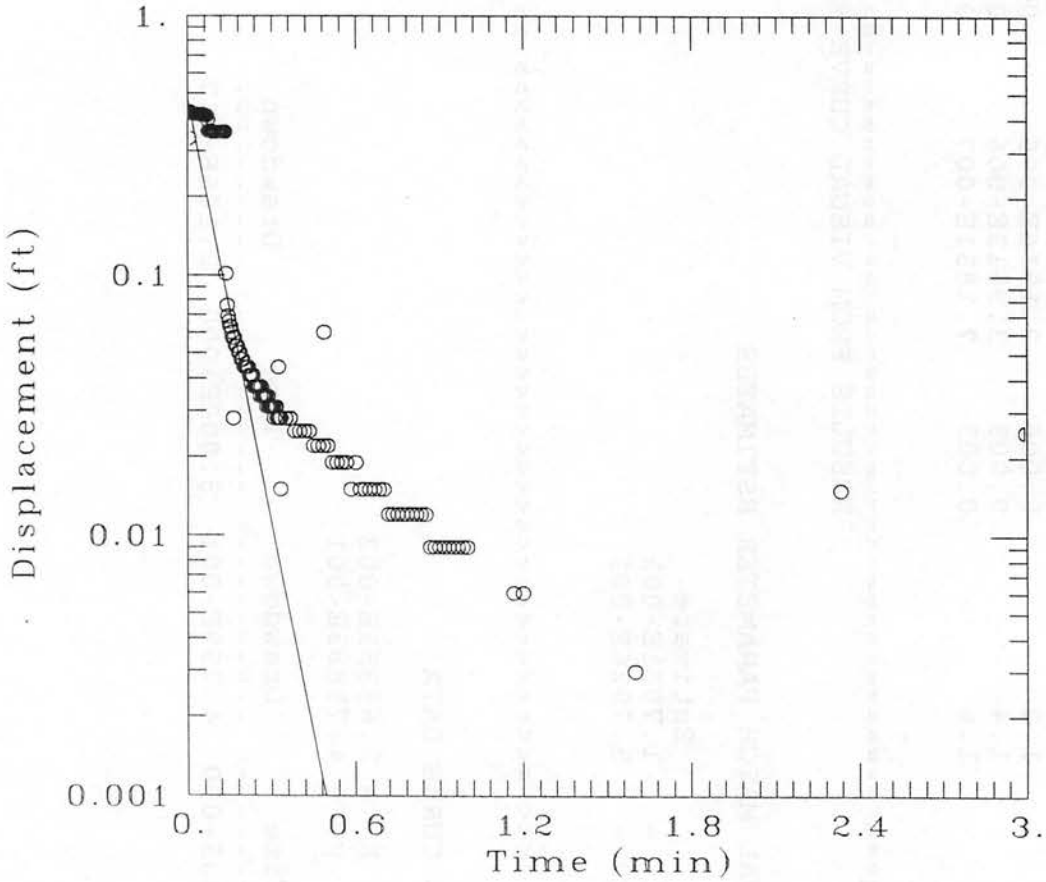
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

K = 2.65351E-002
y0 = 4.75883E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	4.759E-001	3.000E+000	2.168E-017		

MW17-5 First Rising Head Slug Test



DATA SET:

MW17SA.INP

10/15/96

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.02654 ft/min

y0 = 0.4759 ft

TEST DATA:

H0 = 0.424 ft

ro = 0.083 ft

rw = 0.33 ft

L = 2.48 ft

b = 2.88 ft

H = 2.88 ft

MW17-5, Second Run
Slug test run with In-Situ Hermit 1000C 2-Channel Data Logger
and pressure transducer
9/06/96 10:05 am

VARIABLE	UNITS
Elapsed Time	Minutes
INPUT 1	Drawdown from Static, feet

Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1	Elapsed Time	INPUT 1
0.00	0.50	0.1633	0.37	0.3266	0.057	2.4	-0.025	32	0.031
0.00	0.45	0.1666	0.373	0.33	0.057	2.6	-0.031	34	0.038
0.01	0.42	0.17	0.373	0.3333	0.057	2.8	-0.034	36	0.041
0.01	0.40	0.1733	0.37	0.35	0.05	3	-0.037	38	0.05
0.01	0.39	0.1766	0.373	0.3666	0.05	3.2	-0.037	40	0.053
0.02	0.38	0.18	0.373	0.3833	0.047	3.4	-0.037	42	0.06
0.02	0.38	0.1833	0.373	0.4	0.05	3.6	-0.034	44	0.069
0.0233	0.376	0.1866	0.373	0.4166	0.047	3.8	-0.031	46	0.075
0.0266	0.376	0.19	0.373	0.4333	0.05	4	-0.031	48	0.082
0.03	0.379	0.1933	0.373	0.45	0.05	4.2	-0.031	50	0.088
0.0333	0.379	0.1966	0.373	0.4666	0.05	4.4	-0.031	52	0.091
0.0366	0.379	0.2	0.373	0.4833	0.05	4.6	-0.031	54	0.098
0.04	0.379	0.2033	0.373	0.5	0.05	4.8	-0.031	56	0.104
0.0433	0.379	0.2066	0.373	0.5166	0.05	5	-0.031	58	0.107
0.0466	0.379	0.21	0.373	0.5333	0.047	5.2	-0.031	60	0.11
0.05	0.379	0.2133	0.373	0.55	0.047	5.4	-0.031	62	0.114
0.0533	0.379	0.2166	0.373	0.5666	0.047	5.6	-0.031	64	0.117
0.0566	0.379	0.22	0.373	0.5833	0.047	5.8	-0.031	66	0.117
0.06	0.379	0.2233	0.373	0.6	0.047	6	-0.031	68	0.12
0.0633	0.376	0.2266	0.376	0.6166	0.047	6.2	-0.031	70	0.123
0.0666	0.367	0.23	0.256	0.6333	0.044	6.4	-0.031	72	0.123
0.07	0.367	0.2333	0.075	0.65	0.044	6.6	-0.031	74	0.126
0.0733	0.37	0.2366	0.066	0.6666	0.044	6.8	-0.031	76	0.126
0.0766	0.37	0.24	0.06	0.6833	0.044	7	-0.031	78	0.129
0.08	0.37	0.2433	0.06	0.7	0.044	7.2	-0.031	80	0.129
0.0833	0.37	0.2466	0.06	0.7166	0.044	7.4	-0.031	82	0.133
0.0866	0.37	0.25	0.057	0.7333	0.044	7.6	-0.028	84	0.133
0.09	0.37	0.2533	0.057	0.75	0.044	7.8	-0.028	86	0.136
0.0933	0.37	0.2566	0.057	0.7666	0.044	8	-0.028	88	0.136
0.0966	0.37	0.26	0.057	0.7833	0.041	8.2	-0.028	90	0.136
0.1	0.37	0.2633	0.057	0.8	0.041	8.4	-0.028	92	0.136
0.1033	0.37	0.2666	0.057	0.8166	0.041	8.6	-0.028	94	0.136
0.1066	0.37	0.27	0.057	0.8333	0.041	8.8	-0.028	96	0.139
0.11	0.37	0.2733	0.057	0.85	0.041	9	-0.028	98	0.139
0.1133	0.37	0.2766	0.057	0.8666	0.041	9.2	-0.025	100	0.139
0.1166	0.37	0.28	0.057	0.8833	0.038	9.4	-0.025	120	0.142
0.12	0.37	0.2833	0.053	0.9	0.038	9.6	-0.028	140	0.123
0.1233	0.37	0.2866	0.053	0.9166	0.038	9.8	-0.028		
0.1266	0.37	0.29	0.057	0.9333	0.038	10	-0.028		
0.13	0.37	0.2933	0.053	0.95	0.038	12	-0.025		
0.1333	0.37	0.2966	0.053	0.9666	0.038	14	-0.018		
0.1366	0.37	0.3	0.053	0.9833	0.034	16	-0.012		
0.14	0.37	0.3033	0.053	1	0.034	18	-0.006		
0.1433	0.37	0.3066	0.053	1.2	0.012	20	0		
0.1466	0.37	0.31	0.053	1.4	0.003	22	0.006		
0.15	0.37	0.3133	0.057	1.6	-0.009	24	0.012		
0.1533	0.37	0.3166	0.057	1.8	-0.018	26	0.019		
0.1566	0.37	0.32	0.057	2	-0.025	28	0.025		
0.16	0.37	0.3233	0.057	2.2	-0.018	30	0.031		

```
MW17-5 Second Rising Head Slug Test
slugt1
0.497
0.083
0.33
slugt2
2.8
2.4
2.8
tsdata
0.01    0.42    1
0.01    0.4    1
0.01    0.39    1
0.02    0.38    1
0.02    0.38    1
0.0233    0.376    1
0.0266    0.376    1
0.03    0.379    1
0.0333    0.379    1
0.0366    0.379    1
0.04    0.379    1
0.0433    0.379    1
0.0466    0.379    1
0.05    0.379    1
0.0533    0.379    1
0.0566    0.379    1
0.06    0.379    1
0.0633    0.376    1
0.0666    0.367    1
0.07    0.367    1
0.0733    0.37    1
0.0766    0.37    1
0.08    0.37    1
0.0833    0.37    1
0.0866    0.37    1
0.09    0.37    1
0.0933    0.37    1
0.0966    0.37    1
0.1    0.37    1
0.1033    0.37    1
0.1066    0.37    1
0.11    0.37    1
0.1133    0.37    1
0.1166    0.37    1
0.12    0.37    1
0.1233    0.37    1
0.1266    0.37    1
0.13    0.37    1
0.1333    0.37    1
0.1366    0.37    1
0.14    0.37    1
```

```
0.1433    0.37    1
0.1466    0.37    1
0.15    0.37    1
0.1533    0.37    1
0.1566    0.37    1
0.16    0.37    1
0.1633    0.37    1
0.1666    0.373    1
0.17    0.373    1
0.1733    0.37    1
0.1766    0.373    1
0.18    0.373    1
0.1833    0.373    1
0.1866    0.373    1
0.19    0.373    1
0.1933    0.373    1
0.1966    0.373    1
0.2    0.373    1
0.2033    0.373    1
0.2066    0.373    1
0.21    0.373    1
0.2133    0.373    1
0.2166    0.373    1
0.22    0.373    1
0.2233    0.373    1
0.2266    0.376    1
0.23    0.256    1
0.2333    0.075    1
0.2366    0.066    1
0.24    0.06    1
0.2433    0.06    1
0.2466    0.06    1
0.25    0.057    1
0.2533    0.057    1
0.2566    0.057    1
0.26    0.057    1
0.2633    0.057    1
0.2666    0.057    1
0.27    0.057    1
0.2733    0.057    1
0.2766    0.057    1
0.28    0.057    1
0.2833    0.053    1
0.2866    0.053    1
0.29    0.057    1
0.2933    0.053    1
0.2966    0.053    1
0.3    0.053    1
0.3033    0.053    1
0.3066    0.053    1
0.31    0.053    1
```

```
0.3133    0.057    1
0.3166    0.057    1
0.32    0.057    1
0.3233    0.057    1
0.3266    0.057    1
0.33    0.057    1
0.3333    0.057    1
0.35    0.05    1
0.3666    0.05    1
0.3833    0.047    1
0.4    0.05    1
0.4166    0.047    1
0.4333    0.05    1
0.45    0.05    1
0.4666    0.05    1
0.4833    0.05    1
0.5    0.05    1
0.5166    0.05    1
0.5333    0.047    1
0.55    0.047    1
0.5666    0.047    1
0.5833    0.047    1
0.6    0.047    1
0.6166    0.047    1
0.6333    0.044    1
0.65    0.044    1
0.6666    0.044    1
0.6833    0.044    1
0.7    0.044    1
0.7166    0.044    1
0.7333    0.044    1
0.75    0.044    1
0.7666    0.044    1
0.7833    0.041    1
0.8    0.041    1
0.8166    0.041    1
0.8333    0.041    1
0.85    0.041    1
0.8666    0.041    1
0.8833    0.038    1
0.9    0.038    1
0.9166    0.038    1
0.9333    0.038    1
0.95    0.038    1
0.9666    0.038    1
0.9833    0.034    1
1    0.034    1
1.2    0.012    1
1.4    0.003    1
22    0.006    0
24    0.012    0
```

```
26    0.019    0
28    0.025    0
30    0.031    0
32    0.031    0
34    0.038    0
36    0.041    0
38    0.05    0
40    0.053    0
42    0.06    0
44    0.069    0
46    0.075    0
48    0.082    0
50    0.088    0
52    0.091    0
54    0.098    0
56    0.104    0
58    0.107    0
60    0.11    0
62    0.114    0
64    0.117    0
66    0.117    0
68    0.12    0
70    0.123    0
72    0.123    0
74    0.126    0
76    0.126    0
78    0.129    0
80    0.129    0
82    0.133    0
84    0.133    0
86    0.136    0
88    0.136    0
90    0.136    0
92    0.136    0
94    0.136    0
96    0.139    0
98    0.139    0
100    0.139    0
120    0.142    0
140    0.123    0
```

A Q T E S O L V

A Program for

Automatic Estimation of Aquifer Coefficients

From Aquifer Test Data

By:

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and
James O. Rumbaugh, III

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Reston, VA 22091

(703) 476 - 0335

A Q T E S O L V is a user-friendly program designed to analyze data from aquifer tests automatically. Aquifer coefficients for a variety of aquifer test conditions can be estimated by A Q T E S O L V , including the following:

- o confined aquifers, unconfined aquifers, and leaky aquifers
- o pumping tests, injection tests, recovery tests, and slug tests

Features:

- o Interactive, menu-driven program design
- o Nonlinear least-squares estimation of aquifer coefficients
- o Statistical analysis of results
- o Complete graphical display of results

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

A Q T E S O L V   R E S U L T S
Version 1.10

10/15/96 14:21:52

TEST DESCRIPTION

```
Data set........... MW175B.INP
Data set title..... MW17-5 Second Rising Head Slug Test

Knowns and Constants:
   No. of data points.................. 183
   Radius of well casing............... 0.083
   Radius of well...................... 0.33
   Aquifer saturated thickness......... 2.8
   Well screen length.................. 2.4
   Static height of water in well...... 2.8
   Log(Re/Rw).......................... 1.503
   A, B, C.............................  0.000,  0.000,  1.098
```

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

RESULTS FROM STATISTICAL CURVE MATCHING

STATISTICAL MATCH PARAMETER ESTIMATES

```
          Estimate          Std. Error
   K  =   8.4822E-003 +/-   6.6292E-004
   y0 =   5.0142E-001 +/-   2.2226E-002
```

ANALYSIS OF MODEL RESIDUALS

```
residual = calculated - observed
weighted residual = residual * weight

Weighted Residual Statistics:
   Number of residuals............... 141
   Number of estimated parameters.... 2
   Degrees of freedom................ 139
   Residual mean..................... -0.001699
   Residual standard deviation....... 0.08365
   Residual variance................. 0.006997
```

Model Residuals:

Time	Observed	Calculated	Residual	Weight

0.01	0.42	0.48209	-0.062086	1
0.01	0.4	0.48209	-0.082086	1
0.01	0.39	0.48209	-0.092086	1
0.02	0.38	0.46349	-0.083494	1
0.02	0.38	0.46349	-0.083494	1
0.0233	0.376	0.45752	-0.081517	1
0.0266	0.376	0.45162	-0.075618	1
0.03	0.379	0.44562	-0.066619	1
0.0333	0.379	0.43987	-0.060873	1
0.0366	0.379	0.4342	-0.055201	1
0.04	0.379	0.42843	-0.049433	1
0.0433	0.379	0.42291	-0.043909	1
0.0466	0.379	0.41746	-0.038455	1
0.05	0.379	0.41191	-0.03291	1
0.0533	0.379	0.4066	-0.027599	1
0.0566	0.379	0.40136	-0.022356	1
0.06	0.379	0.39602	-0.017025	1
0.0633	0.376	0.39092	-0.014918	1
0.0666	0.367	0.38588	-0.018877	1
0.07	0.367	0.38075	-0.013752	1
0.0733	0.37	0.37584	-0.005842	1
0.0766	0.37	0.371	-0.00099562	1
0.08	0.37	0.36607	0.0039323	1
0.0833	0.37	0.36135	0.0086526	1
0.0866	0.37	0.35669	0.013312	1
0.09	0.37	0.35195	0.01805	1
0.0933	0.37	0.34741	0.022588	1
0.0966	0.37	0.34293	0.027068	1
0.1	0.37	0.33838	0.031623	1
0.1033	0.37	0.33401	0.035986	1
0.1066	0.37	0.32971	0.040293	1
0.11	0.37	0.32533	0.044673	1
0.1133	0.37	0.32113	0.048868	1
0.1166	0.37	0.31699	0.053009	1
0.12	0.37	0.31278	0.057219	1
0.1233	0.37	0.30875	0.061253	1
0.1266	0.37	0.30477	0.065234	1
0.13	0.37	0.30072	0.069282	1
0.1333	0.37	0.29684	0.07316	1
0.1366	0.37	0.29301	0.076987	1
0.14	0.37	0.28912	0.080879	1
0.1433	0.37	0.28539	0.084608	1
0.1466	0.37	0.28171	0.088288	1
0.15	0.37	0.27797	0.09203	1
0.1533	0.37	0.27439	0.095614	1
0.1566	0.37	0.27085	0.099152	1
0.16	0.37	0.26725	0.10275	1
0.1633	0.37	0.2638	0.1062	1
0.1666	0.373	0.2604	0.1126	1
0.17	0.373	0.25694	0.11606	1
0.1733	0.37	0.25363	0.11637	1
0.1766	0.373	0.25036	0.12264	1
0.18	0.373	0.24703	0.12597	1
0.1833	0.373	0.24385	0.12915	1
0.1866	0.373	0.2407	0.1323	1
0.19	0.373	0.23751	0.13549	1
0.1933	0.373	0.23444	0.13856	1
0.1966	0.373	0.23142	0.14158	1
0.2	0.373	0.22835	0.14465	1

0.2033	0.373	0.2254	0.1476	1
0.2066	0.373	0.2225	0.1505	1
0.21	0.373	0.21954	0.15346	1
0.2133	0.373	0.21671	0.15629	1
0.2166	0.373	0.21392	0.15908	1
0.22	0.373	0.21107	0.16193	1
0.2233	0.373	0.20835	0.16465	1
0.2266	0.376	0.20567	0.17033	1
0.23	0.256	0.20293	0.053066	1
0.2333	0.075	0.20032	-0.12532	1
0.2366	0.066	0.19773	-0.13173	1
0.24	0.06	0.19511	-0.13511	1
0.2433	0.06	0.19259	-0.13259	1
0.2466	0.06	0.19011	-0.13011	1
0.25	0.057	0.18758	-0.13058	1
0.2533	0.057	0.18516	-0.12816	1
0.2566	0.057	0.18278	-0.12578	1
0.26	0.057	0.18035	-0.12335	1
0.2633	0.057	0.17802	-0.12102	1
0.2666	0.057	0.17573	-0.11873	1
0.27	0.057	0.17339	-0.11639	1
0.2733	0.057	0.17116	-0.11416	1
0.2766	0.057	0.16895	-0.11195	1
0.28	0.057	0.16671	-0.10971	1
0.2833	0.053	0.16456	-0.11156	1
0.2866	0.053	0.16244	-0.10944	1
0.29	0.057	0.16028	-0.10328	1
0.2933	0.053	0.15821	-0.10521	1
0.2966	0.053	0.15617	-0.10317	1
0.3	0.053	0.1541	-0.1011	1
0.3033	0.053	0.15211	-0.099109	1
0.3066	0.053	0.15015	-0.097148	1
0.31	0.053	0.14815	-0.095154	1
0.3133	0.057	0.14624	-0.089243	1
0.3166	0.057	0.14436	-0.087357	1
0.32	0.057	0.14244	-0.08544	1
0.3233	0.057	0.1406	-0.083603	1
0.3266	0.057	0.13879	-0.08179	1
0.33	0.057	0.13695	-0.079947	1
0.3333	0.057	0.13518	-0.078181	1
0.35	0.05	0.12659	-0.076587	1
0.3666	0.05	0.11859	-0.068587	1
0.3833	0.047	0.11105	-0.064048	1
0.4	0.05	0.10399	-0.053989	1
0.4166	0.047	0.097417	-0.050417	1
0.4333	0.05	0.091224	-0.041224	1
0.45	0.05	0.085425	-0.035425	1
0.4666	0.05	0.080026	-0.030026	1
0.4833	0.05	0.074939	-0.024939	1
0.5	0.05	0.070175	-0.020175	1
0.5166	0.05	0.06574	-0.01574	1
0.5333	0.047	0.061561	-0.014561	1
0.55	0.047	0.057648	-0.010648	1
0.5666	0.047	0.054004	-0.0070043	1
0.5833	0.047	0.050571	-0.0035713	1
0.6	0.047	0.047357	-0.00035654	1
0.6166	0.047	0.044364	0.0026364	1
0.6333	0.044	0.041543	0.0024566	1
0.65	0.044	0.038903	0.0050975	1
0.6666	0.044	0.036444	0.0075561	1

0.6833	0.044	0.034127	0.0098728	1
0.7	0.044	0.031958	0.012042	1
0.7166	0.044	0.029938	0.014062	1
0.7333	0.044	0.028035	0.015965	1
0.75	0.044	0.026253	0.017747	1
0.7666	0.044	0.024593	0.019407	1
0.7833	0.041	0.02303	0.01797	1
0.8	0.041	0.021566	0.019434	1
0.8166	0.041	0.020203	0.020797	1
0.8333	0.041	0.018919	0.022081	1
0.85	0.041	0.017716	0.023284	1
0.8666	0.041	0.016596	0.024404	1
0.8833	0.038	0.015541	0.022459	1
0.9	0.038	0.014554	0.023446	1
0.9166	0.038	0.013634	0.024366	1
0.9333	0.038	0.012767	0.025233	1
0.95	0.038	0.011955	0.026045	1
0.9666	0.038	0.0112	0.0268	1
0.9833	0.034	0.010488	0.023512	1
1	0.034	0.0098212	0.024179	1
1.2	0.012	0.0044725	0.0075275	1
1.4	0.003	0.0020368	0.00096321	1

===

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	8.4822E-003
y0 =	5.0142E-001

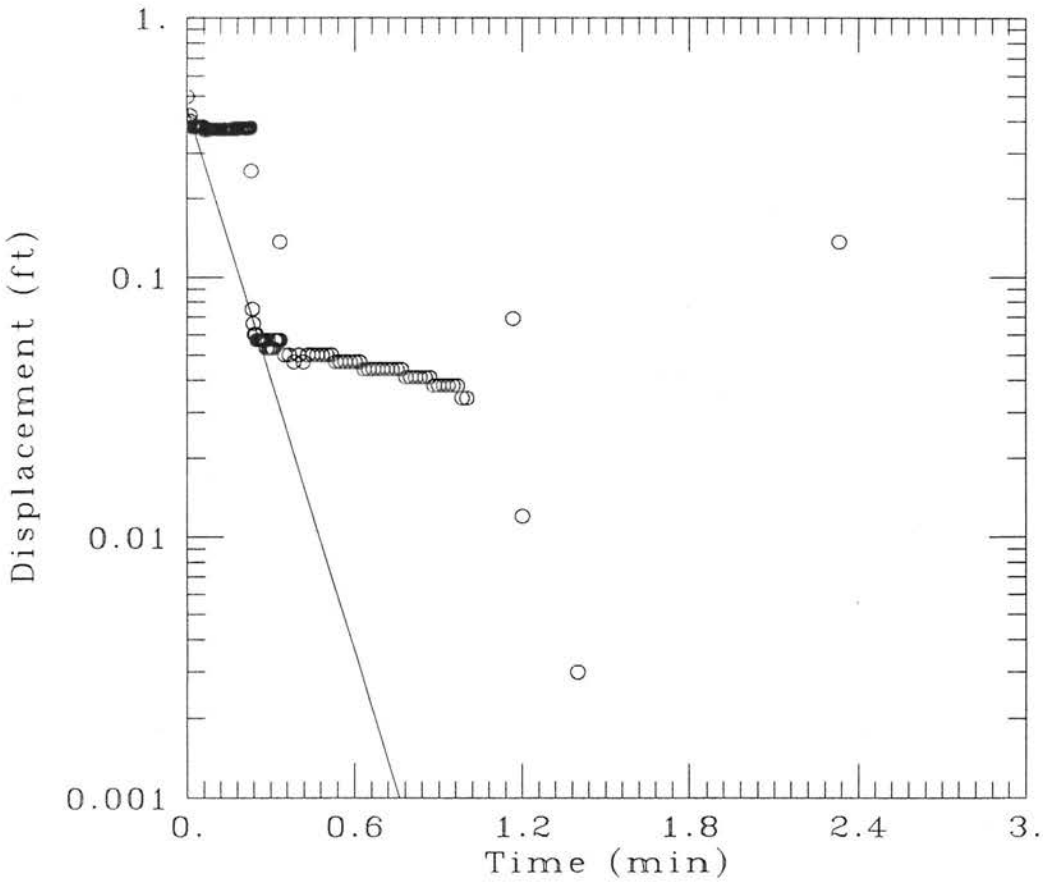
<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

TYPE CURVE DATA

K = 1.73722E-002
y0 = 4.52856E-001

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	4.529E-001	3.000E+000	1.450E-011		

MW17-5 Second Rising Head Slug Test



DATA SET:

MW17SB.INP

10/15/96

AQUIFER TYPE:

Unconfined

SOLUTION METHOD:

Bouwer-Rice

ESTIMATED PARAMETERS:

K = 0.01737 ft/min

y0 = 0.4529 ft

TEST DATA:

H0 = 0.497 ft

rc = 0.083 ft

rw = 0.33 ft

L = 2.4 ft

b = 2.8 ft

H = 2.8 ft

APPENDIX F

U.S. Fish and Wildlife Services Letter on Endangered or Threatened Species

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

TAKE PRIDE IN AMERICA

June 21, 1994

Mr. Michael Duchesneau
Project Manager
Engineering-Science, Inc.
Prudential Center
Boston, MA 02199

Dear Mr. Duchesneau:

This responds to your letter of May 12, 1994, requesting information on the presence of endangered or threatened species in the vicinity of the Seneca Army Depot located at Romulus, Seneca County, New York.

Except for occasional transient individuals, no Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) is required with the U.S. Fish and Wildlife Service (Service). Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of Federally listed and proposed endangered and threatened species in New York is enclosed for your information.

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the Endangered Species Act. This response does not preclude additional Service comments under the Fish and Wildlife Coordination Act or other legislation.

For additional information on fish and wildlife resources or State-listed species, we suggest you contact:

New York State Department of
Environmental Conservation
Region 8
6274 East Avon-Lima Road
Avon, NY 14414
(716) 226-2466

New York State Department of
Environmental Conservation
Wildlife Resources Center - Information Serv.
New York Natural Heritage Program
700 Troy-Schenectady Road
Latham, NY 12110-2400
(518) 783-3932

The National Wetlands Inventory (NWI) maps of Dresden, Geneva South, Ovid, and Romulus Quadrangles are now available in draft form and there may be wetlands in the project vicinity. Copies of NWI maps may be obtained through:

CLEARS
Cornell University
464 Hollister Hall
Ithaca, NY 14853
(607) 255-6520

An order form listing the topographic quadrangles that have been mapped in New York State is enclosed for your information. However, while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes.

Work in certain waters and wetlands of the United States may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act, the Service may concur, with or without stipulations, or recommend denial of the permit depending upon the potential adverse impacts on fish and wildlife resources associated with project implementation. The need for a Corps permit may be determined by contacting Mr. Paul Leuchner, Chief, Regulatory Branch, U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, NY 14207 (telephone: (716) 879-4321).

If you have any questions regarding this letter, contact Tom McCartney at (607) 753-9334.

Sincerely,

Mark W. Clough

ACTING FOR

David A. Stilwell
Acting Field Supervisor

Enclosures

cc: NYSDEC, Avon, NY (Regulatory Affairs)
NYSDEC, Latham, NY
COE, Buffalo, NY
EPA, Chief, Marine & Wetlands Protection Branch, New York, NY

FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES IN NEW YORK

Common Name	Scientific Name	Status	Distribution
FISHES			
Sturgeon, shortnose*	*Acipenser brevirostrum*	E	Hudson River & other Atlantic coastal rivers
REPTILES			
Turtle, green*	*Chelonia mydas*	T	Oceanic summer visitor coastal waters
Turtle, hawksbill*	*Eretmochelys imbricata*	E	Oceanic summer visitor coastal waters
Turtle, leatherback*	*Dermochelys coriacea*	E	Oceanic summer resident coastal waters
Turtle, loggerhead*	*Caretta caretta*	T	Oceanic summer resident coastal waters
Turtle, Atlantic ridley*	*Lepidochelys kempii*	E	Oceanic summer resident coastal waters
BIRDS			
Eagle, bald	*Haliaeetus leucocephalus*	E	Entire state
Falcon, peregrine	*Falco peregrinus*	E	Entire state - re-establishment to former breeding range in progress
Plover, piping	*Charadrius melodus*	E T	Great Lakes Watershed Remainder of coastal New York
Tern, roseate	*Sterna dougallii dougallii*	E	Southeastern coastal portions of state
MAMMALS			
Bat, Indiana	*Myotis sodalis*	E	Entire state
Cougar, eastern	*Felis concolor couguar*	E	Entire state - probably extinct
Whale, blue*	*Balaenoptera musculus*	E	Oceanic
Whale, finback*	*Balaenoptera physalus*	E	Oceanic
Whale, humpback*	*Megaptera novaeangliae*	E	Oceanic
Whale, right*	*Eubalaena glacialis*	E	Oceanic
Whale, sei*	*Balaenoptera borealis*	E	Oceanic
Whale, sperm*	*Physeter catodon*	E	Oceanic
MOLLUSKS			
Snail, Chittenango ovate amber	*Succinea chittenangoensis*	T	Madison County
Mussel, dwarf wedge	*Alasmidonta heterodon*	E	Orange County - lower Neversink River

* Except for sea turtle nesting habitat, principal responsibility for these species is vested with the National Marine Fisheries Service.

Region 5 - 05/07/93 - 2 pp.

FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES IN NEW YORK (Cont'd)

Common Name	Scientific Name	Status	Distribution
BUTTERFLIES			
Butterfly, Karner blue	*Lycaeides melissa samuelis*	E	Albany, Saratoga, Warren, and Schenectady Counties
PLANTS			
Monkshood, northern wild	*Aconitum noveboracense*	T	Ulster, Sullivan, and Delaware Counties
Pogonia, small whorled	*Isotria medeoloides*	E	Entire state
Swamp pink	*Helonias bullata*	T	Staten Island - presumed extirpated
Gerardia, sandplain	*Agalinis acuta*	E	Nassau and Suffolk Counties
Fern, American hart's-tongue	*Phyllitis scolopendrium* var. *americana*	T	Onondaga and Madison Counties
Orchid, eastern prairie fringed	*Platanthera leucophea*	T	Not relocated in New York
Bulrush, northeastern	*Scirpus ancistrochaetus*	E	Not relocated in New York
Roseroot, Leedy's	*Sedum integrifolium* ssp. *Leedyi*	T	West shore of Seneca Lake
Amaranth, seabeach	*Amaranthus pumilus*	T	Atlantic coastal plain beaches

E=endangered T=threatened P=proposed

Region 5 - 05/07/0[illegible]

APPENDIX G

Analytical Results

- SEAD-16 Soil
- SEAD-16 Groundwater
- SEAD-16 Surface Water
- SEAD-16 Sediment
- SEAD-16 Solids
- SEAD-16 Indoor Air
- SEAD-16 Asbestos
- SEAD-16 QC Rinsates and Trip Blanks
- SEAD-17 Soil
- SEAD-17 Groundwater
- SEAD-17 Surface Water
- SEAD-17 Sediment
- SEAD-17 QC Rinsates and Trip Blanks
- SEAD-16 and SEAD-17 TICs

On-site Surface Soils

SEAD-16 Soil

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-3		SB16-3		SB16-4		SS16-1		SS16-10		SS16-11		SS16-12	
SAMP ID:		16037		16032		16033		16030		SS16-1-1		SS16-10-1		SS16-11-1		SS16-12-1	
QC CODE:		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/14/96		8/14/96		8/14/96		10/20/93		11/9/93		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
1,1,2,2-Tetrachloroethane	UG/KG	12	U	11	U	10	J	10	U	11	U	11	U	13	U	11	UJ
1,1,2-Trichloroethane	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
1,1-Dichloroethane	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
1,1-Dichloroethene	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
1,2-Dichloroethane	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
1,2-Dichloroethene (total)	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
1,2-Dichloropropane	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
2-Butanone	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
2-Hexanone	UG/KG	12	U	11	U	10	UJ	10	U	11	U	11	U	13	U	11	UJ
4-Methyl-2-Pentanone	UG/KG	12	U	11	U	10	UJ	10	U	11	U	11	U	13	U	11	UJ
Acetone	UG/KG	7	J	11	U	22	U	10	U	11	U	11	U	13	U	11	UJ
Benzene	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
Bromodichloromethane	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
Bromoform	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
Bromomethane	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
Carbon Disulfide	UG/KG	12	U	11	U	2	J	10	U	11	U	11	U	13	U	11	UJ
Carbon Tetrachloride	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
Chlorobenzene	UG/KG	12	U	11	U	10	UJ	10	U	11	U	11	U	13	U	11	UJ
Chloroethane	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ
Chloroform	UG/KG	12	U	11	U	10	U	10	U	11	U	11	U	13	U	11	UJ

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-3		SB16-3		SB16-4		SS16-1		SS16-10		SS16-11		SS16-12	
SAMP ID:		16037		16032		16033		16030		SS16-1-1		SS16-10-1		SS16-11-1		SS16-12-1	
QC CODE:		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/14/96		8/14/96		8/14/96		10/20/93		11/9/93		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	420	U	1800	U	3500	U	1800		420	J	1800	U	110	J	31	J
Benzo(a)pyrene	UG/KG	420	U	1800	U	3500	U	4400		560	J	1800	U	99	J	27	J
Benzo(b)fluoranthene	UG/KG	420	U	1800	U	3500	U	3800		480	J	1800	U	100	J	31	J
Benzo(g,h,i)perylene	UG/KG	32	J	900	J	340	J	6300		160	J	1800	U	62	J	360	U
Benzo(k)fluoranthene	UG/KG	420	U	1800	U	3500	U	2300		740	J	1800	U	98	J	34	J
Butylbenzylphthalate	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Carbazole	UG/KG	420	U	1800	U	3500	U	100	J	710	UR	1800	U	22	J	360	U
Chrysene	UG/KG	420	U	96	J	3500	U	2100		500	J	1800	U	130	J	49	J
Di-n-butylphthalate	UG/KG	420	U	1800	U	3500	U	150	J	1300	J	120	J	250	J	19	J
Di-n-octylphthalate	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Dibenz(a,h)anthracene	UG/KG	26	J	260	J	220	J	1100	J	710	UR	1800	U	440	U	360	U
Dibenzofuran	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Diethylphthalate	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Dimethylphthalate	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Fluoranthene	UG/KG	420	U	91	J	3500	U	1800		470	J	1800	U	240	J	83	J
Fluorene	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Hexachlorobenzene	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Hexachlorobutadiene	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Hexachlorocyclopentadiene	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Hexachloroethane	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Indeno(1,2,3-cd)pyrene	UG/KG	32	J	470	J	320	J	4600		710	UR	1800	U	30	J	360	U
Isophorone	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-3		SB16-3		SB16-4		SS16-1		SS16-10		SS16-11		SS16-12	
SAMP ID:		16037		16032		16033		16030		SS16-1-1		SS16-10-1		SS16-11-1		SS16-12-1	
QC CODE:		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/14/96		8/14/96		8/14/96		10/20/93		11/9/93		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	1800	U	3500	U	1100	U	680	J	1800	U	22	J	360	U
Naphthalene	UG/KG	420	U	1800	U	3500	U	180	J	710	UR	1800	U	440	U	360	U
Nitrobenzene	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Pentachlorophenol	UG/KG	1000	U	4200	U	8400	U	2800	U	1700	UR	4300	U	1100	U	880	U
Phenanthrene	UG/KG	420	U	1800	U	3500	U	620	J	140	J	1800	U	130	J	45	J
Phenol	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
Pyrene	UG/KG	420	U	1800	U	3500	U	2100		980	J	1800	U	200	J	66	J
bis(2-Chloroethoxy) methane	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
bis(2-Chloroethyl) ether	UG/KG	420	U	1800	U	3500	U	1100	U	710	UR	1800	U	440	U	360	U
bis(2-Chloroisopropyl) ether	UG/KG	420	U	1800	U	3500	U	1100	U								
bis(2-Ethylhexyl)phthalate	UG/KG	30	J	1800	U	3500	U	67	J	710	UR	1800	U	540	J	360	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.2	U	3.5	U	3.5	U	35	U	5	J	3.6	UJ	4.4	U	3.6	U
4,4'-DDE	UG/KG	4.2	U	2	J	3.5	U	35	U	19	J	3.6	UJ	15	J	38	
4,4'-DDT	UG/KG	4.2	U	3.5	U	3.5	U	35	U	12	J	3.6	UJ	6.3	J	5	
Aldrin	UG/KG	2.2	U	1.8	U	1.8	U	18	U	1.8	UJ	1.8	UJ	2.3	U	1.9	U
Aroclor-1016	UG/KG	42	U	35	U	35	U	350	U	35	U	36	UJ	44	U	36	U
Aroclor-1221	UG/KG	86	U	71	U	71	U	710	U	72	U	73	UJ	89	U	74	U
Aroclor-1232	UG/KG	42	U	35	U	35	U	350	U	35	U	36	UJ	44	U	36	U
Aroclor-1242	UG/KG	42	U	35	U	35	U	350	U	35	U	36	UJ	44	U	36	U
Aroclor-1248	UG/KG	42	U	35	U	35	U	350	U	35	U	36	UJ	44	U	36	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-3		SB16-3		SB16-4		SS16-1		SS16-10		SS16-11		SS16-12	
SAMP ID:		16037		16032		16033		16030		SS16-1-1		SS16-10-1		SS16-11-1		SS16-12-1	
QC CODE:		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/14/96		8/14/96		8/14/96		10/20/93		11/9/93		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	42	U	35	U	35	U	350	U	30	UJ	36	UJ	44	U	36	U
Aroclor-1260	UG/KG	42	U	35	U	35	U	350	U	35	U	36	UJ	110		36	U
Dieldrin	UG/KG	4.2	U	3.5	U	3.5	U	26	J	3.5	UJ	3.6	UJ	4.4	U	3.6	U
Endosulfan I	UG/KG	1.4	U	1.2	U	1.8	U	25	J	14	J	1.8	UJ	2.3	U	1.4	J
Endosulfan II	UG/KG	4.2	U	3.5	U	3.5	U	35	U	4.4	J	3.6	UJ	4.4	U	3.6	U
Endosulfan sulfate	UG/KG	4.2	U	3.5	U	3.5	U	35	U	3.5	UJ	3.6	UJ	4.4	U	3.6	U
Endrin	UG/KG	2.2	U	3.5	U	3.5	U	35	U	3.5	UJ	3.6	UJ	4.4	U	3.6	U
Endrin aldehyde	UG/KG	4.2	U	3.5	U	3.5	U	35	U	3	J	3.6	UJ	6.5	J	3.6	U
Endrin ketone	UG/KG	4.2	U	3.5	U	3.5	U	35	U	3.4	J	3.6	UJ	4.4	U	3.6	U
Heptachlor	UG/KG	2.2	U	1.8	U	1.8	U	18	U	1.8	UJ	1.8	UJ	2.3	U	1.9	U
Heptachlor epoxide	UG/KG	1.6	J	1.8	U	1.8	U	18	U	1.8	UJ	1.8	UJ	2.3	U	1.6	J
Methoxychlor	UG/KG	22	U	18	U	18	U	180	U	18	UJ	18	UJ	23	U	19	U
Toxaphene	UG/KG	220	U	180	U	180	U	1800	U	180	UJ	180	UJ	230	U	190	U
alpha-BHC	UG/KG	2.2	U	1.8	U	1.8	U	18	U	1.8	UJ	1.8	UJ	2.3	U	1.9	U
alpha-Chlordane	UG/KG	2.2	U	1.8	U	1.8	U	18	U	1.8	UJ	1.8	UJ	2.3	U	1.9	U
beta-BHC	UG/KG	2.2	U	1.8	U	1.8	U	18	U	1.8	UJ	1.8	UJ	2.3	U	1.9	U
delta-BHC	UG/KG	2.2	U	1.8	U	1.8	U	18	U	1.8	UJ	1.8	UJ	2.3	U	1.9	U
gamma-BHC (Lindane)	UG/KG	2.2	U	1.8	U	1.8	U	18	U	1.8	UJ	1.8	UJ	2.3	U	1.9	U
gamma-Chlordane	UG/KG	2.2	U	1.8	U	1.8	U	18	U	1.8	UJ	1.8	UJ	2.3	U	1.9	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	2.2		0.01		0.01		0.02		0.05		0.07		0.23		0.04	
Percent Moisture (PEST/PCB)		22		6		5		5									

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-3		SB16-3		SB16-4		SS16-1		SS16-10		SS16-11		SS16-12	
SAMP ID:		16037		16032		16033		16030		SS16-1-1		SS16-10-1		SS16-11-1		SS16-12-1	
QC CODE:		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/14/96		8/14/96		8/14/96		10/20/93		11/9/93		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)		22		6		5		4									
Percent Moisture (VOCs)		18		6		5		5									
Percent Solids (Metals)		78		93.8		94.6		95.4									
Total Organic Carbon	MG/KG																
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	120	U	250	U	120	U	120	U	130	U	130	U	130	U	130	U
1,3-Dinitrobenzene	UG/KG	120	U	250	U	120	U	120	U	130	U	130	U	130	U	130	U
2,4,6-Trinitrotoluene	UG/KG	120	U	250	U	120	U	120	U	130	U	130	U	130	U	130	U
2,4-Dinitrotoluene	UG/KG	120	U	6800	J	280	J	2200		320		130	U	130	U	130	U
2,6-Dinitrotoluene	UG/KG	120	U	250	U	120	U	130	J	130	U	130	U	130	U	130	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	250	U	120	U	120	U	130	U	130	U	130	U	130	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	250	U	120	U	120	U	130	U	130	U	130	U	130	U
HMX	UG/KG	120	U	250	U	120	U	120	U	130	U	130	U	130	U	130	U
Nitrobenzene	UG/KG	120	U	250	U	120	U	120	U								
RDX	UG/KG	120	U	250	U	120	U	120	U	130	U	130	U	130	U	130	U
Tetryl	UG/KG	120	U	250	U	120	U	120	U	130	U	130	U	130	U	130	U
METALS																	
Aluminum	MG/KG	19700	R	12500	R	11700	R	5100	R	6550		9720		17200		10400	
Antimony	MG/KG	0.42	UJ	0.39	UJ	0.38	UJ	1.6	J	17.1		6.6	U	13.9	U	6.6	U
Arsenic	MG/KG	5	J	4	J	3.8	J	3	J	4.9		5.2	J	7.7		5.2	
Barium	MG/KG	198	J	67.6	J	61.5	J	44.4	J	102		33.6		195		52	
Beryllium	MG/KG	0.72		0.41		0.38		0.08		0.32	J	0.36	J	0.91	J	0.46	J

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-3		SB16-3		SB16-4		SS16-1		SS16-10		SS16-11		SS16-12	
SAMP ID:		16037		16032		16033		16030		SS16-1-1		SS16-10-1		SS16-11-1		SS16-12-1	
QC CODE:		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/14/96		8/14/96		8/14/96		10/20/93		11/9/93		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	0.36		0.06	U	0.06	U	0.18		0.44	U	0.41	UR	0.87	U	0.41	U
Calcium	MG/KG	6180		30600		45500		76600		147000		13800		9820		30300	
Chromium	MG/KG	24.7		21.2		20.5		8.6		12.6		13.9		25.5		19.2	
Cobalt	MG/KG	14.9	J	12.6	J	13	J	4.6		6.2	J	7.6		16.7		10.6	
Copper	MG/KG	19	J	35.6	J	33	J	39.7	J	44		29	J	199		54.8	
Cyanide	MG/KG	0.55	UJ	0.52	UJ	0.5	UJ	0.47	UJ	0.64	U	0.53	U	0.69	U	0.64	U
Iron	MG/KG	31900	J	27100	J	25600	J	10900	J	12300		23200		30600		22700	
Lead	MG/KG	21.9	J	65.9	J	51.7	J	193	J	269		16.1		616		195	
Magnesium	MG/KG	4380		8010		9320		24900		34900		5500		5200		5830	
Manganese	MG/KG	1060		397	J	409	J	417	J	355	J	342		706	J	329	J
Mercury	MG/KG	0.1	J	0.05	U	0.04	J	0.51	J	0.2		0.02	U	0.73		0.24	
Nickel	MG/KG	30	J	40.3	J	39.7	J	12.3	J	23		22.4		35.2		39.5	
Potassium	MG/KG	1710		1690		1590		1060		1290		813		1600		1080	
Selenium	MG/KG	1.5	J	0.82	J	0.45	UJ	0.44	UJ	0.15	UJ	0.22	UJ	0.24	UJ	0.25	J
Silver	MG/KG	0.3		0.25	U	0.25	U	0.24		0.9	U	0.84	UJ	1.8	U	0.84	U
Sodium	MG/KG	55.8	U	76.6		99.2		53.4		213	J	49.7	J	72.2	J	108	J
Thallium	MG/KG	1.8		0.82	U	0.79	U	0.77		1.6	U	0.24	UJ	0.26	U	0.25	U
Vanadium	MG/KG	33.6	J	22.4	J	20.4	J	11.2	J	36.9		16.9		28.8		15	
Zinc	MG/KG	99.8		84.5		79.8		90.4		219		65.8	J	1270		89	
HERBICIDES																	
2,4,5-T	UG/KG									5.4	U	5.4	U	6.7	U	5.5	U
2,4,5-TP (Silvex)	UG/KG									5.4	U	5.4	U	6.7	U	5.5	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-3		SB16-3		SB16-4		SS16-1		SS16-10		SS16-11		SS16-12	
SAMP ID:		16037		16032		16033		16030		SS16-1-1		SS16-10-1		SS16-11-1		SS16-12-1	
QC CODE:		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/14/96		8/14/96		8/14/96		10/20/93		11/9/93		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG									54	U	54	U	67	U	55	U
2,4-DB	UG/KG									54	U	54	U	67	U	55	U
Dalapon	UG/KG									130	U	130	U	160	U	140	U
Dicamba	UG/KG									5.4	U	5.4	U	6.7	U	5.5	U
Dichloroprop	UG/KG									54	U	54	U	67	U	55	U
Dinoseb	UG/KG									27	U	27	U	34	U	28	U
MCPA	UG/KG									5400	U	5400	U	6700	U	5500	U
MCPP	UG/KG									5400	U	5400	U	6700	U	5500	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-13		SS16-14		SS16-15		SS16-16		SS16-17		SS16-18		SS16-19	
SAMP ID:		16037		SS16-13-1		SS16-14-1		SS16-15-1		SS16-16-1		16040		16041		16042	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		10/20/93		10/20/93		10/20/93		8/19/96		8/19/96		8/19/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
1,1,2,2-Tetrachloroethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
1,1,2-Trichloroethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
1,1-Dichloroethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
1,1-Dichloroethene	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
1,2-Dichloroethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
1,2-Dichloroethene (total)	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
1,2-Dichloropropane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
2-Butanone	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
2-Hexanone	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
4-Methyl-2-Pentanone	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Acetone	UG/KG	7	J	11	UJ	11	U	11	UJ	11	U	6	U	8	U	10	UJ
Benzene	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Bromodichloromethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Bromoform	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Bromomethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Carbon Disulfide	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Carbon Tetrachloride	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	6	U	6	U	5	UJ
Chlorobenzene	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Chloroethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Chloroform	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	6	U	6	U	5	UJ

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-13		SS16-14		SS16-15		SS16-16		SS16-17		SS16-18		SS16-19	
SAMP ID:		16037		SS16-13-1		SS16-14-1		SS16-15-1		SS16-16-1		16040		16041		16042	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		10/20/93		10/20/93		10/20/93		8/19/96		8/19/96		8/19/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Dibromochloromethane	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Ethylbenzene	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Methylene Chloride	UG/KG	12	U	11	UJ	3	J	11	UJ	11	U	12	U	12	U	10	UJ
Styrene	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Tetrachloroethene	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Toluene	UG/KG	12	U	11	UJ	1	J	11	UJ	11	U	12	U	12	U	2	J
Trichloroethene	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Vinyl Chloride	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
Xylene (total)	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
cis-1,3-Dichloropropene	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
trans-1,3-Dichloropropene	UG/KG	12	U	11	UJ	11	U	11	UJ	11	U	12	U	12	U	10	UJ
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
1,2-Dichlorobenzene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
1,3-Dichlorobenzene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
1,4-Dichlorobenzene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
2,2'-oxybis(1-Chloropropane)	UG/KG			750	U	370	U	350	U	1800	UJ						
2,4,5-Trichlorophenol	UG/KG	1000	U	1800	U	890	U	860	U	4500	UJ	950	U	1000	U	820	U
2,4,6-Trichlorophenol	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
2,4-Dichlorophenol	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
2,4-Dimethylphenol	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-13		SS16-14		SS16-15		SS16-16		SS16-17		SS16-18		SS16-19	
SAMP ID:		16037		SS16-13-1		SS16-14-1		SS16-15-1		SS16-16-1		16040		16041		16042	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		10/20/93		10/20/93		10/20/93		8/19/96		8/19/96		8/19/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	1800	U	890	U	860	U	4500	UJ	950	U	1000	U	820	U
2,4-Dinitrotoluene	UG/KG	420	U	750	U	370		350	U	1800	UJ	390	U	420	U	340	U
2,6-Dinitrotoluene	UG/KG	420	U	750	U	56	J	350	U	1800	UJ	390	U	420	U	340	U
2-Chloronaphthalene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
2-Chlorophenol	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
2-Methylnaphthalene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
2-Methylphenol	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
2-Nitroaniline	UG/KG	1000	U	1800	U	890	U	860	U	4500	UJ	950	U	1000	U	820	U
2-Nitrophenol	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
3,3'-Dichlorobenzidine	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
3-Nitroaniline	UG/KG	1000	U	1800	U	890	U	860	U	4500	UJ	950	U	1000	U	820	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	1800	U	890	U	860	U	4500	UJ	950	U	1000	U	820	U
4-Bromophenyl-phenylether	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
4-Chloro-3-methylphenol	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
4-Chloroaniline	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
4-Chlorophenyl-phenylether	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
4-Methylphenol	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
4-Nitroaniline	UG/KG	1000	U	1800	U	890	U	860	U	4500	UJ	950	U	1000	U	820	U
4-Nitrophenol	UG/KG	1000	U	1800	U	890	U	860	U	4500	UJ	950	U	1000	U	820	U
Acenaphthene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Acenaphthylene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Anthracene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-13		SS16-14		SS16-15		SS16-16		SS16-17		SS16-18		SS16-19	
SAMP ID:		16037		SS16-13-1		SS16-14-1		SS16-15-1		SS16-16-1		16040		16041		16042	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		10/20/93		10/20/93		10/20/93		8/19/96		8/19/96		8/19/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	420	U	45	J	26	J	350	U	1800	UJ	390	U	420	U	340	U
Benzo(a)pyrene	UG/KG	420	U	40	J	24	J	350	U	1800	UJ	22	J	420	U	340	U
Benzo(b)fluoranthene	UG/KG	420	U	49	J	33	J	350	U	1800	UJ	21	J	420	U	20	J
Benzo(g,h,i)perylene	UG/KG	32	J	750	U	19	J	350	U	1800	UJ	390	U	420	U	340	U
Benzo(k)fluoranthene	UG/KG	420	U	53	J	30	J	350	U	1800	UJ	22	J	420	U	16	J
Butylbenzylphthalate	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Carbazole	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Chrysene	UG/KG	420	U	72	J	44	J	16	J	1800	UJ	22	J	19	J	24	J
Di-n-butylphthalate	UG/KG	420	U	750	U	76	J	350	U	1800	UJ	390	U	420	U	340	U
Di-n-octylphthalate	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Dibenz(a,h)anthracene	UG/KG	26	J	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Dibenzofuran	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Diethylphthalate	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	19	J	16	J
Dimethylphthalate	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Fluoranthene	UG/KG	420	U	120	J	68	J	23	J	1800	UJ	37	J	28	J	39	J
Fluorene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Hexachlorobenzene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Hexachlorobutadiene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Hexachlorocyclopentadiene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Hexachloroethane	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Indeno(1,2,3-cd)pyrene	UG/KG	32	J	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Isophorone	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-13		SS16-14		SS16-15		SS16-16		SS16-17		SS16-18		SS16-19	
SAMP ID:		16037		SS16-13-1		SS16-14-1		SS16-15-1		SS16-16-1		16040		16041		16042	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		10/20/93		10/20/93		10/20/93		8/19/96		8/19/96		8/19/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	43	J	17	J	350	U	1800	UJ	390	U	420	U	340	U
Naphthalene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Nitrobenzene	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Pentachlorophenol	UG/KG	1000	U	1800	U	890	U	860	U	4500	UJ	950	U	1000	U	820	U
Phenanthrene	UG/KG	420	U	81	J	36	J	25	J	1800	UJ	19	J	420	U	29	J
Phenol	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
Pyrene	UG/KG	420	U	97	J	54	J	19	J	1800	UJ	26	J	22	J	30	J
bis(2-Chloroethoxy) methane	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
bis(2-Chloroethyl) ether	UG/KG	420	U	750	U	370	U	350	U	1800	UJ	390	U	420	U	340	U
bis(2-Chloroisopropyl) ether	UG/KG	420	U									390	U	420	U	340	U
bis(2-Ethylhexyl)phthalate	UG/KG	30	J	320	J	370	J	350	U	1800	UJ	24	U	26	U	84	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.2	U	3.7	U	7.3	U	3.5	U	7.4	U	3.9	U	4.2	U	3.4	U
4,4'-DDE	UG/KG	4.2	U	6		59		28	J	38		3.9	U	4.2	U	14	
4,4'-DDT	UG/KG	4.2	U	2.6	J	19		2.1	J	89		3.9	U	4.2	U	1.8	J
Aldrin	UG/KG	2.2	U	1.9	U	3.8	U	1.8	U	3.8	U	2	U	2.2	U	1.7	U
Aroclor-1016	UG/KG	42	U	37	U	73	U	35	U	74	U	39	U	42	U	34	U
Aroclor-1221	UG/KG	86	U	76	U	150	U	72	U	150	U	80	U	85	U	68	U
Aroclor-1232	UG/KG	42	U	37	U	73	U	35	U	74	U	39	U	42	U	34	U
Aroclor-1242	UG/KG	42	U	37	U	73	U	35	U	74	U	39	U	42	U	34	U
Aroclor-1248	UG/KG	42	U	37	U	73	U	35	U	74	U	39	U	42	U	34	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-13		SS16-14		SS16-15		SS16-16		SS16-17		SS16-18		SS16-19	
SAMP ID:		16037		SS16-13-1		SS16-14-1		SS16-15-1		SS16-16-1		16040		16041		16042	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		10/20/93		10/20/93		10/20/93		8/19/96		8/19/96		8/19/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	42	U	37	U	73	U	35	U	74	U	39	U	42	U	34	U
Aroclor-1260	UG/KG	42	U	37	U	73	U	22	J	74	U	39	U	42	U	34	U
Dieldrin	UG/KG	4.2	U	3.7	U	7.3	U	3.5	U	7.4	U	3.9	U	4.2	U	3.4	U
Endosulfan I	UG/KG	1.4	U	1.9	U	3.8	U	0.96	J	3.8	U	2	U	2.2	U	2	J
Endosulfan II	UG/KG	4.2	U	3.7	U	7.3	U	3.5	U	7.4	U	3.9	U	4.2	U	3.4	U
Endosulfan sulfate	UG/KG	4.2	U	3.7	U	7.3	U	3.5	U	7.4	U	3.9	U	4.2	U	3.4	U
Endrin	UG/KG	2.2	U	3.7	U	7.3	U	3.5	U	7.4	U	3.9	U	4.2	U	3.4	U
Endrin aldehyde	UG/KG	4.2	U	3.7	U	7.3	U	3.5	U	7.4	U	3.9	U	4.2	U	3.4	U
Endrin ketone	UG/KG	4.2	U	3.7	U	7.3	U	3.5	U	7.4	U	3.9	U	4.2	U	3.4	U
Heptachlor	UG/KG	2.2	U	1.9	U	3.8	U	1.8	U	3.8	U	2	U	2.2	U	1.7	U
Heptachlor epoxide	UG/KG	1.6	J	2.1	J	3.8	U	1.8	U	3.8	U	2	U	2.2	U	1.7	U
Methoxychlor	UG/KG	22	U	19	U	38	U	18	U	38	U	20	U	22	U	17	U
Toxaphene	UG/KG	220	U	190	U	380	U	180	U	380	U	200	U	220	U	170	U
alpha-BHC	UG/KG	2.2	U	1.9	U	3.8	U	1.8	U	3.8	U	2	U	2.2	U	1.7	U
alpha-Chlordane	UG/KG	2.2	U	1.9	U	4.8		1.8	U	3.8	U	2	U	2.2	U	1.7	U
beta-BHC	UG/KG	2.2	U	1.9	U	3.8	U	1.8	U	3.8	U	2	U	2.2	U	1.7	U
delta-BHC	UG/KG	2.2	U	1.9	U	3.8	U	1.8	U	3.8	U	2	U	2.2	U	1.7	U
gamma-BHC (Lindane)	UG/KG	2.2	U	1.9	U	3.8	U	1.8	U	3.8	U	2	U	2.2	U	1.7	U
gamma-Chlordane	UG/KG	2.2	U	1.9	U	3.4	J	1.8	U	3.8	U	2	U	2.2	U	1.7	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	2.2		0.05		0.05		0.04		0.2		1.4		0.49		0.04	
Percent Moisture (PEST/PCB)		22										16		21		2	

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-13		SS16-14		SS16-15		SS16-16		SS16-17		SS16-18		SS16-19	
SAMP ID:		16037		SS16-13-1		SS16-14-1		SS16-15-1		SS16-16-1		16040		16041		16042	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		10/20/93		10/20/93		10/20/93		8/19/96		8/19/96		8/19/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)		22										16		21		2	
Percent Moisture (VOCs)		18										19		17		4	
Percent Solids (Metals)		78										84		79.3		97.7	
Total Organic Carbon	MG/KG																
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	120	U	130	U	130	U	130	U	130	U	2500	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	U	130	U	130	U	130	U	130	U	2500	U	120	U	120	U
2,4,6-Trinitrotoluene	UG/KG	120	U	130	U	130	U	130	U	130	U	2500	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	120	U	130	U	1200		130	U	150		74000		120	U	220	
2,6-Dinitrotoluene	UG/KG	120	U	130	U	130	U	130	U	130	U	2500	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	130	U	130	U	130	U	130	U	2500	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	130	U	130	U	130	U	130	U	2500	U	120	U	120	U
HMX	UG/KG	120	U	130	U	130	U	130	U	130	U	2500	U	120	U	120	U
Nitrobenzene	UG/KG	120	U									2500	U	120	U	120	U
RDX	UG/KG	120	U	130	U	130	U	130	U	130	U	2500	U	120	U	120	U
Tetryl	UG/KG	120	U	130	U	130	U	130	U	130	U	2500	U	120	U	120	U
METALS																	
Aluminum	MG/KG	19700	R	14100		7680		7510		6310		10200	J	13600	J	9670	J
Antimony	MG/KG	0.42	UJ	8.2	U	8.4		6.2	U	9	U	2.9	J	2.5	J	3.5	J
Arsenic	MG/KG	5	J	6.8		9.9		4.8		3.8		4.7	J	4.1	J	4.5	J
Barium	MG/KG	198	J	88.2		211		35.1		56.6		168	J	148	J	124	J
Beryllium	MG/KG	0.72		0.59	J	0.41	J	0.34	J	0.37	J	0.24		0.75		0.37	

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-13		SS16-14		SS16-15		SS16-16		SS16-17		SS16-18		SS16-19	
SAMP ID:		16037		SS16-13-1		SS16-14-1		SS16-15-1		SS16-16-1		16040		16041		16042	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		10/20/93		10/20/93		10/20/93		8/19/96		8/19/96		8/19/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	0.36		0.51	U	0.61	J	0.39	U	0.56	U	0.45		0.25		0.36	
Calcium	MG/KG	6180		28700		178000		26800		135000		7470		5200		113000	
Chromium	MG/KG	24.7		26.7		14.4		15.6		14.1		16		19.9		20.4	
Cobalt	MG/KG	14.9	J	13.7		8.2		8.1		10.4		9.3		7.9		12.7	J
Copper	MG/KG	19	J	204		163		42.6		69.2		74.4	J	60.1	J	99.4	J
Cyanide	MG/KG	0.55	UJ	0.63	U	0.64	U	0.63	U	0.67	U	0.59	U	0.53	U	0.51	U
Iron	MG/KG	31900	J	30400		16500		17500		11700		19700	J	22700	J	21900	J
Lead	MG/KG	21.9	J	460		720		210		643		304	J	187	J	669	J
Magnesium	MG/KG	4380		7350		5990		4770		56000		3520		3190		10100	
Manganese	MG/KG	1060		417	J	270	J	227	J	310	J	948		353		413	
Mercury	MG/KG	0.1	J	1		0.07	J	0.05	J	0.04	J	1.2	J	0.77	J	0.04	U
Nickel	MG/KG	30	J	50.8		29.4		30.5		28.5		22.7	J	20.3	J	38.8	J
Potassium	MG/KG	1710		1320		1100		802		2300		1170		1150		1840	
Selenium	MG/KG	1.5	J	0.21	J	0.41	J	0.22	UJ	0.21	UJ	0.59		0.93		0.47	
Silver	MG/KG	0.3		1	U	0.93	U	0.79	U	1.1	U	0.26		0.32	U	0.31	
Sodium	MG/KG	55.8	U	125	J	176	J	90.1	J	240	J	51.8	U	66.2	U	128	
Thallium	MG/KG	1.8		0.16	U	0.14	U	0.24	U	0.23	U	1.7	J	1.1	J	0.74	J
Vanadium	MG/KG	33.6	J	21.1		13.4		10.8		61.9		20.1	J	24.5	J	16.5	J
Zinc	MG/KG	99.8		128		104		68.6		93.8		107		87.5		117	
HERBICIDES																	
2,4,5-T	UG/KG			5.7	U	8.3		5.4	U	5.6	U						
2,4,5-TP (Silvex)	UG/KG			5.7	U	5.6	U	5.4	U	5.6	U						

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-13		SS16-14		SS16-15		SS16-16		SS16-17		SS16-18		SS16-19	
SAMP ID:		16037		SS16-13-1		SS16-14-1		SS16-15-1		SS16-16-1		16040		16041		16042	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		10/20/93		10/20/93		10/20/93		8/19/96		8/19/96		8/19/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG			57	U	56	U	54	U	56	U						
2,4-DB	UG/KG			57	U	56	U	54	U	56	U						
Dalapon	UG/KG			140	U	140	U	130	U	140	U						
Dicamba	UG/KG			5.7	U	5.6	U	5.4	U	5.6	U						
Dichloroprop	UG/KG			57	U	56	U	54	U	56	U						
Dinoseb	UG/KG			29	U	28	U	27	U	28	U						
MCPA	UG/KG			5700	U	5600	U	5400	U	5600	U						
MCPP	UG/KG			5700	U	5600	U	5400	U	5600	U						

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-2		SS16-20		SS16-21		SS16-21		SS16-22		SS16-23		SS16-24	
SAMP ID:		16037		SS16-2-1		16043		16058		16059		16049		16051		16060	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		8/19/96		8/21/96		8/21/96		8/20/96		8/20/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	12	U	11	UJ	10	U	10	UJ	11	U	12	U	10	UJ
1,1,2,2-Tetrachloroethane	UG/KG	12	U	12	U	11	UJ	10	UJ	10	UJ	11	UJ	12	U	10	UJ
1,1,2-Trichloroethane	UG/KG	12	U	12	U	11	UJ	10	U	10	UJ	11	U	12	U	10	UJ
1,1-Dichloroethane	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
1,1-Dichloroethene	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
1,2-Dichloroethane	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
1,2-Dichloroethene (total)	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
1,2-Dichloropropane	UG/KG	12	U	12	U	11	UJ	10	U	10	UJ	11	U	12	U	10	UJ
2-Butanone	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
2-Hexanone	UG/KG	12	U	12	U	11	U	10	UJ	10	UJ	11	UJ	12	U	10	UJ
4-Methyl-2-Pentanone	UG/KG	12	U	12	U	11	UJ	10	UJ	10	UJ	11	UJ	12	U	10	UJ
Acetone	UG/KG	7	J	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
Benzene	UG/KG	12	U	12	U	2	J	10	U	10	UJ	11	U	12	U	2	J
Bromodichloromethane	UG/KG	12	U	12	U	11	UJ	10	U	10	UJ	11	U	12	U	10	UJ
Bromoform	UG/KG	12	U	12	U	11	UJ	10	U	10	UJ	11	U	12	U	10	UJ
Bromomethane	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
Carbon Disulfide	UG/KG	12	U	1	J	11	UJ	10	U	10	U	11	U	12	U	10	UJ
Carbon Tetrachloride	UG/KG	12	U	12	U	5	UJ	5	U	5	UJ	6	U	6	U	5	UJ
Chlorobenzene	UG/KG	12	U	12	U	11	UJ	10	UJ	10	UJ	11	UJ	12	U	10	UJ
Chloroethane	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
Chloroform	UG/KG	12	U	12	U	5	UJ	5	U	5	U	6	U	6	U	5	UJ

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-2		SS16-20		SS16-21		SS16-21		SS16-22		SS16-23		SS16-24	
SAMP ID:		16037		SS16-2-1		16043		16058		16059		16049		16051		16060	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		8/19/96		8/21/96		8/21/96		8/20/96		8/20/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
Dibromochloromethane	UG/KG	12	U	12	U	11	UJ	10	U	10	UJ	11	U	12	U	10	UJ
Ethylbenzene	UG/KG	12	U	12	U	11	UJ	10	UJ	10	UJ	11	UJ	12	U	10	UJ
Methylene Chloride	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
Styrene	UG/KG	12	U	12	U	11	UJ	10	UJ	10	UJ	11	UJ	12	U	10	UJ
Tetrachloroethene	UG/KG	12	U	12	U	11	UJ	10	UJ	10	UJ	11	UJ	12	U	10	UJ
Toluene	UG/KG	12	U	12	U	3	J	10	UJ	2	J	11	UJ	12	U	4	J
Trichloroethene	UG/KG	12	U	12	U	11	UJ	10	U	10	UJ	11	U	12	U	10	UJ
Vinyl Chloride	UG/KG	12	U	12	U	11	UJ	10	U	10	U	11	U	12	U	10	UJ
Xylene (total)	UG/KG	12	U	12	U	11	UJ	10	UJ	10	UJ	11	UJ	12	U	10	UJ
cis-1,3-Dichloropropene	UG/KG	12	U	12	U	11	UJ	10	U	10	UJ	11	U	12	U	10	UJ
trans-1,3-Dichloropropene	UG/KG	12	U	12	U	11	UJ	10	U	10	UJ	11	U	12	U	10	UJ
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
1,2-Dichlorobenzene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
1,3-Dichlorobenzene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
1,4-Dichlorobenzene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
2,2'-oxybis(1-Chloropropane)	UG/KG			410	U												
2,4,5-Trichlorophenol	UG/KG	1000	U	1000	U	850	U	5600	U	7100	U	870	U	920	U	830	U
2,4,6-Trichlorophenol	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
2,4-Dichlorophenol	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
2,4-Dimethylphenol	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-2		SS16-20		SS16-21		SS16-21		SS16-22		SS16-23		SS16-24	
SAMP ID:		16037		SS16-2-1		16043		16058		16059		16049		16051		16060	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		8/19/96		8/21/96		8/21/96		8/20/96		8/20/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	1000	U	850	U	5600	U	7100	U	870	U	920	U	830	U
2,4-Dinitrotoluene	UG/KG	420	U	760		58	J	15000		19000		95	J	380	U	1800	
2,6-Dinitrotoluene	UG/KG	420	U	410	U	350	U	1200	J	1600	J	360	U	380	U	160	J
2-Chloronaphthalene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
2-Chlorophenol	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
2-Methylnaphthalene	UG/KG	420	U	350	J	350	U	2300	U	2900	U	19	J	380	U	76	J
2-Methylphenol	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
2-Nitroaniline	UG/KG	1000	U	1000	U	850	U	5600	U	7100	U	870	U	920	U	830	U
2-Nitrophenol	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
3,3'-Dichlorobenzidine	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
3-Nitroaniline	UG/KG	1000	U	1000	U	850	U	5600	U	7100	U	870	U	920	U	830	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	1000	U	850	U	5600	U	7100	U	870	U	920	U	830	U
4-Bromophenyl-phenylether	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
4-Chloro-3-methylphenol	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
4-Chloroaniline	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
4-Chlorophenyl-phenylether	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
4-Methylphenol	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
4-Nitroaniline	UG/KG	1000	U	1000	U	850	U	5600	U	7100	U	870	U	920	U	830	U
4-Nitrophenol	UG/KG	1000	U	1000	U	850	U	5600	U	7100	U	870	U	920	U	830	U
Acenaphthene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	37	J
Acenaphthylene	UG/KG	420	U	65	J	350	U	2300	U	2900	U	19	J	380	U	340	U
Anthracene	UG/KG	420	U	55	J	350	U	2300	U	2900	U	32	J	380	U	44	J

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-2		SS16-20		SS16-21		SS16-21		SS16-22		SS16-23		SS16-24	
SAMP ID:		16037		SS16-2-1		16043		16058		16059		16049		16051		16060	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		8/19/96		8/21/96		8/21/96		8/20/96		8/20/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	420	U	260	J	26	J	2300	U	2900	U	190	J	380	U	340	U
Benzo(a)pyrene	UG/KG	420	U	300	J	34	J	2300	U	2900	U	250	J	380	U	340	U
Benzo(b)fluoranthene	UG/KG	420	U	500		32	J	2300	U	2900	U	420		380	U	480	
Benzo(g,h,i)perylene	UG/KG	32	J	130	J	350	U	2300	U	2900	U	210	U	380	U	340	U
Benzo(k)fluoranthene	UG/KG	420	U	310	J	32	J	2300	U	2900	U	290	J	380	U	340	U
Butylbenzylphthalate	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Carbazole	UG/KG	420	U	48	J	350	U	2300	U	2900	U	26	J	380	U	41	J
Chrysene	UG/KG	420	U	470		37	J	2300	U	2900	U	370		380	U	340	U
Di-n-butylphthalate	UG/KG	420	U	710		350	U	2300	U	2300	U	32	J	380	U	340	U
Di-n-octylphthalate	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Dibenz(a,h)anthracene	UG/KG	26	J	410	U	32	U	2300	U	2900	U	67	U	380	U	38	J
Dibenzofuran	UG/KG	420	U	100	J	350	U	2300	U	2900	U	21	J	380	U	110	J
Diethylphthalate	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Dimethylphthalate	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Fluoranthene	UG/KG	420	U	580		43	J	2300	U	2900	U	420		380	U	520	
Fluorene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	24	J
Hexachlorobenzene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Hexachlorobutadiene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Hexachlorocyclopentadiene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Hexachloroethane	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Indeno(1,2,3-cd)pyrene	UG/KG	32	J	30	J	350	U	2300	U	2900	U	210	U	380	U	340	U
Isophorone	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-2		SS16-20		SS16-21		SS16-21		SS16-22		SS16-23		SS16-24	
SAMP ID:		16037		SS16-2-1		16043		16058		16059		16049		16051		16060	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		8/19/96		8/21/96		8/21/96		8/20/96		8/20/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	150	J	350	U	1600	J	1700	J	360	U	380	U	310	J
Naphthalene	UG/KG	420	U	230	J	350	U	2300	U	2900	U	360	U	380	U	24	J
Nitrobenzene	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Pentachlorophenol	UG/KG	1000	U	1000	U	850	U	5600	U	7100	U	870	U	920	U	830	U
Phenanthrene	UG/KG	420	U	420		27	J	2300	U	2900	U	160	J	380	U	340	U
Phenol	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
Pyrene	UG/KG	420	U	520		41	J	2300	U	2900	U	360		380	U	350	
bis(2-Chloroethoxy) methane	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
bis(2-Chloroethyl) ether	UG/KG	420	U	410	U	350	U	2300	U	2900	U	360	U	380	U	340	U
bis(2-Chloroisopropyl) ether	UG/KG	420	U			350	U	2300	U	2900	U	360	U	380	U	340	U
bis(2-Ethylhexyl)phthalate	UG/KG	30	J	410	U	200	U	2300	U	2800	U	360	U	380	U	340	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.2	U	4.1	UR	3.5	U	3.5	R	2	U	5.4	J	3.8	U	8.9	J
4,4'-DDE	UG/KG	4.2	U	9.4	J	37		34	J	50		73	J	21		110	J
4,4'-DDT	UG/KG	4.2	U	8.1	J	6.7		22	J	32	J	18	J	22		24	J
Aldrin	UG/KG	2.2	U	2.1	UR	1.8	U	1.8	R	1.8	R	1.8	U	2	U	1.8	R
Aroclor-1016	UG/KG	42	U	41	UR	35	U	35	R	35	R	36	U	38	U	34	R
Aroclor-1221	UG/KG	86	U	84	UR	71	U	71	R	71	R	73	U	77	U	70	R
Aroclor-1232	UG/KG	42	U	41	UR	35	U	35	R	35	R	36	U	38	U	34	R
Aroclor-1242	UG/KG	42	U	41	UR	35	U	35	R	35	R	36	U	38	U	34	R
Aroclor-1248	UG/KG	42	U	41	UR	35	U	35	R	35	R	36	U	38	U	34	R

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-2		SS16-20		SS16-21		SS16-21		SS16-22		SS16-23		SS16-24	
SAMP ID:		16037		SS16-2-1		16043		16058		16059		16049		16051		16060	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		8/19/96		8/21/96		8/21/96		8/20/96		8/20/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	42	U	41	UR	35	U	35	R	35	R	36	U	38	U	1100	J
Aroclor-1260	UG/KG	42	U	41	UR	35	U	35	R	35	R	55	J	38	U	160	J
Dieldrin	UG/KG	4.2	U	4.1	UR	3.5	U	3.5	R	3.5	R	3.6	U	3.8	U	2.9	U
Endosulfan I	UG/KG	1.4	U	3.4	J	1.8	U	1.8	J	2.1	J	5.9	J	2.3	J	13	J
Endosulfan II	UG/KG	4.2	U	4.1	UR	3.5	U	3.5	R	3.5	R	3.6	U	3.8	U	3.4	R
Endosulfan sulfate	UG/KG	4.2	U	4.1	UR	3.5	U	3.5	R	3.5	R	3.6	U	3.8	U	2.8	U
Endrin	UG/KG	2.2	U	4.1	UR	3.5	U	3.5	R	2.1	R	2.2	J	3.8	U	9.1	J
Endrin aldehyde	UG/KG	4.2	U	4.1	UR	3.5	U	3.5	J	1.9	U	3.4	U	3.8	U	4.9	J
Endrin ketone	UG/KG	4.2	U	4.1	UR	3.5	U	3.5	R	3.5	R	3.6	U	3.8	U	3.4	R
Heptachlor	UG/KG	2.2	U	2.1	UR	1.8	U	1.8	J	1.8	R	1.8	U	2	U	1.8	R
Heptachlor epoxide	UG/KG	1.6	J	2.1	UR	1.8	U	1.8	R	1.8	R	1.8	U	2	U	6.7	J
Methoxychlor	UG/KG	22	U	21	UR	18	U	18	R	18	R	18	U	20	U	18	R
Toxaphene	UG/KG	220	U	210	UR	180	U	180	J	180	R	180	U	200	U	180	R
alpha-BHC	UG/KG	2.2	U	2.1	UR	1.8	U	1.8	R	1.8	R	1.8	U	2	U	1.8	R
alpha-Chlordane	UG/KG	2.2	U	2.1	UR	1.8	U	1.3	J	1.2	U	5.7		2	U	14	J
beta-BHC	UG/KG	2.2	U	2.1	UR	1.8	U	1.8	R	1.8	R	1.8	U	2	U	1.8	R
delta-BHC	UG/KG	2.2	U	2.1	UR	1.8	U	1.8	R	1.8	R	0.82	U	2	U	1.8	R
gamma-BHC (Lindane)	UG/KG	2.2	U	2.1	UR	1.8	U	1.8	R	1.8	R	2.3	J	2	U	1.8	R
gamma-Chlordane	UG/KG	2.2	U	2.1	UR	1.8	U	1.8	R	1.3	J	2.5	J	2	U	11	J
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	2.2		0.9		0.11		0.29		0.34		0.03		0.08		0.04	
Percent Moisture (PEST/PCB)		22				6		5		6		8		13		4	

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-2		SS16-20		SS16-21		SS16-21		SS16-22		SS16-23		SS16-24	
SAMP ID:		16037		SS16-2-1		16043		16058		16059		16049		16051		16060	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		8/19/96		8/21/96		8/21/96		8/20/96		8/20/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)		22				6		5		6		8		13		4	
Percent Moisture (VOCs)		18				6		5		4		13		18		4	
Percent Solids (Metals)		78				94		94.6		94.5		92		87.4		95.8	
Total Organic Carbon	MG/KG							11000									
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	120	U	130	U	120	U	250	U	250	U	120	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	U	130	U	120	U	250	U	250	U	120	U	120	U	120	U
2,4,6-Trinitrotoluene	UG/KG	120	U	130	U	120	U	250	U	250	U	120	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	120	U	500		310		7300		7700		160	J	120	U	450	J
2,6-Dinitrotoluene	UG/KG	120	U	130	U	120		250	U	250	U	120	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	130	U	120	U	250	U	250	U	120	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	130	U	120	U	250	U	250	U	120	U	120	U	120	U
HMX	UG/KG	120	U	130	U	120	U	250	U	250	U	120	U	120	U	120	U
Nitrobenzene	UG/KG	120	U			120	U	250	U	250	U	120	U	120	U	120	U
RDX	UG/KG	120	U	130	U	120	U	250	U	250	U	120	U	120	U	120	U
Tetryl	UG/KG	120	U	130	U	120	U	250	U	250	U	120	U	120	U	120	U
METALS																	
Aluminum	MG/KG	19700	R	6340		14100	J	12200	J	12900	J	12200	J	10400	J	11100	J
Antimony	MG/KG	0.42	UJ	55.6		9.9	J	20.8	J	19.2	J	20.3	J	10.4	J	7.1	J
Arsenic	MG/KG	5	J	16.6		5.2	J	6.5		7.2		6.2	J	7.9		6.1	
Barium	MG/KG	198	J	1200		175	J	442	J	676	J	169	J	263	J	148	J
Beryllium	MG/KG	0.72		0.42	J	0.52		0.46		0.52		0.46		0.49		0.46	

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-2		SS16-20		SS16-21		SS16-21		SS16-22		SS16-23		SS16-24	
SAMP ID:		16037		SS16-2-1		16043		16058		16059		16049		16051		16060	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		8/19/96		8/21/96		8/21/96		8/20/96		8/20/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	0.36		1.6	R	0.49		0.69		0.87		1.3		0.76		1.2	
Calcium	MG/KG	6180		11700		36300		34900		40200		56900		25400		50600	
Chromium	MG/KG	24.7		16.5		29.1		40.3		38		31		20.4		26.6	
Cobalt	MG/KG	14.9	J	6.7	J	16.1	J	12.7		12.9		12.7	J	9		13.5	
Copper	MG/KG	19	J	911		207	J	379		536		357	J	291		324	
Cyanide	MG/KG	0.55	UJ	0.74	U	0.49	U	0.52	U	0.5	U	0.5	U	0.56	U	0.46	U
Iron	MG/KG	31900	J	25900		30600	J	27100	J	28700	J	25700	J	20500		27600	J
Lead	MG/KG	21.9	J	3780		1370	J	2030		2640		2920	J	1360		1450	
Magnesium	MG/KG	4380		4400		8330		8560		8600		8610		7510		8200	
Manganese	MG/KG	1060		178	J	417		381		373		414		350		432	
Mercury	MG/KG	0.1	J	4		0.13	J	0.26		0.3		1.7	J	0.93		0.27	
Nickel	MG/KG	30	J	21.7		55.6	J	45.7		49.8		44.1	J	25		48	
Potassium	MG/KG	1710		673	J	2020		1240		1560		2200		1080		1540	
Selenium	MG/KG	1.5	J	0.4	J	0.46	U	1.2		0.81		0.54		0.73	U	0.57	U
Silver	MG/KG	0.3		1.5	U	0.28		0.21	U	0.25	U	0.33		0.27		0.28	
Sodium	MG/KG	55.8	U	121	J	107		101		102		89.1		138		120	
Thallium	MG/KG	1.8		0.19	U	0.92	J	0.8	J	1	J	0.9	J	0.85	U	0.66	U
Vanadium	MG/KG	33.6	J	14.5		21.5	J	17.1		18.6		26.7	J	20.1		21.3	
Zinc	MG/KG	99.8		478		174		246		307		299		411		327	
HERBICIDES																	
2,4,5-T	UG/KG			6.3	U												
2,4,5-TP (Silvex)	UG/KG			6.3	U												

SEAD-16 Analytes Detected in Surface Soils
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Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-2		SS16-20		SS16-21		SS16-21		SS16-22		SS16-23		SS16-24	
SAMP ID:		16037		SS16-2-1		16043		16058		16059		16049		16051		16060	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		8/19/96		8/21/96		8/21/96		8/20/96		8/20/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG			63	U												
2,4-DB	UG/KG			63	U												
Dalapon	UG/KG			150	U												
Dicamba	UG/KG			6.3	U												
Dichloroprop	UG/KG			63	U												
Dinoseb	UG/KG			32	U												
MCPA	UG/KG			6300	U												
MCPP	UG/KG			6300	U												

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-25		SS16-26		SS16-27		SS16-28		SS16-29		SS16-3		SS16-30	
SAMP ID:		16037		16050		16046		16047		16044		16045		SS16-3-1		16048	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/20/96		8/20/96		8/20/96		8/19/96		8/19/96		10/22/93		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	UJ
1,1,2-Trichloroethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
1,1-Dichloroethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
1,1-Dichloroethene	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
1,2-Dichloroethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
1,2-Dichloroethene (total)	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
1,2-Dichloropropane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
2-Butanone	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
2-Hexanone	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	UJ
4-Methyl-2-Pentanone	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	UJ
Acetone	UG/KG	7	J	11	UJ	5	U	11	U	10	U	11	UJ	11	U	11	U
Benzene	UG/KG	12	U	11	UJ	11	U	11	U	10	U	2	J	11	U	11	U
Bromodichloromethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Bromoform	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Bromomethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Carbon Disulfide	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Carbon Tetrachloride	UG/KG	12	U	5	UJ	5	U	5	U	5	U	5	UJ	11	U	6	U
Chlorobenzene	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	UJ
Chloroethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Chloroform	UG/KG	12	U	2	J	5	U	5	U	5	U	5	UJ	11	U	6	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-25		SS16-26		SS16-27		SS16-28		SS16-29		SS16-3		SS16-30	
SAMP ID:		16037		16050		16046		16047		16044		16045		SS16-3-1		16048	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/20/96		8/20/96		8/20/96		8/19/96		8/19/96		10/22/93		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Dibromochloromethane	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Ethylbenzene	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	UJ
Methylene Chloride	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Styrene	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	UJ
Tetrachloroethene	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	UJ
Toluene	UG/KG	12	U	2	J	1	J	3	J	10	U	4	J	4	J	11	UJ
Trichloroethene	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Vinyl Chloride	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
Xylene (total)	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	UJ
cis-1,3-Dichloropropene	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
trans-1,3-Dichloropropene	UG/KG	12	U	11	UJ	11	U	11	U	10	U	10	UJ	11	U	11	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
1,2-Dichlorobenzene	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
1,3-Dichlorobenzene	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
1,4-Dichlorobenzene	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
2,2'-oxybis(1-Chloropropane)	UG/KG													1100	U		
2,4,5-Trichlorophenol	UG/KG	1000	U	830	U	850	U	35000	U	840	U	820	U	2700	U	3100	U
2,4,6-Trichlorophenol	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
2,4-Dichlorophenol	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
2,4-Dimethylphenol	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-25		SS16-26		SS16-27		SS16-28		SS16-29		SS16-3		SS16-30	
SAMP ID:		16037		16050		16046		16047		16044		16045		SS16-3-1		16048	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/20/96		8/20/96		8/20/96		8/19/96		8/19/96		10/22/93		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	830	U	850	U	35000	U	840	U	820	U	2700	U	3100	U
2,4-Dinitrotoluene	UG/KG	420	U	39	J	870		85000		500		1800		7100		9400	
2,6-Dinitrotoluene	UG/KG	420	U	340	U	350	U	8000	J	51	J	150	J	310	J	680	J
2-Chloronaphthalene	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
2-Chlorophenol	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
2-Methylnaphthalene	UG/KG	420	U	340	U	27	J	14000	U	350	U	340	U	510	J	1300	U
2-Methylphenol	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
2-Nitroaniline	UG/KG	1000	U	830	U	850	U	35000	U	840	U	820	U	2700	U	3100	U
2-Nitrophenol	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
3,3'-Dichlorobenzidine	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
3-Nitroaniline	UG/KG	1000	U	830	U	850	U	35000	U	840	U	820	U	2700	U	3100	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	830	U	850	U	35000	U	840	U	820	U	2700	U	3100	U
4-Bromophenyl-phenylether	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
4-Chloro-3-methylphenol	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
4-Chloroaniline	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
4-Chlorophenyl-phenylether	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
4-Methylphenol	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
4-Nitroaniline	UG/KG	1000	U	830	U	850	U	35000	U	840	U	820	U	2700	U	3100	U
4-Nitrophenol	UG/KG	1000	U	830	U	850	U	35000	U	840	U	820	U	2700	U	3100	U
Acenaphthene	UG/KG	420	U	340	U	64	J	14000	U	350	U	340	U	1100	U	1300	U
Acenaphthylene	UG/KG	420	U	340	U	22	J	14000	U	350	U	340	U	1100	U	1300	U
Anthracene	UG/KG	420	U	340	U	120	J	14000	U	350	U	340	U	1100	U	1300	U

SEAD-16 Analytes Detected in Surface Soils
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-25		SS16-26		SS16-27		SS16-28		SS16-29		SS16-3		SS16-30	
SAMP ID:		16037		16050		16046		16047		16044		16045		SS16-3-1		16048	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/20/96		8/20/96		8/20/96		8/19/96		8/19/96		10/22/93		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	420	U	26	J	500		1300	J	42	J	340	U	110	J	1300	U
Benzo(a)pyrene	UG/KG	420	U	30	J	520		1500	J	61	J	17	J	120	J	1300	U
Benzo(b)fluoranthene	UG/KG	420	U	28	J	810		1800	J	84	J	17	J	170	J	1300	U
Benzo(g,h,i)perylene	UG/KG	32	J	24	J	440	U	14000	U	350	U	340	U	1100	U	1300	U
Benzo(k)fluoranthene	UG/KG	420	U	33	J	600		1500	J	65	J	340	U	97	J	1300	U
Butylbenzylphthalate	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Carbazole	UG/KG	420	U	340	U	110	J	14000	U	350	U	340	U	1100	U	1300	U
Chrysene	UG/KG	420	U	40	J	720		1600	J	70	J	17	J	200	J	170	J
Di-n-butylphthalate	UG/KG	420	U	340	U	430		16000		350	U	150	J	1200		1500	
Di-n-octylphthalate	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Dibenz(a,h)anthracene	UG/KG	26	J	340	U	100	U	680	U	28	U	340	U	1100	U	1300	U
Dibenzofuran	UG/KG	420	U	340	U	33	J	14000	U	350	U	340	U	110	J	1300	U
Diethylphthalate	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Dimethylphthalate	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Fluoranthene	UG/KG	420	U	56	J	1200		3100	J	94	J	21	J	200	J	180	J
Fluorene	UG/KG	420	U	340	U	67	J	14000	U	350	U	340	U	1100	U	1300	U
Hexachlorobenzene	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Hexachlorobutadiene	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Hexachlorocyclopentadiene	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Hexachloroethane	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Indeno(1,2,3-cd)pyrene	UG/KG	32	J	22	J	440	U	14000	U	350	U	340	U	1100	U	1300	U
Isophorone	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U

SEAD-16 Analytes Detected in Surface Soils
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-25		SS16-26		SS16-27		SS16-28		SS16-29		SS16-3		SS16-30	
SAMP ID:		16037		16050		16046		16047		16044		16045		SS16-3-1		16048	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/20/96		8/20/96		8/20/96		8/19/96		8/19/96		10/22/93		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	340	U	950		25000		100	J	110	J	1400		780	J
Naphthalene	UG/KG	420	U	340	U	18	J	14000	U	350	U	340	U	320	J	1300	U
Nitrobenzene	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Pentachlorophenol	UG/KG	1000	U	830	U	850	U	35000	U	840	U	820	U	2700	U	3100	U
Phenanthrene	UG/KG	420	U	25	J	770		1800	J	37	J	340	U	360	J	99	J
Phenol	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
Pyrene	UG/KG	420	U	51	J	1000		2200	J	81	J	23	J	200	J	220	J
bis(2-Chloroethoxy) methane	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
bis(2-Chloroethyl) ether	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U	1100	U	1300	U
bis(2-Chloroisopropyl) ether	UG/KG	420	U	340	U	350	U	14000	U	350	U	340	U			1300	U
bis(2-Ethylhexyl)phthalate	UG/KG	30	J	24	J	1200		14000	U	66	U	17	U	390	J	1300	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.2	U	3.4	U	23	J	17	J	1.8	J	3.4	U	3.9	UJ	2.65	
4,4'-DDE	UG/KG	4.2	U	20		210	J	190	J	20		5.7		32	J	6.12	
4,4'-DDT	UG/KG	4.2	U	5.2		340	J	320	J	2.7	J	3.4	U	18	J	21.5	J
Aldrin	UG/KG	2.2	U	1.8	U	5	J	1.8	U	1.8	U	1.8	U	2.8	J	2	U
Aroclor-1016	UG/KG	42	U	34	U	180	U	36	U	34	U	34	U	39	UJ	38	U
Aroclor-1221	UG/KG	86	U	70	U	360	U	73	U	70	U	69	U	80	UJ	77	U
Aroclor-1232	UG/KG	42	U	34	U	180	U	36	U	34	U	34	U	39	UJ	38	U
Aroclor-1242	UG/KG	42	U	34	U	180	U	36	U	34	U	34	U	39	UJ	38	U
Aroclor-1248	UG/KG	42	U	34	U	180	U	36	U	34	U	34	U	39	UJ	38	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-25		SS16-26		SS16-27		SS16-28		SS16-29		SS16-3		SS16-30	
SAMP ID:		16037		16050		16046		16047		16044		16045		SS16-3-1		16048	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/20/96		8/20/96		8/20/96		8/19/96		8/19/96		10/22/93		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	42	U	34	U	180	U	280		34	U	34	U	39	UJ	38	U
Aroclor-1260	UG/KG	42	U	34	U	340	J	310	J	34	U	34	U	110	J	80	
Dieldrin	UG/KG	4.2	U	2	UJ	18	U	4.3	J	3.4	U	3.4	U	3.9	UJ	3.8	U
Endosulfan I	UG/KG	1.4	U	1.6	UJ	9	U	21	J	2.2	J	1.8	U	2	UJ	10.5	J
Endosulfan II	UG/KG	4.2	U	3.4	U	9.9	U	2.3	J	3.4	U	3.4	U	4.6	J	3.8	U
Endosulfan sulfate	UG/KG	4.2	U	3.4	U	18	U	2.1	J	3.4	U	3.4	U	3.9	UJ	3.8	U
Endrin	UG/KG	2.2	U	3.1	UJ	17	U	6.4	J	3.4	U	3.4	U	3.9	UJ	3.8	U
Endrin aldehyde	UG/KG	4.2	U	3.4	U	15	U	14	J	3.4	U	3.4	U	3.9	UJ	4.15	J
Endrin ketone	UG/KG	4.2	U	3.4	U	18	U	3.6	J	3.4	U	3.4	U	3.3	J	3.8	U
Heptachlor	UG/KG	2.2	U	1.8	U	9	U	1.8	U	1.8	U	1.8	U	2	UJ	2	U
Heptachlor epoxide	UG/KG	1.6	J	1.8	U	9	U	1.6	J	1	J	1.8	U	2	UJ	2	U
Methoxychlor	UG/KG	22	U	18	U	90	U	18	U	18	U	18	U	20	UJ	20	U
Toxaphene	UG/KG	220	U	180	U	900	U	180	U	180	U	180	U	200	UJ	200	U
alpha-BHC	UG/KG	2.2	U	1.8	U	9	U	1.8	U	1.8	U	1.8	U	2	UJ	2	U
alpha-Chlordane	UG/KG	2.2	U	1.8	U	170	J	11	J	4.6		1.8	U	4.7	J	10.1	
beta-BHC	UG/KG	2.2	U	1.8	U	9	U	2.3		1.8	U	1.8	U	1.3	J	2	U
delta-BHC	UG/KG	2.2	U	1.8	U	9	U	1.8	U	1.8	U	1.8	U	2	UJ	2	U
gamma-BHC (Lindane)	UG/KG	2.2	U	1.8	U	9	U	1.8	U	1.8	U	1.8	U	2	UJ	2	U
gamma-Chlordane	UG/KG	2.2	U	1.8	U	200	J	6.4		5.2		1.8	U	4.7	J	17.4	
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	2.2		0.06		0.39		0.11		0.06		0.11		0.26		4.8	
Percent Moisture (PEST/PCB)		22		4		6		8		4		3				13	

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-25		SS16-26		SS16-27		SS16-28		SS16-29		SS16-3		SS16-30	
SAMP ID:		16037		16050		16046		16047		16044		16045		SS16-3-1		16048	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/20/96		8/20/96		8/20/96		8/19/96		8/19/96		10/22/93		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)		22		4		6		8		5		3				13	
Percent Moisture (VOCs)		18		9		9		9		5		1				11	
Percent Solids (Metals)		78		95.8		93.5		91.9		95.5		97.4				86.8	
Total Organic Carbon	MG/KG							56400									
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	120	U	120	U	120	U	250	U	120	U	120	U	130	U	120	U
1,3-Dinitrobenzene	UG/KG	120	U	120	U	120	U	250	U	120	U	120	U	130	U	120	U
2,4,6-Trinitrotoluene	UG/KG	120	U	120	U	120	U	250	U	120	U	120	U	130	U	120	U
2,4-Dinitrotoluene	UG/KG	120	U	200		490		7500	J	310	J	180	J	1100		510	
2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	320	J	120	U	120	U	130	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	250	U	120	U	120	U	430	J	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	250	U	120	U	120	U	130	U	120	U
HMX	UG/KG	120	U	120	U	120	U	250	U	120	U	120	U	130	U	120	U
Nitrobenzene	UG/KG	120	U	120	U	120	U	250	U	120	U	120	U			120	U
RDX	UG/KG	120	U	120	U	120	U	250	U	120	U	120	U	130	U	120	U
Tetryl	UG/KG	120	U	120	U	120	U	250	U	120	U	120	U	220	J	120	U
METALS																	
Aluminum	MG/KG	19700	R	14100	J	6370	J	11300	J	10000	J	3860	J	7250		8420	J
Antimony	MG/KG	0.42	UJ	3.1	J	1930	J	122	J	6.7	J	1	J	121	R	28.1	J
Arsenic	MG/KG	5	J	4	J	23	J	32.2	J	5.2	J	2.9	J	23.6		11.2	J
Barium	MG/KG	198	J	121	J	9340	J	5190	J	107	J	48.1	J	1540	R	1220	J
Beryllium	MG/KG	0.72		0.53		0.02	U	0.13		0.36		0.17		0.39	J	0.27	

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-25		SS16-26		SS16-27		SS16-28		SS16-29		SS16-3		SS16-30	
SAMP ID:		16037		16050		16046		16047		16044		16045		SS16-3-1		16048	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/20/96		8/20/96		8/20/96		8/19/96		8/19/96		10/22/93		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	0.36		0.25		7.1		16.6		0.3		0.11		2.5		1.2	
Calcium	MG/KG	6180		39200		68400		99700		57200		260000		21400		77300	
Chromium	MG/KG	24.7		28.4		47.5		43.7		20.5		8.4		33.3		19.4	
Cobalt	MG/KG	14.9	J	17.8	J	8.8		9.6		10.2	J	5.3		9.1		8.4	
Copper	MG/KG	19	J	86.6	J	37900	J	3200	J	192	J	28.3	J	1730		617	J
Cyanide	MG/KG	0.55	UJ	0.44	U	0.53	U	0.54	U	0.49	U	0.47	U	0.68	U	0.51	U
Iron	MG/KG	31900	J	28800	J	17900	J	20500	J	21900	J	8870	J	25700		17600	J
Lead	MG/KG	21.9	J	439	J	140000	J	12600	J	626	J	66.6	J	9140		2560	J
Magnesium	MG/KG	4380		8170		9100		22300		5510		4880		4300		9010	
Manganese	MG/KG	1060		465		367		581		322		215		4140		365	
Mercury	MG/KG	0.1	J	0.4	J	1.6	J	2.6	J	0.11	J	0.03	U	11.4	J	2.3	J
Nickel	MG/KG	30	J	53.5	J	30.2	J	31.3	J	35.1	J	18.1	J	37.3		22.7	J
Potassium	MG/KG	1710		2280		599		1510		1300		972		886		1200	
Selenium	MG/KG	1.5	J	0.65		0.59		0.52	U	0.66		0.43	U	0.22	UJ	0.66	
Silver	MG/KG	0.3		0.32		11.1		1.9		0.41		0.37		1.1	UJ	0.44	
Sodium	MG/KG	55.8	U	61.3		1830		342		77.8		115		147	J	91.6	
Thallium	MG/KG	1.8		0.82	U	16.6	J	1.2	J	0.86	U	0.75	U	0.24	U	0.71	U
Vanadium	MG/KG	33.6	J	22.5	J	15.5	J	23.6	J	16.3	J	8.2		17.9		18.3	J
Zinc	MG/KG	99.8		113		14600		2120		115		42.7		929		573	
HERBICIDES																	
2,4,5-T	UG/KG													7.2			
2,4,5-TP (Silvex)	UG/KG													6	U		

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-25		SS16-26		SS16-27		SS16-28		SS16-29		SS16-3		SS16-30	
SAMP ID:		16037		16050		16046		16047		16044		16045		SS16-3-1		16048	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/20/96		8/20/96		8/20/96		8/19/96		8/19/96		10/22/93		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG													60	U		
2,4-DB	UG/KG													60	U		
Dalapon	UG/KG													150	U		
Dicamba	UG/KG													6	U		
Dichloroprop	UG/KG													60	U		
Dinoseb	UG/KG													30	U		
MCPA	UG/KG													6000	U		
MCPP	UG/KG													6000	U		

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-31		SS16-32		SS16-33		SS16-34		SS16-35		SS16-36		SS16-37	
SAMP ID:		16037		16062		16052		16067		16053		16066		16061		16054	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/21/96		8/20/96		8/22/96		8/20/96		8/22/96		8/21/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	UJ	10	UJ	11	U
1,1,2-Trichloroethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
1,1-Dichloroethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
1,1-Dichloroethene	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
1,2-Dichloroethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
1,2-Dichloroethene (total)	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
1,2-Dichloropropane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
2-Butanone	UG/KG	12	U	11	U	10	U	11	U	21	U	10	UJ	10	UJ	11	U
2-Hexanone	UG/KG	12	U	11	U	10	U	11	UJ	21	U	10	UJ	10	UJ	11	U
4-Methyl-2-Pentanone	UG/KG	12	U	11	U	10	U	11	UJ	21	U	10	UJ	10	UJ	11	U
Acetone	UG/KG	7	J	11	U	10	U	11	UJ	15	U	10	UJ	10	UJ	11	U
Benzene	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	5	J	11	U
Bromodichloromethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
Bromoform	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
Bromomethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
Carbon Disulfide	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	2	J	11	U
Carbon Tetrachloride	UG/KG	12	U	5	U	5	U	11	U	10	U	10	U	5	UJ	5	U
Chlorobenzene	UG/KG	12	U	11	U	10	U	11	UJ	21	U	10	UJ	10	UJ	11	U
Chloroethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
Chloroform	UG/KG	12	U	5	U	5	U	11	U	10	U	10	U	5	UJ	5	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-31		SS16-32		SS16-33		SS16-34		SS16-35		SS16-36		SS16-37	
SAMP ID:		16037		16062		16052		16067		16053		16066		16061		16054	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/21/96		8/20/96		8/22/96		8/20/96		8/22/96		8/21/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
Dibromochloromethane	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
Ethylbenzene	UG/KG	12	U	11	U	10	U	11	UJ	21	U	10	UJ	10	UJ	11	U
Methylene Chloride	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
Styrene	UG/KG	12	U	11	U	10	U	11	UJ	21	U	10	UJ	10	UJ	11	U
Tetrachloroethene	UG/KG	12	U	11	U	10	U	11	UJ	21	U	10	UJ	10	UJ	11	U
Toluene	UG/KG	12	U	11	U	10	U	11	UJ	21	U	10	UJ	10	J	11	U
Trichloroethene	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
Vinyl Chloride	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
Xylene (total)	UG/KG	12	U	11	U	10	U	11	UJ	21	U	10	UJ	10	UJ	11	U
cis-1,3-Dichloropropene	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
trans-1,3-Dichloropropene	UG/KG	12	U	11	U	10	U	11	U	21	U	10	U	10	UJ	11	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
1,2-Dichlorobenzene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
1,3-Dichlorobenzene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
1,4-Dichlorobenzene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
2,2'-oxybis(1-Chloropropane)	UG/KG																
2,4,5-Trichlorophenol	UG/KG	1000	U	220000	UJ	850	U	1200	U	4200	U	2100	U	1700	U	860	U
2,4,6-Trichlorophenol	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
2,4-Dichlorophenol	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
2,4-Dimethylphenol	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-31		SS16-32		SS16-33		SS16-34		SS16-35		SS16-36		SS16-37	
SAMP ID:		16037		16062		16052		16067		16053		16066		16061		16054	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/21/96		8/20/96		8/22/96		8/20/96		8/22/96		8/21/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	220000	UJ	850	U	1200	U	4200	U	2100	U	1700	U	860	U
2,4-Dinitrotoluene	UG/KG	420	U	91000	UJ	340	U	510	U	1800	U	6900		700	U	350	U
2,6-Dinitrotoluene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	400	J	700	U	350	U
2-Chloronaphthalene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
2-Chlorophenol	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
2-Methylnaphthalene	UG/KG	420	U	19000	J	98	J	510	U	1800	U	850	U	700	U	350	U
2-Methylphenol	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
2-Nitroaniline	UG/KG	1000	U	220000	UJ	850	U	1200	U	4200	U	2100	U	1700	U	860	U
2-Nitrophenol	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
3,3'-Dichlorobenzidine	UG/KG	420	U	91000	UJ	350	U	510	UJ	1800	U	850	J	700	U	350	U
3-Nitroaniline	UG/KG	1000	U	220000	UJ	850	U	1200	UJ	4200	U	2100	J	1700	U	860	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	220000	UJ	850	U	1200	U	4200	U	2100	U	1700	U	860	U
4-Bromophenyl-phenylether	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
4-Chloro-3-methylphenol	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
4-Chloroaniline	UG/KG	420	U	91000	UJ	350	U	510	UJ	1800	U	850	U	700	U	350	U
4-Chlorophenyl-phenylether	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
4-Methylphenol	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
4-Nitroaniline	UG/KG	1000	U	220000	UJ	850	U	1200	UJ	4200	U	2100	UJ	1700	U	860	U
4-Nitrophenol	UG/KG	1000	U	220000	UJ	850	U	1200	U	4200	U	2100	UJ	1700	U	860	U
Acenaphthene	UG/KG	420	U	72000	J	30	J	55	J	1800	U	140	J	700	U	350	U
Acenaphthylene	UG/KG	420	U	91000	U	140	J	40	J	1800	U	850	U	700	U	350	U
Anthracene	UG/KG	420	U	120000	J	120	J	310	J	1800	U	260	J	700	U	350	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-31		SS16-32		SS16-33		SS16-34		SS16-35		SS16-36		SS16-37	
SAMP ID:		16037		16062		16052		16067		16053		16066		16061		16054	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/21/96		8/20/96		8/22/96		8/20/96		8/22/96		8/21/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	420	U	220000	J	760		1900		1800	U	1000		700	U	350	U
Benzo(a)pyrene	UG/KG	420	U	200000	J	1800		1900		1800	U	1000		700	U	350	U
Benzo(b)fluoranthene	UG/KG	420	U	200000	J	2500		3300	J	1800	U	850	U	700	U	350	U
Benzo(g,h,i)perylene	UG/KG	32	J	100000	J	1100		1000		1800	U	570	J	700	U	350	U
Benzo(k)fluoranthene	UG/KG	420	U	170000	J	350	U	510	U	1800	U	1700	J	700	U	350	U
Butylbenzylphthalate	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
Carbazole	UG/KG	420	U	89000	J	34	J	160	J	1800	U	410	J	700	U	350	U
Chrysene	UG/KG	420	U	220000	J	950		1700		1800	U	910		700	U	350	U
Di-n-butylphthalate	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	2000		700	U	350	U
Di-n-octylphthalate	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
Dibenz(a,h)anthracene	UG/KG	26	J	49000	J	520		700		1800	U	390	J	700	U	350	U
Dibenzofuran	UG/KG	420	U	50000	J	350	U	33	J	1800	U	62	J	700	U	350	U
Diethylphthalate	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
Dimethylphthalate	UG/KG	420	U	91000	U	350	U	510	U	1800	U	850	U	700	U	350	U
Fluoranthene	UG/KG	420	U	530000	J	700		2400		1800	U	2400		700	U	350	U
Fluorene	UG/KG	420	U	78000	J	350	U	83	J	1800	U	110	J	700	U	350	U
Hexachlorobenzene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
Hexachlorobutadiene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
Hexachlorocyclopentadiene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
Hexachloroethane	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
Indeno(1,2,3-cd)pyrene	UG/KG	32	J	100000	J	990		1500		1800	U	700	J	700	U	350	U
Isophorone	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-31		SS16-32		SS16-33		SS16-34		SS16-35		SS16-36		SS16-37	
SAMP ID:		16037		16062		16052		16067		16053		16066		16061		16054	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/21/96		8/20/96		8/22/96		8/20/96		8/22/96		8/21/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	91000	UJ	180	J	510	U	1800	U	760	J	700	U	350	U
Naphthalene	UG/KG	420	U	66000	J	55	J	510	U	1800	U	850	U	700	U	350	U
Nitrobenzene	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
Pentachlorophenol	UG/KG	1000	U	220000	UJ	850	U	1200	J	4200	U	2100	UJ	1700	U	860	U
Phenanthrene	UG/KG	420	U	490000	J	350	U	1200		1800	U	1300		700	U	350	U
Phenol	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
Pyrene	UG/KG	420	U	360000	J	1200		3200		1800	U	2000		700	U	350	U
bis(2-Chloroethoxy) methane	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
bis(2-Chloroethyl) ether	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
bis(2-Chloroisopropyl) ether	UG/KG	420	U	91000	UJ	350	U	510	U	1800	U	850	U	700	U	350	U
bis(2-Ethylhexyl)phthalate	UG/KG	30	J	91000	UJ	350	U	510	U	1800	U	990		700	U	350	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.2	U	3.2	U	3.5	U	1.6	J	3.5	U	34	U	3.5	R	3.5	U
4,4'-DDE	UG/KG	4.2	U	12		11		20		3.5	U	290		2.3	R	3.5	U
4,4'-DDT	UG/KG	4.2	U	43		9.9		17		2.3	J	340		7.4	J	3.5	U
Aldrin	UG/KG	2.2	U	1.9	U	1.8	U	1.9	U	1.8	U	18	U	1.8	R	1.8	U
Aroclor-1016	UG/KG	42	U	36	U	35	U	36	U	35	U	340	U	35	R	35	U
Aroclor-1221	UG/KG	86	U	74	U	71	U	73	U	71	U	700	U	71	R	72	U
Aroclor-1232	UG/KG	42	U	36	U	35	U	36	U	35	U	340	U	35	R	35	U
Aroclor-1242	UG/KG	42	U	36	U	35	U	36	U	35	U	340	U	35	R	35	U
Aroclor-1248	UG/KG	42	U	36	U	35	U	36	U	35	U	340	U	35	R	35	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-31		SS16-32		SS16-33		SS16-34		SS16-35		SS16-36		SS16-37	
SAMP ID:		16037		16062		16052		16067		16053		16066		16061		16054	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/21/96		8/20/96		8/22/96		8/20/96		8/22/96		8/21/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	42	U	36	U	35	U	36	U	35	U	340	U	35	R	35	U
Aroclor-1260	UG/KG	42	U	36	U	35	U	36	U	35	U	160	J	35	R	35	U
Dieldrin	UG/KG	4.2	U	3.6	U	3.5	U	3.6	U	3.5	U	34	U	3.5	R	3.5	U
Endosulfan I	UG/KG	1.4	U	7.7		33	J	1.9	U	1.8	U	18	U	1.2	R	1.8	U
Endosulfan II	UG/KG	4.2	U	3.6	U	5	J	3.6	U	3.5	U	34	U	3.5	R	3.5	U
Endosulfan sulfate	UG/KG	4.2	U	3.6	U	3.5	U	3.6	U	3.5	U	34	U	3.5	R	3.5	U
Endrin	UG/KG	2.2	U	3.6	U	9.9		3.6	U	3.5	U	34	U	3.5	R	3.5	U
Endrin aldehyde	UG/KG	4.2	U	3.6	U	3.7	R	3.6	U	3.5	U	34	U	3.5	R	3.5	U
Endrin ketone	UG/KG	4.2	U	1.7	J	3.4	U	3.6	U	3.5	U	34	U	3.5	R	3.5	U
Heptachlor	UG/KG	2.2	U	1.9	U	1.8	U	1.9	U	1.8	U	18	U	1.8	R	1.8	U
Heptachlor epoxide	UG/KG	1.6	J	1.9	U	1.5	R	1.9	U	1.8	U	18	U	1.8	R	1.8	U
Methoxychlor	UG/KG	22	U	19	U	18	U	19	U	18	U	180	U	18	R	18	U
Toxaphene	UG/KG	220	U	190	U	180	U	190	U	180	U	1800	U	180	R	180	U
alpha-BHC	UG/KG	2.2	U	1.9	U	1.8	U	1.9	U	1.8	U	18	U	1.8	R	1.8	U
alpha-Chlordane	UG/KG	2.2	U	5.1	J	8.6	J	1.9	U	1.8	U	18	J	1.8	R	1.8	U
beta-BHC	UG/KG	2.2	U	1.9	U	1.8	U	1.9	U	1.8	U	18	U	1.8	R	1.8	U
delta-BHC	UG/KG	2.2	U	1.9	U	1.8	U	1.9	U	1.8	U	18	U	1.8	R	1.8	U
gamma-BHC (Lindane)	UG/KG	2.2	U	1.9	U	1.8	U	1.9	U	1.8	U	18	U	1.8	R	1.8	U
gamma-Chlordane	UG/KG	2.2	U	5.3		9.4		1.9	U	1.8	U	15	J	1.8	R	1.8	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	2.2		0.41		0.11		0.04		0.04		0.08		0.16		0.02	
Percent Moisture (PEST/PCB)		22		9		6		9		6		4		6		7	

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-31		SS16-32		SS16-33		SS16-34		SS16-35		SS16-36		SS16-37	
SAMP ID:		16037		16062		16052		16067		16053		16066		16061		16054	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/21/96		8/20/96		8/22/96		8/20/96		8/22/96		8/21/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)		22		9		6		9		6		4		6		7	
Percent Moisture (VOCs)		18		7		5		9		5		2		5		6	
Percent Solids (Metals)		78		90.5		94.1		90.6		93.9		95.9		94.4		93.3	
Total Organic Carbon	MG/KG																
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2,4,6-Trinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	4400		3000	J	120	U	120	U
2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
HMX	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
Nitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
RDX	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
Tetryl	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
METALS																	
Aluminum	MG/KG	19700	R	11300	J	12000	J	13500	J	8660	J	6930	J	10200	J	10200	J
Antimony	MG/KG	0.42	UJ	0.81	J	1.5	J	1.2	J	0.35	UJ	7.1	J	0.5	J	0.37	UJ
Arsenic	MG/KG	5	J	6.6		5.1		6		5.8		5.3		6.7		5.5	
Barium	MG/KG	198	J	70.9	J	85.3	J	70.7	J	47.7	J	314	J	42.3	J	42	J
Beryllium	MG/KG	0.72		0.47		0.42		0.47		0.3		0.24		0.34		0.28	

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-31		SS16-32		SS16-33		SS16-34		SS16-35		SS16-36		SS16-37	
SAMP ID:		16037		16062		16052		16067		16053		16066		16061		16054	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/21/96		8/20/96		8/22/96		8/20/96		8/22/96		8/21/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	0.36		0.49		0.5		0.06	U	0.31		5.3		0.29		0.14	
Calcium	MG/KG	6180		32800		56100		10700		59700		110000		22400		24100	
Chromium	MG/KG	24.7		18.4		24.5		22.6		13.2		35.3		14.7		15.9	
Cobalt	MG/KG	14.9	J	12.2		11.4		10.9		7.7		8.2		8.1		9.5	
Copper	MG/KG	19	J	39.5		104		44.6		41.5		407		34.4		30.9	
Cyanide	MG/KG	0.55	UJ	0.54	U	0.49	U	0.53	U	0.49	U	1.5		0.51	U	0.46	U
Iron	MG/KG	31900	J	23000	J	23900		25800		20300		18300		22700	J	23700	
Lead	MG/KG	21.9	J	81.1		265		131		43.7		1290		34.7		23.6	
Magnesium	MG/KG	4380		10700		11200		7130		7480		27000		10100		5890	
Manganese	MG/KG	1060		459		508		443	J	422		375	J	337		502	
Mercury	MG/KG	0.1	J	0.07		0.12		0.12		0.03	U	0.12		0.04	U	0.04	U
Nickel	MG/KG	30	J	28.9		36.3		31.2		23.7		28.6		24.7		27.6	
Potassium	MG/KG	1710		1260		1840		1650		953		1340		1130		1300	
Selenium	MG/KG	1.5	J	0.71	U	0.76		0.52	U	0.62	U	1.2	J	0.55	U	0.66	U
Silver	MG/KG	0.3		0.26	U	0.35		0.28	U	0.3		0.5		0.2	U	0.24	U
Sodium	MG/KG	55.8	U	53.2		126		58	U	78.6		137		41.1	U	83.2	
Thallium	MG/KG	1.8		1.1	J	1	J	0.91	U	0.98		0.78	U	0.64	U	0.77	U
Vanadium	MG/KG	33.6	J	20.3		28.9		22.7		28.4		33.8		18.8		18.2	
Zinc	MG/KG	99.8		134		157		109	J	109		466	J	95.7		80.6	
HERBICIDES																	
2,4,5-T	UG/KG																
2,4,5-TP (Silvex)	UG/KG																

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-31		SS16-32		SS16-33		SS16-34		SS16-35		SS16-36		SS16-37	
SAMP ID:		16037		16062		16052		16067		16053		16066		16061		16054	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/21/96		8/20/96		8/22/96		8/20/96		8/22/96		8/21/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG																
2,4-DB	UG/KG																
Dalapon	UG/KG																
Dicamba	UG/KG																
Dichloroprop	UG/KG																
Dinoseb	UG/KG																
MCPA	UG/KG																
MCPP	UG/KG																

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-38		SS16-4		SS16-5		SS16-500-N		SS16-500-S		SS16-6		SS16-7	
SAMP ID:		16037		16068		SS16-4-1		SS16-5-1		16074		16086		SS16-6-1		SS16-7-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/22/96		10/20/93		10/20/93		8/22/96		8/22/96		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
1,1,2-Trichloroethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
1,1-Dichloroethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
1,1-Dichloroethene	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
1,2-Dichloroethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
1,2-Dichloroethene (total)	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
1,2-Dichloropropane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
2-Butanone	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	UJ	10	U	53	U
2-Hexanone	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
4-Methyl-2-Pentanone	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Acetone	UG/KG	7	J	10	UJ	17		11	U	16	U	13	UJ	10	U	53	U
Benzene	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Bromodichloromethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Bromoform	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Bromomethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Carbon Disulfide	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Carbon Tetrachloride	UG/KG	12	U	10	UJ	11	U	11	U	16	U	6	U	10	U	53	U
Chlorobenzene	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Chloroethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Chloroform	UG/KG	12	U	10	UJ	11	U	11	U	16	U	6	U	2	J	53	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-38		SS16-4		SS16-5		SS16-500-N		SS16-500-S		SS16-6		SS16-7	
SAMP ID:		16037		16068		SS16-4-1		SS16-5-1		16074		16086		SS16-6-1		SS16-7-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/22/96		10/20/93		10/20/93		8/22/96		8/22/96		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Dibromochloromethane	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Ethylbenzene	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Methylene Chloride	UG/KG	12	U	10	UJ	11	U	2	J	16	U	13	U	10	U	53	U
Styrene	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Tetrachloroethene	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Toluene	UG/KG	12	U	10	UJ	11	U	5	J	16	U	13	U	3	J	53	U
Trichloroethene	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Vinyl Chloride	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
Xylene (total)	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
cis-1,3-Dichloropropene	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
trans-1,3-Dichloropropene	UG/KG	12	U	10	UJ	11	U	11	U	16	U	13	U	10	U	53	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
1,2-Dichlorobenzene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
1,3-Dichlorobenzene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
1,4-Dichlorobenzene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
2,2'-oxybis(1-Chloropropane)	UG/KG					7200	U	750	U					14000	U	1300	U
2,4,5-Trichlorophenol	UG/KG	1000	U	840	U	18000	U	1800	U	1100	U	990	U	34000	U	3100	U
2,4,6-Trichlorophenol	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
2,4-Dichlorophenol	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
2,4-Dimethylphenol	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-38		SS16-4		SS16-5		SS16-500-N		SS16-500-S		SS16-6		SS16-7	
SAMP ID:		16037		16068		SS16-4-1		SS16-5-1		16074		16086		SS16-6-1		SS16-7-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/22/96		10/20/93		10/20/93		8/22/96		8/22/96		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	840	U	18000	U	1800	U	1100	U	990	UJ	34000	U	3100	U
2,4-Dinitrotoluene	UG/KG	420	U	350	U	7200	U	530	J	450	U	410	U	14000	U	1300	U
2,6-Dinitrotoluene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
2-Chloronaphthalene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
2-Chlorophenol	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
2-Methylnaphthalene	UG/KG	420	U	350	U	7200	U	97	J	450	U	410	U	14000	U	1300	U
2-Methylphenol	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
2-Nitroaniline	UG/KG	1000	U	840	U	18000	U	1800	U	1100	U	990	U	34000	U	3100	U
2-Nitrophenol	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
3,3'-Dichlorobenzidine	UG/KG	420	U	350	U	7200	U	750	U	450	UJ	410	U	14000	U	1300	U
3-Nitroaniline	UG/KG	1000	U	840	U	18000	U	1800	U	1100	UJ	990	U	34000	U	3100	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	840	U	18000	U	1800	U	1100	U	990	U	34000	U	3100	U
4-Bromophenyl-phenylether	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
4-Chloro-3-methylphenol	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
4-Chloroaniline	UG/KG	420	U	350	U	7200	U	750	U	450	UJ	410	U	14000	U	1300	U
4-Chlorophenyl-phenylether	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
4-Methylphenol	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
4-Nitroaniline	UG/KG	1000	U	840	U	18000	U	1800	U	1100	UJ	990	U	34000	U	3100	U
4-Nitrophenol	UG/KG	1000	U	840	U	18000	U	1800	U	1100	U	990	U	34000	U	3100	U
Acenaphthene	UG/KG	420	U	350	U	7200	U	44	J	450	U	410	U	14000	U	1300	U
Acenaphthylene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Anthracene	UG/KG	420	U	350	U	7200	U	70	J	450	U	410	U	14000	U	1300	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-38		SS16-4		SS16-5		SS16-500-N		SS16-500-S		SS16-6		SS16-7	
SAMP ID:		16037		16068		SS16-4-1		SS16-5-1		16074		16086		SS16-6-1		SS16-7-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/22/96		10/20/93		10/20/93		8/22/96		8/22/96		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	420	U	17	J	7200	U	240	J	450	U	410	U	14000	U	1300	U
Benzo(a)pyrene	UG/KG	420	U	19	J	7200	U	270	J	450	U	410	U	14000	U	1300	U
Benzo(b)fluoranthene	UG/KG	420	U	350	U	7200	U	350	J	450	U	410	U	14000	U	1300	U
Benzo(g,h,i)perylene	UG/KG	32	J	54	J	7200	U	180	J	450	U	410	U	14000	U	1300	U
Benzo(k)fluoranthene	UG/KG	420	U	350	U	7200	U	330	J	450	U	410	U	14000	U	1300	U
Butylbenzylphthalate	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Carbazole	UG/KG	420	U	350	U	7200	U	78	J	450	UJ	410	U	14000	U	1300	U
Chrysene	UG/KG	420	U	22	J	7200	U	340	J	450	U	410	U	14000	U	1300	U
Di-n-butylphthalate	UG/KG	420	U	350	U	7200	U	350	J	450	U	410	U	14000	U	1300	U
Di-n-octylphthalate	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Dibenz(a,h)anthracene	UG/KG	26	J	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Dibenzofuran	UG/KG	420	U	350	U	7200	U	82	J	450	U	410	U	14000	U	1300	U
Diethylphthalate	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Dimethylphthalate	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Fluoranthene	UG/KG	420	U	22	J	7200	U	710	J	450	U	410	U	14000	U	1300	U
Fluorene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Hexachlorobenzene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Hexachlorobutadiene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Hexachlorocyclopentadiene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	UJ	14000	U	1300	U
Hexachloroethane	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Indeno(1,2,3-cd)pyrene	UG/KG	32	J	350	U	7200	U	200	J	450	U	410	U	14000	U	1300	U
Isophorone	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-38		SS16-4		SS16-5		SS16-500-N		SS16-500-S		SS16-6		SS16-7	
SAMP ID:		16037		16068		SS16-4-1		SS16-5-1		16074		16086		SS16-6-1		SS16-7-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/22/96		10/20/93		10/20/93		8/22/96		8/22/96		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	350	U	7200	U	130	J	450	U	410	U	14000	U	1300	U
Naphthalene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Nitrobenzene	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Pentachlorophenol	UG/KG	1000	U	840	UJ	18000	U	1800	U	1100	UJ	990	U	34000	U	3100	U
Phenanthrene	UG/KG	420	U	22	J	7200	U	410	J	450	U	410	U	14000	U	1300	U
Phenol	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
Pyrene	UG/KG	420	U	31	J	7200	U	550	J	22	J	410	U	14000	U	1300	U
bis(2-Chloroethoxy) methane	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
bis(2-Chloroethyl) ether	UG/KG	420	U	350	U	7200	U	750	U	450	U	410	U	14000	U	1300	U
bis(2-Chloroisopropyl) ether	UG/KG	420	U	350	U					450	U	410	U				
bis(2-Ethylhexyl)phthalate	UG/KG	30	J	350	U	7200	U	450	J	450	U	410	U	14000	U	1300	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.2	U	3.5	U	36	U	19	U	4.5	U	4.1	U	3.5	UJ	3.5	U
4,4'-DDE	UG/KG	4.2	U	5.1		1400		130		4.5	U	4.1	U	3.5	UJ	6.3	
4,4'-DDT	UG/KG	4.2	U	2.1	J	180		29		4.5	U	4.1	U	1.8	J	5.6	
Aldrin	UG/KG	2.2	U	1.8	U	19	U	9.7	U	2.3	U	2.1	U	1.8	UJ	1.8	U
Aroclor-1016	UG/KG	42	U	35	U	360	U	190	U	45	U	41	U	35	UJ	35	U
Aroclor-1221	UG/KG	86	U	71	U	740	U	380	U	92	U	83	U	71	UJ	71	U
Aroclor-1232	UG/KG	42	U	35	U	360	U	190	U	45	U	41	U	35	UJ	35	U
Aroclor-1242	UG/KG	42	U	35	U	360	U	190	U	45	U	41	U	35	UJ	35	U
Aroclor-1248	UG/KG	42	U	35	U	360	U	190	U	45	U	41	U	35	UJ	35	U

SEAD-16 Analytes Detected in Surface Soils
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-38		SS16-4		SS16-5		SS16-500-N		SS16-500-S		SS16-6		SS16-7	
SAMP ID:		16037		16068		SS16-4-1		SS16-5-1		16074		16086		SS16-6-1		SS16-7-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/22/96		10/20/93		10/20/93		8/22/96		8/22/96		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	42	U	35	U	360	U	190	U	45	U	41	U	35	UJ	35	U
Aroclor-1260	UG/KG	42	U	35	U	360	U	190	U	45	U	41	U	35	UJ	35	U
Dieldrin	UG/KG	4.2	U	3.5	U	36	U	19	U	4.5	U	4.1	U	3.5	UJ	3.5	U
Endosulfan I	UG/KG	1.4	U	1.8	U	19	U	6.2	J	2.3	U	2.1	U	1.8	UJ	1.8	U
Endosulfan II	UG/KG	4.2	U	3.5	U	36	U	19	U	4.5	U	4.1	U	3.5	UJ	2.2	J
Endosulfan sulfate	UG/KG	4.2	U	3.5	U	36	U	19	U	4.5	U	4.1	U	3.5	UJ	3.5	U
Endrin	UG/KG	2.2	U	3.5	U	36	U	19	U	4.5	U	4.1	U	3.5	UJ	3.5	U
Endrin aldehyde	UG/KG	4.2	U	3.5	U	36	U	19	U	4.5	U	4.1	U	3.5	UJ	3.5	U
Endrin ketone	UG/KG	4.2	U	3.5	U	36	U	19	U	4.5	U	4.1	U	3.5	UJ	3.5	U
Heptachlor	UG/KG	2.2	U	1.8	U	19	U	9.7	U	2.3	U	2.1	U	1.8	UJ	1.8	U
Heptachlor epoxide	UG/KG	1.6	J	1.8	U	19	U	9.7	U	2.3	U	2.1	U	1.8	UJ	1.8	U
Methoxychlor	UG/KG	22	U	18	U	190	U	97	U	23	U	21	U	18	UJ	18	U
Toxaphene	UG/KG	220	U	180	U	1900	U	970	U	230	U	210	U	180	UJ	180	U
alpha-BHC	UG/KG	2.2	U	1.8	U	19	U	9.7	U	2.3	U	2.1	U	1.8	UJ	1.8	U
alpha-Chlordane	UG/KG	2.2	U	1.8	U	19	U	9.7	U	2.3	U	2.1	U	1.8	UJ	6.1	
beta-BHC	UG/KG	2.2	U	1.8	U	19	U	9.7	U	2.3	U	2.1	U	1.8	UJ	1.8	U
delta-BHC	UG/KG	2.2	U	1.8	U	19	U	9.7	U	2.3	U	2.1	U	1.8	UJ	1.8	U
gamma-BHC (Lindane)	UG/KG	2.2	U	1.8	U	19	U	9.7	U	2.3	U	2.1	U	1.8	UJ	1.8	U
gamma-Chlordane	UG/KG	2.2	U	1.8	U	19	U	9.7	U	2.3	U	2.1	U	1.8	UJ	7	
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	2.2		1		0.45		0.5		0.16		0.35		0.42		0.05	
Percent Moisture (PEST/PCB)		22		6						27		19					

SEAD-16 Analytes Detected in Surface Soils
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-38		SS16-4		SS16-5		SS16-500-N		SS16-500-S		SS16-6		SS16-7	
SAMP ID:		16037		16068		SS16-4-1		SS16-5-1		16074		16086		SS16-6-1		SS16-7-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/22/96		10/20/93		10/20/93		8/22/96		8/22/96		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)		22		6						27		19					
Percent Moisture (VOCs)		18		5						38		21					
Percent Solids (Metals)		78		94						73.4		80.6					
Total Organic Carbon	MG/KG			8400													
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	120	U	120	U	130	U	130	U	120	U	120	U	130	U	130	U
1,3-Dinitrobenzene	UG/KG	120	U	120	U	130	U	130	U	120	U	120	U	130	U	130	U
2,4,6-Trinitrotoluene	UG/KG	120	U	120	U	130	U	130	U	120	U	120	U	130	U	130	U
2,4-Dinitrotoluene	UG/KG	120	U	120	U	170		780	J	120	U	120	U	130	U	130	U
2,6-Dinitrotoluene	UG/KG	120	U	120	U	130	U	130	U	120	U	120	UJ	130	U	130	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	120	U	130	U	130	U	120	U	120	UJ	130	U	130	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	120	U	130	U	130	U	120	U	120	U	130	U	130	U
HMX	UG/KG	120	U	120	U	130	U	130	U	120	U	120	U	130	U	130	U
Nitrobenzene	UG/KG	120	U	120	U					120	U	120	U				
RDX	UG/KG	120	U	120	U	130	U	130	U	120	U	120	U	130	U	130	U
Tetryl	UG/KG	120	U	120	U	130	U	130	U	120	U	120	U	130	U	130	U
METALS																	
Aluminum	MG/KG	19700	R	14400		11900		13600		14600	J	13200	J	9650		8670	
Antimony	MG/KG	0.42	UJ	0.56	J	26.3		27.3		0.54	UJ	0.88	J	7.9	U	8.8	U
Arsenic	MG/KG	5	J	3.8		11.3		10.8		4.1		3.5	J	5.1		5	
Barium	MG/KG	198	J	127	J	227		630		128	J	143	J	45.1		41.2	
Beryllium	MG/KG	0.72		0.56		0.45	J	0.56	J	0.64		0.51		0.24	J	0.29	J

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-38		SS16-4		SS16-5		SS16-500-N		SS16-500-S		SS16-6		SS16-7	
SAMP ID:		16037		16068		SS16-4-1		SS16-5-1		16074		16086		SS16-6-1		SS16-7-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/22/96		10/20/93		10/20/93		8/22/96		8/22/96		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	0.36		0.06	U	0.55	U	2.8		0.08	U	0.25		0.49	U	0.55	U
Calcium	MG/KG	6180		18000		55600		37100		4280		6060		25600		36600	
Chromium	MG/KG	24.7		25.4		24		43.3		20.5		17		12.9	R	11.9	
Cobalt	MG/KG	14.9	J	12.4		11.9		13.4		8.5		9.2		7.9		7.5	J
Copper	MG/KG	19	J	34.4		399		635		25.4		20.8		26.2		28.9	
Cyanide	MG/KG	0.55	UJ	0.53	U	0.6	U	0.63	U	0.66	U	0.58	U	0.58	U	0.6	U
Iron	MG/KG	31900	J	26500		27700		36500		23400		21300		22100		20000	
Lead	MG/KG	21.9	J	60.3		2940		2860		53.4		33.4		8.5		81.2	
Magnesium	MG/KG	4380		6090		8690		7930		3940		3850		7710		13800	
Manganese	MG/KG	1060		391	J	411	J	444	J	295	J	647		305	J	478	J
Mercury	MG/KG	0.1	J	0.04	U	0.21		0.99		0.16		0.05		0.03	U	0.04	U
Nickel	MG/KG	30	J	43.5		41.6		148		24.5		21.7		22.7		21.7	
Potassium	MG/KG	1710		2020		1250		1410		1200		901		720	J	794	J
Selenium	MG/KG	1.5	J	0.55	J	0.2	UJ	0.22	UJ	1.3	J	1.6		0.13	UJ	0.13	UJ
Silver	MG/KG	0.3		0.25	U	1.1	U	1	U	0.35	U	0.27	U	1	U	1.1	U
Sodium	MG/KG	55.8	U	84.1		128	J	132	J	73	U	56.3	U	79.6	J	109	J
Thallium	MG/KG	1.8		0.82	U	0.22	U	0.24	U	1.1	U	0.88	U	0.14	U	0.14	U
Vanadium	MG/KG	33.6	J	22.6		20.3		23.9		24.1		21.7		38.1		35.7	
Zinc	MG/KG	99.8		117	J	416		562		85.2	J	56.4		65.8		66.1	
HERBICIDES																	
2,4,5-T	UG/KG					5.5	U	5.7	U					5.3	U	5.3	U
2,4,5-TP (Silvex)	UG/KG					5.5	U	5.7	U					5.3	U	5.3	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-38		SS16-4		SS16-5		SS16-500-N		SS16-500-S		SS16-6		SS16-7	
SAMP ID:		16037		16068		SS16-4-1		SS16-5-1		16074		16086		SS16-6-1		SS16-7-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		8/22/96		10/20/93		10/20/93		8/22/96		8/22/96		10/20/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG					55	U	57	U					53	U	53	U
2,4-DB	UG/KG					55	U	57	U					53	U	53	U
Dalapon	UG/KG					140	U	140	U					130	U	130	U
Dicamba	UG/KG					5.5	U	5.7	U					5.3	U	5.3	U
Dichloroprop	UG/KG					55	U	57	U					53	U	53	U
Dinoseb	UG/KG					28	U	29	U					27	U	27	U
MCPA	UG/KG					5500	U	5700	U					5300	U	5300	U
MCPP	UG/KG					5500	U	16000						5300	U	5300	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-8		SS16-9	
SAMP ID:		16037		SS16-8-1		SS16-9-1	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI	
TOP:		0		0		0	
BOTTOM:		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		11/9/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS							
1,1,1-Trichloroethane	UG/KG	12	U	10	U	11	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	10	U	11	U
1,1,2-Trichloroethane	UG/KG	12	U	10	U	11	U
1,1-Dichloroethane	UG/KG	12	U	10	U	11	U
1,1-Dichloroethene	UG/KG	12	U	10	U	11	U
1,2-Dichloroethane	UG/KG	12	U	10	U	11	U
1,2-Dichloroethene (total)	UG/KG	12	U	10	U	11	U
1,2-Dichloropropane	UG/KG	12	U	10	U	11	U
2-Butanone	UG/KG	12	U	10	U	11	U
2-Hexanone	UG/KG	12	U	10	U	11	U
4-Methyl-2-Pentanone	UG/KG	12	U	10	U	11	U
Acetone	UG/KG	7	J	10	U	11	U
Benzene	UG/KG	12	U	10	U	11	U
Bromodichloromethane	UG/KG	12	U	10	U	11	U
Bromoform	UG/KG	12	U	10	U	11	U
Bromomethane	UG/KG	12	U	10	U	11	U
Carbon Disulfide	UG/KG	12	U	10	U	11	U
Carbon Tetrachloride	UG/KG	12	U	10	U	11	U
Chlorobenzene	UG/KG	12	U	10	U	11	U
Chloroethane	UG/KG	12	U	10	U	11	U
Chloroform	UG/KG	12	U	10	U	11	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-8		SS16-9	
SAMP ID:		16037		SS16-8-1		SS16-9-1	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI	
TOP:		0		0		0	
BOTTOM:		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		11/9/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	10	U	11	U
Dibromochloromethane	UG/KG	12	U	10	U	11	U
Ethylbenzene	UG/KG	12	U	10	U	11	U
Methylene Chloride	UG/KG	12	U	10	U	11	U
Styrene	UG/KG	12	U	10	U	11	U
Tetrachloroethene	UG/KG	12	U	10	U	11	U
Toluene	UG/KG	12	U	2	J	11	U
Trichloroethene	UG/KG	12	U	10	U	11	U
Vinyl Chloride	UG/KG	12	U	10	U	11	U
Xylene (total)	UG/KG	12	U	10	U	11	U
cis-1,3-Dichloropropene	UG/KG	12	U	10	U	11	U
trans-1,3-Dichloropropene	UG/KG	12	U	10	U	11	U
SEMIVOLATILE ORGANICS							
1,2,4-Trichlorobenzene	UG/KG	420	U	1800	U	2700	U
1,2-Dichlorobenzene	UG/KG	420	U	1800	U	2700	U
1,3-Dichlorobenzene	UG/KG	420	U	1800	U	2700	U
1,4-Dichlorobenzene	UG/KG	420	U	1800	U	2700	U
2,2'-oxybis(1-Chloropropane)	UG/KG			1800	U	2700	U
2,4,5-Trichlorophenol	UG/KG	1000	U	4200	U	6600	U
2,4,6-Trichlorophenol	UG/KG	420	U	1800	U	2700	U
2,4-Dichlorophenol	UG/KG	420	U	1800	U	2700	U
2,4-Dimethylphenol	UG/KG	420	U	1800	U	2700	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-8		SS16-9	
SAMP ID:		16037		SS16-8-1		SS16-9-1	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI	
TOP:		0		0		0	
BOTTOM:		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		11/9/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	4200	U	6600	U
2,4-Dinitrotoluene	UG/KG	420	U	1800	U	2700	U
2,6-Dinitrotoluene	UG/KG	420	U	1800	U	2700	U
2-Chloronaphthalene	UG/KG	420	U	1800	U	2700	U
2-Chlorophenol	UG/KG	420	U	1800	U	2700	U
2-Methylnaphthalene	UG/KG	420	U	1800	U	2700	U
2-Methylphenol	UG/KG	420	U	1800	U	2700	U
2-Nitroaniline	UG/KG	1000	U	4200	U	6600	U
2-Nitrophenol	UG/KG	420	U	1800	U	2700	U
3,3'-Dichlorobenzidine	UG/KG	420	U	1800	U	2700	U
3-Nitroaniline	UG/KG	1000	U	4200	U	6600	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	4200	U	6600	U
4-Bromophenyl-phenylether	UG/KG	420	U	1800	U	2700	U
4-Chloro-3-methylphenol	UG/KG	420	U	1800	U	2700	U
4-Chloroaniline	UG/KG	420	U	1800	U	2700	U
4-Chlorophenyl-phenylether	UG/KG	420	U	1800	U	2700	U
4-Methylphenol	UG/KG	420	U	1800	U	2700	U
4-Nitroaniline	UG/KG	1000	U	4200	U	6600	U
4-Nitrophenol	UG/KG	1000	U	4200	U	6600	U
Acenaphthene	UG/KG	420	U	1800	U	2700	U
Acenaphthylene	UG/KG	420	U	1800	U	2700	U
Anthracene	UG/KG	420	U	1800	U	2700	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-8		SS16-9	
SAMP ID:		16037		SS16-8-1		SS16-9-1	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI	
TOP:		0		0		0	
BOTTOM:		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		11/9/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	420	U	1800	U	2700	U
Benzo(a)pyrene	UG/KG	420	U	1800	U	2700	U
Benzo(b)fluoranthene	UG/KG	420	U	1800	U	2700	U
Benzo(g,h,i)perylene	UG/KG	32	J	1800	U	2700	U
Benzo(k)fluoranthene	UG/KG	420	U	1800	U	2700	U
Butylbenzylphthalate	UG/KG	420	U	1800	U	2700	U
Carbazole	UG/KG	420	U	1800	U	2700	U
Chrysene	UG/KG	420	U	1800	U	2700	U
Di-n-butylphthalate	UG/KG	420	U	1400	J	510	J
Di-n-octylphthalate	UG/KG	420	U	1800	U	2700	U
Dibenz(a,h)anthracene	UG/KG	26	J	1800	U	2700	U
Dibenzofuran	UG/KG	420	U	1800	U	2700	U
Diethylphthalate	UG/KG	420	U	1800	U	2700	U
Dimethylphthalate	UG/KG	420	U	1800	U	2700	U
Fluoranthene	UG/KG	420	U	1800	U	2700	U
Fluorene	UG/KG	420	U	1800	U	2700	U
Hexachlorobenzene	UG/KG	420	U	1800	U	2700	U
Hexachlorobutadiene	UG/KG	420	U	1800	U	2700	U
Hexachlorocyclopentadiene	UG/KG	420	U	1800	U	2700	U
Hexachloroethane	UG/KG	420	U	1800	U	2700	U
Indeno(1,2,3-cd)pyrene	UG/KG	32	J	1800	U	2700	U
Isophorone	UG/KG	420	U	1800	U	2700	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-8		SS16-9	
SAMP ID:		16037		SS16-8-1		SS16-9-1	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI	
TOP:		0		0		0	
BOTTOM:		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		11/9/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	1800	U	2700	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	350	J	2700	U
Naphthalene	UG/KG	420	U	1800	U	2700	U
Nitrobenzene	UG/KG	420	U	1800	U	2700	U
Pentachlorophenol	UG/KG	1000	U	4200	U	6600	U
Phenanthrene	UG/KG	420	U	1800	U	2700	U
Phenol	UG/KG	420	U	1800	U	2700	U
Pyrene	UG/KG	420	U	1800	U	160	J
bis(2-Chloroethoxy) methane	UG/KG	420	U	1800	U	2700	U
bis(2-Chloroethyl) ether	UG/KG	420	U	1800	U	2700	U
bis(2-Chloroisopropyl) ether	UG/KG	420	U				
bis(2-Ethylhexyl)phthalate	UG/KG	30	J	1800	U	2100	J
PESTICIDES/PCB							
4,4'-DDD	UG/KG	4.2	U	7	U	3.5	UJ
4,4'-DDE	UG/KG	4.2	U	84	J	2.8	J
4,4'-DDT	UG/KG	4.2	U	79	J	2.9	J
Aldrin	UG/KG	2.2	U	3.6	U	1.8	UJ
Aroclor-1016	UG/KG	42	U	70	U	35	UJ
Aroclor-1221	UG/KG	86	U	140	U	72	UJ
Aroclor-1232	UG/KG	42	U	70	U	35	UJ
Aroclor-1242	UG/KG	42	U	70	U	35	UJ
Aroclor-1248	UG/KG	42	U	70	U	35	UJ

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-8		SS16-9	
SAMP ID:		16037		SS16-8-1		SS16-9-1	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI	
TOP:		0		0		0	
BOTTOM:		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		11/9/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	42	U	57	UJ	35	UJ
Aroclor-1260	UG/KG	42	U	70	U	35	UJ
Dieldrin	UG/KG	4.2	U	7	U	3.5	UJ
Endosulfan I	UG/KG	1.4	U	1.9	J	1.8	UJ
Endosulfan II	UG/KG	4.2	U	7	U	3.5	UJ
Endosulfan sulfate	UG/KG	4.2	U	7	U	3.5	UJ
Endrin	UG/KG	2.2	U	7	U	3.5	UJ
Endrin aldehyde	UG/KG	4.2	U	7	U	3.5	UJ
Endrin ketone	UG/KG	4.2	U	7	U	3.5	UJ
Heptachlor	UG/KG	2.2	U	3.6	U	1.8	UJ
Heptachlor epoxide	UG/KG	1.6	J	3.6	U	1.8	UJ
Methoxychlor	UG/KG	22	U	36	U	18	UJ
Toxaphene	UG/KG	220	U	360	U	180	UJ
alpha-BHC	UG/KG	2.2	U	3.6	U	1.8	UJ
alpha-Chlordane	UG/KG	2.2	U	3.6	U	1.8	UJ
beta-BHC	UG/KG	2.2	U	3.6	U	1.8	UJ
delta-BHC	UG/KG	2.2	U	3.6	U	1.8	UJ
gamma-BHC (Lindane)	UG/KG	2.2	U	3.6	U	1.8	UJ
gamma-Chlordane	UG/KG	2.2	U	3.6	U	1.8	UJ
OTHER ANALYSES							
Nitrate/Nitrite-Nitrogen	MG/KG	2.2		0.23		0.01	U
Percent Moisture (PEST/PCB)		22					

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-8		SS16-9	
SAMP ID:		16037		SS16-8-1		SS16-9-1	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI	
TOP:		0		0		0	
BOTTOM:		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		11/9/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)		22					
Percent Moisture (VOCs)		18					
Percent Solids (Metals)		78					
Total Organic Carbon	MG/KG						
NITROAROMATICS							
1,3,5-Trinitrobenzene	UG/KG	120	U	130	U	130	U
1,3-Dinitrobenzene	UG/KG	120	U	130	U	130	U
2,4,6-Trinitrotoluene	UG/KG	120	U	130	U	130	U
2,4-Dinitrotoluene	UG/KG	120	U	770		450	J
2,6-Dinitrotoluene	UG/KG	120	U	130	U	130	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	130	U	130	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	130	U	130	U
HMX	UG/KG	120	U	130	U	130	U
Nitrobenzene	UG/KG	120	U				
RDX	UG/KG	120	U	130	U	130	U
Tetryl	UG/KG	120	U	130	U	130	U
METALS							
Aluminum	MG/KG	19700	R	7600		10700	
Antimony	MG/KG	0.42	UJ	8.2	U	7	U
Arsenic	MG/KG	5	J	5.2		4.2	J
Barium	MG/KG	198	J	72.2		53.6	
Beryllium	MG/KG	0.72		0.39	J	0.43	J

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-8		SS16-9	
SAMP ID:		16037		SS16-8-1		SS16-9-1	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI	
TOP:		0		0		0	
BOTTOM:		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		11/9/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	0.36		0.52	U	0.43	UR
Calcium	MG/KG	6180		107000		35400	
Chromium	MG/KG	24.7		15.9		17.6	
Cobalt	MG/KG	14.9	J	8.1		8.2	
Copper	MG/KG	19	J	88.9		31.4	J
Cyanide	MG/KG	0.55	UJ	0.58	U	0.52	U
Iron	MG/KG	31900	J	16700		22400	
Lead	MG/KG	21.9	J	1890		76.2	
Magnesium	MG/KG	4380		9940		15300	
Manganese	MG/KG	1060		333	J	349	
Mercury	MG/KG	0.1	J	0.08		0.05	J
Nickel	MG/KG	30	J	28.7		29.3	
Potassium	MG/KG	1710		1150		1160	
Selenium	MG/KG	1.5	J	0.21	UJ	0.19	UJ
Silver	MG/KG	0.3		1	U	0.88	UJ
Sodium	MG/KG	55.8	U	170	J	125	J
Thallium	MG/KG	1.8		0.23	U	0.21	UJ
Vanadium	MG/KG	33.6	J	34.5		22.8	
Zinc	MG/KG	99.8		105		78.8	J
HERBICIDES							
2,4,5-T	UG/KG			5.3	U	5.5	U
2,4,5-TP (Silvex)	UG/KG			5.3	U	5.5	U

SEAD-16 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SS16-8		SS16-9	
SAMP ID:		16037		SS16-8-1		SS16-9-1	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		ESI	
TOP:		0		0		0	
BOTTOM:		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/14/96		10/20/93		11/9/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG			53	U	55	U
2,4-DB	UG/KG			53	U	55	U
Dalapon	UG/KG			130	U	130	U
Dicamba	UG/KG			5.3	U	5.5	U
Dichloroprop	UG/KG			53	U	55	U
Dinoseb	UG/KG			27	U	28	U
MCPA	UG/KG			5300	U	5500	U
MCPP	UG/KG			5300	U	5500	U

Downwind Surface Soils

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		1000-S		2000-N		2000-N		2000-S		3000-N		3000-S		3500-N	
SAMP ID:		16083		16087		16089		16090		16085		16088		16056		16084	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/20/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
1,1,2,2-Tetrachloroethane	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
1,1,2-Trichloroethane	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
1,1-Dichloroethane	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
1,1-Dichloroethene	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
1,2-Dichloroethane	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
1,2-Dichloroethene (total)	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
1,2-Dichloropropane	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
2-Butanone	UG/KG	11	U	12	UJ	12	UJ	12	U	12	U	12	UJ	11	U	10	U
2-Hexanone	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
4-Methyl-2-Pentanone	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
Acetone	UG/KG	11	U	12	UJ	12	UJ	12	UJ	12	U	12	UJ	11	U	10	U
Benzene	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	2	J
Bromodichloromethane	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
Bromoform	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
Bromomethane	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
Carbon Disulfide	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
Carbon Tetrachloride	UG/KG	11	U	6	U	6	U	6	U	12	U	6	U	6	U	10	U
Chlorobenzene	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
Chloroethane	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
Chloroform	UG/KG	11	U	6	U	6	U	6	U	12	U	6	U	6	U	10	U

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		1000-S		2000-N		2000-N		2000-S		3000-N		3000-S		3500-N	
SAMP ID:		16083		16087		16089		16090		16085		16088		16056		16084	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/20/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
Dibromochloromethane	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
Ethylbenzene	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
Methylene Chloride	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
Styrene	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
Tetrachloroethene	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
Toluene	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	3	J
Trichloroethene	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
Vinyl Chloride	UG/KG	11	U	12	U	12	U	12	U	12	U	12	U	11	U	10	U
Xylene (total)	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
cis-1,3-Dichloropropene	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
trans-1,3-Dichloropropene	UG/KG	11	UJ	12	U	12	U	12	U	12	U	12	U	11	U	10	UJ
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
1,2-Dichlorobenzene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
1,3-Dichlorobenzene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
1,4-Dichlorobenzene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
2,4,5-Trichlorophenol	UG/KG	900	U	930	U	950	U	950	U	990	U	930	U	910	U	820	U
2,4,6-Trichlorophenol	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
2,4-Dichlorophenol	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
2,4-Dimethylphenol	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
2,4-Dinitrophenol	UG/KG	900	U	930	U	950	U	950	U	990	U	930	U	910	U	820	U

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		1000-S		2000-N		2000-N		2000-S		3000-N		3000-S		3500-N	
SAMP ID:		16083		16087		16089		16090		16085		16088		16056		16084	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/20/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrotoluene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	880	
2,6-Dinitrotoluene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
2-Chloronaphthalene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
2-Chlorophenol	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
2-Methylnaphthalene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
2-Methylphenol	UG/KG	370	U	380	U	390	U	390	U	120	J	380	U	380	U	340	U
2-Nitroaniline	UG/KG	900	U	930	U	950	U	950	U	990	U	930	U	910	U	820	UJ
2-Nitrophenol	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
3,3'-Dichlorobenzidine	UG/KG	370	UJ	380	U	390	U	390	U	410	UJ	380	U	380	U	340	UJ
3-Nitroaniline	UG/KG	900	UJ	930	U	950	U	950	U	990	UJ	930	U	910	U	820	UJ
4,6-Dinitro-2-methylphenol	UG/KG	900	U	930	U	950	U	950	U	990	U	930	U	910	U	820	U
4-Bromophenyl-phenylether	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
4-Chloro-3-methylphenol	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
4-Chloroaniline	UG/KG	370	UJ	380	U	390	U	390	U	410	U	380	U	380	U	340	U
4-Chlorophenyl-phenylether	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
4-Methylphenol	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
4-Nitroaniline	UG/KG	900	U	930	U	950	U	950	U	990	UJ	930	U	910	U	820	UJ
4-Nitrophenol	UG/KG	900	U	930	U	950	U	950	U	990	UJ	930	U	910	U	820	UJ
Acenaphthene	UG/KG	370	U	18	J	390	U	390	U	410	U	380	U	380	U	340	U
Acenaphthylene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	96	J
Anthracene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	110	J
Benzo(a)anthracene	UG/KG	39	J	85	J	57	J	52	J	19	J	54	J	380	U	720	

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		1000-S		2000-N		2000-N		2000-S		3000-N		3000-S		3500-N	
SAMP ID:		16083		16087		16089		16090		16085		16088		16056		16084	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/20/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)pyrene	UG/KG	39	J	110	J	69	J	62	J	22	J	73	J	380	U	940	
Benzo(b)fluoranthene	UG/KG	42	J	120	J	68	J	54	J	410	U	58	J	380	U	2200	J
Benzo(g,h,i)perylene	UG/KG	35	J	130	J	65	J	55	J	51	J	78	J	380	U	710	
Benzo(k)fluoranthene	UG/KG	47	J	94	J	65	J	61	J	38	J	73	J	380	U	340	U
Butylbenzylphthalate	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Carbazole	UG/KG	370	UJ	380	U	390	U	390	U	410	UJ	380	U	380	U	85	J
Chrysene	UG/KG	55	J	110	J	70	J	62	J	25	J	69	J	380	U	670	
Di-n-butylphthalate	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Di-n-octylphthalate	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Dibenz(a,h)anthracene	UG/KG	370	U	54	J	34	J	30	J	410	U	39	J	18	J	470	
Dibenzofuran	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Diethylphthalate	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Dimethylphthalate	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Fluoranthene	UG/KG	70	J	160	J	110	J	93	J	36	J	100	J	380	U	1000	
Fluorene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Hexachlorobenzene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Hexachlorobutadiene	UG/KG	370	U	380	U	390	U	390	U	410	UJ	380	U	380	U	340	U
Hexachlorocyclopentadiene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Hexachloroethane	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Indeno(1,2,3-cd)pyrene	UG/KG	32	J	110	J	55	J	50	J	20	J	70	J	380	U	790	
Isophorone	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
N-Nitroso-di-n-propylamine	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		1000-S		2000-N		2000-N		2000-S		3000-N		3000-S		3500-N	
SAMP ID:		16083		16087		16089		16090		16085		16088		16056		16084	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/20/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitrosodiphenylamine (1)	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	95	J
Naphthalene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	16	J
Nitrobenzene	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Pentachlorophenol	UG/KG	900	UJ	930	U	950	U	950	U	990	U	930	U	910	U	820	U
Phenanthrene	UG/KG	34	J	90	J	36	J	35	J	410	U	42	J	380	U	320	J
Phenol	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
Pyrene	UG/KG	76	J	160	J	92	J	81	J	38	J	90	J	380	U	1200	
bis(2-Chloroethoxy) methane	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
bis(2-Chloroethyl) ether	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
bis(2-Chloroisopropyl) ether	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
bis(2-Ethylhexyl)phthalate	UG/KG	370	U	380	U	390	U	390	U	410	U	380	U	380	U	340	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	3.7	U	3.8	U	3.9	U	3.9	U	4.1	U	3.8	U	3.7	U	3.4	U
4,4'-DDE	UG/KG	5.2	J	1.9	J	3.9	U	3.9	U	4.1	U	3.8	U	3.7	U	8.9	
4,4'-DDT	UG/KG	6	J	3.8	U	3.9	U	3.9	U	4.1	U	3.8	U	3.7	U	13	J
Aldrin	UG/KG	1.9	U	2	U	2	U	2	U	2.1	U	2	U	1.9	U	1.8	U
Aroclor-1016	UG/KG	37	U	38	U	39	U	39	U	41	U	38	U	37	U	34	U
Aroclor-1221	UG/KG	75	U	78	U	80	U	80	U	83	U	78	U	76	U	69	U
Aroclor-1232	UG/KG	37	U	38	U	39	U	39	U	41	U	38	U	37	U	34	U
Aroclor-1242	UG/KG	37	U	38	U	39	U	39	U	41	U	38	U	37	U	34	U
Aroclor-1248	UG/KG	37	U	38	U	39	U	39	U	41	U	38	U	37	U	34	U
Aroclor-1254	UG/KG	37	U	38	U	39	U	39	U	41	U	38	U	37	U	34	U

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		1000-S		2000-N		2000-N		2000-S		3000-N		3000-S		3500-N	
SAMP ID:		16083		16087		16089		16090		16085		16088		16056		16084	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/20/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1260	UG/KG	37	U	38	U	39	U	39	U	41	U	38	U	37	U	34	U
Dieldrin	UG/KG	3.7	U	3.8	U	3.9	U	3.9	U	4.1	U	8.4	J	3.5	UJ	3.4	U
Endosulfan I	UG/KG	1.6	J	2	U	2	U	2	U	2.1	U	2	U	1.9	U	12	J
Endosulfan II	UG/KG	3.7	U	3.8	U	3.9	U	3.9	U	4.1	U	3.8	U	3.7	U	3.4	U
Endosulfan sulfate	UG/KG	3.7	U	3.8	U	3.9	U	3.9	U	4.1	U	3.8	U	3.7	U	3.4	U
Endrin	UG/KG	3.7	U	3.8	U	3.9	U	3.9	U	4.1	U	3.8	U	3.7	U	5.6	
Endrin aldehyde	UG/KG	3.7	U	3.8	U	3.9	U	3.9	U	4.1	U	3.8	U	3.7	U	2.2	U
Endrin ketone	UG/KG	3.7	U	3.8	U	3.9	U	3.9	U	4.1	U	3.8	U	3.7	U	4.8	
Heptachlor	UG/KG	1.9	U	2	U	2	U	2	U	2.1	U	2	U	1.9	U	1.8	U
Heptachlor epoxide	UG/KG	1.9	U	2	U	2	U	2	U	2.1	U	2	U	1.9	U	1.8	U
Methoxychlor	UG/KG	19	U	20	U	20	U	20	U	21	U	20	U	19	U	18	U
Toxaphene	UG/KG	190	U	200	U	200	U	200	U	210	U	200	U	190	U	180	U
alpha-BHC	UG/KG	1.9	U	2	U	2	U	2	U	2.1	U	2	U	1.9	U	1.8	U
alpha-Chlordane	UG/KG	1.1	J	2	U	2	U	2	U	2.1	U	2	U	1.9	U	1.8	U
beta-BHC	UG/KG	1.9	U	2	U	2	U	2	U	2.1	U	2	U	1.9	U	1.8	U
delta-BHC	UG/KG	2.2		2	U	2	U	2	U	2.1	U	2	U	1.9	U	1.8	U
gamma-BHC (Lindane)	UG/KG	1.9	U	2	U	2	U	2	U	2.1	U	2	U	1.9	U	1.8	U
gamma-Chlordane	UG/KG	1.9	U	2	U	2	U	2	U	2.1	U	2	U	1.9	U	1.8	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	0.34		0.27		6.1		6		0.27		0.64		0.06		0.34	
Percent Moisture (PEST/PCB)		11		14		16		16		19		14		12		3	
Percent Moisture (SVOCs)		11		14		16		16		19		14		12		3	

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		1000-S		2000-N		2000-N		2000-S		3000-N		3000-S		3500-N	
SAMP ID:		16083		16087		16089		16090		16085		16088		16056		16084	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/20/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (VOCs)		11		14		17		17		20		18		11		3	
Percent Solids (Metals)		88.7		86.1		83.5		83.6		81.4		85.7		87.9		97.2	
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2,4,6-Trinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2,6-Dinitrotoluene	UG/KG	120	U	120	UJ	120	UJ	120	UJ	120	U	120	UJ	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	120	UJ	120	UJ	120	UJ	120	U	120	UJ	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
HMX	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
Nitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
RDX	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
Tetryl	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
METALS																	
Aluminum	MG/KG	13900	J	11600	J	11700	J	11500	J	14100	J	12700	J	11800	J	4120	J
Antimony	MG/KG	0.7		0.8	J	0.39	U	0.45	U	0.36		0.7	J	0.37	UJ	0.56	
Arsenic	MG/KG	4.9		4.5	J	4.6	J	4.5	J	5.1		5.1	J	5.6		3.8	
Barium	MG/KG	81.8	J	90.3	J	113	J	109	J	129	J	98.7	J	69.1	J	27.2	J
Beryllium	MG/KG	0.54		0.48		0.41		0.44		0.57		0.43		0.51		0.16	
Cadmium	MG/KG	0.07		0.34		0.21		0.21		0.21		0.1		0.18		0.23	
Calcium	MG/KG	9650		14500		3410		3420		3600		18200		10800		229000	

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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		1000-S		2000-N		2000-N		2000-S		3000-N		3000-S		3500-N	
SAMP ID:		16083		16087		16089		16090		16085		16088		16056		16084	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96		8/20/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chromium	MG/KG	24.4		18.5		14.8		14.8		19.5		18.4		19.9		9.3	
Cobalt	MG/KG	15.7		9.2		7.2		7.1		10.7		10.3		12.3		4.7	
Copper	MG/KG	39		21.2		17.9		17.7		19.9		20.4		28.9		14.9	
Cyanide	MG/KG	0.51	U	0.56	U	0.6	U	0.52	U	0.58	U	0.55	U	0.55	U	0.5	U
Iron	MG/KG	29300		22500		19100		19100		24000		23600		24900		9760	
Lead	MG/KG	52		58		19.7		19.5		29		19.3		16.7		36.7	
Magnesium	MG/KG	6120		5330		3230		3200		3840		6820		5330		8430	
Manganese	MG/KG	399	J	452		663		587		704	J	670		550		286	J
Mercury	MG/KG	0.06		0.06		0.07		0.09		0.06		0.56		0.05		0.04	U
Nickel	MG/KG	50.8		26.4		16.6		16.4		25.9		27.2		34.6		15.8	
Potassium	MG/KG	1460		1100		1030		1060		1730		1420		1320		848	
Selenium	MG/KG	1.3	J	1.4		1.3		1.5		1.4	J	1.2		0.74		0.5	J
Silver	MG/KG	0.27	U	0.29	U	0.25	U	0.29	U	0.23	U	0.28	U	0.24	U	0.23	U
Sodium	MG/KG	83.1		59.2	U	51.7	U	59.9	U	49.4		57.9	U	49.5	U	383	
Thallium	MG/KG	0.88	U	0.93	U	0.81	U	0.94	U	0.83		0.91	U	1.2		0.74	U
Vanadium	MG/KG	20.5		19		19.4		19.5		22.3		20.1		19		15.5	
Zinc	MG/KG	109	J	92.5		55.8		55.8		78.7	J	68.2		97.9		53.2	J

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		3500-S	
SAMP ID:		16083		16055	
QC CODE:		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1	
TOP:		0		0	
BOTTOM:		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
VOLATILE ORGANICS					
1,1,1-Trichloroethane	UG/KG	11	UJ	11	U
1,1,2,2-Tetrachloroethane	UG/KG	11	UJ	11	U
1,1,2-Trichloroethane	UG/KG	11	UJ	11	U
1,1-Dichloroethane	UG/KG	11	U	11	U
1,1-Dichloroethene	UG/KG	11	U	11	U
1,2-Dichloroethane	UG/KG	11	U	11	U
1,2-Dichloroethene (total)	UG/KG	11	U	11	U
1,2-Dichloropropane	UG/KG	11	UJ	11	U
2-Butanone	UG/KG	11	U	11	U
2-Hexanone	UG/KG	11	UJ	11	U
4-Methyl-2-Pentanone	UG/KG	11	UJ	11	U
Acetone	UG/KG	11	U	11	U
Benzene	UG/KG	11	UJ	11	U
Bromodichloromethane	UG/KG	11	UJ	11	U
Bromoform	UG/KG	11	UJ	11	U
Bromomethane	UG/KG	11	U	11	U
Carbon Disulfide	UG/KG	11	U	11	U
Carbon Tetrachloride	UG/KG	11	U	5	U
Chlorobenzene	UG/KG	11	UJ	11	U
Chloroethane	UG/KG	11	U	11	U
Chloroform	UG/KG	11	U	5	U

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		3500-S	
SAMP ID:		16083		16055	
QC CODE:		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1	
TOP:		0		0	
BOTTOM:		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	11	U	11	U
Dibromochloromethane	UG/KG	11	UJ	11	U
Ethylbenzene	UG/KG	11	UJ	11	U
Methylene Chloride	UG/KG	11	U	11	U
Styrene	UG/KG	11	UJ	11	U
Tetrachloroethene	UG/KG	11	UJ	11	U
Toluene	UG/KG	11	UJ	2	J
Trichloroethene	UG/KG	11	UJ	11	U
Vinyl Chloride	UG/KG	11	U	11	U
Xylene (total)	UG/KG	11	UJ	11	U
cis-1,3-Dichloropropene	UG/KG	11	UJ	11	U
trans-1,3-Dichloropropene	UG/KG	11	UJ	11	U
SEMIVOLATILE ORGANICS					
1,2,4-Trichlorobenzene	UG/KG	370	U	350	U
1,2-Dichlorobenzene	UG/KG	370	U	350	U
1,3-Dichlorobenzene	UG/KG	370	U	350	U
1,4-Dichlorobenzene	UG/KG	370	U	350	U
2,4,5-Trichlorophenol	UG/KG	900	U	850	U
2,4,6-Trichlorophenol	UG/KG	370	U	350	U
2,4-Dichlorophenol	UG/KG	370	U	350	U
2,4-Dimethylphenol	UG/KG	370	U	350	U
2,4-Dinitrophenol	UG/KG	900	U	850	U

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
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SEAD-16 Remedial Investigation
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LOC_ID:		1000-N		3500-S	
SAMP ID:		16083		16055	
QC CODE:		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1	
TOP:		0		0	
BOTTOM:		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
2,4-Dinitrotoluene	UG/KG	370	U	400	
2,6-Dinitrotoluene	UG/KG	370	U	350	U
2-Chloronaphthalene	UG/KG	370	U	350	U
2-Chlorophenol	UG/KG	370	U	350	U
2-Methylnaphthalene	UG/KG	370	U	28	J
2-Methylphenol	UG/KG	370	U	350	U
2-Nitroaniline	UG/KG	900	U	850	U
2-Nitrophenol	UG/KG	370	U	350	U
3,3'-Dichlorobenzidine	UG/KG	370	UJ	350	U
3-Nitroaniline	UG/KG	900	UJ	850	U
4,6-Dinitro-2-methylphenol	UG/KG	900	U	850	U
4-Bromophenyl-phenylether	UG/KG	370	U	350	U
4-Chloro-3-methylphenol	UG/KG	370	U	350	U
4-Chloroaniline	UG/KG	370	UJ	350	U
4-Chlorophenyl-phenylether	UG/KG	370	U	350	U
4-Methylphenol	UG/KG	370	U	350	U
4-Nitroaniline	UG/KG	900	U	850	U
4-Nitrophenol	UG/KG	900	U	850	U
Acenaphthene	UG/KG	370	U	33	J
Acenaphthylene	UG/KG	370	U	35	J
Anthracene	UG/KG	370	U	130	J
Benzo(a)anthracene	UG/KG	39	J	480	

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
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LOC_ID:		1000-N		3500-S	
SAMP ID:		16083		16055	
QC CODE:		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1	
TOP:		0		0	
BOTTOM:		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Benzo(a)pyrene	UG/KG	39	J	640	
Benzo(b)fluoranthene	UG/KG	42	J	580	
Benzo(g,h,i)perylene	UG/KG	35	J	540	
Benzo(k)fluoranthene	UG/KG	47	J	530	
Butylbenzylphthalate	UG/KG	370	U	350	U
Carbazole	UG/KG	370	UJ	40	J
Chrysene	UG/KG	55	J	520	
Di-n-butylphthalate	UG/KG	370	U	90	J
Di-n-octylphthalate	UG/KG	370	U	350	U
Dibenz(a,h)anthracene	UG/KG	370	U	200	J
Dibenzofuran	UG/KG	370	U	36	J
Diethylphthalate	UG/KG	370	U	350	U
Dimethylphthalate	UG/KG	370	U	350	U
Fluoranthene	UG/KG	70	J	780	
Fluorene	UG/KG	370	U	38	J
Hexachlorobenzene	UG/KG	370	U	350	U
Hexachlorobutadiene	UG/KG	370	U	350	U
Hexachlorocyclopentadiene	UG/KG	370	U	350	U
Hexachloroethane	UG/KG	370	U	350	U
Indeno(1,2,3-cd)pyrene	UG/KG	32	J	520	
Isophorone	UG/KG	370	U	350	U
N-Nitroso-di-n-propylamine	UG/KG	370	U	350	U

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SAMP ID:		16083		16055	
QC CODE:		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1	
TOP:		0		0	
BOTTOM:		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
N-Nitrosodiphenylamine (1)	UG/KG	370	U	47	J
Naphthalene	UG/KG	370	U	29	J
Nitrobenzene	UG/KG	370	U	350	U
Pentachlorophenol	UG/KG	900	UJ	850	U
Phenanthrene	UG/KG	34	J	360	
Phenol	UG/KG	370	U	350	U
Pyrene	UG/KG	76	J	620	
bis(2-Chloroethoxy) methane	UG/KG	370	U	350	U
bis(2-Chloroethyl) ether	UG/KG	370	U	350	U
bis(2-Chloroisopropyl) ether	UG/KG	370	U	350	U
bis(2-Ethylhexyl)phthalate	UG/KG	370	U	350	U
PESTICIDES/PCB					
4,4'-DDD	UG/KG	3.7	U	35	U
4,4'-DDE	UG/KG	5.2	J	140	J
4,4'-DDT	UG/KG	6	J	35	U
Aldrin	UG/KG	1.9	U	18	U
Aroclor-1016	UG/KG	37	U	350	U
Aroclor-1221	UG/KG	75	U	710	U
Aroclor-1232	UG/KG	37	U	350	U
Aroclor-1242	UG/KG	37	U	350	U
Aroclor-1248	UG/KG	37	U	350	U
Aroclor-1254	UG/KG	37	U	350	U

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
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Seneca Army Depot Activity

LOC_ID:		1000-N		3500-S	
SAMP ID:		16083		16055	
QC CODE:		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1	
TOP:		0		0	
BOTTOM:		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Aroclor-1260	UG/KG	37	U	350	U
Dieldrin	UG/KG	3.7	U	17	U
Endosulfan I	UG/KG	1.6	J	430	J
Endosulfan II	UG/KG	3.7	U	35	U
Endosulfan sulfate	UG/KG	3.7	U	20	J
Endrin	UG/KG	3.7	U	43	
Endrin aldehyde	UG/KG	3.7	U	35	U
Endrin ketone	UG/KG	3.7	U	71	
Heptachlor	UG/KG	1.9	U	18	U
Heptachlor epoxide	UG/KG	1.9	U	18	U
Methoxychlor	UG/KG	19	U	180	U
Toxaphene	UG/KG	190	U	1800	U
alpha-BHC	UG/KG	1.9	U	18	U
alpha-Chlordane	UG/KG	1.1	J	11	R
beta-BHC	UG/KG	1.9	U	20	J
delta-BHC	UG/KG	2.2		18	U
gamma-BHC (Lindane)	UG/KG	1.9	U	18	U
gamma-Chlordane	UG/KG	1.9	U	18	U
OTHER ANALYSES					
Nitrate/Nitrite-Nitrogen	MG/KG	0.34		0.44	
Percent Moisture (PEST/PCB)		11		6	
Percent Moisture (SVOCs)		11		6	

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
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Seneca Army Depot Activity

LOC_ID:		1000-N		3500-S	
SAMP ID:		16083		16055	
QC CODE:		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1	
TOP:		0		0	
BOTTOM:		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Percent Moisture (VOCs)		11		8	
Percent Solids (Metals)		88.7		93.7	
NITROAROMATICS					
1,3,5-Trinitrobenzene	UG/KG	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	U	120	U
2,4,6-Trinitrotoluene	UG/KG	120	U	120	U
2,4-Dinitrotoluene	UG/KG	120	U	120	U
2,6-Dinitrotoluene	UG/KG	120	U	900	J
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	120	U
HMX	UG/KG	120	U	120	U
Nitrobenzene	UG/KG	120	U	120	U
RDX	UG/KG	120	U	120	U
Tetryl	UG/KG	120	U	120	U
METALS					
Aluminum	MG/KG	13900	J	8620	J
Antimony	MG/KG	0.7		0.74	J
Arsenic	MG/KG	4.9		4.5	
Barium	MG/KG	81.8	J	86.4	J
Beryllium	MG/KG	0.54		0.32	
Cadmium	MG/KG	0.07		0.32	
Calcium	MG/KG	9650		107000	

SEAD-16 and 17 Analytes Detected in Downwind Surface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		1000-N		3500-S	
SAMP ID:		16083		16055	
QC CODE:		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1	
TOP:		0		0	
BOTTOM:		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		8/22/96		8/20/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Chromium	MG/KG	24.4		14	
Cobalt	MG/KG	15.7		6.8	
Copper	MG/KG	39		29.6	
Cyanide	MG/KG	0.51	U	0.53	U
Iron	MG/KG	29300		15800	J
Lead	MG/KG	52		36	
Magnesium	MG/KG	6120		6310	
Manganese	MG/KG	399	J	558	
Mercury	MG/KG	0.06		0.05	
Nickel	MG/KG	50.8		18.1	
Potassium	MG/KG	1460		1410	
Selenium	MG/KG	1.3	J	1.2	
Silver	MG/KG	0.27	U	0.25	U
Sodium	MG/KG	83.1		68.9	
Thallium	MG/KG	0.88	U	1	
Vanadium	MG/KG	20.5		19.8	
Zinc	MG/KG	109	J	90.8	

Subsurface Soils

SEAD-16 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-1		SB16-2		SB16-4		SB16-5		SB16-5	
SAMP ID:		16038		16093		16036		16031		16034		16035	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		2		6		1		2		1		2	
BOTTOM:		3		12		2		4		2		3.3	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		8/14/96		8/22/96		8/14/96		8/14/96		8/14/96		8/14/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS													
1,1,1-Trichloroethane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	11	UJ	11	U	11	U	11	U	11	U
1,1,2-Trichloroethane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
1,1-Dichloroethane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
1,1-Dichloroethene	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
1,2-Dichloroethane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
1,2-Dichloroethene (total)	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
1,2-Dichloropropane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
2-Butanone	UG/KG	12	U	11	U	11	U	5	J	2	U	11	U
2-Hexanone	UG/KG	12	U	11	UJ	11	U	11	U	11	U	11	U
4-Methyl-2-Pentanone	UG/KG	12	U	11	UJ	11	U	11	U	11	U	11	U
Acetone	UG/KG	11	J	11	U	11	U	46		12	U	11	U
Benzene	UG/KG	12	U	11	U	2	J	2	J	11	U	11	U
Bromodichloromethane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
Bromoform	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
Bromomethane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
Carbon Disulfide	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
Carbon Tetrachloride	UG/KG	12	U	5	U	11	U	11	U	11	U	11	U
Chlorobenzene	UG/KG	12	U	11	UJ	11	U	11	U	11	U	11	U
Chloroethane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
Chloroform	UG/KG	12	U	5	U	11	U	11	U	11	U	11	U
Chloromethane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U

SEAD-16 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-1		SB16-2		SB16-4		SB16-5		SB16-5	
SAMP ID:		16038		16093		16036		16031		16034		16035	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		2		6		1		2		1		2	
BOTTOM:		3		12		2		4		2		3.3	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		8/14/96		8/22/96		8/14/96		8/14/96		8/14/96		8/14/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Dibromochloromethane	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
Ethylbenzene	UG/KG	12	U	11	UJ	11	U	11	U	11	U	11	U
Methylene Chloride	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
Styrene	UG/KG	12	U	11	UJ	11	U	11	U	11	U	11	U
Tetrachloroethene	UG/KG	12	U	11	UJ	11	U	11	U	11	U	11	U
Toluene	UG/KG	12	U	11	UJ	3	J	2	J	2	J	6	J
Trichloroethene	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
Vinyl Chloride	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
Xylene (total)	UG/KG	12	U	11	UJ	11	U	11	U	11	U	11	U
cis-1,3-Dichloropropene	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
trans-1,3-Dichloropropene	UG/KG	12	U	11	U	11	U	11	U	11	U	11	U
SEMIVOLATILE ORGANICS													
1,2,4-Trichlorobenzene	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
1,2-Dichlorobenzene	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
1,3-Dichlorobenzene	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
1,4-Dichlorobenzene	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
2,4,5-Trichlorophenol	UG/KG	940	U	830	U	920	U	4600	U	4400	U	900	U
2,4,6-Trichlorophenol	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
2,4-Dichlorophenol	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
2,4-Dimethylphenol	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
2,4-Dinitrophenol	UG/KG	940	U	830	U	920	U	4600	U	4400	U	900	U
2,4-Dinitrotoluene	UG/KG	390	U	67	J	1700		1900	U	1800	U	370	U
2,6-Dinitrotoluene	UG/KG	390	U	340	U	160	J	1900	U	1800	U	370	U

SEAD-16 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-1		SB16-2		SB16-4		SB16-5		SB16-5	
SAMP ID:		16038		16093		16036		16031		16034		16035	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		2		6		1		2		1		2	
BOTTOM:		3		12		2		4		2		3.3	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		8/14/96		8/22/96		8/14/96		8/14/96		8/14/96		8/14/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2-Chloronaphthalene	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
2-Chlorophenol	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
2-Methylnaphthalene	UG/KG	390	U	340	U	190	J	1900	U	1800	U	370	U
2-Methylphenol	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
2-Nitroaniline	UG/KG	940	U	830	U	920	U	4600	U	4400	U	900	U
2-Nitrophenol	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
3,3'-Dichlorobenzidine	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
3-Nitroaniline	UG/KG	940	U	830	U	920	U	4600	U	4400	U	900	U
4,6-Dinitro-2-methylphenol	UG/KG	940	U	830	U	920	U	4600	U	4400	U	900	U
4-Bromophenyl-phenylether	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
4-Chloro-3-methylphenol	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
4-Chloroaniline	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
4-Chlorophenyl-phenylether	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
4-Methylphenol	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
4-Nitroaniline	UG/KG	940	U	830	U	920	U	4600	U	4400	U	900	U
4-Nitrophenol	UG/KG	940	U	830	U	920	U	4600	U	4400	U	900	U
Acenaphthene	UG/KG	390	U	340	U	380	U	1900	U	1100	J	370	U
Acenaphthylene	UG/KG	390	U	340	U	380	U	300	J	1800	U	370	U
Anthracene	UG/KG	390	U	340	U	380	U	310	J	2000		40	J
Benzo(a)anthracene	UG/KG	390	U	340	U	55	J	420	J	6600		110	J
Benzo(a)pyrene	UG/KG	390	U	20	J	63	J	1400	J	6200		170	J
Benzo(b)fluoranthene	UG/KG	390	U	18	J	72	J	670	J	6000		110	J
Benzo(g,h,i)perylene	UG/KG	390	U	26	J	84	J	11000		4500		660	

SEAD-16 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-1		SB16-2		SB16-4		SB16-5		SB16-5	
SAMP ID:		16038		16093		16036		16031		16034		16035	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		2		6		1		2		1		2	
BOTTOM:		3		12		2		4		2		3.3	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		8/14/96		8/22/96		8/14/96		8/14/96		8/14/96		8/14/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(k)fluoranthene	UG/KG	390	U	20	J	60	J	690	J	5600		110	J
Butylbenzylphthalate	UG/KG	390	U	18	J	380	U	1900	U	1800	U	370	U
Carbazole	UG/KG	390	U	340	U	380	U	1900	U	730	J	370	U
Chrysene	UG/KG	390	U	22	J	90	J	480	J	7000		120	J
Di-n-butylphthalate	UG/KG	390	U	35	J	240	J	1900	U	1800	U	370	U
Di-n-octylphthalate	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
Dibenz(a,h)anthracene	UG/KG	390	U	340	U	32	J	2500		1700	J	220	J
Dibenzofuran	UG/KG	390	U	340	U	45	J	1900	U	270	J	370	U
Diethylphthalate	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
Dimethylphthalate	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
Fluoranthene	UG/KG	390	U	32	J	110	J	480	J	13000		190	J
Fluorene	UG/KG	390	U	340	U	380	U	1900	U	800	J	370	U
Hexachlorobenzene	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
Hexachlorobutadiene	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
Hexachlorocyclopentadiene	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
Hexachloroethane	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
Indeno(1,2,3-cd)pyrene	UG/KG	390	U	24	J	65	J	7100		3900		510	
Isophorone	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
N-Nitroso-di-n-propylamine	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
N-Nitrosodiphenylamine (1)	UG/KG	390	U	340	U	530		1900	U	1800	U	370	U
Naphthalene	UG/KG	390	U	340	U	120	J	1900	U	1800	U	370	U
Nitrobenzene	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
Pentachlorophenol	UG/KG	940	U	830	U	920	U	4600	U	4400	U	120	J

SEAD-16 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-1		SB16-2		SB16-4		SB16-5		SB16-5	
SAMP ID:		16038		16093		16036		16031		16034		16035	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		2		6		1		2		1		2	
BOTTOM:		3		12		2		4		2		3.3	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		8/14/96		8/22/96		8/14/96		8/14/96		8/14/96		8/14/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Phenanthrene	UG/KG	390	U	23	J	160	J	160	J	7600		100	J
Phenol	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
Pyrene	UG/KG	390	U	25	J	80	J	550	J	11000		160	J
bis(2-Chloroethoxy) methane	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
bis(2-Chloroethyl) ether	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
bis(2-Chloroisopropyl) ether	UG/KG	390	U	340	U	380	U	1900	U	1800	U	370	U
bis(2-Ethylhexyl)phthalate	UG/KG	390	U	340	U	110	J	1900	U	1800	U	370	U
PESTICIDES/PCB													
4,4'-DDD	UG/KG	3.9	U	3.4	U	38	U	3.8	U	37	U	3.7	U
4,4'-DDE	UG/KG	3.9	U	8.3		38	U	3.8	U	37	U	3.7	U
4,4'-DDT	UG/KG	3.9	U	1.7	J	38	U	3.8	U	37	U	3.4	J
Aldrin	UG/KG	2	U	1.8	U	20	U	2	U	19	U	1.9	U
Aroclor-1016	UG/KG	39	U	34	U	380	U	38	U	370	U	37	U
Aroclor-1221	UG/KG	79	U	70	U	770	U	77	U	740	U	75	U
Aroclor-1232	UG/KG	39	U	34	U	380	U	38	U	370	U	37	U
Aroclor-1242	UG/KG	39	U	34	U	380	U	38	U	370	U	37	U
Aroclor-1248	UG/KG	39	U	34	U	380	U	38	U	370	U	37	U
Aroclor-1254	UG/KG	39	U	34	U	380	U	38	U	370	U	37	U
Aroclor-1260	UG/KG	39	U	34	U	380	U	38	U	370	U	37	U
Dieldrin	UG/KG	3.9	U	3.4	U	38	U	12		37	U	3.7	U
Endosulfan I	UG/KG	2	U	1.8	U	20	U	7.3	J	15	U	2.4	J
Endosulfan II	UG/KG	3.9	U	3.4	U	38	U	3.8	U	37	U	3.7	U
Endosulfan sulfate	UG/KG	3.9	U	3.4	U	38	U	3.8	U	37	U	3.7	U

SEAD-16 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-1		SB16-2		SB16-4		SB16-5		SB16-5	
SAMP ID:		16038		16093		16036		16031		16034		16035	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		2		6		1		2		1		2	
BOTTOM:		3		12		2		4		2		3.3	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		8/14/96		8/22/96		8/14/96		8/14/96		8/14/96		8/14/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Endrin	UG/KG	3.9	U	3.4	U	38	U	2.9	J	37	U	3.4	U
Endrin aldehyde	UG/KG	3.9	U	3.4	U	38	U	3.8	U	37	U	3.7	U
Endrin ketone	UG/KG	3.9	U	3.4	U	38	U	3.8	U	37	U	3.7	U
Heptachlor	UG/KG	2	U	1.8	U	20	U	2	U	19	U	1.9	U
Heptachlor epoxide	UG/KG	2	U	1.8	U	20	U	2	U	19	U	1.3	U
Methoxychlor	UG/KG	20	U	18	U	200	U	20	U	190	U	19	U
Toxaphene	UG/KG	200	U	180	U	2000	U	200	U	1900	U	190	U
alpha-BHC	UG/KG	2	U	1.8	U	20	U	2	U	19	U	1.9	U
alpha-Chlordane	UG/KG	2	U	1.8	U	20	U	2	U	19	U	1.9	U
beta-BHC	UG/KG	2	U	1.8	U	20	U	2	U	19	U	1.9	U
delta-BHC	UG/KG	2	U	1.8	U	20	U	2	U	19	U	1.9	U
gamma-BHC (Lindane)	UG/KG	2	U	1.8	U	20	U	2	U	19	U	1.9	U
gamma-Chlordane	UG/KG	2	U	1.8	U	20	U	2	U	19	U	1.9	U
OTHER ANALYSES													
Nitrate/Nitrite-Nitrogen	MG/KG	0.11		0.32		0.78		0.3		0.09		0.17	
Percent Moisture (PEST/PCB)		15		4		13		13		10		11	
Percent Moisture (SVOCs)		15		4		13		13		10		11	
Percent Moisture (VOCs)		16		6		12		10		13		13	
Percent Solids (Metals)		85.3		95.6		87.3		87.2		89.8		88.7	
Total Organic Carbon	MG/KG					9850				668		1010	
NITROAROMATICS													
1,3,5-Trinitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U

SEAD-16 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-1		SB16-2		SB16-4		SB16-5		SB16-5	
SAMP ID:		16038		16093		16036		16031		16034		16035	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		2		6		1		2		1		2	
BOTTOM:		3		12		2		4		2		3.3	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		8/14/96		8/22/96		8/14/96		8/14/96		8/14/96		8/14/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4,6-Trinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	120	U	280	J	150	J	500		120	U	120	U
2,6-Dinitrotoluene	UG/KG	120	U	120	UJ	120	U	120	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	120	UJ	120	U	120	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U
HMX	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U
Nitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U
RDX	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U
Tetryl	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U
METALS													
Aluminum	MG/KG	13200	R	12800	J	9350	R	13200	R	9850	R	10500	R
Antimony	MG/KG	0.45	UJ	3.3	J	8.3	J	0.41	UJ	135	J	0.4	UJ
Arsenic	MG/KG	3.3	J	6.3	J	6.9	J	5.2	J	6.9	J	5	J
Barium	MG/KG	98	J	125	J	197	J	51.8	J	302	J	84.7	J
Beryllium	MG/KG	0.51		0.42		0.29		0.43		0.34		0.29	
Cadmium	MG/KG	0.07	U	0.19		0.45		0.06		0.09		0.09	
Calcium	MG/KG	67700		22500		24400		25000		37100		97900	
Chromium	MG/KG	18.2		20.9		15.4		21.1		18		16.7	
Cobalt	MG/KG	7		12.1		10.2	J	12.2	J	11.5	J	11.2	J
Copper	MG/KG	23.6	J	66.4		206	J	16.4	J	736	J	26.6	J
Cyanide	MG/KG	0.58	UJ	0.5	U	0.56	UJ	0.52	J	0.5	UJ	0.51	UJ
Iron	MG/KG	20700	J	31400		23900	J	27300	J	21800	J	21500	J
Lead	MG/KG	12.6	J	309		791	J	21.4	J	35400	J	61.6	J

SEAD-16 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB16-1		SB16-1		SB16-2		SB16-4		SB16-5		SB16-5	
SAMP ID:		16038		16093		16036		16031		16034		16035	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		2		6		1		2		1		2	
BOTTOM:		3		12		2		4		2		3.3	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		8/14/96		8/22/96		8/14/96		8/14/96		8/14/96		8/14/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Magnesium	MG/KG	12600		6230		7250		13300		7410		11500	
Manganese	MG/KG	210		586		606	J	457	J	315	J	650	J
Mercury	MG/KG	0.04	U	0.48		1.9	J	0.04	J	0.54	J	0.03	U
Nickel	MG/KG	23.8	J	34.5		23.9	J	30.7	J	37	J	29.2	J
Potassium	MG/KG	1990		1310		1290		1180		1160		1470	
Selenium	MG/KG	0.54	UJ	1.2		0.82	J	0.64	J	0.5	UJ	0.48	UJ
Silver	MG/KG	0.29	U	0.26	U	0.25		0.27	U	1.2		0.26	U
Sodium	MG/KG	59.8	U	54.4	U	59.2		160		56.3	U	82.9	
Thallium	MG/KG	0.94	U	0.85	U	0.91		0.87	U	88.2	U	0.85	U
Vanadium	MG/KG	22.6	J	19.3		17.1	J	19.6	J	15.2	J	17.6	J
Zinc	MG/KG	54.8		119		183		89.2		165		70.9	

SEAD-16 Groundwater

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1,2-Tetrachloroethane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,1,1-Trichloroethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
1,1,2,2-Tetrachloroethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
1,1,2-Trichloroethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
1,1-Dichloroethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
1,1-Dichloroethene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
1,1-Dichloropropene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,2,3-Trichlorobenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,2,3-Trichloropropane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,2,4-Trichlorobenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,2,4-Trimethylbenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,2-Dibromo-3-Chloropropane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,2-Dibromoethane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,2-Dichlorobenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,2-Dichloroethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
1,2-Dichloroethene (total)	UG/L			10	U			10	U	10	U					10	U
1,2-Dichloropropane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
1,3,5-Trimethylbenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,3-Dichlorobenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,4-Dichlorobenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
1,4-Dioxane	UG/L	50	R			50	R					50	R	50	R		
2,2-Dichloropropane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2-Butanone	UG/L	5	R	10	U	5	R	10	U	10	U	5	R	5	R	10	U
2-Chlorotoluene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
2-Hexanone	UG/L	5	U	10	U	5	U	10	U	10	U	5	U	5	U	10	U
4-Chlorotoluene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
4-Methyl-2-Pentanone	UG/L	5	U	10	U	5	U	10	U	10	U	5	U	5	U	10	U
Acetone	UG/L	5	U	10	U	5	U	10	U	10	U	5	U	5	U	10	U
Benzene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Bromobenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
Bromochloromethane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
Bromodichloromethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Bromoform	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Bromomethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Carbon Disulfide	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Carbon Tetrachloride	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Chlorobenzene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Chloroethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Chloroform	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Chloromethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Dibromochloromethane	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Dibromomethane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
Dichlorodifluromethane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
Ethylbenzene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Hexachlorobutadiene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Isopropylbenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
Methylene Chloride	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Naphthalene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
Styrene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Tetrachloroethene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Tetrahydrofuran	UG/L	50	U			50	U					50	U	50	U		
Toluene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Trichloroethene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Trichlorofluoromethane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
Vinyl Chloride	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
Xylene (total)	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
cis-1,2-Dichloroethane	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
cis-1,3-Dichloropropene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
n-Butylbenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
n-Propylbenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
p-Isopropyltoluene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
sec-Butylbenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
tert-Butylbenzene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
trans-1,2-Dichloroethene	UG/L	0.5	U			0.5	U					0.5	U	0.5	U		
trans-1,3-Dichloropropene	UG/L	0.5	U	10	U	0.5	U	10	U	10	U	0.5	U	0.5	U	10	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
1,2-Dichlorobenzene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
1,3-Dichlorobenzene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
1,4-Dichlorobenzene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2,2'-oxybis(1-Chloropropane)	UG/L			11	U			11	U	11	U					11	U
2,4,5-Trichlorophenol	UG/L	26	UJ	27	U	25	U	27	U	27	U	25	U	25	U	27	U
2,4,6-Trichlorophenol	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2,4-Dichlorophenol	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2,4-Dimethylphenol	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2,4-Dinitrophenol	UG/L	26	UJ	27	U	25	U	27	U	27	U	25	UJ	25	U	27	U
2,4-Dinitrotoluene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2,6-Dinitrotoluene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2-Chloronaphthalene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2-Chlorophenol	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2-Methylnaphthalene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2-Methylphenol	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
2-Nitroaniline	UG/L	26	UJ	27	U	25	U	27	U	27	U	25	U	25	U	27	U
2-Nitrophenol	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
3,3'-Dichlorobenzidine	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	UJ	10	UJ	11	U
3-Nitroaniline	UG/L	26	UJ	27	U	25	U	27	U	27	U	25	U	25	U	27	U
4,6-Dinitro-2-methylphenol	UG/L	26	UJ	27	U	25	U	27	U	27	U	25	U	25	U	27	U
4-Bromophenyl-phenylether	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
4-Chloro-3-methylphenol	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
4-Chloroaniline	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
4-Chlorophenyl-phenylether	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
4-Methylphenol	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
4-Nitroaniline	UG/L	26	UJ	27	U	25	U	27	U	27	U	25	U	25	U	27	U
4-Nitrophenol	UG/L	26	UJ	27	U	25	U	27	U	27	U	25	U	25	U	27	U
Acenaphthene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Acenaphthylene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Anthracene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Benzo(a)anthracene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Benzo(a)pyrene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Benzo(b)fluoranthene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Benzo(g,h,i)perylene	UG/L	10	UJ	11	U	10	U	11	U	11	U	1	J	10	U	11	U
Benzo(k)fluoranthene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Butylbenzylphthalate	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Carbazole	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Chrysene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Di-n-butylphthalate	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Di-n-octylphthalate	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Dibenz(a,h)anthracene	UG/L	10	UJ	11	U	10	U	11	U	11	U	0.7	J	10	U	11	U
Dibenzofuran	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Diethylphthalate	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	0.5	J
Dimethylphthalate	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Fluoranthene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Fluorene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Hexachlorobenzene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Hexachlorobutadiene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Hexachlorocyclopentadiene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Hexachloroethane	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Indeno(1,2,3-cd)pyrene	UG/L	10	UJ	11	U	10	U	11	U	11	U	0.6	J	10	U	11	U
Isophorone	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
N-Nitroso-di-n-propylamine	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
N-Nitrosodiphenylamine (1)	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Naphthalene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Nitrobenzene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Pentachlorophenol	UG/L	26	UJ	27	U	25	U	27	U	27	U	25	U	25	U	27	U
Phenanthrene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Phenol	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
Pyrene	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
bis(2-Chloroethoxy) methane	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
bis(2-Chloroethyl) ether	UG/L	10	UJ	11	U	10	U	11	U	11	U	10	U	10	U	11	U
bis(2-Chloroisopropyl) ether	UG/L	10	UJ			10	U					10	U	10	U		
bis(2-Ethylhexyl)phthalate	UG/L	10	UJ	12	U	10	U	13	U	11	U	10	U	10	U	24	U
PESTICIDES/PCB																	
4,4'-DDD	UG/L	0.1	U	0.11	UJ	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	UJ
4,4'-DDE	UG/L	0.1	U	0.11	UJ	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	UJ
4,4'-DDT	UG/L	0.1	U	0.11	UJ	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	UJ
Aldrin	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ
Aroclor-1016	UG/L	1	U	1.1	UJ	1	U	1.1	U	1.1	U	1	U	1	U	1.1	UJ

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1221	UG/L	2	U	2.1	UJ	2	U	2.1	U	2.2	U	2	U	2	U	2.2	UJ
Aroclor-1232	UG/L	1	U	1.1	UJ	1	U	1.1	U	1.1	U	1	U	1	U	1.1	UJ
Aroclor-1242	UG/L	1	U	1.1	UJ	1	U	1.1	U	1.1	U	1	U	1	U	1.1	UJ
Aroclor-1248	UG/L	1	U	1.1	UJ	1	U	1.1	U	1.1	U	1	U	1	U	1.1	UJ
Aroclor-1254	UG/L	1	U	1.1	UJ	1	U	1.1	U	1.1	U	1	U	1	U	1.1	UJ
Aroclor-1260	UG/L	1	U	1.1	UJ	1	U	1.1	U	1.1	U	1	U	1	U	1.1	UJ
Dieldrin	UG/L	0.1	U	0.11	UJ	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	UJ
Endosulfan I	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ
Endosulfan II	UG/L	0.1	U	0.11	UJ	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	UJ
Endosulfan sulfate	UG/L	0.1	U	0.11	UJ	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	UJ
Endrin	UG/L	0.1	U	0.11	UJ	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	UJ
Endrin aldehyde	UG/L	0.1	U	0.11	UJ	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	UJ
Endrin ketone	UG/L	0.1	U	0.11	UJ	0.1	U	0.11	U	0.11	U	0.1	U	0.1	U	0.11	UJ
Heptachlor	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ
Heptachlor epoxide	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ
Methoxychlor	UG/L	0.5	U	0.53	UJ	0.5	U	0.53	U	0.54	U	0.5	U	0.5	U	0.56	UJ
Toxaphene	UG/L	5	U	5.3	UJ	5	U	5.3	U	5.4	U	5	U	5	U	5.6	UJ
alpha-BHC	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ
alpha-Chlordane	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ
beta-BHC	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ
delta-BHC	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ
gamma-BHC (Lindane)	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ
gamma-Chlordane	UG/L	0.05	U	0.053	UJ	0.05	U	0.053	U	0.054	U	0.05	U	0.05	U	0.056	UJ

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/L	0.02		0.11		0.67		0.86		0.77		0.04		0.11		0.23	
Percent Moisture (PEST/PCB)																	
Percent Moisture (SVOCs)																	
Percent Moisture (VOCs)																	
Percent Solids (Metals)		0				0						0		0			
Total Petroleum Hydrocarbons	MG/L	0.44	U			0.4	U					0.41	U	1.3			
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/L	0.26	U	0.13	U	0.26	U	0.13	U	0.13	U	0.26	U	0.26	U	0.13	U
1,3-Dinitrobenzene	UG/L	0.26	U	0.13	U	1.8	J	0.13	U	0.13	U	0.26	U	0.26	U	0.13	U
2,4,6-Trinitrotoluene	UG/L	0.26	U	0.13	U	0.26	U	0.13	U	0.13	U	0.26	U	0.26	U	0.13	U
2,4-Dinitrotoluene	UG/L	0.26	U	0.13	U	0.26	U	0.13	U	0.13	U	0.26	U	0.26	U	0.07	J
2,6-Dinitrotoluene	UG/L	0.26	U	0.13	U	0.26	U	0.13	U	0.13	U	0.26	UJ	0.26	U	0.13	U
2-amino-4,6-Dinitrotoluene	UG/L	0.26	U	0.13	U	0.26	U	0.13	U	0.13	U	0.26	U	0.26	U	0.13	U
4-amino-2,6-Dinitrotoluene	UG/L	0.26	U	0.13	U	0.26	U	0.13	U	0.13	U	0.26	UJ	0.26	U	0.13	U
HMX	UG/L	0.26	U	0.13	U	0.26	U	0.13	U	0.13	U	0.26	U	0.26	U	0.13	U
Nitrobenzene	UG/L	0.26	U			0.26	U					0.26	U	0.26	U		
RDX	UG/L	0.26	U	0.13	U	0.26	U	0.13	U	0.13	U	0.26	U	0.26	U	0.13	U
Tetryl	UG/L	0.26	U	0.13	U	0.26	U	0.13	U	0.13	U	0.26	U	0.26	U	0.13	U
METALS																	
Aluminum	UG/L	1850		53600		1010		3500		4540		336		1470		149000	
Antimony	UG/L	2	U	52.5	U	2	U	52.4	U	52.7	U	7.5		12.3		89.6	
Arsenic	UG/L	2.7	U	15.4		2.7	U	1	U	1.3	J	2.7	U	3.2		33.2	

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Barium	UG/L	74.2		401		48.1		43	J	48.4	J	64.4		74		1170	
Beryllium	UG/L	0.23		3.1	J	0.22		0.3	U	0.3	U	0.21		0.15		8.1	
Cadmium	UG/L	0.3	U	3.3	U	0.3	U	3.3	U	3.3	U	0.3	U	0.32		3.9	J
Calcium	UG/L	157000		239000		193000		114000		117000		99800		91600		477000	
Chromium	UG/L	2.7		88.5		2.3		6	J	6.9	J	1	U	3.4		293	
Cobalt	UG/L	2.1		59.9		1.5		4.9	U	4.9	U	1.2	U	1.6		166	
Copper	UG/L	4.9		64.2		7.9		12.1	J	14.8	J	19.2		56.8		2150	
Cyanide	UG/L	5	U	5	U	5	U	5.6	U	5.3	U	5	U	5	U	5.4	U
Iron	UG/L	2400	J	88100		1720	J	5310		6400		432	J	1900	J	246000	
Lead	UG/L	1.7	U	71.1		5.9		27.3		34.5		6.1		24.1	J	3240	
Magnesium	UG/L	23300		42000		23700		15200		15900		11600		10500		92000	
Manganese	UG/L	210		2110		129		167		189		130		66.3		6300	
Mercury	UG/L	0.1	U	0.07	UJ	0.1	U	0.07	UJ	0.07	UJ	0.1	U	0.1	U	3.9	J
Nickel	UG/L	4.7		135		11		10.2	J	11.5	J	3		6.1		406	
Potassium	UG/L	1670		10200		4760		4810	J	4520	J	2740		2970		24800	
Selenium	UG/L	2.4	U	2.5	J	2.4	U	0.8	U	0.99	J	2.4	U	2.8		10.3	
Silver	UG/L	1.3	U	6.7	U	1.3	U	6.7	U	6.7	U	1.3	U	1.3	U	6.7	U
Sodium	UG/L	8750		7710		19100		11400		11700		9480		6740		10500	
Thallium	UG/L	4.2	U	1.8	U	9.2		1.8	U	1.8	U	4.2	U	4.2	UJ	17.8	U
Vanadium	UG/L	3.3		86.5		2.9		7.2	J	9.3	J	1.2	U	3.8		257	
Zinc	UG/L	15.6	R	460		37.4	R	30.4		33.4		32.4	R	91.2	R	3370	
HERBICIDES																	
2,4,5-T	UG/L			0.11	U			0.12	U	0.12	U					0.11	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-1		MW16-2		MW16-2		MW16-2		MW16-3		MW16-3		MW16-3	
SAMP ID:		16101		MW16-1-1		16102		MW16-2-1		MW16-41-1		16110		16115		MW16-3-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA	
STUDY ID:		RI ROUND1		ESI		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1		ESI	
TOP:		3.3		3.3		1.4		1.4		1.4		2.3		0.3		2.3	
BOTTOM:		5.3		5.3		3.4		3.4		3.4		4.3		4.3		4.3	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		11/19/93		8/27/96		11/19/93		11/19/93		8/30/96		9/10/96		11/19/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4,5-TP (Silvex)	UG/L			0.11	U			0.12	U	0.12	U					0.11	U
2,4-D	UG/L			1.1	U			1.2	U	1.2	U					1.1	U
2,4-DB	UG/L			1.1	U			1.2	U	1.2	U					1.1	U
Dalapon	UG/L			2.5	U			2.6	U	2.6	U					2.5	U
Dicamba	UG/L			0.11	U			0.12	U	0.12	U					0.11	U
Dichloroprop	UG/L			1.1	U			1.2	U	1.2	U					1.1	U
Dinoseb	UG/L			0.54	U			0.57	U	0.56	U					0.54	U
MCPA	UG/L			110	U			120	U	120	U					110	U
MCPP	UG/L			110	U			120	U	120	U					110	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-4		MW16-6		MW16-7	
SAMP ID:		16101		16105		16111		16104	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		3.3		2.5		2.6		2.6	
BOTTOM:		5.3		4.5		4.9		4.6	
MATRIX:		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		8/28/96		9/3/96		8/28/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS									
1,1,1,2-Tetrachloroethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloroethene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,1-Dichloropropene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichlorobenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,2,3-Trichloropropane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trimethylbenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dibromo-3-Chloropropane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dibromoethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloroethene (total)	UG/L								
1,2-Dichloropropane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,3,5-Trimethylbenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,3-Dichlorobenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,4-Dichlorobenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
1,4-Dioxane	UG/L	50	R	50	R	50	R	50	R
2,2-Dichloropropane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-4		MW16-6		MW16-7	
SAMP ID:		16101		16105		16111		16104	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		3.3		2.5		2.6		2.6	
BOTTOM:		5.3		4.5		4.9		4.6	
MATRIX:		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		8/28/96		9/3/96		8/28/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2-Butanone	UG/L	5	R	5	R	5	R	5	R
2-Chlorotoluene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
2-Hexanone	UG/L	5	U	5	U	5	U	5	U
4-Chlorotoluene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
4-Methyl-2-Pentanone	UG/L	5	U	5	U	5	U	5	U
Acetone	UG/L	5	U	5	U	7	U	5	U
Benzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Bromobenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Bromochloromethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Bromodichloromethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Bromomethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Carbon Disulfide	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Carbon Tetrachloride	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Chloroethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Chloroform	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Chloromethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Dibromochloromethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Dibromomethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Dichlorodifluromethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Ethylbenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Hexachlorobutadiene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-4		MW16-6		MW16-7	
SAMP ID:		16101		16105		16111		16104	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		3.3		2.5		2.6		2.6	
BOTTOM:		5.3		4.5		4.9		4.6	
MATRIX:		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		8/28/96		9/3/96		8/28/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Isopropylbenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Methylene Chloride	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Styrene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Tetrachloroethene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Tetrahydrofuran	UG/L	50	U	50	U	50	U	50	U
Toluene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Vinyl Chloride	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
Xylene (total)	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,2-Dichloroethane	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
n-Butylbenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
n-Propylbenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
p-Isopropyltoluene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
sec-Butylbenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
tert-Butylbenzene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,2-Dichloroethene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	UG/L	0.5	U	0.5	U	0.5	U	0.5	U
SEMIVOLATILE ORGANICS									
1,2,4-Trichlorobenzene	UG/L	10	UJ	10	U	10	U	10	U
1,2-Dichlorobenzene	UG/L	10	UJ	10	U	10	U	10	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-4		MW16-6		MW16-7	
SAMP ID:		16101		16105		16111		16104	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		3.3		2.5		2.6		2.6	
BOTTOM:		5.3		4.5		4.9		4.6	
MATRIX:		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		8/28/96		9/3/96		8/28/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
1,3-Dichlorobenzene	UG/L	10	UJ	10	U	10	U	10	U
1,4-Dichlorobenzene	UG/L	10	UJ	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	UG/L								
2,4,5-Trichlorophenol	UG/L	26	UJ	26	U	25	U	25	U
2,4,6-Trichlorophenol	UG/L	10	UJ	10	U	10	U	10	U
2,4-Dichlorophenol	UG/L	10	UJ	10	U	10	U	10	U
2,4-Dimethylphenol	UG/L	10	UJ	10	U	10	U	10	U
2,4-Dinitrophenol	UG/L	26	UJ	26	U	25	U	25	U
2,4-Dinitrotoluene	UG/L	10	UJ	10	U	10	U	10	U
2,6-Dinitrotoluene	UG/L	10	UJ	10	U	10	U	10	U
2-Chloronaphthalene	UG/L	10	UJ	10	U	10	U	10	U
2-Chlorophenol	UG/L	10	UJ	10	U	10	U	10	U
2-Methylnaphthalene	UG/L	10	UJ	10	U	10	U	10	U
2-Methylphenol	UG/L	10	UJ	10	U	10	U	10	U
2-Nitroaniline	UG/L	26	UJ	26	U	25	U	25	U
2-Nitrophenol	UG/L	10	UJ	10	U	10	U	10	U
3,3'-Dichlorobenzidine	UG/L	10	UJ	10	U	10	U	10	U
3-Nitroaniline	UG/L	26	UJ	26	U	25	U	25	J
4,6-Dinitro-2-methylphenol	UG/L	26	UJ	26	U	25	U	25	U
4-Bromophenyl-phenylether	UG/L	10	UJ	10	U	10	U	10	U
4-Chloro-3-methylphenol	UG/L	10	UJ	10	U	10	U	10	U
4-Chloroaniline	UG/L	10	UJ	10	U	10	U	10	J
4-Chlorophenyl-phenylether	UG/L	10	UJ	10	U	10	U	10	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-4		MW16-6		MW16-7	
SAMP ID:		16101		16105		16111		16104	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		3.3		2.5		2.6		2.6	
BOTTOM:		5.3		4.5		4.9		4.6	
MATRIX:		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		8/28/96		9/3/96		8/28/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
4-Methylphenol	UG/L	10	UJ	10	U	10	U	10	U
4-Nitroaniline	UG/L	26	UJ	26	U	25	U	25	U
4-Nitrophenol	UG/L	26	UJ	26	U	25	U	25	U
Acenaphthene	UG/L	10	UJ	10	U	10	U	10	U
Acenaphthylene	UG/L	10	UJ	10	U	10	U	10	U
Anthracene	UG/L	10	UJ	10	U	10	U	10	U
Benzo(a)anthracene	UG/L	10	UJ	10	U	10	U	10	U
Benzo(a)pyrene	UG/L	10	UJ	10	U	10	U	10	U
Benzo(b)fluoranthene	UG/L	10	UJ	10	U	10	U	10	U
Benzo(g,h,i)perylene	UG/L	10	UJ	10	U	10	U	10	U
Benzo(k)fluoranthene	UG/L	10	UJ	10	U	10	U	10	U
Butylbenzylphthalate	UG/L	10	UJ	10	U	10	U	10	U
Carbazole	UG/L	10	UJ	10	U	10	UJ	10	U
Chrysene	UG/L	10	UJ	10	U	10	U	10	U
Di-n-butylphthalate	UG/L	10	UJ	10	U	10	U	10	U
Di-n-octylphthalate	UG/L	10	UJ	10	U	10	U	10	U
Dibenz(a,h)anthracene	UG/L	10	UJ	10	U	10	U	10	U
Dibenzofuran	UG/L	10	UJ	10	U	10	U	10	U
Diethylphthalate	UG/L	10	UJ	10	U	10	U	10	U
Dimethylphthalate	UG/L	10	UJ	10	U	10	U	10	U
Fluoranthene	UG/L	10	UJ	10	U	10	U	10	U
Fluorene	UG/L	10	UJ	10	U	10	U	10	U
Hexachlorobenzene	UG/L	10	UJ	10	U	10	U	10	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-4		MW16-6		MW16-7	
SAMP ID:		16101		16105		16111		16104	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		3.3		2.5		2.6		2.6	
BOTTOM:		5.3		4.5		4.9		4.6	
MATRIX:		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		8/28/96		9/3/96		8/28/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES									
Nitrate/Nitrite-Nitrogen	MG/L	0.02		0.29		0.01	U	0.83	
Percent Moisture (PEST/PCB)									
Percent Moisture (SVOCs)									
Percent Moisture (VOCs)									
Percent Solids (Metals)		0		0		0		0	
Total Petroleum Hydrocarbons	MG/L	0.44	U	0.41	U	0.89		0.41	U
NITROAROMATICS									
1,3,5-Trinitrobenzene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U
1,3-Dinitrobenzene	UG/L	0.26	U	0.26	U	0.26	U	0.26	
2,4,6-Trinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U
2,4-Dinitrotoluene	UG/L	0.26	U	0.68	J	0.26	U	0.26	U
2,6-Dinitrotoluene	UG/L	0.26	U	0.26	UJ	0.26	U	0.26	U
2-amino-4,6-Dinitrotoluene	UG/L	0.26	U	0.26	UJ	0.26	U	0.26	U
4-amino-2,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U
HMX	UG/L	0.26	U	0.26	U	0.26	U	0.26	U
Nitrobenzene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U
RDX	UG/L	0.26	U	0.26	U	0.26	U	0.26	U
Tetryl	UG/L	0.26	U	0.26	U	0.26	U	0.26	U
METALS									
Aluminum	UG/L	1850		24.9		208		12.4	
Antimony	UG/L	2	U	2	U	2	U	15.7	U
Arsenic	UG/L	2.7	U	2.7	U	2.7	U	4	U

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-4		MW16-6		MW16-7	
SAMP ID:		16101		16105		16111		16104	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		3.3		2.5		2.6		2.6	
BOTTOM:		5.3		4.5		4.9		4.6	
MATRIX:		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		8/28/96		9/3/96		8/28/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Barium	UG/L	74.2		97.4		86.4		89.2	
Beryllium	UG/L	0.23		0.21		0.1	U	0.21	
Cadmium	UG/L	0.3	U	0.3	U	0.3	U	0.3	U
Calcium	UG/L	157000		130000		44600		109000	
Chromium	UG/L	2.7		1	U	1.5		1	
Cobalt	UG/L	2.1		1.2	U	1.2		1.2	
Copper	UG/L	4.9		3.6		4.4		5.1	
Cyanide	UG/L	5	U	5	U		NA	5	U
Iron	UG/L	2400	J	38.2		273	J	23.4	
Lead	UG/L	1.7	U	1.7	U	1.7	U	8.4	
Magnesium	UG/L	23300		17700		6370		16900	
Manganese	UG/L	210		132		545		85.7	
Mercury	UG/L	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	UG/L	4.7		2.2		4.1		2.2	
Potassium	UG/L	1670		4040		3530		3220	
Selenium	UG/L	2.4	U	2.4	U	2.4	U	2.4	U
Silver	UG/L	1.3	U	1.3	U	1.3	U	1.3	U
Sodium	UG/L	8750		17200		396000		12000	
Thallium	UG/L	4.2	U	4.2	U	6.2		4.2	
Vanadium	UG/L	3.3		1.2	U	2.9		1.2	
Zinc	UG/L	15.6	R	4.5	R	13.2	R	2.9	R
HERBICIDES									
2,4,5-T	UG/L								

SEAD-16 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW16-1		MW16-4		MW16-6		MW16-7	
SAMP ID:		16101		16105		16111		16104	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		3.3		2.5		2.6		2.6	
BOTTOM:		5.3		4.5		4.9		4.6	
MATRIX:		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/27/96		8/28/96		9/3/96		8/28/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4,5-TP (Silvex)	UG/L								
2,4-D	UG/L								
2,4-DB	UG/L								
Dalapon	UG/L								
Dicamba	UG/L								
Dichloroprop	UG/L								
Dinoseb	UG/L								
MCPA	UG/L								
MCPP	UG/L								

SEAD-16 Surface Water

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143		16129		16135		16133		16119		16125		16142		16126	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Butanone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Hexanone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acetone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Bromoform	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Bromomethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Carbon Disulfide	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Carbon Tetrachloride	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chloroform	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143		16129		16135		16133		16119		16125		16142		16126	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Methylene Chloride	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Styrene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Toluene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Trichloroethene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Vinyl Chloride	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Xylene (total)	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	UG/L																
2,4,5-Trichlorophenol	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
2,4,6-Trichlorophenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

SEAD-16 Analytes Detected in Surface Water
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143		16129		16135		16133		16119		16125		16142		16126	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/L	25	U	25	U	25	UJ	25	UJ	25	U	25	UJ	25	U	25	UJ
2,4-Dinitrotoluene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
2-Nitrophenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
4,6-Dinitro-2-methylphenol	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
4-Bromophenyl-phenylether	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
4-Nitrophenol	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Acenaphthene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Anthracene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

SEAD-16 Analytes Detected in Surface Water
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143		16129		16135		16133		16119		16125		16142		16126	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Butylbenzylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Carbazole	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chrysene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Di-n-butylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	0.5	J	10	U
Di-n-octylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene	UG/L	10	U	10	U	10	UJ	10	UJ	10	U	10	UJ	10	U	10	UJ
Dibenzofuran	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Dimethylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Fluoranthene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Fluorene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	UG/L	10	U	10	U	10	UJ	10	UJ	10	U	10	U	10	U	10	U
Isophorone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

SEAD-16 Analytes Detected in Surface Water
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143		16129		16135		16133		16119		16125		16142		16126	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
N-Nitrosodiphenylamine (1)	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Naphthalene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	UG/L	25	U	0.7	J	25	U	25	U	25	U	25	U	25	U	25	U
Phenanthrene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Phenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Pyrene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy) methane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl) ether	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroisopropyl) ether	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	UG/L	10	U	3	J	10	U	10	U	10	U	10	U	3	J	10	U
PESTICIDES/PCB																	
4,4'-DDD	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
4,4'-DDE	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
4,4'-DDT	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Aldrin	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Aroclor-1016	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor-1221	UG/L	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Aroclor-1232	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor-1242	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor-1248	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

SEAD-16 Analytes Detected in Surface Water
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Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143		16129		16135		16133		16119		16125		16142		16126	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor-1260	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dieldrin	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endosulfan I	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Endosulfan II	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endosulfan sulfate	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endrin	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endrin aldehyde	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endrin ketone	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Heptachlor	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Heptachlor epoxide	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Methoxychlor	UG/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toxaphene	UG/L	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
alpha-BHC	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
alpha-Chlordane	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
beta-BHC	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
delta-BHC	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
gamma-BHC (Lindane)	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
gamma-Chlordane	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/L	0.34		0.01	U	0.49		0.43		0.26		0.31		0.15		0.02	
Percent Moisture (PEST/PCB)																	

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143		16129		16135		16133		16119		16125		16142		16126	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)																	
Percent Moisture (VOCs)																	
Percent Solids (Metals)		0		0		0		0		0		0		0		0	
Total Organic Carbon	MG/L	5		6.4		3.2		2.3		2.8		2.8		4		12.5	
pH	MG/L	7.39		7.62		7.34		7.57		7.46		7.59		7.36		7.75	
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
1,3-Dinitrobenzene	UG/L	0.26	UJ	0.26	U	0.26	UJ	0.26	U	0.26	UJ	0.26	U	0.26	U	0.26	U
2,4,6-Trinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
2,4-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
2,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
2-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
2-amino-4,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
3-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
4-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
4-amino-2,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
HMX	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
Nitrobenzene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
RDX	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
Tetryl	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
METALS																	
Aluminum	UG/L	26.8	R	118	R	34.2	R	401	R	123	R	69.6	R	976	R	43.2	R

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143		16129		16135		16133		16119		16125		16142		16126	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Antimony	UG/L	10.4	J	5.3	J	14.7	J	124	J	59.1	J	68.8	J	3.6	J	27.3	J
Arsenic	UG/L	3	J	2.7	U	2.7	U	5.7	J	4	J	2.7	U	3.6	J	3	J
Barium	UG/L	75.3	J	103	J	114	J	100	J	155	J	116	J	64.4	J	348	J
Beryllium	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Cadmium	UG/L	0.3	U	0.71	J	0.3	U	2	J	0.43	J	0.3	U	0.63	J	0.54	J
Calcium	UG/L	79000		73300		87900		69800		78600		75300		89900		79600	
Chromium	UG/L	1	U	1	U	1	U	2.1	J	1	U	1	U	2.2	J	1	U
Cobalt	UG/L	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	2.6		1.2	U
Copper	UG/L	13.5		17.9		13.9		424		33.4		26.7		25.7		40.9	
Cyanide	UG/L	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Iron	UG/L	32.4	J	210	J	41	J	1550	J	1140	J	272	J	3340	J	58.3	J
Lead	UG/L	5.4		11.7		34.3		813		96.8		34.2		66.8		36.6	
Magnesium	UG/L	8080		6800		11400		11200		11400		11100		10100		10500	
Manganese	UG/L	18.4		47.3		8.6		22.6		53		42.8		161		11.6	
Mercury	UG/L	0.1	U	0.1	U	0.1	U	0.9		0.1	U	0.1	U	0.1	U	0.1	U
Nickel	UG/L	1.6	U	4.8		1.6	U	3.5		2.7		3.7		3.8		1.6	U
Potassium	UG/L	2380		2460		1200		4590		3890		3790		2510		4510	
Selenium	UG/L	2.4	U	2.4	U	2.8	J	2.4	U	2.4	U	2.4	U	4.3	J	2.4	U
Silver	UG/L	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U
Sodium	UG/L	4720		4830		5540		8280		7730		7620		5670		1320	
Thallium	UG/L	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U
Vanadium	UG/L	1.2	U	1.2	U	1.2	U	1.3	J	1.5	J	1.2	U	3.7	J	1.2	U

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143		16129		16135		16133		16119		16125		16142		16126	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Zinc	UG/L	28.5		158		71.7		253		217		125		104		55	
HERBICIDES																	
2,4,5-T	UG/L																
2,4,5-TP (Silvex)	UG/L																
2,4-D	UG/L																
2,4-DB	UG/L																
Dalapon	UG/L																
Dicamba	UG/L																
Dichloroprop	UG/L																
Dinoseb	UG/L																
MCPA	UG/L																
MCPP	UG/L																

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9		SW16-1		SW16-2	
SAMP ID:		16143		16127		16134		16128		SW16-1-1		SW16-2-1	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:										0		0	
BOTTOM:										0.2		0.2	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS													
1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
2-Butanone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
2-Hexanone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Acetone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Benzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Bromoform	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Bromomethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Carbon Disulfide	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Carbon Tetrachloride	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Chloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Chloroform	UG/L	10	U	10	U	10	U	10	U	10	U	10	U

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9		SW16-1		SW16-2	
SAMP ID:		16143		16127		16134		16128		SW16-1-1		SW16-2-1	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:										0		0	
BOTTOM:										0.2		0.2	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Methylene Chloride	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Styrene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Toluene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Trichloroethene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Vinyl Chloride	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
Xylene (total)	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U
SEMIVOLATILE ORGANICS													
1,2,4-Trichlorobenzene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
1,2-Dichlorobenzene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
1,3-Dichlorobenzene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
1,4-Dichlorobenzene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
2,2'-oxybis(1-Chloropropane)	UG/L									11	U	10	U
2,4,5-Trichlorophenol	UG/L	25	U	25	U	25	U	25	U	27	U	26	U
2,4,6-Trichlorophenol	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
2,4-Dichlorophenol	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
2,4-Dimethylphenol	UG/L	10	U	10	U	10	U	10	U	11	U	10	U

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9		SW16-1		SW16-2	
SAMP ID:		16143		16127		16134		16128		SW16-1-1		SW16-2-1	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:										0		0	
BOTTOM:										0.2		0.2	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/L	25	U	25	UJ	25	UJ	25	U	27	U	26	U
2,4-Dinitrotoluene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
2,6-Dinitrotoluene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
2-Chloronaphthalene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
2-Chlorophenol	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
2-Methylnaphthalene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
2-Methylphenol	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
2-Nitroaniline	UG/L	25	U	25	U	25	U	25	U	27	U	26	U
2-Nitrophenol	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
3,3'-Dichlorobenzidine	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
3-Nitroaniline	UG/L	25	U	25	U	25	U	25	U	27	U	26	U
4,6-Dinitro-2-methylphenol	UG/L	25	U	25	U	25	U	25	U	27	U	26	U
4-Bromophenyl-phenylether	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
4-Chloro-3-methylphenol	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
4-Chloroaniline	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
4-Chlorophenyl-phenylether	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
4-Methylphenol	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
4-Nitroaniline	UG/L	25	U	25	U	25	U	25	U	27	U	26	U
4-Nitrophenol	UG/L	25	U	25	U	25	U	25	U	27	U	26	U
Acenaphthene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Acenaphthylene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Anthracene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9		SW16-1		SW16-2	
SAMP ID:		16143		16127		16134		16128		SW16-1-1		SW16-2-1	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:										0		0	
BOTTOM:										0.2		0.2	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Benzo(a)pyrene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Benzo(b)fluoranthene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Benzo(g,h,i)perylene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Benzo(k)fluoranthene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Butylbenzylphthalate	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Carbazole	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Chrysene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Di-n-butylphthalate	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Di-n-octylphthalate	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Dibenz(a,h)anthracene	UG/L	10	U	10	UJ	10	UJ	10	U	11	U	10	U
Dibenzofuran	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Diethylphthalate	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Dimethylphthalate	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Fluoranthene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Fluorene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Hexachlorobenzene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Hexachlorobutadiene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Hexachlorocyclopentadiene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Hexachloroethane	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Indeno(1,2,3-cd)pyrene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Isophorone	UG/L	10	U	10	U	10	U	10	U	11	U	10	U

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9		SW16-1		SW16-2	
SAMP ID:		16143		16127		16134		16128		SW16-1-1		SW16-2-1	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:										0		0	
BOTTOM:										0.2		0.2	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
N-Nitrosodiphenylamine (1)	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Naphthalene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Nitrobenzene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Pentachlorophenol	UG/L	25	U	1	J	25	U	4	J	27	U	26	U
Phenanthrene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Phenol	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
Pyrene	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
bis(2-Chloroethoxy) methane	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
bis(2-Chloroethyl) ether	UG/L	10	U	10	U	10	U	10	U	11	U	10	U
bis(2-Chloroisopropyl) ether	UG/L	10	U	10	U	10	U	10	U				
bis(2-Ethylhexyl)phthalate	UG/L	10	U	10	U	10	U	1	J	11	U	10	U
PESTICIDES/PCB													
4,4'-DDD	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U
4,4'-DDE	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U
4,4'-DDT	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U
Aldrin	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
Aroclor-1016	UG/L	1	U	1	U	1	U	1	U	1.1	U	1	U
Aroclor-1221	UG/L	2	U	2	U	2	U	2	U	2.2	U	2.1	U
Aroclor-1232	UG/L	1	U	1	U	1	U	1	U	1.1	U	1	U
Aroclor-1242	UG/L	1	U	1	U	1	U	1	U	1.1	U	1	U
Aroclor-1248	UG/L	1	U	1	U	1	U	1	U	1.1	U	1	U

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9		SW16-1		SW16-2	
SAMP ID:		16143		16127		16134		16128		SW16-1-1		SW16-2-1	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:										0		0	
BOTTOM:										0.2		0.2	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/L	1	U	1	U	1	U	1	U	1.1	U	1	U
Aroclor-1260	UG/L	1	U	1	U	1	U	1	U	1.1	U	1	U
Dieldrin	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U
Endosulfan I	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
Endosulfan II	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U
Endosulfan sulfate	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U
Endrin	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U
Endrin aldehyde	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U
Endrin ketone	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U
Heptachlor	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
Heptachlor epoxide	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
Methoxychlor	UG/L	0.5	U	0.5	U	0.5	U	0.5	U	0.56	U	0.52	U
Toxaphene	UG/L	5	U	5	U	5	U	5	U	5.6	U	5.2	U
alpha-BHC	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
alpha-Chlordane	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
beta-BHC	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
delta-BHC	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
gamma-BHC (Lindane)	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
gamma-Chlordane	UG/L	0.05	U	0.05	U	0.05	U	0.05	U	0.056	U	0.052	U
OTHER ANALYSES													
Nitrate/Nitrite-Nitrogen	MG/L	0.34		0.12		0.01	U	0.04		1.27		1.77	
Percent Moisture (PEST/PCB)													

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9		SW16-1		SW16-2	
SAMP ID:		16143		16127		16134		16128		SW16-1-1		SW16-2-1	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:										0		0	
BOTTOM:										0.2		0.2	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)													
Percent Moisture (VOCs)													
Percent Solids (Metals)		0		0		0		0					
Total Organic Carbon	MG/L	5		2.8		10.4		9.3					
pH	MG/L	7.39		7.57		7.53		7.8					
NITROAROMATICS													
1,3,5-Trinitrobenzene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.13	U	0.13	U
1,3-Dinitrobenzene	UG/L	0.26	UJ	0.26	UJ	0.26	U	0.26	U	0.13	U	0.13	U
2,4,6-Trinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.13	U	0.13	U
2,4-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.13	U	0.13	U
2,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.13	U	0.13	U
2-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U				
2-amino-4,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.13	U	0.13	U
3-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U				
4-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U				
4-amino-2,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.13	U	0.13	U
HMX	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.13	U	0.17	U
Nitrobenzene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U				
RDX	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.13	U	0.13	U
Tetryl	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.13	U	0.13	U
METALS													
Aluminum	UG/L	26.8	R	1540	R	77.1	R	190	R	152	J	261	

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9		SW16-1		SW16-2	
SAMP ID:		16143		16127		16134		16128		SW16-1-1		SW16-2-1	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:										0		0	
BOTTOM:										0.2		0.2	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Antimony	UG/L	10.4	J	6.5	J	7.2	J	7.7	J	21.5	U	21.4	U
Arsenic	UG/L	3	J	4.5	J	4.3	J	3.6	J	0.8	U	0.8	U
Barium	UG/L	75.3	J	74.4	J	117	J	122	J	60.6	J	84.5	J
Beryllium	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.4	U	0.4	U
Cadmium	UG/L	0.3	U	0.72	J	0.3	U	0.5	J	2.1	U	2.1	U
Calcium	UG/L	79000		88400		46100		45900		71700		53400	
Chromium	UG/L	1	U	3	J	1	U	1	U	2.6	U	2.6	U
Cobalt	UG/L	1.2	U	4.1		1.2	U	1.2	U	4.4	U	4.4	U
Copper	UG/L	13.5		24.9		15.6		41.1		19.3	J	67.6	
Cyanide	UG/L	5	UJ	5	UJ	5	UJ	5	UJ	5	U	5	U
Iron	UG/L	32.4	J	3650	J	94.7	J	220	J	281	R	551	R
Lead	UG/L	5.4		67.4		6.5		37.3		67.8		178	
Magnesium	UG/L	8080		10000		5990		4300		9590		8170	
Manganese	UG/L	18.4		252		2.4		18.4		8.7	J	33.9	
Mercury	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	J	0.19	J
Nickel	UG/L	1.6	U	5.5		1.6	U	4.1		4	U	5.2	J
Potassium	UG/L	2380		2500		3150		2090		2560	J	3120	J
Selenium	UG/L	2.4	U	2.4	U	2.4	U	2.7	J	1.1	J	0.7	U
Silver	UG/L	1.3	U	1.3	U	1.3	U	1.3	U	4.2	U	5.2	J
Sodium	UG/L	4720		5380		1150		3040		9220		8850	
Thallium	UG/L	4.2	U	4.2	U	4.2	U	4.2	U	1.2	U	1.2	U
Vanadium	UG/L	1.2	U	4.9	J	1.2	U	1.3	J	3.7	J	4.5	J

SEAD-16 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9		SW16-1		SW16-2	
SAMP ID:		16143		16127		16134		16128		SW16-1-1		SW16-2-1	
QC CODE:		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI	
TOP:										0		0	
BOTTOM:										0.2		0.2	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Zinc	UG/L	28.5		121		28.8		66.7		34.7		380	
HERBICIDES													
2,4,5-T	UG/L									0.11	U	0.12	U
2,4,5-TP (Silvex)	UG/L									0.11	U	0.12	U
2,4-D	UG/L									1.1	U	1.2	U
2,4-DB	UG/L									1.1	U	1.2	U
Dalapon	UG/L									2.5	U	2.6	U
Dicamba	UG/L									0.11	U	0.12	U
Dichloroprop	UG/L									1.1	U	1.2	U
Dinoseb	UG/L									0.53	U	0.56	U
MCPA	UG/L									110	U	120	U
MCPP	UG/L									110	U	120	U

SEAD-16 Sediment

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
1,1,2,2-Tetrachloroethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
1,1,2-Trichloroethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
1,1-Dichloroethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
1,1-Dichloroethene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
1,2-Dichloroethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
1,2-Dichloroethene (total)	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
1,2-Dichloropropane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
2-Butanone	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
2-Hexanone	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
4-Methyl-2-Pentanone	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Acetone	UG/KG	37	U	20		17	U	21	U	21	J	20		13	U	36	
Benzene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Bromodichloromethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Bromoform	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Bromomethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Carbon Disulfide	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Carbon Tetrachloride	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Chlorobenzene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Chloroethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Chloroform	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Chloromethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Dibromochloromethane	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Ethylbenzene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Methylene Chloride	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Styrene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Tetrachloroethene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Toluene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Trichloroethene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Vinyl Chloride	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
Xylene (total)	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
cis-1,3-Dichloropropene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
trans-1,3-Dichloropropene	UG/KG	24	U	18	U	17	U	21	U	22	U	16	U	13	U	14	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
1,2-Dichlorobenzene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
1,3-Dichlorobenzene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
1,4-Dichlorobenzene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
2,4,5-Trichlorophenol	UG/KG	2000	U	1500	U	1700	U	1200	U	1000	UJ	2400	UJ	1000	U	1300	U
2,4,6-Trichlorophenol	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
2,4-Dichlorophenol	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
2,4-Dimethylphenol	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
2,4-Dinitrophenol	UG/KG	2000	U	1500	U	1700	U	1200	U	1000	UJ	2400	UJ	1000	U	1300	U
2,4-Dinitrotoluene	UG/KG	5400		620	U	720	U	480	U	430	UJ	1000	UJ	430	U	820	
2,6-Dinitrotoluene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2-Chloronaphthalene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
2-Chlorophenol	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
2-Methylnaphthalene	UG/KG	850	U	620	U	55	J	480	U	430	UJ	1000	UJ	430	U	40	J
2-Methylphenol	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
2-Nitroaniline	UG/KG	2000	U	1500	U	1700	U	1200	U	1000	UJ	2400	UJ	1000	U	1300	U
2-Nitrophenol	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
3,3'-Dichlorobenzidine	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
3-Nitroaniline	UG/KG	2000	U	1500	U	1700	U	1200	U	1000	UJ	2400	UJ	1000	U	1300	U
4,6-Dinitro-2-methylphenol	UG/KG	2000	U	1500	U	1700	U	1200	U	1000	UJ	2400	UJ	1000	U	1300	U
4-Bromophenyl-phenylether	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
4-Chloro-3-methylphenol	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
4-Chloroaniline	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
4-Chlorophenyl-phenylether	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
4-Methylphenol	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
4-Nitroaniline	UG/KG	2000	U	1500	U	1700	U	1200	U	1000	UJ	2400	UJ	1000	U	1300	U
4-Nitrophenol	UG/KG	2000	U	1500	U	1700	U	1200	U	1000	UJ	2400	UJ	1000	U	1300	U
Acenaphthene	UG/KG	850	U	32	J	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Acenaphthylene	UG/KG	54	J	620	U	41	J	480	U	430	UJ	1000	UJ	430	U	530	U
Anthracene	UG/KG	99	J	57	J	42	J	480	U	430	UJ	1000	UJ	430	U	530	U
Benzo(a)anthracene	UG/KG	570	J	260	J	240	J	480	U	430	UJ	1000	UJ	430	U	110	J
Benzo(a)pyrene	UG/KG	600	J	320	J	270	J	480	U	430	UJ	1000	UJ	430	U	120	J
Benzo(b)fluoranthene	UG/KG	1200		480	J	450	J	480	U	430	UJ	1000	UJ	430	U	200	J
Benzo(g,h,i)perylene	UG/KG	530	J	280	J	250	J	41	J	430	UJ	1000	UJ	430	U	110	J

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(k)fluoranthene	UG/KG	780	J	320	J	370	J	480	U	430	UJ	1000	UJ	430	U	130	J
Butylbenzylphthalate	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Carbazole	UG/KG	110	J	52	J	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Chrysene	UG/KG	1200		440	J	440	J	480	U	430	UJ	1000	UJ	430	U	220	J
Di-n-butylphthalate	UG/KG	250	J	210	J	720	U	480	U	430	UJ	1000	UJ	430	U	160	J
Di-n-octylphthalate	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Dibenz(a,h)anthracene	UG/KG	170	J	100	J	720	U	480	U	430	UJ	1000	UJ	430	U	38	J
Dibenzofuran	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Diethylphthalate	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Dimethylphthalate	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Fluoranthene	UG/KG	1600		550	J	490	J	33	J	430	UJ	1000	UJ	430	U	250	J
Fluorene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Hexachlorobenzene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Hexachlorobutadiene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Hexachlorocyclopentadiene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Hexachloroethane	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Indeno(1,2,3-cd)pyrene	UG/KG	500	J	250	J	240	J	39	J	430	UJ	1000	UJ	430	U	98	J
Isophorone	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
N-Nitroso-di-n-propylamine	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
N-Nitrosodiphenylamine (1)	UG/KG	600	J	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Naphthalene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Nitrobenzene	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Pentachlorophenol	UG/KG	2000	U	1500	U	1700	U	1200	U	1000	UJ	2400	UJ	1000	U	1300	U

SEAD-16 Analytes Detected in Sediments
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SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Phenanthrene	UG/KG	420	J	340	J	140	J	31	J	430	UJ	1000	UJ	430	U	150	J
Phenol	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
Pyrene	UG/KG	1400		620	J	510	J	30	J	430	UJ	1000	UJ	430	U	240	J
bis(2-Chloroethoxy) methane	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
bis(2-Chloroethyl) ether	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
bis(2-Chloroisopropyl) ether	UG/KG	850	U	620	U	720	U	480	U	430	UJ	1000	UJ	430	U	530	U
bis(2-Ethylhexyl)phthalate	UG/KG	180	J	270	J	720	U	120	J	27	J	160	J	430	U	73	J
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	730	J	61		4.4	J	3	J	4.3	U	10	UJ	4.3	U	11	J
4,4'-DDE	UG/KG	570	J	150		13	J	32		3	J	15	J	4.3	J	120	J
4,4'-DDT	UG/KG	420	J	54		5.3	J	4.9	U	4.3	U	7.9	J	4.3	U	31	
Aldrin	UG/KG	4.4	U	3.2	U	3.7	U	2.5	U	2.2	U	5.2	UJ	2.2	U	2.4	U
Aroclor-1016	UG/KG	85	U	62	U	72	U	49	U	43	U	100	UJ	43	U	46	U
Aroclor-1221	UG/KG	170	U	130	U	150	U	99	U	88	U	200	UJ	88	U	93	U
Aroclor-1232	UG/KG	85	U	62	U	72	U	49	U	43	U	100	UJ	43	U	46	U
Aroclor-1242	UG/KG	85	U	62	U	72	U	49	U	43	U	100	UJ	43	U	46	U
Aroclor-1248	UG/KG	85	U	62	U	72	U	49	U	43	U	100	UJ	43	U	46	U
Aroclor-1254	UG/KG	670		100	J	72	U	41	J	43	U	100	UJ	43	U	65	J
Aroclor-1260	UG/KG	130	J	72	J	72	U	39	J	43	U	100	UJ	43	U	36	U
Dieldrin	UG/KG	8.5	U	6.2	U	7.2	U	4.9	U	4.3	U	10	UJ	4.3	U	4.6	U
Endosulfan I	UG/KG	26		8.8		11	J	2.3	J	2.2	U	5.2	UJ	2.2	U	5.5	J
Endosulfan II	UG/KG	8.5	U	6.3	J	7.2	U	4.9	U	2.6	J	6.8	J	4.3	U	4.6	U
Endosulfan sulfate	UG/KG	18	J	6.2	U	7.2	U	4.9	U	4.3	U	10	UJ	4.3	U	2.7	U

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SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Endrin	UG/KG	8.5	U	6.2	U	7.2	U	4.9	U	4.3	U	10	UJ	4.3	U	4.6	U
Endrin aldehyde	UG/KG	8.5	U	6.2	U	7.2	U	3.2	J	4.3	U	10	UJ	4.3	U	3.2	U
Endrin ketone	UG/KG	8.5	U	6.2	U	7.2	U	4.9	U	4.3	U	10	UJ	4.3	U	4.6	U
Heptachlor	UG/KG	4.4	U	3.2	U	3.7	U	2.5	U	2.2	U	5.2	UJ	2.2	U	2.4	U
Heptachlor epoxide	UG/KG	4.4	U	3.2	U	2.8	J	2.5	U	2.2	U	5.2	UJ	2.2	U	2.4	U
Methoxychlor	UG/KG	44	U	32	U	37	U	25	U	22	U	52	UJ	22	U	24	U
Toxaphene	UG/KG	440	U	320	U	370	U	250	U	220	U	520	UJ	220	U	240	U
alpha-BHC	UG/KG	4.4	U	3.2	U	3.7	U	2.5	U	2.2	U	5.2	UJ	2.2	U	2.4	U
alpha-Chlordane	UG/KG	10	J	3.2	U	3.7	U	2.5	U	2.2	U	5.2	UJ	2.2	U	2.4	U
beta-BHC	UG/KG	4.4	U	3.2	U	3.7	U	2.5	U	2.2	U	5.2	UJ	2.2	U	2.4	U
delta-BHC	UG/KG	4.4	U	3.2	U	3.7	U	2.5	U	2.2	U	5.2	UJ	2.2	U	2.4	U
gamma-BHC (Lindane)	UG/KG	4.4	U	3.2	U	3.7	U	2.5	U	2.2	U	5.2	UJ	2.2	U	2.4	U
gamma-Chlordane	UG/KG	4.4	U	3.2	U	3.7	U	2.5	U	2.2	U	5.2	UJ	2.2	U	1.4	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	0.67		0.09		0.24		0.01	U	0.01	U	0.03	U	0.12		0.14	
Percent Moisture (PEST/PCB)		61		47		54		32		24		67		24		28	
Percent Moisture (SVOCs)		61		47		54		32		24		67		24		38	
Percent Moisture (VOCs)		59		44		40		52		54		39		23		28	
Percent Solids (Metals)		38.9		52.8		46.2		67.8		75.5		33.1		75.6		71.8	
Total Organic Carbon	MG/KG	62500		56600		30300		28900		7150		56800		2780		19400	
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U

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Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4,6-Trinitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
2,4-Dinitrotoluene	UG/KG	190	J	120	U	120	UJ	120	U	120	U	120	UJ	120	U	910	J
2,6-Dinitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
2-Nitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
3-Nitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
4-Nitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
HMX	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
Nitrobenzene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
RDX	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
Tetryl	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
METALS																	
Aluminum	MG/KG	11000	J	14300		22900	J	8040		6430	J	11400	J	17500		19500	
Antimony	MG/KG	10.9	J	11.5	J	13.5	J	50.3	J	1.4	J	8.7	J	0.77	UJ	32.2	J
Arsenic	MG/KG	8.7	J	9.6		7.2	J	4.5		3.4	J	6.1	J	5.6		7.6	
Barium	MG/KG	109	J	636		242	J	433		27.8	J	92	J	99.9		3980	
Beryllium	MG/KG	0.46	J	0.69		0.93	J	0.41		0.24	J	0.39	J	0.73		0.78	
Cadmium	MG/KG	1.6	J	7.6		0.72	J	0.57		0.24	J	0.61	J	0.26		0.92	
Calcium	MG/KG	75700	J	38300		13400	J	26400		19200	J	43500	J	72700		30900	
Chromium	MG/KG	43.5	J	41.3		32.9	J	20.4		10.8	J	18.3	J	27.8		36.2	
Cobalt	MG/KG	7.6	J	13.6		13.1	J	7.6		6.5	J	11.8	J	10.6		15.6	
Copper	MG/KG	335	J	573	J	260	J	17500	J	27.4	J	116	J	50	J	363	J

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cyanide	MG/KG	1.2	UJ	0.83	U	1.1	UJ	0.71	U	0.56	UJ	1.5	UJ	0.63	U	0.66	U
Iron	MG/KG	28500	J	46400		34300	J	20400		15300	J	23200	J	31000		31700	
Lead	MG/KG	1720	J	1950		1250	J	4480		175	J	634	J	112		2700	
Magnesium	MG/KG	12300	J	8390		7500	J	4720		3200	J	5700	J	8350		9430	
Manganese	MG/KG	218	J	386	J	174	J	217	J	186	J	343	J	303		359	J
Mercury	MG/KG	0.52	J	0.31		2	J	2.5		0.08	J	0.2	J	0.08		0.23	
Nickel	MG/KG	32.6	J	45.2	J	44.8	J	32.4	J	18.2	J	30	J	40.1	J	50.9	J
Potassium	MG/KG	2420	J	2440	J	2660	J	880	J	557	J	1630	J	2450	J	3870	J
Selenium	MG/KG	4.9	J	1.5	U	1.7	UJ	1.1	U	0.7	UJ	1.8	UJ	1	U	1.4	
Silver	MG/KG	0.69	UJ	0.48	U	0.53	UJ	0.35		0.22	UJ	0.58	UJ	0.32	U	0.28	U
Sodium	MG/KG	153	J	782		182	J	404		69.1	J	147	J	142		197	
Thallium	MG/KG	1.9	UJ	1.3	U	1.6	J	0.94	U	0.61	UJ	1.6	UJ	0.88	U	1	
Vanadium	MG/KG	39.8	J	29.3		33.5	J	10		8.9	J	18.3	J	26.6		34.3	
Zinc	MG/KG	549	J	557		339	J	952		138	J	284	J	103		307	

1/4/97

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SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4,6-Trinitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
2,4-Dinitrotoluene	UG/KG	190	J	120	U	120	UJ	120	U	120	U	120	UJ	120	U	910	J
2,6-Dinitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
2-Nitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
3-Nitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
4-Nitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
HMX	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
Nitrobenzene	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
RDX	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
Tetryl	UG/KG	120	UJ	120	U	120	UJ	120	U	120	U	120	UJ	120	U	120	U
METALS																	
Aluminum	MG/KG	11000	J	14300		22900	J	8040		6430	J	11400	J	17500		19500	
Antimony	MG/KG	10.9	J	11.5	J	13.5	J	50.3	J	1.4	J	8.7	J	0.77	UJ	32.2	J
Arsenic	MG/KG	8.7	J	9.6		7.2	J	4.5		3.4	J	6.1	J	5.6		7.6	
Barium	MG/KG	109	J	636		242	J	433		27.8	J	92	J	99.9		3980	
Beryllium	MG/KG	0.46	J	0.69		0.93	J	0.41		0.24	J	0.39	J	0.73		0.78	
Cadmium	MG/KG	1.6	J	7.6		0.72	J	0.57		0.24	J	0.61	J	0.26		0.92	
Calcium	MG/KG	75700	J	38300		13400	J	26400		19200	J	43500	J	72700		30900	
Chromium	MG/KG	43.5	J	41.3		32.9	J	20.4		10.8	J	18.3	J	27.8		36.2	
Cobalt	MG/KG	7.6	J	13.6		13.1	J	7.6		6.5	J	11.8	J	10.6		15.6	
Copper	MG/KG	335	J	573	J	260	J	17500	J	27.4	J	116	J	50	J	363	J

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-10		SW/SD16-2		SW/SD16-3		SW/SD16-4		SW/SD16-4		SW/SD16-5		SW/SD16-6	
SAMP ID:		16143A		16129A		16135A		16133A		16119A		16125A		16142A		16126A	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cyanide	MG/KG	1.2	UJ	0.83	U	1.1	UJ	0.71	U	0.56	UJ	1.5	UJ	0.63	U	0.66	U
Iron	MG/KG	28500	J	46400		34300	J	20400		15300	J	23200	J	31000		31700	
Lead	MG/KG	1720	J	1950		1250	J	4480		175	J	634	J	112		2700	
Magnesium	MG/KG	12300	J	8390		7500	J	4720		3200	J	5700	J	8350		9430	
Manganese	MG/KG	218	J	386	J	174	J	217	J	186	J	343	J	303		359	J
Mercury	MG/KG	0.52	J	0.31		2	J	2.5		0.08	J	0.2	J	0.08		0.23	
Nickel	MG/KG	32.6	J	45.2	J	44.8	J	32.4	J	18.2	J	30	J	40.1	J	50.9	J
Potassium	MG/KG	2420	J	2440	J	2660	J	880	J	557	J	1630	J	2450	J	3870	J
Selenium	MG/KG	4.9	J	1.5	U	1.7	UJ	1.1	U	0.7	UJ	1.8	UJ	1	U	1.4	
Silver	MG/KG	0.69	UJ	0.48	U	0.53	UJ	0.35		0.22	UJ	0.58	UJ	0.32	U	0.28	U
Sodium	MG/KG	153	J	782		182	J	404		69.1	J	147	J	142		197	
Thallium	MG/KG	1.9	UJ	1.3	U	1.6	J	0.94	U	0.61	UJ	1.6	UJ	0.88	U	1	
Vanadium	MG/KG	39.8	J	29.3		33.5	J	10		8.9	J	18.3	J	26.6		34.3	
Zinc	MG/KG	549	J	557		339	J	952		138	J	284	J	103		307	

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9	
SAMP ID:		16143A		16127A		16134A		16128A	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0	
BOTTOM:		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS									
1,1,1-Trichloroethane	UG/KG	24	U	14	U	16	U	21	U
1,1,2,2-Tetrachloroethane	UG/KG	24	U	14	U	16	U	21	U
1,1,2-Trichloroethane	UG/KG	24	U	14	U	16	U	21	U
1,1-Dichloroethane	UG/KG	24	U	14	U	16	U	21	U
1,1-Dichloroethene	UG/KG	24	U	14	U	16	U	21	U
1,2-Dichloroethane	UG/KG	24	U	14	U	16	U	21	U
1,2-Dichloroethene (total)	UG/KG	24	U	14	U	16	U	21	U
1,2-Dichloropropane	UG/KG	24	U	14	U	16	U	21	U
2-Butanone	UG/KG	24	U	14	U	16	U	12	J
2-Hexanone	UG/KG	24	U	14	U	16	U	21	U
4-Methyl-2-Pentanone	UG/KG	24	U	14	U	16	U	21	U
Acetone	UG/KG	37	U	20		16	U	32	
Benzene	UG/KG	24	U	14	U	16	U	21	U
Bromodichloromethane	UG/KG	24	U	14	U	16	U	21	U
Bromoform	UG/KG	24	U	14	U	16	U	21	U
Bromomethane	UG/KG	24	U	14	U	16	U	21	U
Carbon Disulfide	UG/KG	24	U	14	U	16	U	21	U
Carbon Tetrachloride	UG/KG	24	U	14	U	16	U	21	U
Chlorobenzene	UG/KG	24	U	14	U	16	U	21	U
Chloroethane	UG/KG	24	U	14	U	16	U	21	U
Chloroform	UG/KG	24	U	14	U	16	U	21	U
Chloromethane	UG/KG	24	U	14	U	16	U	21	U

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9	
SAMP ID:		16143A		16127A		16134A		16128A	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0	
BOTTOM:		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Dibromochloromethane	UG/KG	24	U	14	U	16	U	21	U
Ethylbenzene	UG/KG	24	U	14	U	16	U	21	U
Methylene Chloride	UG/KG	24	U	14	U	16	U	21	U
Styrene	UG/KG	24	U	14	U	16	U	21	U
Tetrachloroethene	UG/KG	24	U	14	U	16	U	21	U
Toluene	UG/KG	24	U	14	U	16	U	21	U
Trichloroethene	UG/KG	24	U	14	U	16	U	21	U
Vinyl Chloride	UG/KG	24	U	14	U	16	U	21	U
Xylene (total)	UG/KG	24	U	14	U	16	U	21	U
cis-1,3-Dichloropropene	UG/KG	24	U	14	U	16	U	21	U
trans-1,3-Dichloropropene	UG/KG	24	U	14	U	16	U	21	U
SEMIVOLATILE ORGANICS									
1,2,4-Trichlorobenzene	UG/KG	850	U	570	U	470	U	520	U
1,2-Dichlorobenzene	UG/KG	850	U	570	U	470	U	520	U
1,3-Dichlorobenzene	UG/KG	850	U	570	U	470	U	520	U
1,4-Dichlorobenzene	UG/KG	850	U	570	U	470	U	520	U
2,4,5-Trichlorophenol	UG/KG	2000	U	1400	U	1100	U	1200	U
2,4,6-Trichlorophenol	UG/KG	850	U	570	U	470	U	520	U
2,4-Dichlorophenol	UG/KG	850	U	570	U	470	U	520	U
2,4-Dimethylphenol	UG/KG	850	U	570	U	470	U	520	U
2,4-Dinitrophenol	UG/KG	2000	U	1400	U	1100	U	1200	U
2,4-Dinitrotoluene	UG/KG	5400		43	J	470	U	520	U
2,6-Dinitrotoluene	UG/KG	850	U	570	U	470	U	520	U

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9	
SAMP ID:		16143A		16127A		16134A		16128A	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0	
BOTTOM:		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2-Chloronaphthalene	UG/KG	850	U	570	U	470	U	520	U
2-Chlorophenol	UG/KG	850	U	570	U	470	U	520	U
2-Methylnaphthalene	UG/KG	850	U	570	U	470	U	520	U
2-Methylphenol	UG/KG	850	U	570	U	470	U	520	U
2-Nitroaniline	UG/KG	2000	U	1400	U	1100	U	1200	U
2-Nitrophenol	UG/KG	850	U	570	U	470	U	520	U
3,3'-Dichlorobenzidine	UG/KG	850	U	570	U	470	U	520	U
3-Nitroaniline	UG/KG	2000	U	1400	U	1100	U	1200	U
4,6-Dinitro-2-methylphenol	UG/KG	2000	U	1400	U	1100	U	1200	U
4-Bromophenyl-phenylether	UG/KG	850	U	570	U	470	U	520	U
4-Chloro-3-methylphenol	UG/KG	850	U	570	U	470	U	520	U
4-Chloroaniline	UG/KG	850	U	570	U	470	U	520	U
4-Chlorophenyl-phenylether	UG/KG	850	U	570	U	470	U	520	U
4-Methylphenol	UG/KG	850	U	570	U	470	U	520	U
4-Nitroaniline	UG/KG	2000	U	1400	U	1100	U	1200	U
4-Nitrophenol	UG/KG	2000	U	1400	U	1100	U	1200	U
Acenaphthene	UG/KG	850	U	570	U	470	U	520	U
Acenaphthylene	UG/KG	54	J	570	U	470	U	37	J
Anthracene	UG/KG	99	J	570	U	470	U	100	J
Benzo(a)anthracene	UG/KG	570	J	92	J	22	J	370	J
Benzo(a)pyrene	UG/KG	600	J	120	J	470	U	470	J
Benzo(b)fluoranthene	UG/KG	1200		120	J	470	U	690	
Benzo(g,h,i)perylene	UG/KG	530	J	100	J	470	U	400	J

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9	
SAMP ID:		16143A		16127A		16134A		16128A	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0	
BOTTOM:		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(k)fluoranthene	UG/KG	780	J	120	J	470	U	520	
Butylbenzylphthalate	UG/KG	850	U	570	U	470	U	520	U
Carbazole	UG/KG	110	J	570	U	470	U	54	J
Chrysene	UG/KG	1200		120	J	36	J	640	
Di-n-butylphthalate	UG/KG	250	J	570	U	470	U	160	J
Di-n-octylphthalate	UG/KG	850	U	570	U	470	U	520	U
Dibenz(a,h)anthracene	UG/KG	170	J	47	J	470	U	150	J
Dibenzofuran	UG/KG	850	U	570	U	470	U	520	U
Diethylphthalate	UG/KG	850	U	570	U	470	U	520	U
Dimethylphthalate	UG/KG	850	U	570	U	470	U	520	U
Fluoranthene	UG/KG	1600		190	J	41	J	550	
Fluorene	UG/KG	850	U	570	U	470	U	520	U
Hexachlorobenzene	UG/KG	850	U	570	U	470	U	520	U
Hexachlorobutadiene	UG/KG	850	U	570	U	470	U	520	U
Hexachlorocyclopentadiene	UG/KG	850	U	570	U	470	U	520	U
Hexachloroethane	UG/KG	850	U	570	U	470	U	520	U
Indeno(1,2,3-cd)pyrene	UG/KG	500	J	91	J	470	U	380	J
Isophorone	UG/KG	850	U	570	U	470	U	520	U
N-Nitroso-di-n-propylamine	UG/KG	850	U	570	U	470	U	520	U
N-Nitrosodiphenylamine (1)	UG/KG	600	J	570	U	470	U	520	U
Naphthalene	UG/KG	850	U	570	U	470	U	520	U
Nitrobenzene	UG/KG	850	U	570	U	470	U	520	U
Pentachlorophenol	UG/KG	2000	U	1400	U	1100	U	1200	U

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9	
SAMP ID:		16143A		16127A		16134A		16128A	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0	
BOTTOM:		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Phenanthrene	UG/KG	420	J	100	J	24	J	300	J
Phenol	UG/KG	850	U	570	U	470	U	520	U
Pyrene	UG/KG	1400		190	J	41	J	660	
bis(2-Chloroethoxy) methane	UG/KG	850	U	570	U	470	U	520	U
bis(2-Chloroethyl) ether	UG/KG	850	U	570	U	470	U	520	U
bis(2-Chloroisopropyl) ether	UG/KG	850	U	570	U	470	U	520	U
bis(2-Ethylhexyl)phthalate	UG/KG	180	J	150	J	470	U	51	J
PESTICIDES/PCB									
4,4'-DDD	UG/KG	730	J	100	J	3	J	18	J
4,4'-DDE	UG/KG	570	J	140	J	13		76	
4,4'-DDT	UG/KG	420	J	100	J	3	J	49	
Aldrin	UG/KG	4.4	U	2.9	U	2.4	U	2.7	U
Aroclor-1016	UG/KG	85	U	57	U	47	U	52	U
Aroclor-1221	UG/KG	170	U	120	U	96	U	100	U
Aroclor-1232	UG/KG	85	U	57	U	47	U	52	U
Aroclor-1242	UG/KG	85	U	57	U	47	U	52	U
Aroclor-1248	UG/KG	85	U	57	U	47	U	52	U
Aroclor-1254	UG/KG	670		150		35	J	61	J
Aroclor-1260	UG/KG	130	J	51	J	47	U	63	J
Dieldrin	UG/KG	8.5	U	5.7	U	4.7	U	5.2	U
Endosulfan I	UG/KG	26		4.4	J	2.4	U	12	
Endosulfan II	UG/KG	8.5	U	5.7	U	4.7	U	5.2	U
Endosulfan sulfate	UG/KG	18	J	4.6	J	4.7	U	3	U

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9	
SAMP ID:		16143A		16127A		16134A		16128A	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0	
BOTTOM:		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Endrin	UG/KG	8.5	U	5.7	U	4.7	U	5.2	U
Endrin aldehyde	UG/KG	8.5	U	5.7	U	4.7	U	5.2	U
Endrin ketone	UG/KG	8.5	U	5.7	U	4.7	U	5.2	U
Heptachlor	UG/KG	4.4	U	2.9	U	2.4	U	2.7	U
Heptachlor epoxide	UG/KG	4.4	U	2.9	U	2.4	U	2.7	U
Methoxychlor	UG/KG	44	U	29	U	24	U	27	U
Toxaphene	UG/KG	440	U	290	U	240	U	270	U
alpha-BHC	UG/KG	4.4	U	2.9	U	2.4	U	2.7	U
alpha-Chlordane	UG/KG	10	J	4.2		2.4	U	12.1	J
beta-BHC	UG/KG	4.4	U	2.9	U	2.4	U	2.7	U
delta-BHC	UG/KG	4.4	U	2.9	U	2.4	U	2.7	U
gamma-BHC (Lindane)	UG/KG	4.4	U	2.9	U	2.4	U	2.7	U
gamma-Chlordane	UG/KG	4.4	U	3.8		2.4	U	2.9	
OTHER ANALYSES									
Nitrate/Nitrite-Nitrogen	MG/KG	0.67		0.03		0.2		0.05	
Percent Moisture (PEST/PCB)		61		42		30		36	
Percent Moisture (SVOCs)		61		42		30		36	
Percent Moisture (VOCs)		59		31		37		53	
Percent Solids (Metals)		38.9		57.7		70		64	
Total Organic Carbon	MG/KG	62500		50600		26400		59800	
NITROAROMATICS									
1,3,5-Trinitrobenzene	UG/KG	120	UJ	120	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	UJ	120	U	120	U	120	U

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9	
SAMP ID:		16143A		16127A		16134A		16128A	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0	
BOTTOM:		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4,6-Trinitrotoluene	UG/KG	120	UJ	120	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	190	J	120	U	120	U	120	U
2,6-Dinitrotoluene	UG/KG	120	UJ	120	U	120	U	120	U
2-Nitrotoluene	UG/KG	120	UJ	120	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	UJ	120	U	120	U	120	U
3-Nitrotoluene	UG/KG	120	UJ	120	U	120	U	120	U
4-Nitrotoluene	UG/KG	120	UJ	120	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	UJ	120	U	120	U	120	U
HMX	UG/KG	120	UJ	120	U	120	U	120	U
Nitrobenzene	UG/KG	120	UJ	120	U	120	U	120	U
RDX	UG/KG	120	UJ	120	U	120	U	120	U
Tetryl	UG/KG	120	UJ	120	U	120	U	120	U
METALS									
Aluminum	MG/KG	11000	J	10200		17300		9600	
Antimony	MG/KG	10.9	J	3.2	J	2.6	J	3	J
Arsenic	MG/KG	8.7	J	1.9		6.5		4.2	
Barium	MG/KG	109	J	62.7		300		131	
Beryllium	MG/KG	0.46	J	0.42		0.61		0.48	
Cadmium	MG/KG	1.6	J	1.9		0.23		1.2	
Calcium	MG/KG	75700	J	25700		6680		58000	
Chromium	MG/KG	43.5	J	23.5		25		16.9	
Cobalt	MG/KG	7.6	J	7.5		8		8.9	
Copper	MG/KG	335	J	120	J	85	J	124	J

SEAD-16 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-16 Remedial Investigation\
Seneca Army Depot Activity

LOC_ID:		SW/SD16-1		SW/SD16-7		SW/SD16-8		SW/SD16-9	
SAMP ID:		16143A		16127A		16134A		16128A	
QC CODE:		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0	
BOTTOM:		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cyanide	MG/KG	1.2	UJ	0.73	U	0.7	U	0.63	U
Iron	MG/KG	28500	J	17700		36400		18100	
Lead	MG/KG	1720	J	511		992		476	
Magnesium	MG/KG	12300	J	6660		5260		15100	
Manganese	MG/KG	218	J	192	J	223	J	447	J
Mercury	MG/KG	0.52	J	0.06		0.06		0.16	
Nickel	MG/KG	32.6	J	27.3	J	24.8	J	24.7	J
Potassium	MG/KG	2420	J	1970	J	1640	J	2010	J
Selenium	MG/KG	4.9	J	1.6	U	0.76	U	0.98	U
Silver	MG/KG	0.69	UJ	0.5	U	0.24	U	0.31	U
Sodium	MG/KG	153	J	127		68.6		376	
Thallium	MG/KG	1.9	UJ	1.4	U	0.66	U	0.85	U
Vanadium	MG/KG	39.8	J	26.5		27.2		20.1	
Zinc	MG/KG	549	J	176		96.3		192	

SEAD-16 Solids

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		BS-10		BS-11		FS-50		FS-50		FS16-1		FS16-2		FS16-3		FS16-4		FS16-5	
SAMP ID:		16024		16022		16023		16028		FS16-1-1		FS16-2-1		FS16-3-1		FS16-4-1		FS16-5-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		ESI	
TOP:																			
BOTTOM:																			
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		8/8/96		8/8/96		8/8/96		8/8/96		12/6/93		12/6/93		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																			
1,1,1-Trichloroethane	UG/KG	7	J			25	U	22	U	11	U	10	U	11	U	18	U	11	U
1,1,2,2-Tetrachloroethane	UG/KG	53	U			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
1,1,2-Trichloroethane	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
1,1-Dichloroethane	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
1,1-Dichloroethene	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
1,2-Dichloroethane	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
1,2-Dichloroethene (total)	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
1,2-Dichloropropane	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
2-Butanone	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
2-Hexanone	UG/KG	53	U			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
4-Methyl-2-Pentanone	UG/KG	53	U			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
Acetone	UG/KG	120	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Benzene	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Bromodichloromethane	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Bromoform	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Bromomethane	UG/KG	53	UJ			25	UJ	22	J	11	U	10	U	11	U	18	U	11	U
Carbon Disulfide	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Carbon Tetrachloride	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Chlorobenzene	UG/KG	53	U			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
Chloroethane	UG/KG	53	U			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
Chloroform	UG/KG	53	U			25	U	14	J	11	U	10	U	11	U	18	U	11	U
Chloromethane	UG/KG	53	UJ			25	UJ	22	J	11	U	10	U	11	U	18	U	11	U

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		BS-10		BS-11		FS-50		FS-50		FS16-1		FS16-2		FS16-3		FS16-4		FS16-5	
SAMP ID:		16024		16022		16023		16028		FS16-1-1		FS16-2-1		FS16-3-1		FS16-4-1		FS16-5-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		ESI	
TOP:																			
BOTTOM:																			
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		8/8/96		8/8/96		8/8/96		8/8/96		12/6/93		12/6/93		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Dibromochloromethane	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Ethylbenzene	UG/KG	53	U			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
Methylene Chloride	UG/KG	7	J			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Styrene	UG/KG	53	U			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
Tetrachloroethene	UG/KG	53	U			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
Toluene	UG/KG	20	J			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
Trichloroethene	UG/KG	13	J			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Vinyl Chloride	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
Xylene (total)	UG/KG	53	U			25	UJ	22	U	11	U	10	U	11	U	18	U	11	U
cis-1,3-Dichloropropene	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
trans-1,3-Dichloropropene	UG/KG	53	U			25	U	22	U	11	U	10	U	11	U	18	U	11	U
SEMIVOLATILE ORGANICS																			
1,2,4-Trichlorobenzene	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
1,2-Dichlorobenzene	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
1,3-Dichlorobenzene	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
1,4-Dichlorobenzene	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
2,2'-oxybis(1-Chloropropane)	UG/KG									360	U	340	U	5700	U	620	U	380	U
2,4,5-Trichlorophenol	UG/KG	1200000	U			1900	U	1700	U	880	U	830	U	14000	U	1500	U	920	U
2,4,6-Trichlorophenol	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
2,4-Dichlorophenol	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
2,4-Dimethylphenol	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
2,4-Dinitrophenol	UG/KG	1200000	U			1900	U	1700	U	880	U	830	U	14000	U	1500	U	920	U
2,4-Dinitrotoluene	UG/KG	3000000	J			200	J	720	UJ	360	U	340	U	5700	U	620	U	380	U

SEAD-16 Analytes Detected in Building Materials
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		BS-10		BS-11		FS-50		FS-50		FS16-1		FS16-2		FS16-3		FS16-4		FS16-5	
SAMP ID:		16024		16022		16023		16028		FS16-1-1		FS16-2-1		FS16-3-1		FS16-4-1		FS16-5-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		ESI	
TOP:																			
BOTTOM:																			
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		8/8/96		8/8/96		8/8/96		8/8/96		12/6/93		12/6/93		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,6-Dinitrotoluene	UG/KG	74000	J			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
2-Chloronaphthalene	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
2-Chlorophenol	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
2-Methylnaphthalene	UG/KG	500000	U			800	U	720	U	25	J	21	J	19000		49	J	40	J
2-Methylphenol	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
2-Nitroaniline	UG/KG	1200000	U			1900	U	1700	U	880	U	830	U	14000	U	1500	U	920	U
2-Nitrophenol	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
3,3'-Dichlorobenzidine	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
3-Nitroaniline	UG/KG	1200000	UJ			1900	UJ	1700	UJ	880	U	830	U	14000	U	1500	U	920	U
4,6-Dinitro-2-methylphenol	UG/KG	1200000	U			1900	U	1700	U	880	U	830	U	14000	U	1500	U	920	U
4-Bromophenyl-phenylether	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
4-Chloro-3-methylphenol	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
4-Chloroaniline	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
4-Chlorophenyl-phenylether	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
4-Methylphenol	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
4-Nitroaniline	UG/KG	1200000	UJ			1900	UJ	1700	UJ	880	U	830	U	14000	U	1500	U	920	U
4-Nitrophenol	UG/KG	1200000	UJ			1900	UJ	1700	UJ	880	U	830	U	14000	U	1500	U	920	U
Acenaphthene	UG/KG	500000	U			800	U	720	U	23	J	340	U	4500	J	620	U	380	U
Acenaphthylene	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
Anthracene	UG/KG	500000	U			800	U	720	U	22	J	340	U	2900	J	620	U	22	J
Benzo(a)anthracene	UG/KG	500000	U			800	U	720	U	81	J	40	J	1000	J	44	J	54	J
Benzo(a)pyrene	UG/KG	500000	U			43	J	42	J	70	J	45	J	770	J	61	J	54	J
Benzo(b)fluoranthene	UG/KG	500000	U			120	J	110	J	91	J	130	J	500	J	73	J	47	J

SEAD-16 Analytes Detected in Building Materials
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SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		BS-10		BS-11		FS-50		FS-50		FS16-1		FS16-2		FS16-3		FS16-4		FS16-5	
SAMP ID:		16024		16022		16023		16028		FS16-1-1		FS16-2-1		FS16-3-1		FS16-4-1		FS16-5-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		ESI	
TOP:																			
BOTTOM:																			
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		8/8/96		8/8/96		8/8/96		8/8/96		12/6/93		12/6/93		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(g,h,i)perylene	UG/KG	500000	U			74	J	720	UJ	360	U	120	J	870	J	620	U	380	U
Benzo(k)fluoranthene	UG/KG	500000	U			800	UJ	720	UJ	73	J	77	J	630	J	60	J	50	J
Butylbenzylphthalate	UG/KG	54000	J			55	J	720	U	360	U	340	U	5700	U	620	U	380	U
Carbazole	UG/KG	500000	U			800	U	720	U	24	J	340	U	5700	U	620	U	36	J
Chrysene	UG/KG	500000	U			96	J	73	J	110	J	150	J	1400	J	74	J	120	J
Di-n-butylphthalate	UG/KG	950000				190	J	210	J	360	U	340	U	5700	U	620	U	50	J
Di-n-octylphthalate	UG/KG	500000	U			800	UJ	720	UJ	360	U	340	U	5700	U	620	U	380	U
Dibenz(a,h)anthracene	UG/KG	500000	U			800	UJ	720	UJ	360	U	26	J	500	J	620	U	380	U
Dibenzofuran	UG/KG	500000	U			800	U	720	U	360	U	46	J	1500	J	620	U	22	J
Diethylphthalate	UG/KG	500000	U			800	U	720	U	360	U	340	U	530	J	620	U	380	U
Dimethylphthalate	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
Fluoranthene	UG/KG	500000	U			110	J	99	J	160	J	920		3100	J	140	J	120	J
Fluorene	UG/KG	500000	U			800	U	720	U	25	J	340	U	6100		620	U	380	U
Hexachlorobenzene	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
Hexachlorobutadiene	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
Hexachlorocyclopentadiene	UG/KG	500000	UJ			800	UJ	720	UJ	360	U	340	U	5700	U	620	U	380	U
Hexachloroethane	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
Indeno(1,2,3-cd)pyrene	UG/KG	500000	U			51	J	720	UJ	360	U	92	J	450	J	620	U	380	U
Isophorone	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
N-Nitroso-di-n-propylamine	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
N-Nitrosodiphenylamine (1)	UG/KG	200000	J			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
Naphthalene	UG/KG	500000	U			800	U	720	U	360	U	43	J	1600	J	620	U	19	J
Nitrobenzene	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U

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LOC_ID:		BS-10		BS-11		FS-50		FS-50		FS16-1		FS16-2		FS16-3		FS16-4		FS16-5	
SAMP ID:		16024		16022		16023		16028		FS16-1-1		FS16-2-1		FS16-3-1		FS16-4-1		FS16-5-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		ESI	
TOP:																			
BOTTOM:																			
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		8/8/96		8/8/96		8/8/96		8/8/96		12/6/93		12/6/93		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Pentachlorophenol	UG/KG	1200000	U			220	J	1700	U	880	U	830	U	14000	U	1500	U	920	U
Phenanthrene	UG/KG	500000	U			64	J	720	U	130	J	550		22000		120	J	100	J
Phenol	UG/KG	500000	U			800	U	720	U	81	J	340	U	37000		150	J	380	U
Pyrene	UG/KG	500000	U			95	J	130	J	200	J	570		5000	J	120	J	130	J
bis(2-Chloroethoxy) methane	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
bis(2-Chloroethyl) ether	UG/KG	500000	U			800	U	720	U	360	U	340	U	5700	U	620	U	380	U
bis(2-Chloroisopropyl) ether	UG/KG	500000	U			800	U	720	U										
bis(2-Ethylhexyl)phthalate	UG/KG	500000	U			800	U	800	U	360	U	340	U	5700	U	440	J	5000	J
PESTICIDES/PCB																			
4,4'-DDD	UG/KG	1000	U			8	U	7.2	U	5.2	J	3.1	J	9.2	U	12	U	35	J
4,4'-DDE	UG/KG	1000	U			6.3	J	7.3	J	13	J	17	J	73	J	17		750	
4,4'-DDT	UG/KG	940	J			53		61		8.1	J	6.1	J	61	J	140		610	
Aldrin	UG/KG	540	U			4.1	U	3.7	U	1.9	U	1.8	U	4.7	U	6.4	U	3.9	U
Aroclor-1016	UG/KG	10000	U			80	U	72	U	36	U	34	U	92	U	120	U	75	U
Aroclor-1221	UG/KG	21000	U			160	U	150	U	74	U	70	U	190	U	250	U	150	U
Aroclor-1232	UG/KG	10000	U			80	U	72	U	36	U	34	U	92	U	120	U	75	U
Aroclor-1242	UG/KG	10000	U			80	U	72	U	36	U	34	U	92	U	120	U	75	U
Aroclor-1248	UG/KG	10000	U			80	U	72	U	36	U	34	U	92	U	120	U	75	U
Aroclor-1254	UG/KG	10000	U			100	J	120		36	J	56		130		120	U	75	U
Aroclor-1260	UG/KG	10000	U			45	J	61	J	37		51		97		120	U	89	
Dieldrin	UG/KG	1000	U			8	U	7.2	U	4.2	J	3.4	U	9.2	U	12	U	7.5	U
Endosulfan I	UG/KG	540	U			3.3	J	3.7	U	1.9	U	1.8	U	4.7	U	6.4	U	3.9	U
Endosulfan II	UG/KG	1000	U			8	U	7.2	U	3.6	U	3.4	J	5.7	J	12	U	3.9	J

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LOC_ID:		BS-10		BS-11		FS-50		FS-50		FS16-1		FS16-2		FS16-3		FS16-4		FS16-5	
SAMP ID:		16024		16022		16023		16028		FS16-1-1		FS16-2-1		FS16-3-1		FS16-4-1		FS16-5-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		ESI	
TOP:																			
BOTTOM:																			
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		8/8/96		8/8/96		8/8/96		8/8/96		12/6/93		12/6/93		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Endosulfan sulfate	UG/KG	1000	U			8	U	7.2	U	3.6	U	3.4	U	9.2	U	12	U	7.5	U
Endrin	UG/KG	1000	U			8	U	7.2	U	3.6	U	3.4	U	9.2	J	12	U	7.5	U
Endrin aldehyde	UG/KG	1000	U			6.6	U	4.1	U	3.6	U	3.4	U	9.2	U	12	U	7.5	U
Endrin ketone	UG/KG	1000	U			8	U	7.2	U	3.6	U	3.4	U	9.2	U	12	U	7.5	U
Heptachlor	UG/KG	540	U			4.1	U	3.7	U	1.9	U	1.8	U	4.7	U	6.4	U	3.9	U
Heptachlor epoxide	UG/KG	540	U			4.1	U	3.7	U	1.9	U	1.8	U	2.6	J	6.4	U	3.9	U
Methoxychlor	UG/KG	5400	U			41	U	37	U	19	U	18	U	47	U	64	U	39	U
Toxaphene	UG/KG	54000	U			410	U	370	U	190	U	180	U	470	U	640	U	390	U
alpha-BHC	UG/KG	540	U			3.7	J	2	J	1.9	U	1.8	U	4.7	U	6.4	U	3.9	U
alpha-Chlordane	UG/KG	540	U			3.8	J	3.7	J	1.2	J	2.1	J	3.8	J	6.4	U	3.1	J
beta-BHC	UG/KG	540	U			4.1	U	3.7	U	1.9	U	1.8	U	4.7	U	6.4	U	3.9	U
delta-BHC	UG/KG	540	U			4.1	U	3.7	U	1.9	U	1.8	U	4.7	U	6.4	U	3.9	U
gamma-BHC (Lindane)	UG/KG	540	U			4.1	U	3.7	U	0.93	J	1.8	U	4.7	U	6.4	U	3.9	U
gamma-Chlordane	UG/KG	540	U			2.3	J	2.3	J	1.9	U	2.1	J	4.6	J	6.4	U	2.9	J
OTHER ANALYSES																			
Amosite Asbestos	%																		
Amosite Asbestos	%, +-5%																		
Chrysotile Asbestos	%																		
Chrysotile Asbestos	%, +-2.5%																		
Chrysotile Asbestos	%, +-5%																		
Chrysotile Asbestos	%, > THAN																		
Nitrate/Nitrite-Nitrogen	MG/KG	14200				539		638		151		13.7		0.21		0.27		2	
Percent Moisture (PEST/PCB)		8				59		54											

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LOC_ID:		BS-10		BS-11		FS-50		FS-50		FS16-1		FS16-2		FS16-3		FS16-4		FS16-5	
SAMP ID:		16024		16022		16023		16028		FS16-1-1		FS16-2-1		FS16-3-1		FS16-4-1		FS16-5-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		ESI	
TOP:																			
BOTTOM:																			
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		8/8/96		8/8/96		8/8/96		8/8/96		12/6/93		12/6/93		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)		8				58		54											
Percent Moisture (VOCs)		6				60		54											
Percent Solids (Metals)		91.5		72.5		41.2		45.8											
NITROAROMATICS																			
1,3,5-Trinitrobenzene	UG/KG	120000	U	620000	U	1200	U	220	J	130	U	130	UJ	130	U	130	U	130	U
1,3-Dinitrobenzene	UG/KG	120000	U	620000	U	1200	U	120	U	130	U	130	U	130	U	130	U	130	U
2,4,6-Trinitrotoluene	UG/KG	120000	U	620000	U	1200	U	120	U	170	J	130	UJ	130	U	130	U	130	U
2,4-Dinitrotoluene	UG/KG	3700000		19000000		36000		4600	J	130	U	72	J	130	U	2900		130	U
2,6-Dinitrotoluene	UG/KG	120000	UJ	620000	UJ	1200	UJ	120	UJ	130	U	130	U	130	U	130	U	130	U
2-amino-4,6-Dinitrotoluene	UG/KG	120000	U	620000	U	1200	U	120	U	130	U	130	U	130	U	130	U	130	U
4-amino-2,6-Dinitrotoluene	UG/KG	120000	U	620000	U	1200	U	120	U	130	U	130	U	130	U	130	U	130	U
HMX	UG/KG	120000	U	620000	U	1200	U	120	U	130	U	130	U	130	U	130	U	130	U
Nitrobenzene	UG/KG	120000	U	620000	U	1200	U	120	U										
RDX	UG/KG	120000	U	620000	U	1200	U	120	U	130	U	130	U	130	U	130	U	130	U
Tetryl	UG/KG	120000	UJ	620000	UJ	1200	UJ	120	UJ	190	U	130	U	130	U	130	U	130	U
METALS																			
Aluminum	MG/KG	13600	R	1380	R	4590	R	9580	R	9540		16500		6610		9550		2960	
Antimony	MG/KG	32.5	J	82.4	J	322	J	1050	J	4.6	U	1250		1560		31.5		11.9	J
Arsenic	MG/KG	9.1	J	1.3	J	6.7	J	13.6	J	3.4		47.3		26.9		7.1		1.9	
Barium	MG/KG	40500	J	3520	J	225	J	381	J	145		15600		6950		466		88.2	
Beryllium	MG/KG	0.16		0.04	U	0.28		0.72		0.51	J	0.09	J	0.08	U	1.1	J	0.19	J
Cadmium	MG/KG	54.6		0.41		0.94		1.5		22.2	R	36.8	R	156	R	1	R	3	
Calcium	MG/KG	5390		586		85900		107000		19800		13800		21200		23000		215000	

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LOC_ID:		BS-10		BS-11		FS-50		FS-50		FS16-1		FS16-2		FS16-3		FS16-4		FS16-5	
SAMP ID:		16024		16022		16023		16028		FS16-1-1		FS16-2-1		FS16-3-1		FS16-4-1		FS16-5-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		ESI	
TOP:																			
BOTTOM:																			
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		8/8/96		8/8/96		8/8/96		8/8/96		12/6/93		12/6/93		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chromium	MG/KG	518		4.3		36.7		60.7		15.8		220		33.2		6.4		33.2	R
Cobalt	MG/KG	26.3		2.7		6.8		10.9		15		20.9		9.7	J	3.3	J	5.6	J
Copper	MG/KG	16200		5260		99.1		130		211	J	38900	J	81400	J	129	J	90	J
Cyanide	MG/KG	24.2	J	9.7	J	1	UJ	1	UJ	1.1		1.4		0.74	U	1	U	0.61	U
Iron	MG/KG	79200	J	2690	J	59200	J	79700	J	19700		49300		30500		8420		41300	
Lead	MG/KG	4180		132		391		420		810		437000		527000		596		309	
Magnesium	MG/KG	8450		3370		8500		15300		4850		16400		19700		2470		15700	
Manganese	MG/KG	507		27.3		574		1040		488	J	334	J	214	J	194	J	480	
Mercury	MG/KG	24.9		0.07	U	0.12	U	0.11		0.81		39.3		1.8		0.34		0.1	
Nickel	MG/KG	154		2.1		20.9		60.1		21.1		119		66.8		7.9	J	18.8	
Potassium	MG/KG	80600		2830		3770		4980		10500		1570		636	J	1550	J	704	J
Selenium	MG/KG	1.6		0.95		1.3		2.1		5.8	J	1.3	UJ	1.6	UJ	0.26	UJ	0.13	UJ
Silver	MG/KG	3.6		0.62		0.29	U	0.46	U	0.9	U	13.4		22.7		1.5	U	0.73	U
Sodium	MG/KG	3090	J	63.1	J	3460	J	4440	J	3690		2650		152	J	365	J	179	J
Thallium	MG/KG	0.84	U	0.57	U	1	U	1.6	U	0.38	J	2.2	UJ	1.4	J	0.44	UJ	0.22	U
Vanadium	MG/KG	20.4	J	0.5		5.6		12.2		17.7		12.9		6.2	J	7	J	8.3	J
Zinc	MG/KG	42600		1640		334		495		715	J	12400	J	35700	J	178	J	318	
HERBICIDES																			
2,4,5-T	UG/KG									3.9	J	5.2	U	6.9	U	9.4	U	5.8	U
2,4,5-TP (Silvex)	UG/KG									7.9	J	5.2	U	6.9	U	9.4	U	5.8	U
2,4-D	UG/KG									55	U	52	U	69	U	94	U	58	U
2,4-DB	UG/KG									130	J	52	U	69	U	94	U	58	U
Dalapon	UG/KG									140	U	130	U	170	U	230	U	140	U

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LOC_ID:		BS-10		BS-11		FS-50		FS-50		FS16-1		FS16-2		FS16-3		FS16-4		FS16-5	
SAMP ID:		16024		16022		16023		16028		FS16-1-1		FS16-2-1		FS16-3-1		FS16-4-1		FS16-5-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		ESI	
TOP:																			
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MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		8/8/96		8/8/96		8/8/96		8/8/96		12/6/93		12/6/93		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Dicamba	UG/KG									5.5	U	5.2	U	6.9	U	9.4	U	5.8	U
Dichloroprop	UG/KG									61	J	52	U	69	U	94	U	58	U
Dinoseb	UG/KG									28	U	26	UJ	35	U	47	U	29	U
MCPA	UG/KG									6000	J	5200	U	6900	U	9400	U	5800	U
MCPP	UG/KG									22000	J	5200	U	6900	U	9400	U	5800	U

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LOC_ID:		FS16-6		FS16-7		FS16-8	
SAMP ID:		FS16-6-1		FS16-7-1		FS16-8-1	
QC CODE:		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI	
TOP:							
BOTTOM:							
MATRIX:		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS							
1,1,1-Trichloroethane	UG/KG	11	U	25	UJ	21	UJ
1,1,2,2-Tetrachloroethane	UG/KG	11	U	25	UJ	21	UJ
1,1,2-Trichloroethane	UG/KG	11	U	25	UJ	21	UJ
1,1-Dichloroethane	UG/KG	11	U	25	UJ	21	UJ
1,1-Dichloroethene	UG/KG	11	U	25	UJ	21	UJ
1,2-Dichloroethane	UG/KG	11	U	25	UJ	21	UJ
1,2-Dichloroethene (total)	UG/KG	11	U	25	UJ	21	UJ
1,2-Dichloropropane	UG/KG	11	U	25	UJ	21	UJ
2-Butanone	UG/KG	11	U	25	UJ	21	UJ
2-Hexanone	UG/KG	11	U	25	UJ	21	UJ
4-Methyl-2-Pentanone	UG/KG	11	U	25	UJ	21	UJ
Acetone	UG/KG	11	U	25	UJ	21	UJ
Benzene	UG/KG	11	U	25	UJ	21	UJ
Bromodichloromethane	UG/KG	11	U	25	UJ	21	UJ
Bromoform	UG/KG	11	U	25	UJ	21	UJ
Bromomethane	UG/KG	11	U	25	UJ	21	UJ
Carbon Disulfide	UG/KG	11	U	25	UJ	21	UJ
Carbon Tetrachloride	UG/KG	11	U	25	UJ	21	UJ
Chlorobenzene	UG/KG	11	U	25	UJ	21	UJ
Chloroethane	UG/KG	11	U	25	UJ	21	UJ
Chloroform	UG/KG	11	U	25	UJ	21	UJ
Chloromethane	UG/KG	11	U	25	UJ	21	UJ

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		FS16-6		FS16-7		FS16-8	
SAMP ID:		FS16-6-1		FS16-7-1		FS16-8-1	
QC CODE:		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI	
TOP:							
BOTTOM:							
MATRIX:		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Dibromochloromethane	UG/KG	11	U	25	UJ	21	UJ
Ethylbenzene	UG/KG	11	U	25	UJ	21	UJ
Methylene Chloride	UG/KG	11	U	25	UJ	21	UJ
Styrene	UG/KG	11	U	25	UJ	21	UJ
Tetrachloroethene	UG/KG	11	U	25	UJ	21	UJ
Toluene	UG/KG	11	U	25	UJ	21	UJ
Trichloroethene	UG/KG	11	U	25	UJ	21	UJ
Vinyl Chloride	UG/KG	11	U	25	UJ	21	UJ
Xylene (total)	UG/KG	11	U	25	UJ	21	UJ
cis-1,3-Dichloropropene	UG/KG	11	U	25	UJ	21	UJ
trans-1,3-Dichloropropene	UG/KG	11	U	25	UJ	21	UJ
SEMIVOLATILE ORGANICS							
1,2,4-Trichlorobenzene	UG/KG	360	U	2600	UJ	5100	UJ
1,2-Dichlorobenzene	UG/KG	360	U	2600	UJ	5100	UJ
1,3-Dichlorobenzene	UG/KG	360	U	2600	UJ	5100	UJ
1,4-Dichlorobenzene	UG/KG	360	U	2600	UJ	5100	UJ
2,2'-oxybis(1-Chloropropane)	UG/KG	360	U	2600	UJ	5100	UJ
2,4,5-Trichlorophenol	UG/KG	870	U	6300	UJ	12000	UJ
2,4,6-Trichlorophenol	UG/KG	360	U	2600	UJ	5100	UJ
2,4-Dichlorophenol	UG/KG	360	U	2600	UJ	5100	UJ
2,4-Dimethylphenol	UG/KG	360	U	2600	UJ	5100	UJ
2,4-Dinitrophenol	UG/KG	870	U	6300	UJ	12000	UJ
2,4-Dinitrotoluene	UG/KG	2700		2600	UJ	5100	UJ

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		FS16-6		FS16-7		FS16-8	
SAMP ID:		FS16-6-1		FS16-7-1		FS16-8-1	
QC CODE:		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI	
TOP:							
BOTTOM:							
MATRIX:		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
2,6-Dinitrotoluene	UG/KG	200	J	2600	UJ	5100	UJ
2-Chloronaphthalene	UG/KG	360	U	2600	UJ	5100	UJ
2-Chlorophenol	UG/KG	360	U	2600	UJ	5100	UJ
2-Methylnaphthalene	UG/KG	360	U	180	J	5100	UJ
2-Methylphenol	UG/KG	360	U	2600	UJ	5100	UJ
2-Nitroaniline	UG/KG	870	U	6300	UJ	12000	UJ
2-Nitrophenol	UG/KG	360	U	2600	UJ	5100	UJ
3,3'-Dichlorobenzidine	UG/KG	360	U	2600	UJ	5100	UJ
3-Nitroaniline	UG/KG	870	U	6300	UJ	12000	UJ
4,6-Dinitro-2-methylphenol	UG/KG	870	U	6300	UJ	12000	UJ
4-Bromophenyl-phenylether	UG/KG	360	U	2600	UJ	5100	UJ
4-Chloro-3-methylphenol	UG/KG	360	U	2600	UJ	5100	UJ
4-Chloroaniline	UG/KG	360	U	2600	UJ	5100	UJ
4-Chlorophenyl-phenylether	UG/KG	360	U	2600	UJ	5100	UJ
4-Methylphenol	UG/KG	360	U	2600	UJ	5100	UJ
4-Nitroaniline	UG/KG	870	U	6300	UJ	12000	UJ
4-Nitrophenol	UG/KG	870	U	6300	UJ	12000	UJ
Acenaphthene	UG/KG	360	U	560	J	5100	UJ
Acenaphthylene	UG/KG	360	U	2600	UJ	5100	UJ
Anthracene	UG/KG	360	U	670	J	5100	UJ
Benzo(a)anthracene	UG/KG	92	J	1600	J	330	J
Benzo(a)pyrene	UG/KG	90	J	1500	J	400	J
Benzo(b)fluoranthene	UG/KG	99	J	1600	J	750	J

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		FS16-6		FS16-7		FS16-8	
SAMP ID:		FS16-6-1		FS16-7-1		FS16-8-1	
QC CODE:		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI	
TOP:							
BOTTOM:							
MATRIX:		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(g,h,i)perylene	UG/KG	61	J	360	J	5100	UJ
Benzo(k)fluoranthene	UG/KG	92	J	1600	J	630	J
Butylbenzylphthalate	UG/KG	360	UR	2600	UJ	5100	UJ
Carbazole	UG/KG	21	J	740	J	5100	UJ
Chrysene	UG/KG	110	J	1900	J	680	J
Di-n-butylphthalate	UG/KG	710	UJ	2600	UJ	5100	UJ
Di-n-octylphthalate	UG/KG	360	U	2600	UJ	5100	UJ
Dibenz(a,h)anthracene	UG/KG	360	U	2600	UJ	5100	UJ
Dibenzofuran	UG/KG	360	U	390	J	5100	UJ
Diethylphthalate	UG/KG	360	U	2600	UJ	5100	UJ
Dimethylphthalate	UG/KG	360	U	2600	UJ	5100	UJ
Fluoranthene	UG/KG	210	J	3900	J	630	J
Fluorene	UG/KG	360	U	560	J	5100	UJ
Hexachlorobenzene	UG/KG	360	U	2600	UJ	5100	UJ
Hexachlorobutadiene	UG/KG	360	U	2600	UJ	5100	UJ
Hexachlorocyclopentadiene	UG/KG	360	U	2600	UJ	5100	UJ
Hexachloroethane	UG/KG	360	U	2600	UJ	5100	UJ
Indeno(1,2,3-cd)pyrene	UG/KG	39	J	400	J	5100	UJ
Isophorone	UG/KG	360	U	2600	UJ	5100	UJ
N-Nitroso-di-n-propylamine	UG/KG	360	U	2600	UJ	5100	UJ
N-Nitrosodiphenylamine (1)	UG/KG	450		2600	UJ	5100	UJ
Naphthalene	UG/KG	360	U	410	J	5100	UJ
Nitrobenzene	UG/KG	360	U	2600	UJ	5100	UJ

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		FS16-6		FS16-7		FS16-8	
SAMP ID:		FS16-6-1		FS16-7-1		FS16-8-1	
QC CODE:		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI	
TOP:							
BOTTOM:							
MATRIX:		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Pentachlorophenol	UG/KG	870	U	6300	UJ	12000	UJ
Phenanthrene	UG/KG	110	J	4100	J	360	J
Phenol	UG/KG	360	U	2600	UJ	5100	UJ
Pyrene	UG/KG	160	J	3200	J	720	J
bis(2-Chloroethoxy) methane	UG/KG	360	U	2600	UJ	5100	UJ
bis(2-Chloroethyl) ether	UG/KG	360	U	2600	UJ	5100	UJ
bis(2-Chloroisopropyl) ether	UG/KG						
bis(2-Ethylhexyl)phthalate	UG/KG	52	J	500	J	1300	J
PESTICIDES/PCB							
4,4'-DDD	UG/KG	3.6	U	39	UJ	76	UJ
4,4'-DDE	UG/KG	6.3	J	97	J	180	J
4,4'-DDT	UG/KG	7.2		360	J	870	J
Aldrin	UG/KG	1.8	U	20	UJ	39	UJ
Aroclor-1016	UG/KG	36	U	390	UJ	760	UJ
Aroclor-1221	UG/KG	73	U	800	UJ	1500	UJ
Aroclor-1232	UG/KG	36	U	390	UJ	760	UJ
Aroclor-1242	UG/KG	36	U	390	UJ	760	UJ
Aroclor-1248	UG/KG	36	U	390	UJ	760	UJ
Aroclor-1254	UG/KG	36	U	360	J	1400	J
Aroclor-1260	UG/KG	36	U	390	UJ	630	J
Dieldrin	UG/KG	3.6	U	28	J	76	UJ
Endosulfan I	UG/KG	1.8	U	22	J	39	UJ
Endosulfan II	UG/KG	3.6	U	39	UJ	76	UJ

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		FS16-6		FS16-7		FS16-8	
SAMP ID:		FS16-6-1		FS16-7-1		FS16-8-1	
QC CODE:		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI	
TOP:							
BOTTOM:							
MATRIX:		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Endosulfan sulfate	UG/KG	3.6	U	39	UJ	76	UJ
Endrin	UG/KG	3.6	U	39	UJ	76	UJ
Endrin aldehyde	UG/KG	3.6	U	39	UJ	76	UJ
Endrin ketone	UG/KG	3.6	U	39	UJ	76	UJ
Heptachlor	UG/KG	1.8	U	20	UJ	39	UJ
Heptachlor epoxide	UG/KG	1.8	U	20	UJ	39	UJ
Methoxychlor	UG/KG	18	U	200	UJ	390	UJ
Toxaphene	UG/KG	180	U	2000	UJ	3900	UJ
alpha-BHC	UG/KG	1.8	U	20	UJ	39	UJ
alpha-Chlordane	UG/KG	1.8	U	13	J	47	J
beta-BHC	UG/KG	1.8	U	20	UJ	39	UJ
delta-BHC	UG/KG	1.8	U	20	UJ	39	UJ
gamma-BHC (Lindane)	UG/KG	1.8	U	20	UJ	39	UJ
gamma-Chlordane	UG/KG	1.8	U	12	J	36	J
OTHER ANALYSES							
Amosite Asbestos	%						
Amosite Asbestos	%, +-5%						
Chrysotile Asbestos	%						
Chrysotile Asbestos	%, +-2.5%						
Chrysotile Asbestos	%, +-5%						
Chrysotile Asbestos	%, > THAN						
Nitrate/Nitrite-Nitrogen	MG/KG	104		0.89		0.05	
Percent Moisture (PEST/PCB)							

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		FS16-6		FS16-7		FS16-8	
SAMP ID:		FS16-6-1		FS16-7-1		FS16-8-1	
QC CODE:		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI	
TOP:							
BOTTOM:							
MATRIX:		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)							
Percent Moisture (VOCs)							
Percent Solids (Metals)							
NITROAROMATICS							
1,3,5-Trinitrobenzene	UG/KG	130	U	130	UJ	130	UJ
1,3-Dinitrobenzene	UG/KG	130	U	130	UJ	130	UJ
2,4,6-Trinitrotoluene	UG/KG	130	U	130	UJ	130	UJ
2,4-Dinitrotoluene	UG/KG	610		3100	J	610	J
2,6-Dinitrotoluene	UG/KG	130	U	130	UJ	130	UJ
2-amino-4,6-Dinitrotoluene	UG/KG	130	U	130	UJ	130	UJ
4-amino-2,6-Dinitrotoluene	UG/KG	130	U	130	UJ	130	UJ
HMX	UG/KG	130	U	130	UJ	130	UJ
Nitrobenzene	UG/KG						
RDX	UG/KG	130	U	130	UJ	130	UJ
Tetryl	UG/KG	130	U	130	UJ	130	UJ
METALS							
Aluminum	MG/KG	11300		7960	J	13700	J
Antimony	MG/KG	11.2	J	21.8	J	93.2	J
Arsenic	MG/KG	6.5		8	J	15.9	J
Barium	MG/KG	289		392	J	2110	J
Beryllium	MG/KG	0.49	J	0.32	J	0.27	J
Cadmium	MG/KG	1.2		72.8	J	127	J
Calcium	MG/KG	41800		41600	J	67400	J

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		FS16-6		FS16-7		FS16-8	
SAMP ID:		FS16-6-1		FS16-7-1		FS16-8-1	
QC CODE:		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI	
TOP:							
BOTTOM:							
MATRIX:		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Chromium	MG/KG	21.3	R	22.1	R	174	R
Cobalt	MG/KG	9.9		6	J	40.6	J
Copper	MG/KG	198	J	593	J	757	J
Cyanide	MG/KG	0.58	U	2.3	J	4.4	J
Iron	MG/KG	25000		17200	J	48600	J
Lead	MG/KG	865		1560	J	12100	J
Magnesium	MG/KG	16400		10500	J	15700	J
Manganese	MG/KG	456		301	J	458	J
Mercury	MG/KG	1.2		2.4	J	3.7	J
Nickel	MG/KG	30.5		21.5	J	124	J
Potassium	MG/KG	1480		1430	J	1360	J
Selenium	MG/KG	0.72	J	1.6	J	0.91	J
Silver	MG/KG	0.8	U	1.3	UJ	1.7	UJ
Sodium	MG/KG	200	J	97.9	J	302	J
Thallium	MG/KG	0.25	U	0.45	UJ	0.39	UJ
Vanadium	MG/KG	18.3		20.6	J	44	J
Zinc	MG/KG	293		1310	J	11600	J
HERBICIDES							
2,4,5-T	UG/KG	5.5	U	12	UJ	13	J
2,4,5-TP (Silvex)	UG/KG	5.5	U	12	UJ	12	UJ
2,4-D	UG/KG	55	U	120	UJ	160	J
2,4-DB	UG/KG	55	U	120	UJ	120	UJ
Dalapon	UG/KG	130	U	290	UJ	280	UJ

SEAD-16 Analytes Detected in Building Materials
Complete Results of Analyses

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		FS16-6		FS16-7		FS16-8	
SAMP ID:		FS16-6-1		FS16-7-1		FS16-8-1	
QC CODE:		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI	
TOP:							
BOTTOM:							
MATRIX:		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:		12/6/93		12/6/93		12/6/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Dicamba	UG/KG	5.5	U	12	UJ	12	UJ
Dichloroprop	UG/KG	55	U	120	UJ	120	UJ
Dinoseb	UG/KG	28	U	60	UJ	58	UJ
MCPA	UG/KG	5500	U	12000	UJ	12000	UJ
MCPP	UG/KG	5500	U	12000	UJ	12000	UJ

SEAD-16 Indoor Air

TOTAL SUSPENDED PARTICULATE (TSP)

CLIENT: SENECA Army Depot Activity - Romulus, NY
PROJECT: DEACTIVATION FURNACE AIR MONITORING
SITE: SEAD 16/17
PERIOD: AUGUST 6 - 7 1996
TECH.: DEWEY GILE

BACK	M = 1.3403	NE-P	M = 1.5564	QA CHECK
	b = 0.3334		b = -0.0282	
SW	M = 1.4614	NE-C	M = 1.5443	
	b = 0.0597		b = 0.017	

	FILTER/ SAMPLE NUMBER	START DATE	INITIAL WEIGHT (GRAMS)	FINAL WEIGHT (GRAMS)	PARTICULATE WEIGHT (GRAMS)	START TIME (HOURS)	END TIME (HOURS)	ELAPSED TIME (MINUTES)	AVG. MAG (IN. H20)	AVG. TEMP. (K)	AVG. PRES. (mm Hg)	FLOW** RATE (M3/MIN)	TOTAL** VOLUME (M3)	TSP CONC. (UG/M3)	COMMENTS.
Back	696901 16006	08/06/96				0.00	24.00	1440.00	3.28	297.0	754.0	1.2775	1840		
SW	696902 16007	08/06/96				0.00	24.00	1440.00	3.53	297.0	754.0	1.2718	1831		
NE-P	696903 16008	08/06/96				0.00	24.00	1440.00	3.18	297.0	754.0	1.1482	1653		
NE-C	696904 16009	08/06/96				0.00	24.00	1440.00	3.45	297.0	754.0	1.1970	1724		
F.B.	696900 16010	FB													

Bldg S-311 - RAW ORGANICS RESULTS
ACID/BASE NEUTRAL EXTRACTABLES by EPA TO-13

SAMPLE ID		L31557-1	L31557-2	L31557-3	L31557-4	L31557-5	Q-4060	Q-4060BS
ES ID		16001	16002	16003	16004	16005	METHOD BLAN	BLANK SPIKE
SITE		BLDG S-31	BLDG S-31	BLDG S-31	BLDG S-31	BLDG S-311		
MATRIX		FILTER	FILTER	FILTER	FILTER	FILTER		
DATE SAMPLED		7 AUG 96	7 AUG 96	7 AUG 96	7 AUG 96	7 AUG 96		
SDG No.		L31557	L31557	L31557	L31557	L31557		
NOTE: ALL VALUES SHOULD BE QUALIFIED WITH A J.								
ANALYTE	UNITS ug/m3							
Phenol	ug/filter	25 U	22	25 U	6	25 U	25 U	25 U
bis(2-Chloroethyl)ether	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Chlorophenol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,3-Dichlorobenzene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,4-Dichlorobenzene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Benzyl Alcohol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,2-Dichlorobenzene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Methylphenol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,2'-oxybis(1-Chloropropane)	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Methylphenol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
N-nitroso-di-n-propylamine	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Hexachlorethane	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Nitrobenzene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Isophorone	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Nitrophenol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4-Dimethylphenol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Benzoic Acid	ug/filter	62 U	46	62 U	62 U	62 U	62 U	62 U
bis(2-Chloroethoxy)methane	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4-Dichlorophenol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,2,4-Trichlorobenzene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Napthalene	ug/filter	25 U	19 J	25 U	25 U	25 U	25 U	99
4-Chloroaniline	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Hexachlorobutadiene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Chloro-3-methylphenol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Methylnapthalene	ug/filter	25 U	23	13	17	25 U	25 U	25 U
Hexachlorocyclopentadiene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4,5-Trichlorophenol	ug/filter	62 U	62 U	62 U	62 U	62 U	62 U	62 U
2-Chloronapthalene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Nitroaniline	ug/filter	62 U	62 U	62 U	62 U	62 U	62 U	62 U
Dimethylphthalate	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Acenaphthylene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	89
2,6-Dinitrotoluene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
3-Nitroaniline	ug/filter	62 U	62 U	62 U	62 U	62 U	62 U	62 U
Acenaphthene	ug/filter	25 U	10 J	25 U	7 J	25 U	25 U	104
2,4-Dinitrophenol	ug/filter	62 U	62 U	62 U	62 U	62 U	62 U	62 U
4-Nitrophenol	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Dibenzofuran	ug/filter	25 U	10	25 U	6	25 U	25 U	25 U
2,4-Dinitrotoluene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Diethylphthalate	ug/filter	25 U	20	8	14	25 U	25 U	25 U
4-Chlorophenyl-phenylether	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Fluorene	ug/filter	25 U	9 J	25 U	25 U	25 U	25 U	96
4-Nitroaniline	ug/filter	62 U	62 U	62 U	62 U	62 U	62 U	62 U
4,6-Dinitro-2-methylphenol	ug/filter	62 U	62 U	62 U	62 U	62 U	62 U	62 U
N-Nitrosodiphenylamine	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Bromophenyl-phenylether	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Hexachlorobenzene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Pentachlorophenol	ug/filter	62 U	62 U	62 U	62 U	62 U	62 U	62 U
Phenanthrene	ug/filter	25 U	16 J	25 U	25 U	25 U	25 U	89
Anthracene	ug/filter	25 U	15 J	25 U	25 U	25 U	25 U	83
Di-n-Butylphthalate	ug/filter	25 U	9	25 U	6	25 U	25 U	25 U
Fluoranthene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	72 U
Pyrene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	82
Butylbenzylphthalate	ug/filter	25 U	9	25 U	25 U	25 U	25 U	25 U
3,3'-Dichlorobenzidine	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Benzo(a)anthracene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	70
Chrysene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	68
bis(2-ethylhexyl)pthalate	ug/filter	25 U	10	10	29	25 U	25 U	25 U
Di-n-octylphthalate	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Benzo(b)fluoranthene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	61
Benzo(k)fluoranthene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	63
Benzo(a)pyrene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	60
Benzo(e)pyrene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Indeno(1,2,3-cd)pyrene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	52
Dibenzo(a,h)anthracee	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	49
Benzo(g,h,i)perylene	ug/filter	25 U	25 U	25 U	25 U	25 U	25 U	52

SEMI-VOLATILE (PUF) CONCENTRATIONS

CLIENT: SENECA Army Depot Activity - Romulus, NY
PROJECT: SEAD 16/17 DEACTIVATION FURNACE
PERIOD: AUGUST 6 - 7 1996
TECH.: DEWEY GILE

BACK	M = 31.9404	Sampler Flow Curve	NE-P	M = 33.4610
	b = -0.8956			b = -1.3227
SW	M = 30.2327		NE-C	M = 33.3459
	b = -0.3856			b = -0.6224

QA CHECK

	SAMPLE NUMBER	START DATE	INITIAL WEIGHT (GRAMS)	FINAL WEIGHT (GRAMS)	PARTICULATE WEIGHT (GRAMS)	START TIME (HOURS)	END TIME (HOURS)	ELAPSED TIME (MINUTES)	MAG. READING (IN. H20)	AVG. TEMP. (K)	AVG. PRES. (mm Hg)	FLOW** RATE (CM3/MIN)	TOTAL** VOLUME (CM3)	TSP CONC. (UG/M3)	COMMENTS.
.h	16001	08/07/96				0.00	24.00	1440	38.3	297.0	754.0	0.2214	319		
.w	16002	08/07/96				0.00	24.00	1440	41.8	297.0	754.0	0.2261	326		
E-P	16003	08/07/96				0.00	24.00	1440	35.3	297.0	754.0	0.2167	312		
E-C	16004	08/07/96				0.00	24.00	1440	50.5	297.0	754.0	0.2313	333		
B.	16005	FB													

Bldg S-311 - RAW INORGANICS RESULTS
CLP/TAL METALS by 40 CFR 50 Appendix G
MERCURY by NIOSH Method 6009

SAMPLE ID		L31557-6	L31557-7	L31557-8	L31557-9	L31557-10
ES ID		16006	16007	16008	16009	16010
SITE		BLDG S-31	BLDG S-31	BLDG S-31	BLDG S-31	BLDG S-311
MATRIX		FILTER	FILTER	FILTER	FILTER	FILTER
DATE SAMPLED		7 AUG 96	7 AUG 96	7 AUG 96	7 AUG 96	7 AUG 96
SDG No.		L31557	L31557	L31557	L31557	L31557
ANALYTE	**UNITS**					
Silver	ug/filter	36 U	36 U	36 U	36 U	36 U
Aluminum	ug/filter	290	230	250	240	180 U
Arsenic	ug/filter	12 U	12 U	12 U	12 U	12 U
Barium	ug/filter	26.5	34.6	32.2	30.4	24 U
Beryllium	ug/filter	12 U	12 U	12 U	12 U	12 U
Calcium	ug/filter	1200 U	1200 U	1200 U	1200 U	1200 U
Cadmium	ug/filter	12 U	12 U	12 U	12 U	12 U
Cobalt	ug/filter	36 U	36 U	36 U	36 U	36 U
Chromium	ug/filter	36 U	36 U	36 U	36 U	36 U
Copper	ug/filter	630	1800	2600	1700	60 U
Iron	ug/filter	600 U	600 U	600 U	600 U	600 U
Potassium	ug/filter	1200 U	1200 U	1200 U	1200 U	1200 U
Magnesium	ug/filter	240 U	240 U	240 U	240 U	240 U
Manganese	ug/filter	13	8.8	9.1	7.8	7.[illegible]
Sodium	ug/filter	2400 U	2400 U	2400 U	2400 U	2400 U
Nickel	ug/filter	48 U	48 U	48 U	48 U	48 U
Inorganic Lead	ug/filter	24.1	66.7	75.5	62.6	3.6 U
Antimony	ug/filter	18 U	18 U	18 U	18 U	18 U
Selenium	ug/filter	8.5	6 U	8.6	9.2	6 U
Thallium	ug/filter	12 U	12 U	12 U	12 U	12 U
Vanadium	ug/filter	36 U	36 U	36 U	36 U	36 U
Zinc	ug/filter	120 U	120 U	120 U	120 U	120 U

ANALYZED SAMPLE METAL WEIGHTS FROM TSP SAMPLES

CLIENT: SENECA Army Depot Activity - Romulus, NY
PROJECT: DEACTIVATION FURNACE AIR MONITORING
SITE: SEAD 16/17
PERIOD: AUGUST 6 - 7 1996
TECHNICIAN: DEWEY GILE

QA CHECK
100 Percent: _____
_____

METALS ID#: Date:	MINIMUM DETECTION LIMIT	TOTAL MICROGRAMS PER FILTER											FIELD BLANK	
		16006 08/06/96	16007 08/06/96	16008 08/06/96	16009 08/06/96	16010 FB	0 0	0 0	0 0	0 0	0 0	0 0		
ALUMINUM	180.0	290.00	230.00	250.00	240.00	<							<	
ANTIMONY	18.0	<	<	<	<	<							<	
ARSENIC	12.0	<	<	<	<	<							9.17	
BARIUM	24.0	26.50	34.60	32.20	30.40	<							<	
BERYLLIUM	12.0	<	<	<	<	<							<	
CADMIUM	12.0	<	<	<	<	<							4.91	
CALCIUM	1200.0	<	<	<	<	<							2.25	
CHROMIUM	36.0	<	<	<	<	<							1.39	
COBALT	36.0	<	<	<	<	<							<	
COPPER	60.0	630.00	1800.00	2600.00	1700.00	<							<	
IRON	600.0	<	<	<	<	<							<	
LEAD	3.6	24.10	66.70	75.50	62.60	<							<	
MAGNESIUM	240.0	<	<	<	<	<							<	
MANGANESE	7.2	13.00	8.80	9.10	7.80	<							<	
NICKEL	48.0	<	<	<	<	<								
POTASSIUM	1200.0	<	<	<	<	<								
SELENIUM	6.0	8.50	<	8.60	9.20	<								
SILVER	36.0	<	<	<	<	<								
SODIUM	2400.0	<	<	<	<	<								
THALLIUM	12.0	<	<	<	<	<								
VANADIUM	36.0	<	<	<	<	<								
ZINC	120.0	<	<	<	<	<								

METAL CONCENTRATIONS FROM TSP SAMPLES

CLIENT: SENECA Army Depot Activity - Romulus, NY
PROJECT: DEACTIVATION FURNACE AIR MONITORING
SITE: SEAD 16/17
PERIOD: AUGUST 6 - 7 1996
TECHNICIAN: DEWEY GILE

QA CHECK

METALS ID#: / Date	MICROGRAMS/CUBIC METER 16006 08/06/96	16007 08/06/96	16008 08/06/96	16009 08/06/96	16010 FB
ALUMINUM	0.1584	0.1256	0.1365	0.1311	<ND
ANTIMONY	<ND	<ND	<ND	<ND	<ND
ARSENIC	<ND	<ND	<ND	<ND	<ND
BARIUM	0.0145	0.0189	0.0176	0.0166	<ND
BERYLLIUM	<ND	<ND	<ND	<ND	<ND
CADMIUM	<ND	<ND	<ND	<ND	<ND
CALCIUM	<ND	<ND	<ND	<ND	<ND
CHROMIUM	<ND	<ND	<ND	<ND	<ND
COBALT	<ND	<ND	<ND	<ND	<ND
COPPER	0.3440	0.9829	1.4197	0.9283	<ND
IRON	<ND	<ND	<ND	<ND	<ND
LEAD	0.0132	0.0364	0.0412	0.0342	<ND
MAGNESIUM	<ND	<ND	<ND	<ND	<ND
MANGANESE	0.0071	0.0048	0.0050	0.0043	<ND
NICKEL	ND	<ND	<ND	<ND	<ND
POTASSIUM	ND	<ND	<ND	<ND	<ND
SELENIUM	0.0046	<ND	0.0047	0.0050	<ND
SILVER	ND	<ND	<ND	<ND	<ND
SODIUM	ND	<ND	<ND	<ND	<ND
THALLIUM	ND	<ND	<ND	<ND	<ND
VANADIUM	ND	<ND	<ND	<ND	<ND
ZINC	ND	<ND	<ND	<ND	<ND

MERCURY CONCENTRATIONS

CLIENT: SENECA Army Depot Activity - Romulus, NY
PROJECT: SEAD 16/17 DEACTIVATION FURNACE
PERIOD: AUGUST 6 - 7, 1996
METHOD: USEPA 40 CFR 50, APP. G and NIOSH 6009
DURATION: 24 HOURS

QA CHECK

FILTER/ SAMPLE NUMBER	SITE (Aug. 6 - 7)	INITIAL WEIGHT (GRAMS)	FINAL WEIGHT (GRAMS)	PARTICULATE WEIGHT (GRAMS)	START TIME (HOURS)	END TIME (HOURS)	ELAPSED TIME (MINUTES)	FLOW RATE (CC/MIN)	AVG. TEMP. (K)	AVG. PRES. (mm Hg)	FLOW* RATE (M3/MIN)	TOTAL* VOLUME (M3)	CONC. (UG/M3)	COMMENTS.
16011	Bkgrd	NA	NA	NA	0.00	24.00	1440.00	220.4	297.0	754.0	0.000220	0.317376		
16012	SW	NA	NA	NA	0.00	24.00	1440.00	222.1	297.0	754.0	0.000222	0.319824		VOID
16013	NE-P	NA	NA	NA	0.00	24.00	1440.00	220.3	297.0	754.0	0.000220	0.317232		
16014	NE-C	NA	NA	NA	0.00	24.00	1440.00	219.7	297.0	754.0	0.000220	0.316368		
16015	Field Blank	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	** 0.317700		
16025	Aug 7 - 8 SW	NA	NA	NA	0.00	24.00	1440.00	222.1	NA	NA	0.000222	0.319824		MAKEUP SAMPLE FOR VOID

Notes: * THE FLOW RATE AND TOTAL VOLUME REPRESENT STANDARD TEMPERATURE (298 DEG K) AND PRESSURE (760 mm Hg) CONDITIONS.

** REPRESENTS AVERAGE OF AIR VOLUMES FROM SAMPLES NO. 16006 TO 16009.

NA - DENOTES NOT APPLICABLE.

MERCURY CONCENTRATIONS

CLIENT: SENECA Army Depot Activity - Romulus, NY
PROJECT: SEAD 16/17 DEACTIVATION FURNACE
PERIOD: AUGUST 6 - 7, 1996
METHOD: USEPA 40 CFR 50, APP. G and NIOSH 6009
DURATION: 24 HOURS

QA CHECK
100 Percent: _____

SAMPLE ID#: Site:	MINIMUM QUANT. LIMIT	TOTAL MICROGRAMS PER SAMPLE											LAB BLANK	
		16011 Bkgrd	16012 SW	16013 NE-P	16014 NE-C	16015 Field Blank	16025 SW							
MERCURY:			VOID											
FILTER (SOLID)	0.04	<0.0400		<0.0400	<0.0400	<0.0400	<0.0400							
TUBE (GASEOUS)	0.04	0.0972		0.0542	<0.0400	0.1130	0.0550							

MERCURY CONCENTRATIONS

CLIENT:	SENECA Army Depot Activity - Romulus, NY
PROJECT:	SEAD 16/17 DEACTIVATION FURNACE
PERIOD:	AUGUST 6 - 7, 1996
METHOD:	USEPA 40 CFR 50, APP. G and NIOSH 6009
DURATION:	24 HOURS

QA CHECK

	MICROGRAMS/CUBIC METER													
SAMPLE ID#:	16011	16012	16013	16014	16015	16025								
Site:	Bkgrd	SW	NE-P	NE-C	* Field Blank	SW								
MERCURY:		VOID												
FILTER (SOLID)	<0.1260	NA	<.1261	<.1264	<.1259	<1251								
TUBE (GASEOUS)	0.3063	NA	0.1709	<.1264	0.3557	0.1720								

Notes: * Field blank values do not represent true concentrations. They are based on the mass of the metal detected on the field blank divided by the average air sample volume of the four particulate samples collected.

ASBESTOS CONCENTRATIONS

CLIENT: SENECA Army Depot Activity - Romulus, NY
PROJECT: SEAD 16/17 DEACTIVATION FURNACE
PERIOD: AUGUST 6 - 7, 1996
METHOD: NIOSH 7400
DURATION: 24 HOURS

QA CHECK
_____
_____

FILTER/ SAMPLE NUMBER	SITE (Aug. 6 - 7)	INITIAL WEIGHT (GRAMS)	FINAL WEIGHT (GRAMS)	PARTICULATE WEIGHT (GRAMS)	START TIME (HOURS)	END TIME (HOURS)	ELAPSED TIME (MINUTES)	FLOW RATE (l/MIN)	AVG. TEMP. (K)	AVG. PRES. (mm Hg)	TOTAL* VOLUME (l)	FIBER DENSITY (fiber/mm2)	ASBESTOS CONC. (fiber/ml)	COMMENTS.
16016	Bkgrd	NA	NA	NA	0.00	24.00	1440.00	3.042	297.0	754.0	4360.53	< 13.0	< 0.0011	
16017	SW	NA	NA	NA	0.00	24.00	1440.00	3.163	297.0	754.0	4533.98			VOID
16018	NE-P	NA	NA	NA	0.00	24.00	1440.00	3.001	297.0	754.0	4301.76	< 13.0	< 0.0012	
16019	NE-C	NA	NA	NA	0.00	24.00	1440.00	3.187	297.0	754.0	4568.38	< 13.0	< 0.0011	
16020	Field Blank	NA	NA	NA	NA	NA	NA	NA	NA	NA	** 4441.16	< 13.0	< 0.0011	
16026	Aug 7 - 8 SW	NA	NA	NA	0.00	24.00	1440.00	3.163	297.0	754.0	4533.98	< 13.0	< 0.0011	MAKEUP SAMPLE FOR VOID

Notes: * THE TOTAL VOLUME REPRESENT STANDARD TEMPERATURE (298 DEG K) AND PRESSURE (760 mm Hg) CONDITIONS.

** REPRESENTS AVERAGE OF AIR VOLUMES FROM SAMPLES NO. 16016 TO 16019.

NA - DENOTES NOT APPLICABLE.

ASBESTOS CONCENTRATIONS

CLIENT: SENECA Army Depot Activity - Romulus, NY
PROJECT: SEAD 16/17 DEACTIVATION FURNACE
PERIOD: AUGUST 6 - 7, 1996
METHOD: NIOSH 7400
DURATION: 24 HOURS

QA CHECK
100 Percent: _____

SAMPLE ID#: Site:	MINIMUM QUANT. LEVEL	LAB DATA 16016 Bkgrd	16017 SW	16018 NE-P	16019 NE-C	16020 Field Blank	16026 SW						LAB BLANK	
ASBESTOS:			VOID				MAKE-UP Aug 7 to 8							
Fibers/Fields	NA	3/100		6/100	3/100	3/100	4/100							
Fibers/mm2	13.0	< 13.0		< 13.0	< 13.0	< 13.0	< 13.0							
Fibers/Filter	5000.0	< 5000.0		< 5000.0	< 5000.0	< 5000.0	< 5000.0							

ASBESTOS CONCENTRATIONS

CLIENT: SENECA Army Depot Activity - Romulus, NY
PROJECT: SEAD 16/17 DEACTIVATION FURNACE
PERIOD: AUGUST 6 - 7, 1996
METHOD: NIOSH 7400
DURATION: 24 HOURS

QA CHECK

	FIBERS/CUBIC METER													
SAMPLE ID#:	16016	16017	16018	16019	16020	16026								
Site:	Bkgrd	SW	NE-P	NE-C	* Field Blank	SW								
		VOID												
ASBESTOS	< 1146.65	NA	< 1162.32	< 1094.48	< 1125.83	< 1102.78								
0														
0														
0														
0														
0														
0														

SEAD-16 Asbestos

SEAD-16 Analytes Detected in Asbestos Samples
Complete Results of Analytes

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		AS16-1		AS16-10		AS16-11		AS16-12		AS16-13		AS16-14		AS16-15		AS16-16		AS16-17		AS16-17	
SAMP ID:		AS16-1		AS16-10		AS16-11		AS16-12		AS16-13		AS16-14		AS16-15		AS16-16		AS16-17A		AS16-17B	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:										0		0		0		0					
BOTTOM:										0.2		0.2		0.2		0.2					
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:																		8/8/96 8:00		8/8/96 8:00	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES																					
Amosite Asbestos	%	40		1	U	1	U	1	U	1	U	1	U	1	U	1	U				
Amosite Asbestos	%, +-5%																				
Chrysotile Asbestos	%	20		0.5	U	1	U	1	U	1	U	1	U	1	U	1	U	1		0	U
Chrysotile Asbestos	%, +-2.5%																				
Chrysotile Asbestos	%, +-5%																				
Chrysotile Asbestos	%, > THAN																				

SEAD-16 Analytes Detected in Asbestos Samples
Complete Results of Analytes

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		AS16-1		AS16-17		AS16-18		AS16-18		AS16-18		AS16-18		AS16-19		AS16-19	
SAMP ID:		AS16-1		AS16-17C		AS16-18A		AS16-18B		AS16-46A		AS16-46B		AS16-19A		AS16-19B	
QC CODE:		SA		SA		SA		SA		DU		DU		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:				8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES																	
Amosite Asbestos	%	40															
Amosite Asbestos	%, +-5%																
Chrysotile Asbestos	%	20		0	U	1		0	U	1		0	U	0	U	0	U
Chrysotile Asbestos	%, +-2.5%																
Chrysotile Asbestos	%, +-5%																
Chrysotile Asbestos	%, > THAN																

SEAD-16 Analytes Detected in Asbestos Samples
Complete Results of Analytes

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		AS16-1		AS16-2		AS16-20		AS16-21		AS16-21		AS16-22		AS16-23		AS16-24	
SAMP ID:		AS16-1		AS16-2		AS16-20		AS16-21A		AS16-21B		AS16-22		AS16-23		AS16-24	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:						8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES																	
Amosite Asbestos	%	40		1	U												
Amosite Asbestos	%, +-5%																
Chrysotile Asbestos	%	20		1	U	0	U	0	U	0	U	0	U	0	U	0	U
Chrysotile Asbestos	%, +-2.5%																
Chrysotile Asbestos	%, +-5%																
Chrysotile Asbestos	%, > THAN																

SEAD-16 Analytes Detected in Asbestos Samples
Complete Results of Analytes

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		AS16-1		AS16-24		AS16-25		AS16-26		AS16-27		AS16-28		AS16-29		AS16-29	
SAMP ID:		AS16-1		AS16-45		AS16-25		AS16-26		AS16-27		AS16-28		AS16-29A		AS16-29B	
QC CODE:		SA		DU		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:				8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES																	
Amosite Asbestos	%	40															
Amosite Asbestos	%, +-5%																
Chrysotile Asbestos	%	20		0	U	0	U	0	U	45		50		1		0	U
Chrysotile Asbestos	%, +-2.5%																
Chrysotile Asbestos	%, +-5%																
Chrysotile Asbestos	%, > THAN																

SEAD-16 Analytes Detected in Asbestos Samples
Complete Results of Analytes

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		AS16-1		AS16-29		AS16-3		AS16-30		AS16-30		AS16-30		AS16-31		AS16-32	
SAMP ID:		AS16-1		AS16-29C		AS16-3		AS16-30A		AS16-30B		AS16-30C		AS16-31		AS16-32	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:				8/8/96 8:00				8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES																	
Amosite Asbestos	%	40				50											
Amosite Asbestos	%, +-5%																
Chrysotile Asbestos	%	20		0	U	12.5		1		0	U	0	U	0	U	0	U
Chrysotile Asbestos	%, +-2.5%																
Chrysotile Asbestos	%, +-5%																
Chrysotile Asbestos	%, > THAN																

SEAD-16 Analytes Detected in Asbestos Samples
Complete Results of Analytes

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		AS16-1		AS16-33		AS16-34		AS16-35		AS16-36		AS16-37		AS16-37		AS16-38	
SAMP ID:		AS16-1		AS16-33		AS16-34		AS16-35		AS16-36		AS16-37A		AS16-37B		AS16-38	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:				8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES																	
Amosite Asbestos	%	40															
Amosite Asbestos	%, +-5%																
Chrysotile Asbestos	%	20		0	U	0	U	0	U	0	U	0	U	0	U	0	U
Chrysotile Asbestos	%, +-2.5%																
Chrysotile Asbestos	%, +-5%																
Chrysotile Asbestos	%, > THAN																

SEAD-16 Analytes Detected in Asbestos Samples
Complete Results of Analytes

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		AS16-1		AS16-39		AS16-39		AS16-4		AS16-40		AS16-40		AS16-41		AS16-41	
SAMP ID:		AS16-1		AS16-39A		AS16-39B		AS16-4		AS16-40		AS16-44		AS16-41A		AS16-41B	
QC CODE:		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:				8/8/96 8:00		8/8/96 8:00				8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES																	
Amosite Asbestos	%	40						1	U								
Amosite Asbestos	%, +-5%																
Chrysotile Asbestos	%	20		0	U	0	U	1	U	55		35		0	U	0	U
Chrysotile Asbestos	%, +-2.5%																
Chrysotile Asbestos	%, +-5%																
Chrysotile Asbestos	%, > THAN																

SEAD-16 Analytes Detected in Asbestos Samples
Complete Results of Analytes

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		AS16-1		AS16-42		AS16-43		AS16-43		AS16-43		AS16-5		AS16-6		AS16-7		AS16-8	
SAMP ID:		AS16-1		AS16-42		AS16-43A		AS16-43B		AS16-43C		AS16-5		AS16-6		AS16-7		AS16-8	
QC CODE:		SA		SA		SA		SA		SA		SA		DU		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI	
TOP:																		0	
BOTTOM:																		0.2	
MATRIX:		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS		SOLIDS	
SAMPLE DATE:				8/8/96 8:00		8/8/96 8:00		8/8/96 8:00		8/8/96 8:00									
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES																			
Amosite Asbestos	%	40										1	U	1	U	1	U	1	U
Amosite Asbestos	%, +-5%																		
Chrysotile Asbestos	%	20		65		0	U	0	U	0	U	30		30		7.5		1	U
Chrysotile Asbestos	%, +-2.5%																		
Chrysotile Asbestos	%, +-5%																		
Chrysotile Asbestos	%, > THAN																		

SEAD-16 Analytes Detected in Asbestos Samples
Complete Results of Analytes

SEAD-16 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		AS16-1		AS16-9	
SAMP ID:		AS16-1		AS16-9	
QC CODE:		SA		SA	
STUDY ID:		ESI		ESI	
TOP:				0	
BOTTOM:				0.2	
MATRIX:		SOLIDS		SOLIDS	
SAMPLE DATE:					
PARAMETER	UNITS	VALUE	Q	VALUE	Q
OTHER ANALYSES					
Amosite Asbestos	%	40		1	U
Amosite Asbestos	%, +-5%				
Chrysotile Asbestos	%	20		1	U
Chrysotile Asbestos	%, +-2.5%				
Chrysotile Asbestos	%, +-5%				
Chrysotile Asbestos	%, > THAN				

SEAD-17 Soil

On-site Surface Soils

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-10		SS17-11		SS17-12		SS17-13		SS17-14		SS17-15		SS17-16	
SAMP ID:		SS17-1-1		SS17-10-1		SS17-11-1		SS17-12-1		SS17-13-1		SS17-14-1		SS17-15-1		SS17-16-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		11/9/93		11/9/93		10/21/93		10/20/93		10/21/93		10/20/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
1,1,2-Trichloroethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
1,1-Dichloroethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
1,1-Dichloroethene	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
1,2-Dichloroethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
1,2-Dichloroethene (total)	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
1,2-Dichloropropane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
2-Butanone	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
2-Hexanone	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
4-Methyl-2-Pentanone	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Acetone	UG/KG	12	U	11	U	13	U	12	U	7	J	11	U	11	UR	13	U
Benzene	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Bromodichloromethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Bromoform	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Bromomethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Carbon Disulfide	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Carbon Tetrachloride	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Chlorobenzene	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Chloroethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Chloroform	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-10		SS17-11		SS17-12		SS17-13		SS17-14		SS17-15		SS17-16	
SAMP ID:		SS17-1-1		SS17-10-1		SS17-11-1		SS17-12-1		SS17-13-1		SS17-14-1		SS17-15-1		SS17-16-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		11/9/93		11/9/93		10/21/93		10/20/93		10/21/93		10/20/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Dibromochloromethane	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Ethylbenzene	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Methylene Chloride	UG/KG	12	U	11	U	13	U	12	U	4	J	11	U	11	UR	13	U
Styrene	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Tetrachloroethene	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Toluene	UG/KG	12	U	11	U	13	U	12	U	1	J	11	U	11	UR	13	U
Trichloroethene	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Vinyl Chloride	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
Xylene (total)	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
cis-1,3-Dichloropropene	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
trans-1,3-Dichloropropene	UG/KG	12	U	11	U	13	U	12	U	11	U	11	U	11	UR	13	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
1,2-Dichlorobenzene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
1,3-Dichlorobenzene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
1,4-Dichlorobenzene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
2,2'-oxybis(1-Chloropropane)	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
2,4,5-Trichlorophenol	UG/KG	1000	U	850	U	1000	U	940	U	860	U	850	UJ	850	UR	1100	U
2,4,6-Trichlorophenol	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
2,4-Dichlorophenol	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
2,4-Dimethylphenol	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-10		SS17-11		SS17-12		SS17-13		SS17-14		SS17-15		SS17-16	
SAMP ID:		SS17-1-1		SS17-10-1		SS17-11-1		SS17-12-1		SS17-13-1		SS17-14-1		SS17-15-1		SS17-16-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		11/9/93		11/9/93		10/21/93		10/20/93		10/21/93		10/20/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	850	U	1000	U	940	U	860	U	850	UJ	850	UR	1100	U
2,4-Dinitrotoluene	UG/KG	420	U	61	J	420	U	390	U	350	U	350	UJ	350	UR	450	U
2,6-Dinitrotoluene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
2-Chloronaphthalene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
2-Chlorophenol	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
2-Methylnaphthalene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
2-Methylphenol	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
2-Nitroaniline	UG/KG	1000	U	850	U	1000	U	940	U	860	U	850	UJ	850	UR	1100	U
2-Nitrophenol	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
3,3'-Dichlorobenzidine	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
3-Nitroaniline	UG/KG	1000	U	850	U	1000	U	940	U	860	U	850	UJ	850	UR	1100	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	850	U	1000	U	940	U	860	U	850	UJ	850	UR	1100	U
4-Bromophenyl-phenylether	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
4-Chloro-3-methylphenol	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
4-Chloroaniline	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
4-Chlorophenyl-phenylether	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
4-Methylphenol	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
4-Nitroaniline	UG/KG	1000	U	850	U	1000	U	940	U	860	U	850	UJ	850	UR	1100	U
4-Nitrophenol	UG/KG	1000	U	850	U	1000	U	940	U	860	U	850	UJ	850	UR	1100	U
Acenaphthene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Acenaphthylene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Anthracene	UG/KG	23	J	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-10		SS17-11		SS17-12		SS17-13		SS17-14		SS17-15		SS17-16	
SAMP ID:		SS17-1-1		SS17-10-1		SS17-11-1		SS17-12-1		SS17-13-1		SS17-14-1		SS17-15-1		SS17-16-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		11/9/93		11/9/93		10/21/93		10/20/93		10/21/93		10/20/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	72	J	38	J	420	U	390	U	350	U	350	UJ	350	UR	450	U
Benzo(a)pyrene	UG/KG	58	J	32	J	420	U	390	U	350	U	350	UJ	350	UR	450	U
Benzo(b)fluoranthene	UG/KG	70	J	50	J	420	U	390	U	350	U	350	UJ	350	UR	450	U
Benzo(g,h,i)perylene	UG/KG	63	J	27	J	420	U	390	U	350	U	350	UJ	350	UR	450	U
Benzo(k)fluoranthene	UG/KG	49	J	38	J	420	U	390	U	350	U	350	UJ	350	UR	450	U
Butylbenzylphthalate	UG/KG	420	U	46	J	420	U	390	U	350	U	350	UJ	350	UR	450	U
Carbazole	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Chrysene	UG/KG	75	J	78	J	420	U	390	U	350	U	350	UJ	350	UR	450	U
Di-n-butylphthalate	UG/KG	51	J	48	J	66	J	210	J	21	J	350	UJ	350	UR	340	J
Di-n-octylphthalate	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Dibenz(a,h)anthracene	UG/KG	40	J	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Dibenzofuran	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Diethylphthalate	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Dimethylphthalate	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Fluoranthene	UG/KG	190	J	150	J	420	U	390	U	19	J	350	UJ	350	UR	31	J
Fluorene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Hexachlorobenzene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Hexachlorobutadiene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Hexachlorocyclopentadiene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Hexachloroethane	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Indeno(1,2,3-cd)pyrene	UG/KG	62	J	25	J	420	U	390	U	350	U	350	UJ	350	UR	450	U
Isophorone	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-10		SS17-11		SS17-12		SS17-13		SS17-14		SS17-15		SS17-16	
SAMP ID:		SS17-1-1		SS17-10-1		SS17-11-1		SS17-12-1		SS17-13-1		SS17-14-1		SS17-15-1		SS17-16-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		11/9/93		11/9/93		10/21/93		10/20/93		10/21/93		10/20/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Naphthalene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Nitrobenzene	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Pentachlorophenol	UG/KG	1000	U	850	U	1000	U	940	U	860	U	850	UJ	850	UR	1100	U
Phenanthrene	UG/KG	120	J	72	J	420	U	390	U	19	J	350	UJ	350	UR	450	U
Phenol	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
Pyrene	UG/KG	170	J	110	J	26	J	390	U	17	J	350	UJ	350	UR	28	J
bis(2-Chloroethoxy) methane	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
bis(2-Chloroethyl) ether	UG/KG	420	U	350	U	420	U	390	U	350	U	350	UJ	350	UR	450	U
bis(2-Chloroisopropyl) ether	UG/KG																
bis(2-Ethylhexyl)phthalate	UG/KG	530		810	U	1300		390	U	460	J	50	J	350	UR	450	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.7	J	3.5	U	4.2	U	3.9	U	3.5	UJ	3.5	U	3.5	U	4.5	U
4,4'-DDE	UG/KG	5.2		37		4.2	U	2.9	J	11	J	2.7	J	3.5	U	4.5	U
4,4'-DDT	UG/KG	4.1	U	10		4.2	U	3.9	U	4.9	J	3.5	U	3.5	U	4.5	U
Aldrin	UG/KG	2.1	U	1.8	U	2.2	U	2	U	1.8	UJ	1.8	U	1.8	U	2.3	U
Aroclor-1016	UG/KG	41	U	35	U	42	U	39	U	35	UJ	35	U	35	U	45	U
Aroclor-1221	UG/KG	84	U	71	U	85	U	79	U	72	UJ	71	U	71	U	91	U
Aroclor-1232	UG/KG	41	U	35	U	42	U	39	U	35	UJ	35	U	35	U	45	U
Aroclor-1242	UG/KG	41	U	35	U	42	U	39	U	35	UJ	35	U	35	U	45	U
Aroclor-1248	UG/KG	41	U	35	U	42	U	39	U	35	UJ	35	U	35	U	45	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-10		SS17-11		SS17-12		SS17-13		SS17-14		SS17-15		SS17-16	
SAMP ID:		SS17-1-1		SS17-10-1		SS17-11-1		SS17-12-1		SS17-13-1		SS17-14-1		SS17-15-1		SS17-16-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		11/9/93		11/9/93		10/21/93		10/20/93		10/21/93		10/20/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	41	U	35	U	42	U	39	U	35	UJ	35	U	35	U	45	U
Aroclor-1260	UG/KG	41	U	35	U	42	U	39	U	35	UJ	35	U	35	U	45	U
Dieldrin	UG/KG	4.1	U	3.5	U	62		3.9	U	3.5	UJ	3.5	U	3.5	U	4.5	U
Endosulfan I	UG/KG	2.1	U	1.8	U	2.2	U	2	U	0.76	J	1.8	U	1.8	U	2.3	U
Endosulfan II	UG/KG	4.1	U	3.5	U	4.2	U	3.9	U	3.5	UJ	3.5	U	3.5	U	4.5	U
Endosulfan sulfate	UG/KG	4.1	U	3.5	U	4.2	U	3.9	U	3.5	UJ	3.5	U	3.5	U	4.5	U
Endrin	UG/KG	4.1	U	3.5	U	4.2	U	3.9	U	3.5	UJ	3.5	U	3.5	U	4.5	U
Endrin aldehyde	UG/KG	4.1	U	3.5	U	4.2	U	3.9	U	3.5	UJ	3.5	U	3.5	U	4.5	U
Endrin ketone	UG/KG	4.1	U	3.5	U	4.2	U	3.9	U	3.5	UJ	3.5	U	3.5	U	4.5	U
Heptachlor	UG/KG	2.1	U	1.8	U	2.2	U	2	U	1.8	UJ	1.8	U	1.8	U	2.3	U
Heptachlor epoxide	UG/KG	2.1	U	1.8	U	2.2	U	2	U	1.8	UJ	1.8	U	1.8	U	2.3	U
Methoxychlor	UG/KG	21	U	18	U	22	U	20	U	18	UJ	18	U	18	U	23	U
Toxaphene	UG/KG	210	U	180	U	220	U	200	U	180	UJ	180	U	180	U	230	U
alpha-BHC	UG/KG	2.1	U	1.8	U	2.2	U	2	U	1.8	UJ	1.8	U	1.8	U	2.3	U
alpha-Chlordane	UG/KG	2.1	U	1.8	U	2.2	U	2	U	1.8	UJ	1.8	U	1.8	U	2.3	U
beta-BHC	UG/KG	2.1	U	1.8	U	2.2	U	2	U	1.8	UJ	1.8	U	1.8	U	2.3	U
delta-BHC	UG/KG	2.1	U	1.8	U	2.2	U	2	U	1.8	UJ	1.8	U	1.8	U	2.3	U
gamma-BHC (Lindane)	UG/KG	2.1	U	1.8	U	2.2	U	2	U	1.8	UJ	1.8	U	1.8	U	2.3	U
gamma-Chlordane	UG/KG	2.1	U	1.8	U	2.2	U	2	U	1.8	UJ	1.8	U	1.8	U	2.3	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	0.21		0.1		2.4		0.06		0.81		1.1		0.84		0.21	
Percent Moisture (PEST/PCB)																	

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-10		SS17-11		SS17-12		SS17-13		SS17-14		SS17-15		SS17-16	
SAMP ID:		SS17-1-1		SS17-10-1		SS17-11-1		SS17-12-1		SS17-13-1		SS17-14-1		SS17-15-1		SS17-16-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		11/9/93		11/9/93		10/21/93		10/20/93		10/21/93		10/20/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)																	
Percent Moisture (VOCs)																	
Percent Solids (Metals)																	
Total Organic Carbon	MG/KG																
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
1,3-Dinitrobenzene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
2,4,6-Trinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
2,4-Dinitrotoluene	UG/KG	130	U	330	J	130	U	130	U	130		130	U	130	U	130	U
2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
2-amino-4,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
4-amino-2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
HMX	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
Nitrobenzene	UG/KG																
RDX	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
Tetryl	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
METALS																	
Aluminum	MG/KG	11800		9990	J	14200		13100		10700		4660		12600		17300	
Antimony	MG/KG	12.9	UR	52	J	12.4	U	10.8	UR	39.2		11.4	JR	9.8	U	12.4	UR
Arsenic	MG/KG	6		7	J	4.5	J	6.5		6.7		10.6		6.1		6.5	
Barium	MG/KG	102	R	357	J	189		203	R	343		199	R	122		210	R
Beryllium	MG/KG	0.5	J	0.48	J	0.73	J	0.59	J	0.5	J	0.34	J	0.54	J	0.82	J

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-10		SS17-11		SS17-12		SS17-13		SS17-14		SS17-15		SS17-16	
SAMP ID:		SS17-1-1		SS17-10-1		SS17-11-1		SS17-12-1		SS17-13-1		SS17-14-1		SS17-15-1		SS17-16-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		11/9/93		11/9/93		10/21/93		10/20/93		10/21/93		10/20/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	2.3		21.7	R	1.2	R	4.5		8.3		10.8		0.93	J	2.3	
Calcium	MG/KG	99300		113000	J	4670		88400		104000		209000		37800		4760	
Chromium	MG/KG	16.6		21.3	J	19.7		20		23.8		9.8		23.1		23	
Cobalt	MG/KG	6.1	J	9.9	J	9.3	J	12.3		8	J	5.6	J	12		7.7	J
Copper	MG/KG	81		546	J	60.7	J	202		404		499		94.5		182	
Cyanide	MG/KG	0.74	U	0.51	UJ	0.6	U	0.56	U	0.62	U	0.53	U	0.62	U	0.64	U
Iron	MG/KG	16400		21600	J	23100		23600		19500		11100		27500		24200	
Lead	MG/KG	594		6340	R	329		1210		2940		1310		472		595	
Magnesium	MG/KG	7430		9830	J	3640		6600		8890		8330		8880		4170	
Manganese	MG/KG	430		392	J	685		595		314	J	221		324	J	613	
Mercury	MG/KG	0.07	J	0.03	UJ	0.07	J	0.07	J	0.03	J	0.1	J	0.05	J	0.36	J
Nickel	MG/KG	19.8		34.6	J	21.3		33.9		31.9		28.5		43.5		25.2	
Potassium	MG/KG	1500		1350	J	1210		1260		1610		1370		1810		1810	
Selenium	MG/KG	0.26	J	1.6	J	0.64	J	0.23	UJ	0.47	J	0.34	J	0.2	J	0.25	UJ
Silver	MG/KG	1.6	UJ	4.6	J	1.6	UJ	1.4	UJ	5.2		3.8	J	1.2	U	1.6	UJ
Sodium	MG/KG	147	J	197	J	49.8	J	121	J	249	J	179	J	167	J	56.6	J
Thallium	MG/KG	0.24	U	0.22	UJ	0.22	UJ	0.25	U	0.21	U	1.3	U	0.21	U	0.27	U
Vanadium	MG/KG	21		15.3	J	25.9		20		17.7		10.2	J	18.3		29.8	
Zinc	MG/KG	200		620	J	110	J	574		315		480		155		150	
HERBICIDES																	
2,4,5-T	UG/KG	6.3	U	5.3	U	6.3	U	5.9	U	5.4	U	5.3	U	5.3	U	6.8	U
2,4,5-TP (Silvex)	UG/KG	6.3	U	5.3	U	6.3	U	5.9	U	5.4	U	5.3	U	5.3	U	6.8	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-10		SS17-11		SS17-12		SS17-13		SS17-14		SS17-15		SS17-16	
SAMP ID:		SS17-1-1		SS17-10-1		SS17-11-1		SS17-12-1		SS17-13-1		SS17-14-1		SS17-15-1		SS17-16-1	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		11/9/93		11/9/93		10/21/93		10/20/93		10/21/93		10/20/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG	63	U	53	U	63	U	59	U	54	U	53	U	53	U	68	U
2,4-DB	UG/KG	63	U	53	U	63	U	59	U	54	U	53	U	53	U	68	U
Dalapon	UG/KG	150	U	130	U	150	U	150	U	130	U	130	U	130	U	170	U
Dicamba	UG/KG	6.3	U	5.3	U	6.3	U	5.9	U	5.4	U	5.3	U	5.3	U	6.8	U
Dichloroprop	UG/KG	63	U	53	U	63	U	59	U	54	U	53	U	53	U	68	U
Dinoseb	UG/KG	32	U	27	U	32	U	30	U	27	U	27	U	27	U	34	U
MCPA	UG/KG	16000		5300	U	6300	U	5900	U	5400	U	5300	U	5300	U	6800	U
MCPP	UG/KG	6300	U	5300	U	6300	U	5900	U	5400	U	5300	U	5300	U	6800	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-17		SS17-18		SS17-18		SS17-19		SS17-2		SS17-20		SS17-21	
SAMP ID:		SS17-1-1		SS17-17-1		SS17-18-1		SS17-24-1		SS17-19-1		SS17-2-1		SS17-20-1		SS17-21-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/22/93		10/22/93		10/21/93		10/21/93		10/21/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
1,1,2-Trichloroethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
1,1-Dichloroethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
1,1-Dichloroethene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
1,2-Dichloroethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
1,2-Dichloroethene (total)	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
1,2-Dichloropropane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
2-Butanone	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
2-Hexanone	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
4-Methyl-2-Pentanone	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Acetone	UG/KG	12	U	72	U	13	U	15	J	41	U	13	U	12	U	14	U
Benzene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Bromodichloromethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Bromoform	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Bromomethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Carbon Disulfide	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Carbon Tetrachloride	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Chlorobenzene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Chloroethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Chloroform	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-17		SS17-18		SS17-18		SS17-19		SS17-2		SS17-20		SS17-21	
SAMP ID:		SS17-1-1		SS17-17-1		SS17-18-1		SS17-24-1		SS17-19-1		SS17-2-1		SS17-20-1		SS17-21-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/22/93		10/22/93		10/21/93		10/21/93		10/21/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Dibromochloromethane	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Ethylbenzene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Methylene Chloride	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Styrene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Tetrachloroethene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Toluene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Trichloroethene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Vinyl Chloride	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
Xylene (total)	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
cis-1,3-Dichloropropene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
trans-1,3-Dichloropropene	UG/KG	12	U	14	U	13	U	13	UJ	16	U	13	U	12	U	14	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
1,2-Dichlorobenzene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
1,3-Dichlorobenzene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
1,4-Dichlorobenzene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
2,2'-oxybis(1-Chloropropane)	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
2,4,5-Trichlorophenol	UG/KG	1000	U	1100	U	1100	U	1000	U	5500	U	1100	U	1000	U	1100	U
2,4,6-Trichlorophenol	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
2,4-Dichlorophenol	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
2,4-Dimethylphenol	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-17		SS17-18		SS17-18		SS17-19		SS17-2		SS17-20		SS17-21	
SAMP ID:		SS17-1-1		SS17-17-1		SS17-18-1		SS17-24-1		SS17-19-1		SS17-2-1		SS17-20-1		SS17-21-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/22/93		10/22/93		10/21/93		10/21/93		10/21/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	1100	U	1100	U	1000	U	5500	U	1100	U	1000	U	1100	U
2,4-Dinitrotoluene	UG/KG	420	U	430	U	24	J	430	U	2300	U	450	U	420	U	430	U
2,6-Dinitrotoluene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
2-Chloronaphthalene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
2-Chlorophenol	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
2-Methylnaphthalene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
2-Methylphenol	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
2-Nitroaniline	UG/KG	1000	U	1100	U	1100	U	1000	U	5500	U	1100	U	1000	U	1100	U
2-Nitrophenol	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
3,3'-Dichlorobenzidine	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
3-Nitroaniline	UG/KG	1000	U	1100	U	1100	U	1000	U	5500	U	1100	U	1000	U	1100	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	1100	U	1100	U	1000	U	5500	U	1100	U	1000	U	1100	U
4-Bromophenyl-phenylether	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
4-Chloro-3-methylphenol	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
4-Chloroaniline	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
4-Chlorophenyl-phenylether	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
4-Methylphenol	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
4-Nitroaniline	UG/KG	1000	U	1100	U	1100	U	1000	U	5500	U	1100	U	1000	U	1100	U
4-Nitrophenol	UG/KG	1000	U	1100	U	1100	U	1000	U	5500	U	1100	U	1000	U	1100	U
Acenaphthene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Acenaphthylene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Anthracene	UG/KG	23	J	430	U	430	U	430	U	2300	U	450	U	420	U	430	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-17		SS17-18		SS17-18		SS17-19		SS17-2		SS17-20		SS17-21	
SAMP ID:		SS17-1-1		SS17-17-1		SS17-18-1		SS17-24-1		SS17-19-1		SS17-2-1		SS17-20-1		SS17-21-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/22/93		10/22/93		10/21/93		10/21/93		10/21/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	72	J	430	U	31	J	430	U	2300	U	23	J	420	U	430	U
Benzo(a)pyrene	UG/KG	58	J	430	U	31	J	430	U	2300	U	24	J	420	U	430	U
Benzo(b)fluoranthene	UG/KG	70	J	430	U	46	J	32	J	2300	U	28	J	420	U	430	U
Benzo(g,h,i)perylene	UG/KG	63	J	430	U	42	J	430	U	2300	U	31	J	420	U	430	U
Benzo(k)fluoranthene	UG/KG	49	J	430	U	37	J	24	J	2300	U	450	U	420	U	430	U
Butylbenzylphthalate	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Carbazole	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Chrysene	UG/KG	75	J	430	U	55	J	38	J	2300	U	29	J	420	U	430	U
Di-n-butylphthalate	UG/KG	51	J	480		500		430	U	1200	J	76	J	510		760	
Di-n-octylphthalate	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Dibenz(a,h)anthracene	UG/KG	40	J	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Dibenzofuran	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Diethylphthalate	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Dimethylphthalate	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Fluoranthene	UG/KG	190	J	23	J	88	J	52	J	2300	U	47	J	420	U	430	U
Fluorene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Hexachlorobenzene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Hexachlorobutadiene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Hexachlorocyclopentadiene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Hexachloroethane	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Indeno(1,2,3-cd)pyrene	UG/KG	62	J	430	U	40	J	430	U	2300	U	30	J	420	U	430	U
Isophorone	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-17		SS17-18		SS17-18		SS17-19		SS17-2		SS17-20		SS17-21	
SAMP ID:		SS17-1-1		SS17-17-1		SS17-18-1		SS17-24-1		SS17-19-1		SS17-2-1		SS17-20-1		SS17-21-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/22/93		10/22/93		10/21/93		10/21/93		10/21/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Naphthalene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Nitrobenzene	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Pentachlorophenol	UG/KG	1000	U	1100	U	1100	U	1000	U	5500	U	1100	U	1000	U	1100	U
Phenanthrene	UG/KG	120	J	430	U	48	J	34	J	2300	U	450	U	420	U	430	U
Phenol	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
Pyrene	UG/KG	170	J	430	U	73	J	38	J	2300	U	47	J	420	U	430	U
bis(2-Chloroethoxy) methane	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
bis(2-Chloroethyl) ether	UG/KG	420	U	430	U	430	U	430	U	2300	U	450	U	420	U	430	U
bis(2-Chloroisopropyl) ether	UG/KG																
bis(2-Ethylhexyl)phthalate	UG/KG	530		430	U	1200		1300		2300	U	330	J	420	U	200	J
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.7	J	4.3	U	4.3	U	4.3	U	15		4.4	U	4.2	U	4.3	U
4,4'-DDE	UG/KG	5.2		4.3	U	17		17		2.5	J	4.4	U	4.2	U	4.3	U
4,4'-DDT	UG/KG	4.1	U	4.3	U	7		7.4		4.5	U	4.4	U	4.2	U	4.3	U
Aldrin	UG/KG	2.1	U	2.2	U	2.2	U	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
Aroclor-1016	UG/KG	41	U	43	U	43	U	43	U	45	U	44	U	42	U	43	U
Aroclor-1221	UG/KG	84	U	88	U	88	U	88	U	92	U	90	U	86	U	88	U
Aroclor-1232	UG/KG	41	U	43	U	43	U	43	U	45	U	44	U	42	U	43	U
Aroclor-1242	UG/KG	41	U	43	U	43	U	43	U	45	U	44	U	42	U	43	U
Aroclor-1248	UG/KG	41	U	43	U	43	U	43	U	45	U	44	U	42	U	43	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-17		SS17-18		SS17-18		SS17-19		SS17-2		SS17-20		SS17-21	
SAMP ID:		SS17-1-1		SS17-17-1		SS17-18-1		SS17-24-1		SS17-19-1		SS17-2-1		SS17-20-1		SS17-21-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/22/93		10/22/93		10/21/93		10/21/93		10/21/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	41	U	43	U	43	U	43	U	45	U	44	U	42	U	43	U
Aroclor-1260	UG/KG	41	U	43	U	43	U	43	U	45	U	44	U	21	J	28	J
Dieldrin	UG/KG	4.1	U	4.3	U	4.3	U	4.3	U	4.5	U	4.4	U	4.2	U	4.3	U
Endosulfan I	UG/KG	2.1	U	2.2	U	2.2	U	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
Endosulfan II	UG/KG	4.1	U	4.3	U	4.3	U	4.3	U	4.5	U	4.4	U	4.2	U	4.3	U
Endosulfan sulfate	UG/KG	4.1	U	4.3	U	4.3	U	4.3	U	4.5	U	4.4	U	4.2	U	4.3	U
Endrin	UG/KG	4.1	U	4.3	U	4.3	U	4.3	U	4.5	U	4.4	U	4.2	U	4.3	U
Endrin aldehyde	UG/KG	4.1	U	4.3	U	4.3	U	4.3	U	4.5	U	4.4	U	4.2	U	4.3	U
Endrin ketone	UG/KG	4.1	U	4.3	U	4.3	U	4.3	U	4.5	U	4.4	U	4.2	U	4.3	U
Heptachlor	UG/KG	2.1	U	2.2	U	2.2	U	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
Heptachlor epoxide	UG/KG	2.1	U	2.2	U	1.1	J	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
Methoxychlor	UG/KG	21	U	22	U	22	U	22	U	23	U	23	U	22	U	22	U
Toxaphene	UG/KG	210	U	220	U	220	U	220	U	230	U	230	U	220	U	220	U
alpha-BHC	UG/KG	2.1	U	2.2	U	2.2	U	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
alpha-Chlordane	UG/KG	2.1	U	2.2	U	2.2	U	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
beta-BHC	UG/KG	2.1	U	2.2	U	2.2	U	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
delta-BHC	UG/KG	2.1	U	2.2	U	2.2	U	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
gamma-BHC (Lindane)	UG/KG	2.1	U	2.2	U	2.2	U	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
gamma-Chlordane	UG/KG	2.1	U	2.2	U	2.2	U	2.2	U	2.3	U	2.3	U	2.2	U	2.2	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	0.21		0.14		0.13		0.08		0.2		0.67		0.22		0.24	
Percent Moisture (PEST/PCB)																	

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-17		SS17-18		SS17-18		SS17-19		SS17-2		SS17-20		SS17-21	
SAMP ID:		SS17-1-1		SS17-17-1		SS17-18-1		SS17-24-1		SS17-19-1		SS17-2-1		SS17-20-1		SS17-21-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/22/93		10/22/93		10/21/93		10/21/93		10/21/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)																	
Percent Moisture (VOCs)																	
Percent Solids (Metals)																	
Total Organic Carbon	MG/KG																
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	130	U	130	U	130	UR	130	U	130	U	130	U	130	U	130	U
1,3-Dinitrobenzene	UG/KG	130	U	130	U	130	UR	130	U	130	U	130	U	130	U	130	U
2,4,6-Trinitrotoluene	UG/KG	130	U	130	U	130	UR	130	U	130	U	130	U	130	U	130	U
2,4-Dinitrotoluene	UG/KG	130	U	130	U	130	UR	72	J	130	U	130	U	130	U	130	U
2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	UR	130	U	130	U	130	U	130	U	130	U
2-amino-4,6-Dinitrotoluene	UG/KG	130	U	130	U	130	UR	130	U	130	U	130	U	130	U	130	U
4-amino-2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	UR	130	U	130	U	130	U	130	U	130	U
HMX	UG/KG	130	U	130	U	130	UR	130	U	130	U	130	U	130	U	130	U
Nitrobenzene	UG/KG																
RDX	UG/KG	130	U	130	U	130	UR	130	U	130	U	130	U	130	U	130	U
Tetryl	UG/KG	130	U	130	U	130	UR	130	U	130	U	130	U	130	U	130	U
METALS																	
Aluminum	MG/KG	11800		14100		14400		18400		15500		14900		13900		14400	
Antimony	MG/KG	12.9	UR	11.6	UR	15.3	R	17.4	J	9	UR	12.9	UR	8.7	UR	11	UR
Arsenic	MG/KG	6		5.7		8.4		9.1		6.3		5.4		6.5		8.9	
Barium	MG/KG	102	R	132	R	452	R	447		149	R	122	R	96.2	R	96.5	R
Beryllium	MG/KG	0.5	J	0.74	J	0.71		0.87	J	0.83	J	0.58	J	0.71	J	0.74	J

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-17		SS17-18		SS17-18		SS17-19		SS17-2		SS17-20		SS17-21	
SAMP ID:		SS17-1-1		SS17-17-1		SS17-18-1		SS17-24-1		SS17-19-1		SS17-2-1		SS17-20-1		SS17-21-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/22/93		10/22/93		10/21/93		10/21/93		10/21/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	2.3		2		14.3		14.3		2.9		1.6		0.54	U	0.69	U
Calcium	MG/KG	99300		3400		39800		27600		4210		2830		6230		3910	
Chromium	MG/KG	16.6		19.7		23.9		27.2		22.9		19		21.4		23.2	
Cobalt	MG/KG	6.1	J	21.9		11.9		12.5		10.2		6.4	J	11.1		12.4	
Copper	MG/KG	81		47.8		409		378	J	81.7		54.4		26.9		25.9	
Cyanide	MG/KG	0.74	U	0.65	U	0.63	U	0.11	U	0.66	U	0.79	U	0.61	U	0.65	U
Iron	MG/KG	16400		23400		25300		28000		25500		20800		28700		28800	
Lead	MG/KG	594		373		2780		2310		402		371		69.2		44.9	
Magnesium	MG/KG	7430		3520		7590		6910		4260		3110		4770		4930	
Manganese	MG/KG	430		880		525		611		741		319		602		857	
Mercury	MG/KG	0.07	J	0.07	J	0.09	J	0.07		0.07	J	1	J	0.08	J	0.06	J
Nickel	MG/KG	19.8		23.5		39.5		40.4		30.2		18.3		31		35.6	
Potassium	MG/KG	1500		1070	J	1570		2260		1610		1080		1270		1410	
Selenium	MG/KG	0.26	J	0.25	UJ	0.19	J	0.45	J	0.23	UJ	0.27	UJ	0.18	UJ	0.2	UJ
Silver	MG/KG	1.6	UJ	1.5	UJ	4.7	J	3.2		1.1	UJ	1.3	UJ	1.1	UJ	1.4	UJ
Sodium	MG/KG	147	J	71.3	J	109	J	129	J	59.5	J	33.7	J	40.4	J	36.3	J
Thallium	MG/KG	0.24	U	0.28	U	0.19	U	0.27	U	0.25	U	0.3	U	0.2	U	0.22	U
Vanadium	MG/KG	21		25.5		23.6		30		26.3		26.6		24		24.1	
Zinc	MG/KG	200		140		1530		1420		351		136		71.6		83.9	
HERBICIDES																	
2,4,5-T	UG/KG	6.3	U	6.6	U	6.6	U	6.6	U	6.9	U	6.7	U	6.5	U	6.6	U
2,4,5-TP (Silvex)	UG/KG	6.3	U	6.6	U	6.6	UJ	6.6	U	6.9	U	6.7	U	6.5	U	6.6	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-17		SS17-18		SS17-18		SS17-19		SS17-2		SS17-20		SS17-21	
SAMP ID:		SS17-1-1		SS17-17-1		SS17-18-1		SS17-24-1		SS17-19-1		SS17-2-1		SS17-20-1		SS17-21-1	
QC CODE:		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/22/93		10/22/93		10/21/93		10/21/93		10/21/93		10/21/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG	63	U	66	U	66	UJ	66	U	69	U	67	U	65	U	66	U
2,4-DB	UG/KG	63	U	66	U	66	U	66	U	69	U	67	U	65	U	66	U
Dalapon	UG/KG	150	U	160	U	160	U	160	U	170	U	160	U	160	U	160	U
Dicamba	UG/KG	6.3	U	6.6	U	6.6	U	6.6	U	6.9	U	6.7	U	6.5	U	6.6	U
Dichloroprop	UG/KG	63	U	66	U	66	U	66	U	69	U	67	U	65	U	66	U
Dinoseb	UG/KG	32	U	33	U	33	U	33	U	69	U	34	U	33	U	33	U
MCPA	UG/KG	16000		32000		6600	U	6600	U	6900	U	6700	U	6500	U	6600	U
MCPP	UG/KG	6300	U	6600	U	6600	U	6600	U	6900	U	6700	U	6500	U	6600	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-22		SS17-23		SS17-24		SS17-25		SS17-26		SS17-27		SS17-28	
SAMP ID:		SS17-1-1		SS17-22-1		SS17-23-1		16072		16073		16069		16063		16064	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		8/22/96		8/22/96		8/22/96		8/21/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	14	U	14	U	12	UJ	13	U	12	U	12	UJ	12	U
1,1,2-Trichloroethane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
1,1-Dichloroethane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
1,1-Dichloroethene	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
1,2-Dichloroethane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
1,2-Dichloroethene (total)	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
1,2-Dichloropropane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
2-Butanone	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
2-Hexanone	UG/KG	12	U	14	U	14	U	12	UJ	13	U	12	U	12	UJ	12	U
4-Methyl-2-Pentanone	UG/KG	12	U	14	U	14	U	12	UJ	13	U	12	U	12	UJ	12	U
Acetone	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Benzene	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Bromodichloromethane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Bromoform	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Bromomethane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Carbon Disulfide	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Carbon Tetrachloride	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	6	UJ	6	U
Chlorobenzene	UG/KG	12	U	14	U	14	U	12	UJ	13	U	12	U	12	UJ	12	U
Chloroethane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Chloroform	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	6	UJ	6	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-22		SS17-23		SS17-24		SS17-25		SS17-26		SS17-27		SS17-28	
SAMP ID:		SS17-1-1		SS17-22-1		SS17-23-1		16072		16073		16069		16063		16064	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		8/22/96		8/22/96		8/22/96		8/21/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Dibromochloromethane	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Ethylbenzene	UG/KG	12	U	14	U	14	U	12	UJ	13	U	12	U	12	UJ	12	U
Methylene Chloride	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Styrene	UG/KG	12	U	14	U	14	U	12	UJ	13	U	12	U	12	UJ	12	U
Tetrachloroethene	UG/KG	12	U	14	U	14	U	12	UJ	13	U	12	U	12	UJ	12	U
Toluene	UG/KG	12	U	14	U	14	U	12	UJ	13	U	12	U	12	UJ	12	U
Trichloroethene	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Vinyl Chloride	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
Xylene (total)	UG/KG	12	U	14	U	14	U	12	UJ	13	U	12	U	12	UJ	12	U
cis-1,3-Dichloropropene	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
trans-1,3-Dichloropropene	UG/KG	12	U	14	U	14	U	12	U	13	U	12	U	12	UJ	12	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
1,2-Dichlorobenzene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
1,3-Dichlorobenzene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
1,4-Dichlorobenzene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
2,2'-oxybis(1-Chloropropane)	UG/KG	420	U	430	U	430	U										
2,4,5-Trichlorophenol	UG/KG	1000	U	1000	U	1000	U	940	U	990	U	960	U	960	U	950	U
2,4,6-Trichlorophenol	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
2,4-Dichlorophenol	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
2,4-Dimethylphenol	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-22		SS17-23		SS17-24		SS17-25		SS17-26		SS17-27		SS17-28	
SAMP ID:		SS17-1-1		SS17-22-1		SS17-23-1		16072		16073		16069		16063		16064	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		8/22/96		8/22/96		8/22/96		8/21/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	1000	U	1000	U	940	U	990	U	960	U	960	U	950	U
2,4-Dinitrotoluene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
2,6-Dinitrotoluene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
2-Chloronaphthalene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
2-Chlorophenol	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
2-Methylnaphthalene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
2-Methylphenol	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
2-Nitroaniline	UG/KG	1000	U	1000	U	1000	U	940	U	990	U	960	U	960	U	950	U
2-Nitrophenol	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
3,3'-Dichlorobenzidine	UG/KG	420	U	430	U	430	U	390	UJ	410	J	390	U	400	U	390	U
3-Nitroaniline	UG/KG	1000	U	1000	U	1000	U	940	UJ	990	J	960	U	960	U	950	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	1000	U	1000	U	940	U	990	U	960	U	960	U	950	U
4-Bromophenyl-phenylether	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
4-Chloro-3-methylphenol	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
4-Chloroaniline	UG/KG	420	U	430	U	430	U	390	UJ	410	U	390	U	400	U	390	U
4-Chlorophenyl-phenylether	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
4-Methylphenol	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
4-Nitroaniline	UG/KG	1000	U	1000	U	1000	U	940	UJ	990	J	960	U	960	U	950	U
4-Nitrophenol	UG/KG	1000	U	1000	U	1000	U	940	U	990	U	960	U	960	U	950	U
Acenaphthene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Acenaphthylene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Anthracene	UG/KG	23	J	430	U	430	U	390	U	410	U	390	U	400	U	390	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-22		SS17-23		SS17-24		SS17-25		SS17-26		SS17-27		SS17-28	
SAMP ID:		SS17-1-1		SS17-22-1		SS17-23-1		16072		16073		16069		16063		16064	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		8/22/96		8/22/96		8/22/96		8/21/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	72	J	21	J	430	U	390	U	410	U	390	U	400	U	390	U
Benzo(a)pyrene	UG/KG	58	J	21	J	430	U	390	U	410	U	25	J	400	U	390	U
Benzo(b)fluoranthene	UG/KG	70	J	28	J	430	U	390	U	410	U	390	U	400	U	390	U
Benzo(g,h,i)perylene	UG/KG	63	J	430	U	430	U	390	U	410	U	82	J	400	U	390	U
Benzo(k)fluoranthene	UG/KG	49	J	21	J	430	U	390	U	410	U	390	U	400	U	390	U
Butylbenzylphthalate	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Carbazole	UG/KG	420	U	430	U	430	U	390	UJ	410	J	390	UJ	400	U	390	U
Chrysene	UG/KG	75	J	28	J	430	U	23	J	19	J	21	J	400	U	390	U
Di-n-butylphthalate	UG/KG	51	J	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Di-n-octylphthalate	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Dibenz(a,h)anthracene	UG/KG	40	J	430	U	430	U	390	U	410	U	390	U	59	J	55	J
Dibenzofuran	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Diethylphthalate	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Dimethylphthalate	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Fluoranthene	UG/KG	190	J	49	J	430	U	27	J	23	J	28	J	400	U	390	U
Fluorene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Hexachlorobenzene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Hexachlorobutadiene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Hexachlorocyclopentadiene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Hexachloroethane	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Indeno(1,2,3-cd)pyrene	UG/KG	62	J	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Isophorone	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-22		SS17-23		SS17-24		SS17-25		SS17-26		SS17-27		SS17-28	
SAMP ID:		SS17-1-1		SS17-22-1		SS17-23-1		16072		16073		16069		16063		16064	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		8/22/96		8/22/96		8/22/96		8/21/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Naphthalene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Nitrobenzene	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Pentachlorophenol	UG/KG	1000	U	1000	U	1000	U	940	UJ	990	J	1700	UJ	960	U	950	U
Phenanthrene	UG/KG	120	J	20	J	430	U	18	J	410	U	20	J	400	U	390	U
Phenol	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
Pyrene	UG/KG	170	J	40	J	430	U	36	J	29	J	50	J	400	U	390	U
bis(2-Chloroethoxy) methane	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
bis(2-Chloroethyl) ether	UG/KG	420	U	430	U	430	U	390	U	410	U	390	U	400	U	390	U
bis(2-Chloroisopropyl) ether	UG/KG							390	U	410	J	390	U	400	U	390	U
bis(2-Ethylhexyl)phthalate	UG/KG	530		430	U	430	U	390	U	410	U	390	U	400	U	390	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.7	J	4.3	U	4.3	U	3.9	U	4.1	U	4	U	4	U	3.9	U
4,4'-DDE	UG/KG	5.2		4.3	U	4.3	U	3.9	U	4.1	U	4	U	24		3.7	U
4,4'-DDT	UG/KG	4.1	U	4.3	U	4.3	U	3.9	U	4.1	U	4	U	16		2.7	J
Aldrin	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	2	U	2	U
Aroclor-1016	UG/KG	41	U	43	U	43	U	39	U	41	U	40	U	40	U	39	U
Aroclor-1221	UG/KG	84	U	87	U	87	U	79	U	82	U	80	U	81	U	80	U
Aroclor-1232	UG/KG	41	U	43	U	43	U	39	U	41	U	40	U	40	U	39	U
Aroclor-1242	UG/KG	41	U	43	U	43	U	39	U	41	U	40	U	40	U	39	U
Aroclor-1248	UG/KG	41	U	43	U	43	U	39	U	41	U	40	U	40	U	39	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-22		SS17-23		SS17-24		SS17-25		SS17-26		SS17-27		SS17-28	
SAMP ID:		SS17-1-1		SS17-22-1		SS17-23-1		16072		16073		16069		16063		16064	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		8/22/96		8/22/96		8/22/96		8/21/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	41	U	43	U	43	U	39	U	41	U	40	U	40	U	39	U
Aroclor-1260	UG/KG	41	U	43	U	43	U	39	U	41	U	40	U	40	U	39	U
Dieldrin	UG/KG	4.1	U	4.3	U	4.3	U	3.9	U	12	J	4	U	13		80	J
Endosulfan I	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	1.4	U	2	U
Endosulfan II	UG/KG	4.1	U	4.3	U	4.3	U	3.9	U	4.1	U	4	U	4	U	3.9	U
Endosulfan sulfate	UG/KG	4.1	U	4.3	U	4.3	U	3.9	U	4.1	U	4	U	4	U	3.9	U
Endrin	UG/KG	4.1	U	4.3	U	4.3	U	3.9	U	4.1	U	4	U	4	U	3.9	U
Endrin aldehyde	UG/KG	4.1	U	4.3	U	4.3	U	3.9	U	4.1	U	4	U	4	U	3.9	U
Endrin ketone	UG/KG	4.1	U	4.3	U	4.3	U	3.9	U	4.1	U	4	U	4	U	3.9	U
Heptachlor	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	2	U	2	U
Heptachlor epoxide	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	2	U	2	U
Methoxychlor	UG/KG	21	U	22	U	22	U	20	U	21	U	20	U	20	U	20	U
Toxaphene	UG/KG	210	U	220	U	220	U	200	U	210	U	200	U	200	U	200	U
alpha-BHC	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	2	U	2	U
alpha-Chlordane	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	2	U	2	U
beta-BHC	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	2	U	2	U
delta-BHC	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	2	U	2	U
gamma-BHC (Lindane)	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	2	U	2	U
gamma-Chlordane	UG/KG	2.1	U	2.2	U	2.2	U	2	U	2.1	U	2	U	2	U	2	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	0.21		0.09		0.07		0.15		0.07		0.1		0.06		0.12	
Percent Moisture (PEST/PCB)								16		19		17		17		16	

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LOC_ID:		SS17-1		SS17-22		SS17-23		SS17-24		SS17-25		SS17-26		SS17-27		SS17-28	
SAMP ID:		SS17-1-1		SS17-22-1		SS17-23-1		16072		16073		16069		16063		16064	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		8/22/96		8/22/96		8/22/96		8/21/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)								16		19		17		17		16	
Percent Moisture (VOCs)								18		25		17		17		16	
Percent Solids (Metals)								84.1		80.9		83.4		82.9		84	
Total Organic Carbon	MG/KG											40900					
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
2,4,6-Trinitrotoluene	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
HMX	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
Nitrobenzene	UG/KG							120	U	120	U	120	U	120	U	120	U
RDX	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
Tetryl	UG/KG	130	U	130	U	130	U	120	U	120	U	120	U	120	U	120	U
METALS																	
Aluminum	MG/KG	11800		18100		15700		14400	J	16700	J	16000	J	14900	J	14100	J
Antimony	MG/KG	12.9	UR	12.8	UJ	13.1	UJ	3.3	J	3.9	J	5	J	12.7	J	2.7	J
Arsenic	MG/KG	6		5.9		5.3		5.4		6.2		6.5		6.1		5	
Barium	MG/KG	102	R	127		92.6		140		192	J	164	J	387	J	141	J
Beryllium	MG/KG	0.5	J	0.8	J	0.72	J	0.56		0.64		0.51		0.61		0.58	

SEAD-17 Analytes Detected in Surface Soils
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Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-22		SS17-23		SS17-24		SS17-25		SS17-26		SS17-27		SS17-28	
SAMP ID:		SS17-1-1		SS17-22-1		SS17-23-1		16072		16073		16069		16063		16064	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		8/22/96		8/22/96		8/22/96		8/21/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	2.3		1.5		0.82	U	2.8		3.5		3.6		15		5.6	
Calcium	MG/KG	99300		6900		2510		2300		3940		2500		34900		7310	
Chromium	MG/KG	16.6		23.8		20.3		20.1		22.3		22.2		22.9		21.7	
Cobalt	MG/KG	6.1	J	9.9	J	9.4	J	11		11.3		11.5		11.6		10.2	
Copper	MG/KG	81		52	J	22.6	J	59		58.2		80.6		480		141	
Cyanide	MG/KG	0.74	U	0.11	U	0.1	U	0.46	U	0.61	U	0.57	U	0.58	U	0.56	U
Iron	MG/KG	16400		24700		22700		25300		25500		26800		23300	J	24200	J
Lead	MG/KG	594		226		111		496		448		697		2740		524	
Magnesium	MG/KG	7430		4880		3720		3340		3500		3260		6210		4380	
Manganese	MG/KG	430		662		598		652	J	996	J	950	J	573		579	
Mercury	MG/KG	0.07	J	0.06	J	0.04	J	0.06		0.07		0.11		0.12		0.06	
Nickel	MG/KG	19.8		27		22.6		21.2		23.4		22.3		30.6		32.6	
Potassium	MG/KG	1500		1960		1430		1230		1540		1390		1520		1370	
Selenium	MG/KG	0.26	J	0.24	UJ	0.26	UJ	1	J	1.2	J	1.7	J	1.1		0.79	
Silver	MG/KG	1.6	UJ	1.6	U	1.7	U	0.58		0.29	U	0.55		2.9		1.1	
Sodium	MG/KG	147	J	87	J	46	J	61.2	U	60.7	U	60	U	198		119	
Thallium	MG/KG	0.24	U	0.26	U	0.29	U	1.5		1.1		1.5		0.98	J	0.9	J
Vanadium	MG/KG	21		30.1		26.4		26.7		29.3		29.7		23.4		21.2	
Zinc	MG/KG	200		196		75.5		222	J	284	J	233	J	901		468	
HERBICIDES																	
2,4,5-T	UG/KG	6.3	U	6.5	U	6.6	U										
2,4,5-TP (Silvex)	UG/KG	6.3	U	6.5	U	6.6	U										

SEAD-17 Analytes Detected in Surface Soils
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LOC_ID:		SS17-1		SS17-22		SS17-23		SS17-24		SS17-25		SS17-26		SS17-27		SS17-28	
SAMP ID:		SS17-1-1		SS17-22-1		SS17-23-1		16072		16073		16069		16063		16064	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		8/22/96		8/22/96		8/22/96		8/21/96		8/21/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG	63	U	65	U	66	U										
2,4-DB	UG/KG	63	U	65	U	66	U										
Dalapon	UG/KG	150	U	160	U	160	U										
Dicamba	UG/KG	6.3	U	6.5	U	6.6	U										
Dichloroprop	UG/KG	63	U	65	U	66	U										
Dinoseb	UG/KG	32	U	33	U	33	U										
MCPA	UG/KG	16000		6500	U	6600	U										
MCPP	UG/KG	6300	U	6500	U	6600	U										

SEAD-17 Analytes Detected in Surface Soils
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SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-29		SS17-3		SS17-30		SS17-31		SS17-34		SS17-35		SS17-36	
SAMP ID:		SS17-1-1		16065		SS17-3-1		16070		16071		16079		16078		16077	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/21/96		10/21/93		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	10	UJ	13	U	12	U	12	UJ	11	UJ	12	U	12	U
1,1,2-Trichloroethane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
1,1-Dichloroethane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
1,1-Dichloroethene	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
1,2-Dichloroethane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
1,2-Dichloroethene (total)	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
1,2-Dichloropropane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
2-Butanone	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
2-Hexanone	UG/KG	12	U	10	UJ	13	U	12	U	12	UJ	11	UJ	12	UJ	12	U
4-Methyl-2-Pentanone	UG/KG	12	U	10	UJ	13	U	12	U	12	UJ	11	UJ	12	UJ	12	U
Acetone	UG/KG	12	U	10	U	13	U	12	U	8	J	11	U	12	U	12	U
Benzene	UG/KG	12	U	2	J	13	U	12	U	12	U	11	U	12	U	12	U
Bromodichloromethane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Bromoform	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Bromomethane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Carbon Disulfide	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Carbon Tetrachloride	UG/KG	12	U	5	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Chlorobenzene	UG/KG	12	U	10	UJ	13	U	12	U	12	UJ	11	UJ	12	UJ	12	U
Chloroethane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Chloroform	UG/KG	12	U	5	UJ	13	U	12	U	12	U	11	U	12	U	12	U

SEAD-17 Analytes Detected in Surface Soils
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SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-29		SS17-3		SS17-30		SS17-31		SS17-34		SS17-35		SS17-36	
SAMP ID:		SS17-1-1		16065		SS17-3-1		16070		16071		16079		16078		16077	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/21/96		10/21/93		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Dibromochloromethane	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Ethylbenzene	UG/KG	12	U	10	UJ	13	U	12	U	12	UJ	11	UJ	12	UJ	12	U
Methylene Chloride	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Styrene	UG/KG	12	U	10	UJ	13	U	12	U	12	UJ	11	UJ	12	UJ	12	U
Tetrachloroethene	UG/KG	12	U	10	UJ	13	U	12	U	12	UJ	11	UJ	12	UJ	12	U
Toluene	UG/KG	12	U	8	J	13	U	12	U	12	UJ	11	UJ	12	UJ	12	U
Trichloroethene	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Vinyl Chloride	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
Xylene (total)	UG/KG	12	U	10	UJ	13	U	12	U	12	UJ	11	UJ	12	UJ	12	U
cis-1,3-Dichloropropene	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
trans-1,3-Dichloropropene	UG/KG	12	U	10	UJ	13	U	12	U	12	U	11	U	12	U	12	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
1,2-Dichlorobenzene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
1,3-Dichlorobenzene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
1,4-Dichlorobenzene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
2,2'-oxybis(1-Chloropropane)	UG/KG	420	U			430	U										
2,4,5-Trichlorophenol	UG/KG	1000	U	830	U	1000	U	920	U	930	U	880	U	990	U	940	U
2,4,6-Trichlorophenol	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
2,4-Dichlorophenol	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
2,4-Dimethylphenol	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-29		SS17-3		SS17-30		SS17-31		SS17-34		SS17-35		SS17-36	
SAMP ID:		SS17-1-1		16065		SS17-3-1		16070		16071		16079		16078		16077	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/21/96		10/21/93		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	830	U	1000	U	920	U	930	U	880	U	990	U	940	U
2,4-Dinitrotoluene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
2,6-Dinitrotoluene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
2-Chloronaphthalene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
2-Chlorophenol	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
2-Methylnaphthalene	UG/KG	420	U	130	J	430	U	380	U	380	U	360	U	410	U	390	U
2-Methylphenol	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
2-Nitroaniline	UG/KG	1000	U	830	U	1000	U	920	U	930	U	880	U	990	U	940	U
2-Nitrophenol	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
3,3'-Dichlorobenzidine	UG/KG	420	U	340	U	430	U	380	UJ	380	UJ	360	UJ	410	UJ	390	UJ
3-Nitroaniline	UG/KG	1000	U	830	U	1000	U	920	UJ	930	UJ	880	UJ	990	UJ	940	UJ
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	830	U	1000	U	920	U	930	U	880	U	990	U	940	U
4-Bromophenyl-phenylether	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
4-Chloro-3-methylphenol	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
4-Chloroaniline	UG/KG	420	U	340	U	430	U	380	U	380	UJ	360	UJ	410	UJ	390	UJ
4-Chlorophenyl-phenylether	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
4-Methylphenol	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
4-Nitroaniline	UG/KG	1000	U	830	U	1000	U	920	UJ	930	UJ	880	UJ	990	UJ	940	UJ
4-Nitrophenol	UG/KG	1000	U	830	U	1000	U	920	UJ	930	U	880	U	990	U	940	U
Acenaphthene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Acenaphthylene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Anthracene	UG/KG	23	J	340	U	430	U	380	U	380	U	360	U	410	U	390	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-29		SS17-3		SS17-30		SS17-31		SS17-34		SS17-35		SS17-36	
SAMP ID:		SS17-1-1		16065		SS17-3-1		16070		16071		16079		16078		16077	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/21/96		10/21/93		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	72	J	340	U	430	U	19	J	380	U	360	U	410	U	390	U
Benzo(a)pyrene	UG/KG	58	J	340	U	430	U	18	J	380	U	360	U	25	J	390	U
Benzo(b)fluoranthene	UG/KG	70	J	340	U	430	U	49	J	20	J	360	U	410	U	390	U
Benzo(g,h,i)perylene	UG/KG	63	J	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Benzo(k)fluoranthene	UG/KG	49	J	340	U	430	U	380	U	18	J	360	U	410	U	390	U
Butylbenzylphthalate	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Carbazole	UG/KG	420	U	340	U	430	U	380	UJ	380	UJ	360	UJ	410	UJ	390	UJ
Chrysene	UG/KG	75	J	340	U	430	U	22	J	21	J	19	J	20	J	390	U
Di-n-butylphthalate	UG/KG	51	J	340	U	45	J	380	U	380	U	360	U	410	U	390	U
Di-n-octylphthalate	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Dibenz(a,h)anthracene	UG/KG	40	J	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Dibenzofuran	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Diethylphthalate	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Dimethylphthalate	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Fluoranthene	UG/KG	190	J	340	U	430	U	28	J	26	J	26	J	24	J	390	U
Fluorene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Hexachlorobenzene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Hexachlorobutadiene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Hexachlorocyclopentadiene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Hexachloroethane	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Indeno(1,2,3-cd)pyrene	UG/KG	62	J	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Isophorone	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-29		SS17-3		SS17-30		SS17-31		SS17-34		SS17-35		SS17-36	
SAMP ID:		SS17-1-1		16065		SS17-3-1		16070		16071		16079		16078		16077	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/21/96		10/21/93		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Naphthalene	UG/KG	420	U	37	J	430	U	380	U	380	U	360	U	410	U	390	U
Nitrobenzene	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Pentachlorophenol	UG/KG	1000	U	830	U	1000	U	43	J	930	UJ	880	UJ	990	UJ	940	UJ
Phenanthrene	UG/KG	120	J	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Phenol	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
Pyrene	UG/KG	170	J	340	U	430	U	34	J	32	J	29	J	30	J	390	U
bis(2-Chloroethoxy) methane	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
bis(2-Chloroethyl) ether	UG/KG	420	U	340	U	430	U	380	U	380	U	360	U	410	U	390	U
bis(2-Chloroisopropyl) ether	UG/KG			340	U			380	U	380	U	360	U	410	U	390	U
bis(2-Ethylhexyl)phthalate	UG/KG	530		340	U	290	J	380	U	380	U	360	U	410	U	390	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.7	J	1.7	J	4.3	U	3.8	U	3.9	U	3.7	U	4.1	U	3.8	U
4,4'-DDE	UG/KG	5.2		2.2	J	4.3	U	3.8	U	3.9	U	3.7	U	4.1	U	5	
4,4'-DDT	UG/KG	4.1	U	3.4	U	4.3	U	3.8	U	3.9	U	3.7	U	4.1	U	3.8	U
Aldrin	UG/KG	2.1	U	1.9		2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
Aroclor-1016	UG/KG	41	U	34	U	43	U	38	U	39	U	37	U	41	U	38	U
Aroclor-1221	UG/KG	84	U	70	U	86	U	78	U	79	U	74	U	83	U	78	U
Aroclor-1232	UG/KG	41	U	34	U	43	U	38	U	39	U	37	U	41	U	38	U
Aroclor-1242	UG/KG	41	U	34	U	43	U	38	U	39	U	37	U	41	U	38	U
Aroclor-1248	UG/KG	41	U	34	U	43	U	38	U	39	U	37	U	41	U	38	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-29		SS17-3		SS17-30		SS17-31		SS17-34		SS17-35		SS17-36	
SAMP ID:		SS17-1-1		16065		SS17-3-1		16070		16071		16079		16078		16077	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/21/96		10/21/93		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	41	U	34	U	43	U	38	U	39	U	37	U	41	U	38	U
Aroclor-1260	UG/KG	41	U	34	U	43	U	38	U	39	U	37	U	41	U	38	U
Dieldrin	UG/KG	4.1	U	3.4	U	4.3	U	4	U	3.9	U	3.7	U	12	J	3.8	U
Endosulfan I	UG/KG	2.1	U	1.8	U	2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
Endosulfan II	UG/KG	4.1	U	3.4	U	4.3	U	3.8	U	3.9	U	3.7	U	4.1	U	3.8	U
Endosulfan sulfate	UG/KG	4.1	U	3.4	U	4.3	U	3.8	U	3.9	U	3.7	U	4.1	U	3.8	U
Endrin	UG/KG	4.1	U	3.4	U	4.3	U	3.8	U	3.9	U	3.7	U	4.1	U	3.8	U
Endrin aldehyde	UG/KG	4.1	U	3.4	U	4.3	U	3.8	U	3.9	U	3.7	U	4.1	U	3.8	U
Endrin ketone	UG/KG	4.1	U	3.4	U	4.3	U	3.8	U	3.9	U	3.7	U	4.1	U	3.8	U
Heptachlor	UG/KG	2.1	U	1.8	U	2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
Heptachlor epoxide	UG/KG	2.1	U	1.8	U	2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
Methoxychlor	UG/KG	21	U	18	U	22	U	20	U	20	U	19	U	21	U	20	U
Toxaphene	UG/KG	210	U	180	U	220	U	200	U	200	U	190	U	210	U	200	U
alpha-BHC	UG/KG	2.1	U	1.8	U	2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
alpha-Chlordane	UG/KG	2.1	U	1.8	U	2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
beta-BHC	UG/KG	2.1	U	1.8	U	2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
delta-BHC	UG/KG	2.1	U	1.8	U	2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
gamma-BHC (Lindane)	UG/KG	2.1	U	1.8	U	2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
gamma-Chlordane	UG/KG	2.1	U	1.8	U	2.2	U	2	U	2	U	1.9	U	2.1	U	2	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	0.21		0.53		0.13		0.07		0.11		0.08		0.22		0.26	
Percent Moisture (PEST/PCB)				4				14		15		10		20		14	

SEAD-17 Analytes Detected in Surface Soils
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SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-29		SS17-3		SS17-30		SS17-31		SS17-34		SS17-35		SS17-36	
SAMP ID:		SS17-1-1		16065		SS17-3-1		16070		16071		16079		16078		16077	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/21/96		10/21/93		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)				4				14		15		10		20		15	
Percent Moisture (VOCs)				3				15		17		13		20		15	
Percent Solids (Metals)				96.1				85.7		84.7		89.7		80.3		85.5	
Total Organic Carbon	MG/KG																
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
2,4,6-Trinitrotoluene	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
2,6-Dinitrotoluene	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
HMX	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
Nitrobenzene	UG/KG			120	U			120	U	120	U	120	U	120	U	120	U
RDX	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
Tetryl	UG/KG	130	U	120	U	130	U	120	U	120	U	120	U	120	U	120	U
METALS																	
Aluminum	MG/KG	11800		12100	J	15200		14400	J	13200	J	6720	J	11700		14900	J
Antimony	MG/KG	12.9	UR	2	J	13.6	UR	1.4	J	3.4	J	1.5	J	2.6	J	4	J
Arsenic	MG/KG	6		4		5		4		4.1		4.2		4.2		5.5	
Barium	MG/KG	102	R	153	J	102	R	97.7	J	123	J	90.4	J	156	J	237	J
Beryllium	MG/KG	0.5	J	0.52		0.42	J	0.48		0.43		0.25		0.45		0.62	

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-29		SS17-3		SS17-30		SS17-31		SS17-34		SS17-35		SS17-36	
SAMP ID:		SS17-1-1		16065		SS17-3-1		16070		16071		16079		16078		16077	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/21/96		10/21/93		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	2.3		0.93		2.2		0.53		1.6		2.1		3.3		3.4	
Calcium	MG/KG	99300		42500		2180		2180		2260		166000		18900		5880	
Chromium	MG/KG	16.6		23.3		16.8		18.1		16.7		9.7		16.7		21.3	
Cobalt	MG/KG	6.1	J	13.5		5.7	J	8.4		7.4		7.5		7.6		10.7	
Copper	MG/KG	81		71.2		39.3		36.7		67.6		39.3		62.4		142	
Cyanide	MG/KG	0.74	U	0.52	U	0.75	U	0.53	U	0.59	U	1.5		0.78	J	0.48	U
Iron	MG/KG	16400		26100	J	19300		21100		18100		11800		18400		24700	
Lead	MG/KG	594		254		375		172		450		265		534		815	
Magnesium	MG/KG	7430		6390		2540		2950		2850		8660		3380		4020	
Manganese	MG/KG	430		404		277		430	J	304	J	531	J	517	J	608	J
Mercury	MG/KG	0.07	J	0.06		0.07	J	0.09		0.06		0.05		0.07		0.09	
Nickel	MG/KG	19.8		47.8		14.1		17.5		16.6		16.2		19.2		26.3	
Potassium	MG/KG	1500		1660		1060	J	975		983		1090		1390		1610	
Selenium	MG/KG	0.26	J	0.65	U	0.37	J	0.99	J	0.98	J	0.64	J	1	J	0.68	J
Silver	MG/KG	1.6	UJ	0.24	U	1.7	UJ	0.3	U	0.29	U	0.49		0.71		1.1	
Sodium	MG/KG	147	J	131		33.5	J	62.5	U	60.2	U	53.8	U	64.1	U	58.5	U
Thallium	MG/KG	0.24	U	0.8	J	0.26	U	0.98	U	0.94	U	0.84	U	1	U	0.92	U
Vanadium	MG/KG	21		16.7		29.2		26		23.2		14		21.4		27.1	
Zinc	MG/KG	200		79.5		129		93	J	139	J	167	J	207	J	488	J
HERBICIDES																	
2,4,5-T	UG/KG	6.3	U			6.5	U										
2,4,5-TP (Silvex)	UG/KG	6.3	U			6.5	U										

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-29		SS17-3		SS17-30		SS17-31		SS17-34		SS17-35		SS17-36	
SAMP ID:		SS17-1-1		16065		SS17-3-1		16070		16071		16079		16078		16077	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		ESI		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/21/96		10/21/93		8/22/96		8/22/96		8/22/96		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG	63	U			65	U										
2,4-DB	UG/KG	63	U			65	U										
Dalapon	UG/KG	150	U			160	U										
Dicamba	UG/KG	6.3	U			6.5	U										
Dichloroprop	UG/KG	63	U			65	U										
Dinoseb	UG/KG	32	U			33	U										
MCPA	UG/KG	16000				6500	U										
MCPP	UG/KG	6300	U			6500	U										

SEAD-17 Analytes Detected in Surface Soils
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Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-37		SS17-38		SS17-39		SS17-4		SS17-5		SS17-500-N		SS17-500-S	
SAMP ID:		SS17-1-1		16080		16076		16075		SS17-4-1		SS17-5-1		16081		16082	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/22/96		8/22/96		8/22/96		10/21/93		10/21/93		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	11	UJ	12	UJ	13	U	12	U	14	U	13	UJ	12	U
1,1,2-Trichloroethane	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
1,1-Dichloroethane	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
1,1-Dichloroethene	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
1,2-Dichloroethane	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
1,2-Dichloroethene (total)	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
1,2-Dichloropropane	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
2-Butanone	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
2-Hexanone	UG/KG	12	U	11	UJ	12	UJ	13	U	12	U	14	U	13	UJ	12	U
4-Methyl-2-Pentanone	UG/KG	12	U	11	UJ	12	UJ	13	U	12	U	14	U	13	UJ	12	U
Acetone	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
Benzene	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
Bromodichloromethane	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
Bromoform	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
Bromomethane	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
Carbon Disulfide	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
Carbon Tetrachloride	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
Chlorobenzene	UG/KG	12	U	11	UJ	12	UJ	13	U	12	U	14	U	13	UJ	12	U
Chloroethane	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
Chloroform	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-37		SS17-38		SS17-39		SS17-4		SS17-5		SS17-500-N		SS17-500-S	
SAMP ID:		SS17-1-1		16080		16076		16075		SS17-4-1		SS17-5-1		16081		16082	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/22/96		8/22/96		8/22/96		10/21/93		10/21/93		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
Dibromochloromethane	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
Ethylbenzene	UG/KG	12	U	11	UJ	12	UJ	13	U	12	U	14	U	13	UJ	12	U
Methylene Chloride	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
Styrene	UG/KG	12	U	11	UJ	12	UJ	13	U	12	U	14	U	13	UJ	12	U
Tetrachloroethene	UG/KG	12	U	11	UJ	12	UJ	13	U	12	U	14	U	13	UJ	12	U
Toluene	UG/KG	12	U	11	UJ	12	UJ	13	U	12	U	14	U	13	UJ	12	U
Trichloroethene	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
Vinyl Chloride	UG/KG	12	U	11	U	12	U	13	U	12	U	14	U	13	U	12	U
Xylene (total)	UG/KG	12	U	11	UJ	12	UJ	13	U	12	U	14	U	13	UJ	12	U
cis-1,3-Dichloropropene	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
trans-1,3-Dichloropropene	UG/KG	12	U	11	UJ	12	U	13	U	12	U	14	U	13	U	12	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
1,2-Dichlorobenzene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
1,3-Dichlorobenzene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
1,4-Dichlorobenzene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
2,2'-oxybis(1-Chloropropane)	UG/KG	420	U							410	U	430	U				
2,4,5-Trichlorophenol	UG/KG	1000	U	860	U	970	U	1000	U	990	U	1000	U	1000	U	980	U
2,4,6-Trichlorophenol	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
2,4-Dichlorophenol	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
2,4-Dimethylphenol	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U

SEAD-17 Analytes Detected in Surface Soils
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SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-37		SS17-38		SS17-39		SS17-4		SS17-5		SS17-500-N		SS17-500-S	
SAMP ID:		SS17-1-1		16080		16076		16075		SS17-4-1		SS17-5-1		16081		16082	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/22/96		8/22/96		8/22/96		10/21/93		10/21/93		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	860	U	970	U	1000	U	990	U	1000	U	1000	U	980	U
2,4-Dinitrotoluene	UG/KG	420	U	85	J	400	U	410	U	1400		430	U	420	U	400	U
2,6-Dinitrotoluene	UG/KG	420	U	350	U	400	U	410	U	70	J	430	U	420	U	400	U
2-Chloronaphthalene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
2-Chlorophenol	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
2-Methylnaphthalene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
2-Methylphenol	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
2-Nitroaniline	UG/KG	1000	U	860	U	970	U	1000	U	990	U	1000	U	1000	U	980	U
2-Nitrophenol	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
3,3'-Dichlorobenzidine	UG/KG	420	U	350	UJ	400	UJ	410	UJ	410	U	430	U	420	UJ	400	UJ
3-Nitroaniline	UG/KG	1000	U	860	UJ	970	UJ	1000	UJ	990	U	1000	U	1000	UJ	980	UJ
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	860	U	970	U	1000	U	990	U	1000	U	1000	U	980	U
4-Bromophenyl-phenylether	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
4-Chloro-3-methylphenol	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
4-Chloroaniline	UG/KG	420	U	350	UJ	400	UJ	410	UJ	410	U	430	U	420	UJ	400	UJ
4-Chlorophenyl-phenylether	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
4-Methylphenol	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
4-Nitroaniline	UG/KG	1000	U	860	UJ	970	UJ	1000	UJ	990	U	1000	U	1000	U	980	U
4-Nitrophenol	UG/KG	1000	U	860	U	970	U	1000	U	990	U	1000	U	1000	U	980	U
Acenaphthene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Acenaphthylene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Anthracene	UG/KG	23	J	350	U	400	U	410	U	410	U	430	U	420	U	400	U

SEAD-17 Analytes Detected in Surface Soils
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SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-37		SS17-38		SS17-39		SS17-4		SS17-5		SS17-500-N		SS17-500-S	
SAMP ID:		SS17-1-1		16080		16076		16075		SS17-4-1		SS17-5-1		16081		16082	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/22/96		8/22/96		8/22/96		10/21/93		10/21/93		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	72	J	37	J	400	U	410	U	22	J	430	U	420	U	400	U
Benzo(a)pyrene	UG/KG	58	J	34	J	400	U	19	J	410	U	430	U	420	U	20	J
Benzo(b)fluoranthene	UG/KG	70	J	65	J	400	U	410	U	28	J	430	U	420	U	400	U
Benzo(g,h,i)perylene	UG/KG	63	J	44	J	400	U	410	U	28	J	22	J	420	U	400	U
Benzo(k)fluoranthene	UG/KG	49	J	35	J	400	U	410	U	410	U	430	U	420	U	400	U
Butylbenzylphthalate	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Carbazole	UG/KG	420	U	350	UJ	400	UJ	410	UJ	410	U	430	U	420	UJ	400	UJ
Chrysene	UG/KG	75	J	63	J	18	J	21	J	32	J	430	U	20	J	23	J
Di-n-butylphthalate	UG/KG	51	J	550		400	U	410	U	89	J	87	J	420	U	400	U
Di-n-octylphthalate	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Dibenz(a,h)anthracene	UG/KG	40	J	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Dibenzofuran	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Diethylphthalate	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Dimethylphthalate	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Fluoranthene	UG/KG	190	J	74	J	25	J	30	J	54	J	33	J	26	J	28	J
Fluorene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Hexachlorobenzene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Hexachlorobutadiene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Hexachlorocyclopentadiene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Hexachloroethane	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Indeno(1,2,3-cd)pyrene	UG/KG	62	J	33	J	400	U	410	U	410	U	430	U	420	U	400	U
Isophorone	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-37		SS17-38		SS17-39		SS17-4		SS17-5		SS17-500-N		SS17-500-S	
SAMP ID:		SS17-1-1		16080		16076		16075		SS17-4-1		SS17-5-1		16081		16082	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/22/96		8/22/96		8/22/96		10/21/93		10/21/93		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	71	J	400	U	410	U	27	J	430	U	420	U	400	U
Naphthalene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Nitrobenzene	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Pentachlorophenol	UG/KG	1000	U	860	UJ	970	UJ	1000	UJ	990	U	1000	U	1000	UJ	980	UJ
Phenanthrene	UG/KG	120	J	56	J	19	J	20	J	33	J	430	U	420	U	400	U
Phenol	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
Pyrene	UG/KG	170	J	82	J	31	J	36	J	44	J	33	J	30	J	36	J
bis(2-Chloroethoxy) methane	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
bis(2-Chloroethyl) ether	UG/KG	420	U	350	U	400	U	410	U	410	U	430	U	420	U	400	U
bis(2-Chloroisopropyl) ether	UG/KG			350	U	400	U	410	U					420	U	400	U
bis(2-Ethylhexyl)phthalate	UG/KG	530		350	U	400	U	410	U	390	J	600		420	U	400	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.7	J	2.6	J	4	U	4.2	U	4.1	U	4.3	U	4.2	U	4	U
4,4'-DDE	UG/KG	5.2		27		4	U	4.2	U	22		4.3	U	4.2	U	4	U
4,4'-DDT	UG/KG	4.1	U	14	J	4	U	4.2	U	2.6	J	4.3	U	4.2	U	4	U
Aldrin	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
Aroclor-1016	UG/KG	41	U	35	U	40	U	42	U	41	U	43	U	42	U	40	U
Aroclor-1221	UG/KG	84	U	72	U	81	U	85	U	83	U	87	U	85	U	82	U
Aroclor-1232	UG/KG	41	U	35	U	40	U	42	U	41	U	43	U	42	U	40	U
Aroclor-1242	UG/KG	41	U	35	U	40	U	42	U	41	U	43	U	42	U	40	U
Aroclor-1248	UG/KG	41	U	35	U	40	U	42	U	41	U	43	U	42	U	40	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-37		SS17-38		SS17-39		SS17-4		SS17-5		SS17-500-N		SS17-500-S	
SAMP ID:		SS17-1-1		16080		16076		16075		SS17-4-1		SS17-5-1		16081		16082	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/22/96		8/22/96		8/22/96		10/21/93		10/21/93		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	41	U	35	U	40	U	42	U	41	U	43	U	42	U	40	U
Aroclor-1260	UG/KG	41	U	28	J	40	U	42	U	41	U	43	U	42	U	40	U
Dieldrin	UG/KG	4.1	U	22		4	U	4.2	U	4.1	U	4.3	U	4.2	U	4	U
Endosulfan I	UG/KG	2.1	U	2.4	J	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
Endosulfan II	UG/KG	4.1	U	3.5	U	4	U	4.2	U	4.1	U	4.3	U	4.2	U	4	U
Endosulfan sulfate	UG/KG	4.1	U	3.5	U	4	U	4.2	U	4.1	U	4.3	U	4.2	U	4	U
Endrin	UG/KG	4.1	U	1.8	J	4	U	4.2	U	4.1	U	4.3	U	4.2	U	4	U
Endrin aldehyde	UG/KG	4.1	U	3.5	U	4	U	4.2	U	4.1	U	4.3	U	4.2	U	4	U
Endrin ketone	UG/KG	4.1	U	3.5	U	4	U	4.2	U	4.1	U	4.3	U	4.2	U	4	U
Heptachlor	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
Heptachlor epoxide	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
Methoxychlor	UG/KG	21	U	18	U	21	U	21	U	21	U	22	U	22	U	21	U
Toxaphene	UG/KG	210	U	180	U	210	U	210	U	210	U	220	U	220	U	210	U
alpha-BHC	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
alpha-Chlordane	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
beta-BHC	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
delta-BHC	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
gamma-BHC (Lindane)	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
gamma-Chlordane	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	2.1	U	2.2	U	2.2	U	2.1	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	0.21		0.44		0.28		0.34		0.51		0.17		0.23		0.5	
Percent Moisture (PEST/PCB)				7		18		21						21		18	

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-37		SS17-38		SS17-39		SS17-4		SS17-5		SS17-500-N		SS17-500-S	
SAMP ID:		SS17-1-1		16080		16076		16075		SS17-4-1		SS17-5-1		16081		16082	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/22/96		8/22/96		8/22/96		10/21/93		10/21/93		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)				7		18		21						21		18	
Percent Moisture (VOCs)				9		19		24						22		18	
Percent Solids (Metals)				92.9		81.9		79.2						79.2		82.4	
Total Organic Carbon	MG/KG			32700													
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
2,4,6-Trinitrotoluene	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
2,6-Dinitrotoluene	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
HMX	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
Nitrobenzene	UG/KG			120	U	120	U	120	U					120	U	120	U
RDX	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
Tetryl	UG/KG	130	U	120	U	120	U	120	U	130	U	130	U	120	U	120	U
METALS																	
Aluminum	MG/KG	11800		10200	J	11700	J	14400	J	10800		17300		14600	J	13300	J
Antimony	MG/KG	12.9	UR	40.1	J	1.4	J	1.6	J	12.5	UR	10	UR	0.5		1.2	
Arsenic	MG/KG	6		7.7		4.2		4.4		6.6		7.4		5.2		4.1	
Barium	MG/KG	102	R	524	J	103	J	156	J	192	R	146	R	117	J	79.9	J
Beryllium	MG/KG	0.5	J	0.36		0.48		0.83		0.52	J	0.81	J	0.62		0.51	

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-37		SS17-38		SS17-39		SS17-4		SS17-5		SS17-500-N		SS17-500-S	
SAMP ID:		SS17-1-1		16080		16076		16075		SS17-4-1		SS17-5-1		16081		16082	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/22/96		8/22/96		8/22/96		10/21/93		10/21/93		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	2.3		25.5		0.59		0.5		4.9		3.7		0.2		0.37	
Calcium	MG/KG	99300		117000		2780		5280		117000		2740		4570		3140	
Chromium	MG/KG	16.6		19.7		16.5		20.1		18.3		23.6		20.3		17.2	
Cobalt	MG/KG	6.1	J	9.7		7.9		7.4		10.4	J	9.6		8.9		6.3	
Copper	MG/KG	81		837		29.7		46.2		249		73		24.3		19.3	
Cyanide	MG/KG	0.74	U	0.52	U	0.56	U	0.57	U	0.68	U	0.78	U	0.58	U	0.61	U
Iron	MG/KG	16400		18700		19200		22500		19400		25000		23200		19300	
Lead	MG/KG	594		6270		163		183		1680		577		47.7		80.8	
Magnesium	MG/KG	7430		7880		3060		3820		6900		3670		3610		3130	
Manganese	MG/KG	430		371	J	475	J	256	J	431		737		550	J	234	J
Mercury	MG/KG	0.07	J	0.05		0.07		0.09		0.07	J	0.9	J	0.09		0.07	
Nickel	MG/KG	19.8		35.9		17.6		23.5		28		24.9		24.1		17.8	
Potassium	MG/KG	1500		1750		1060		1410		1380		1520		1870		1150	
Selenium	MG/KG	0.26	J	0.98	J	0.82	J	1.2	J	0.36	J	0.23	UJ	1.1	J	1.4	J
Silver	MG/KG	1.6	UJ	9		0.31	U	0.45		1.6	UJ	1.3	UJ	0.32	U	0.3	U
Sodium	MG/KG	147	J	248		64.7	U	64.4	U	144	J	53.1	J	66.3	U	66.8	
Thallium	MG/KG	0.24	U	0.8	U	1	U	1	U	0.25	U	0.25	U	1.1		0.96	U
Vanadium	MG/KG	21		16.8		21.2		25.2		17.5		29.7		25.8		22.9	
Zinc	MG/KG	200		1470	J	84.1	J	84.8	J	324		237		84.2	J	82.5	J
HERBICIDES																	
2,4,5-T	UG/KG	6.3	U							6.2	U	6.5	U				
2,4,5-TP (Silvex)	UG/KG	6.3	U							6.2	U	6.5	U				

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-37		SS17-38		SS17-39		SS17-4		SS17-5		SS17-500-N		SS17-500-S	
SAMP ID:		SS17-1-1		16080		16076		16075		SS17-4-1		SS17-5-1		16081		16082	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		ESI		RI ROUND1		RI ROUND1		RI ROUND1		ESI		ESI		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		8/22/96		8/22/96		8/22/96		10/21/93		10/21/93		8/22/96		8/22/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG	63	U							62	U	65	U				
2,4-DB	UG/KG	63	U							62	U	65	U				
Dalapon	UG/KG	150	U							150	U	160	U				
Dicamba	UG/KG	6.3	U							6.2	U	6.5	U				
Dichloroprop	UG/KG	63	U							62	U	65	U				
Dinoseb	UG/KG	32	U							31	U	33	U				
MCPA	UG/KG	16000								6200	U	34000					
MCPP	UG/KG	6300	U							6200	U	6500	U				

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-6		SS17-7		SS17-8		SS17-9	
SAMP ID:		SS17-1-1		SS17-6-1		SS17-7-1		SS17-8-1		SS17-9-1	
QC CODE:		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		10/21/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS											
1,1,1-Trichloroethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
1,1,2,2-Tetrachloroethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
1,1,2-Trichloroethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
1,1-Dichloroethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
1,1-Dichloroethene	UG/KG	12	U	10	U	12	U	12	U	10	UJ
1,2-Dichloroethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
1,2-Dichloroethene (total)	UG/KG	12	U	10	U	12	U	12	U	10	UJ
1,2-Dichloropropane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
2-Butanone	UG/KG	12	U	10	U	12	U	12	U	10	UJ
2-Hexanone	UG/KG	12	U	10	U	12	U	12	U	10	UJ
4-Methyl-2-Pentanone	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Acetone	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Benzene	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Bromodichloromethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Bromoform	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Bromomethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Carbon Disulfide	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Carbon Tetrachloride	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Chlorobenzene	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Chloroethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Chloroform	UG/KG	12	U	10	U	12	U	12	U	10	UJ

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-6		SS17-7		SS17-8		SS17-9	
SAMP ID:		SS17-1-1		SS17-6-1		SS17-7-1		SS17-8-1		SS17-9-1	
QC CODE:		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		10/21/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Dibromochloromethane	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Ethylbenzene	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Methylene Chloride	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Styrene	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Tetrachloroethene	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Toluene	UG/KG	12	U	10	U	12	U	12	U	4	J
Trichloroethene	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Vinyl Chloride	UG/KG	12	U	10	U	12	U	12	U	10	UJ
Xylene (total)	UG/KG	12	U	10	U	12	U	12	U	10	UJ
cis-1,3-Dichloropropene	UG/KG	12	U	10	U	12	U	12	U	10	UJ
trans-1,3-Dichloropropene	UG/KG	12	U	10	U	12	U	12	U	10	UJ
SEMIVOLATILE ORGANICS											
1,2,4-Trichlorobenzene	UG/KG	420	U	340	U	410	U	410	U	340	U
1,2-Dichlorobenzene	UG/KG	420	U	340	U	410	U	410	U	340	U
1,3-Dichlorobenzene	UG/KG	420	U	340	U	410	U	410	U	340	U
1,4-Dichlorobenzene	UG/KG	420	U	340	U	410	U	410	U	340	U
2,2'-oxybis(1-Chloropropane)	UG/KG	420	U	340	U	410	U	410	U	340	U
2,4,5-Trichlorophenol	UG/KG	1000	U	830	U	990	U	1000	U	830	U
2,4,6-Trichlorophenol	UG/KG	420	U	340	U	410	U	410	U	340	U
2,4-Dichlorophenol	UG/KG	420	U	340	U	410	U	410	U	340	U
2,4-Dimethylphenol	UG/KG	420	U	340	U	410	U	410	U	340	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-6		SS17-7		SS17-8		SS17-9	
SAMP ID:		SS17-1-1		SS17-6-1		SS17-7-1		SS17-8-1		SS17-9-1	
QC CODE:		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		10/21/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrophenol	UG/KG	1000	U	830	U	990	U	1000	U	830	U
2,4-Dinitrotoluene	UG/KG	420	U	340	U	410	U	410	U	340	U
2,6-Dinitrotoluene	UG/KG	420	U	340	U	410	U	410	U	340	U
2-Chloronaphthalene	UG/KG	420	U	340	U	410	U	410	U	340	U
2-Chlorophenol	UG/KG	420	U	340	U	410	U	410	U	340	U
2-Methylnaphthalene	UG/KG	420	U	340	U	410	U	410	U	340	U
2-Methylphenol	UG/KG	420	U	340	U	410	U	410	U	340	U
2-Nitroaniline	UG/KG	1000	U	830	U	990	U	1000	U	830	U
2-Nitrophenol	UG/KG	420	U	340	U	410	U	410	U	340	U
3,3'-Dichlorobenzidine	UG/KG	420	U	340	U	410	U	410	U	340	U
3-Nitroaniline	UG/KG	1000	U	830	U	990	U	1000	U	830	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	830	U	990	U	1000	U	830	U
4-Bromophenyl-phenylether	UG/KG	420	U	340	U	410	U	410	U	340	U
4-Chloro-3-methylphenol	UG/KG	420	U	340	U	410	U	410	U	340	U
4-Chloroaniline	UG/KG	420	U	340	U	410	U	410	U	340	U
4-Chlorophenyl-phenylether	UG/KG	420	U	340	U	410	U	410	U	340	U
4-Methylphenol	UG/KG	420	U	340	U	410	U	410	U	340	U
4-Nitroaniline	UG/KG	1000	U	830	U	990	U	1000	U	830	U
4-Nitrophenol	UG/KG	1000	U	830	U	990	U	1000	U	830	U
Acenaphthene	UG/KG	420	U	340	U	410	U	410	U	340	U
Acenaphthylene	UG/KG	420	U	340	U	410	U	410	U	340	U
Anthracene	UG/KG	23	J	340	U	410	U	410	U	340	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-6		SS17-7		SS17-8		SS17-9	
SAMP ID:		SS17-1-1		SS17-6-1		SS17-7-1		SS17-8-1		SS17-9-1	
QC CODE:		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		10/21/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)anthracene	UG/KG	72	J	19	J	410	U	30	J	16	J
Benzo(a)pyrene	UG/KG	58	J	340	U	410	U	24	J	340	U
Benzo(b)fluoranthene	UG/KG	70	J	26	J	410	U	27	J	17	J
Benzo(g,h,i)perylene	UG/KG	63	J	340	U	410	U	410	U	340	U
Benzo(k)fluoranthene	UG/KG	49	J	18	J	410	U	23	J	17	J
Butylbenzylphthalate	UG/KG	420	U	37	J	410	U	410	U	340	U
Carbazole	UG/KG	420	U	340	U	410	U	410	U	340	U
Chrysene	UG/KG	75	J	31	J	410	U	36	J	28	J
Di-n-butylphthalate	UG/KG	51	J	60	J	97	J	35	J	340	U
Di-n-octylphthalate	UG/KG	420	U	340	U	410	U	410	U	340	U
Dibenz(a,h)anthracene	UG/KG	40	J	340	U	410	U	410	U	340	U
Dibenzofuran	UG/KG	420	U	340	U	410	U	410	U	340	U
Diethylphthalate	UG/KG	420	U	340	U	410	U	410	U	340	U
Dimethylphthalate	UG/KG	420	U	340	U	410	U	410	U	340	U
Fluoranthene	UG/KG	190	J	48	J	21	J	71	J	41	J
Fluorene	UG/KG	420	U	340	U	410	U	410	U	340	U
Hexachlorobenzene	UG/KG	420	U	340	U	410	U	410	U	340	U
Hexachlorobutadiene	UG/KG	420	U	340	U	410	U	410	U	340	U
Hexachlorocyclopentadiene	UG/KG	420	U	340	U	410	U	410	U	340	U
Hexachloroethane	UG/KG	420	U	340	U	410	U	410	U	340	U
Indeno(1,2,3-cd)pyrene	UG/KG	62	J	340	U	410	U	410	U	340	U
Isophorone	UG/KG	420	U	340	U	410	U	410	U	340	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-6		SS17-7		SS17-8		SS17-9	
SAMP ID:		SS17-1-1		SS17-6-1		SS17-7-1		SS17-8-1		SS17-9-1	
QC CODE:		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		10/21/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitroso-di-n-propylamine	UG/KG	420	U	340	U	410	U	410	U	340	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	340	U	410	U	410	U	340	U
Naphthalene	UG/KG	420	U	340	U	410	U	410	U	340	U
Nitrobenzene	UG/KG	420	U	340	U	410	U	410	U	340	U
Pentachlorophenol	UG/KG	1000	U	830	U	990	U	1000	U	830	U
Phenanthrene	UG/KG	120	J	36	J	410	U	46	J	31	J
Phenol	UG/KG	420	U	340	U	410	U	410	U	340	U
Pyrene	UG/KG	170	J	43	J	410	U	63	J	37	J
bis(2-Chloroethoxy) methane	UG/KG	420	U	340	U	410	U	410	U	340	U
bis(2-Chloroethyl) ether	UG/KG	420	U	340	U	410	U	410	U	340	U
bis(2-Chloroisopropyl) ether	UG/KG										
bis(2-Ethylhexyl)phthalate	UG/KG	530		340	U	650		410	U	340	U
PESTICIDES/PCB											
4,4'-DDD	UG/KG	4.7	J	3.4	U	4	U	4.1	U	3.4	U
4,4'-DDE	UG/KG	5.2		11		3.2	J	3.4	J	8.8	
4,4'-DDT	UG/KG	4.1	U	1.9	J	4	U	4.1	U	3.4	U
Aldrin	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
Aroclor-1016	UG/KG	41	U	34	U	40	U	41	U	34	U
Aroclor-1221	UG/KG	84	U	70	U	82	U	84	U	70	U
Aroclor-1232	UG/KG	41	U	34	U	40	U	41	U	34	U
Aroclor-1242	UG/KG	41	U	34	U	40	U	41	U	34	U
Aroclor-1248	UG/KG	41	U	34	U	40	U	41	U	34	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-6		SS17-7		SS17-8		SS17-9	
SAMP ID:		SS17-1-1		SS17-6-1		SS17-7-1		SS17-8-1		SS17-9-1	
QC CODE:		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		10/21/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1254	UG/KG	41	U	34	U	40	U	41	U	34	U
Aroclor-1260	UG/KG	41	U	34	U	40	U	41	U	34	U
Dieldrin	UG/KG	4.1	U	3.4	U	4	U	4.1	U	3.4	U
Endosulfan I	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
Endosulfan II	UG/KG	4.1	U	3.4	U	4	U	4.1	U	3.4	U
Endosulfan sulfate	UG/KG	4.1	U	3.4	U	4	U	4.1	U	3.4	U
Endrin	UG/KG	4.1	U	3.4	U	4	U	4.1	U	3.4	U
Endrin aldehyde	UG/KG	4.1	U	3.4	U	4	U	4.1	U	3.4	U
Endrin ketone	UG/KG	4.1	U	3.4	U	4	U	4.1	U	3.4	U
Heptachlor	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
Heptachlor epoxide	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
Methoxychlor	UG/KG	21	U	18	U	21	U	21	U	18	U
Toxaphene	UG/KG	210	U	180	U	210	U	210	U	180	U
alpha-BHC	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
alpha-Chlordane	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
beta-BHC	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
delta-BHC	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
gamma-BHC (Lindane)	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
gamma-Chlordane	UG/KG	2.1	U	1.8	U	2.1	U	2.1	U	1.8	U
OTHER ANALYSES											
Nitrate/Nitrite-Nitrogen	MG/KG	0.21		3.8		0.15		0.08		3.5	
Percent Moisture (PEST/PCB)											

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-6		SS17-7		SS17-8		SS17-9	
SAMP ID:		SS17-1-1		SS17-6-1		SS17-7-1		SS17-8-1		SS17-9-1	
QC CODE:		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		10/21/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (SVOCs)											
Percent Moisture (VOCs)											
Percent Solids (Metals)											
Total Organic Carbon	MG/KG										
NITROAROMATICS											
1,3,5-Trinitrobenzene	UG/KG	130	U	130	U	130	U	130	U	130	U
1,3-Dinitrobenzene	UG/KG	130	U	130	U	130	U	130	U	130	U
2,4,6-Trinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U
2,4-Dinitrotoluene	UG/KG	130	U	170		130	U	130	U	130	U
2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U
2-amino-4,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U
4-amino-2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U
HMX	UG/KG	130	U	130	U	130	U	130	U	130	U
Nitrobenzene	UG/KG										
RDX	UG/KG	130	U	130	U	130	U	130	U	130	U
Tetryl	UG/KG	130	U	130	U	130	U	130	U	130	U
METALS											
Aluminum	MG/KG	11800		10900		16600		14300		3790	
Antimony	MG/KG	12.9	UR	12.9	R	8.2	JR	7.4	JR	10.7	
Arsenic	MG/KG	6		16.1		8.2		8.5		4.8	
Barium	MG/KG	102	R	352	R	447	R	337	R	78.7	
Beryllium	MG/KG	0.5	J	0.5	J	0.76	J	0.69		0.18	J

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-6		SS17-7		SS17-8		SS17-9	
SAMP ID:		SS17-1-1		SS17-6-1		SS17-7-1		SS17-8-1		SS17-9-1	
QC CODE:		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		10/21/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cadmium	MG/KG	2.3		9.9		7.3		5.1		6.3	
Calcium	MG/KG	99300		89300		3780		110000		177000	
Chromium	MG/KG	16.6		22.5		23.4		23.9		10	
Cobalt	MG/KG	6.1	J	11.3		14.7		13.6		4.7	J
Copper	MG/KG	81		362		423		654		136	
Cyanide	MG/KG	0.74	U	0.46	U	0.61	U	0.59	U	0.59	U
Iron	MG/KG	16400		24300		26400		27600		8020	
Lead	MG/KG	594		3150		2310		2190		1340	
Magnesium	MG/KG	7430		8840		4520		8380		17300	
Manganese	MG/KG	430		399		431		590		270	J
Mercury	MG/KG	0.07	J	0.06	J	0.1	J	0.09	J	0.04	J
Nickel	MG/KG	19.8		37.7		29.1		43.7		16.4	
Potassium	MG/KG	1500		1420		1370		1520		1110	
Selenium	MG/KG	0.26	J	0.68	J	0.25	UJ	0.16	J	0.21	J
Silver	MG/KG	1.6	UJ	2.8	J	1	UJ	4	J	5.5	
Sodium	MG/KG	147	J	168	J	66.9	J	144	J	247	J
Thallium	MG/KG	0.24	U	2	U	0.27	U	0.22	J	0.17	U
Vanadium	MG/KG	21		16.3		28.8		22.2		8.9	
Zinc	MG/KG	200		497		437		613		120	
HERBICIDES											
2,4,5-T	UG/KG	6.3	U	5.2	U	6.2	U	6.2	U	5.2	U
2,4,5-TP (Silvex)	UG/KG	6.3	U	5.2	U	6.2	U	6.2	U	5.2	U

SEAD-17 Analytes Detected in Surface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SS17-1		SS17-6		SS17-7		SS17-8		SS17-9	
SAMP ID:		SS17-1-1		SS17-6-1		SS17-7-1		SS17-8-1		SS17-9-1	
QC CODE:		SA		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI	
TOP:		0		0		0		0		0	
BOTTOM:		0.2		0.2		0.2		0.2		0.2	
MATRIX:		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL		SURFACE SOIL	
SAMPLE DATE:		10/21/93		10/21/93		10/21/93		10/21/93		10/20/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-D	UG/KG	63	U	52	U	62	U	62	U	52	U
2,4-DB	UG/KG	63	U	52	U	62	U	62	U	52	U
Dalapon	UG/KG	150	U	130	U	150	U	150	U	130	U
Dicamba	UG/KG	6.3	U	5.2	U	6.2	U	6.2	U	5.2	U
Dichloroprop	UG/KG	63	U	52	U	62	U	62	U	52	U
Dinoseb	UG/KG	32	U	26	U	31	U	31	U	26	U
MCPA	UG/KG	16000		5200	U	12000		6200	U	5200	U
MCPP	UG/KG	6300	U	5200	U	6200	U	6200	U	5200	U

Subsurface Soils

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-1		SB17-1		SB17-2		SB17-2		SB17-2		SB17-3		SB17-3		SB17-4	
SAMP ID:		SB17-1-1		SB17-1-2		SB17-1-3		SB17-2-1		SB17-2-10		SB17-2-2		SB17-3-1		SB17-3-2		SB17-4-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		2		4		0		2		2		0		2		0	
BOTTOM:		2		4		6		2		4		4		2		4		2	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		12/1/93		12/1/93		12/1/93		10/27/93		10/27/93		10/27/93		11/30/93		11/30/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																			
1,1,1-Trichloroethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
1,1,2-Trichloroethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
1,1-Dichloroethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
1,1-Dichloroethene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
1,2-Dichloroethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
1,2-Dichloroethene (total)	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
1,2-Dichloropropane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
2-Butanone	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
2-Hexanone	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
4-Methyl-2-Pentanone	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Acetone	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Benzene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Bromodichloromethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Bromoform	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Bromomethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Carbon Disulfide	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Carbon Tetrachloride	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Chlorobenzene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Chloroethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Chloroform	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Chloromethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-1		SB17-1		SB17-2		SB17-2		SB17-2		SB17-3		SB17-3		SB17-4	
SAMP ID:		SB17-1-1		SB17-1-2		SB17-1-3		SB17-2-1		SB17-2-10		SB17-2-2		SB17-3-1		SB17-3-2		SB17-4-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		2		4		0		2		2		0		2		0	
BOTTOM:		2		4		6		2		4		4		2		4		2	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		12/1/93		12/1/93		12/1/93		10/27/93		10/27/93		10/27/93		11/30/93		11/30/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Dibromochloromethane	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Ethylbenzene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Methylene Chloride	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Styrene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Tetrachloroethene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Toluene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Trichloroethene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Vinyl Chloride	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
Xylene (total)	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
cis-1,3-Dichloropropene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
trans-1,3-Dichloropropene	UG/KG	12	U	12	U	11	U	12	UJ	13	U	12	U	12	U	13	U	12	U
SEMIVOLATILE ORGANICS																			
1,2,4-Trichlorobenzene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
1,2-Dichlorobenzene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
1,3-Dichlorobenzene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
1,4-Dichlorobenzene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2,2'-oxybis(1-Chloropropane)	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2,4,5-Trichlorophenol	UG/KG	1000	U	920	U	870	U	950	U	920	U	930	U	980	U	940	U	950	U
2,4,6-Trichlorophenol	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2,4-Dichlorophenol	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2,4-Dimethylphenol	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2,4-Dinitrophenol	UG/KG	1000	U	920	U	870	U	950	U	920	U	930	U	980	U	940	U	950	U
2,4-Dinitrotoluene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-1		SB17-1		SB17-2		SB17-2		SB17-2		SB17-3		SB17-3		SB17-4	
SAMP ID:		SB17-1-1		SB17-1-2		SB17-1-3		SB17-2-1		SB17-2-10		SB17-2-2		SB17-3-1		SB17-3-2		SB17-4-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		2		4		0		2		2		0		2		0	
BOTTOM:		2		4		6		2		4		4		2		4		2	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		12/1/93		12/1/93		12/1/93		10/27/93		10/27/93		10/27/93		11/30/93		11/30/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,6-Dinitrotoluene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2-Chloronaphthalene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2-Chlorophenol	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2-Methylnaphthalene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2-Methylphenol	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
2-Nitroaniline	UG/KG	1000	U	920	U	870	U	950	U	920	U	930	U	980	U	940	U	950	U
2-Nitrophenol	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
3,3'-Dichlorobenzidine	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
3-Nitroaniline	UG/KG	1000	U	920	U	870	U	950	U	920	U	930	U	980	U	940	U	950	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	920	U	870	U	950	U	920	U	930	U	980	U	940	U	950	U
4-Bromophenyl-phenylether	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
4-Chloro-3-methylphenol	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
4-Chloroaniline	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
4-Chlorophenyl-phenylether	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
4-Methylphenol	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
4-Nitroaniline	UG/KG	1000	U	920	U	870	U	950	U	920	U	930	U	980	U	940	U	950	U
4-Nitrophenol	UG/KG	1000	U	920	U	870	U	950	U	920	U	930	U	980	U	940	U	950	U
Acenaphthene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Acenaphthylene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Anthracene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Benzo(a)anthracene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Benzo(a)pyrene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Benzo(b)fluoranthene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-1		SB17-1		SB17-2		SB17-2		SB17-2		SB17-3		SB17-3		SB17-4	
SAMP ID:		SB17-1-1		SB17-1-2		SB17-1-3		SB17-2-1		SB17-2-10		SB17-2-2		SB17-3-1		SB17-3-2		SB17-4-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		2		4		0		2		2		0		2		0	
BOTTOM:		2		4		6		2		4		4		2		4		2	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		12/1/93		12/1/93		12/1/93		10/27/93		10/27/93		10/27/93		11/30/93		11/30/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(g,h,i)perylene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Benzo(k)fluoranthene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Butylbenzylphthalate	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Carbazole	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Chrysene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Di-n-butylphthalate	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Di-n-octylphthalate	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Dibenz(a,h)anthracene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Dibenzofuran	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Diethylphthalate	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Dimethylphthalate	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Fluoranthene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Fluorene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Hexachlorobenzene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Hexachlorobutadiene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Hexachlorocyclopentadiene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Hexachloroethane	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Indeno(1,2,3-cd)pyrene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Isophorone	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
N-Nitroso-di-n-propylamine	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Naphthalene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Nitrobenzene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-1		SB17-1		SB17-2		SB17-2		SB17-2		SB17-3		SB17-3		SB17-4	
SAMP ID:		SB17-1-1		SB17-1-2		SB17-1-3		SB17-2-1		SB17-2-10		SB17-2-2		SB17-3-1		SB17-3-2		SB17-4-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		2		4		0		2		2		0		2		0	
BOTTOM:		2		4		6		2		4		4		2		4		2	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		12/1/93		12/1/93		12/1/93		10/27/93		10/27/93		10/27/93		11/30/93		11/30/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Pentachlorophenol	UG/KG	1000	U	920	U	870	U	950	U	920	U	930	U	980	U	940	U	950	U
Phenanthrene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Phenol	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
Pyrene	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
bis(2-Chloroethoxy) methane	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
bis(2-Chloroethyl) ether	UG/KG	420	U	380	U	360	U	390	U	380	U	380	U	400	U	390	U	390	U
bis(2-Ethylhexyl)phthalate	UG/KG	42	J	380	U	21	J	390	U	480		490		93	J	72	J	59	J
PESTICIDES/PCB																			
4,4'-DDD	UG/KG	4.2	U	3.8	U	3.6	U	3.9	U	3.8	U	3.8	U	4	U	3.9	U	3.9	U
4,4'-DDE	UG/KG	4.2	U	3.8	U	3.6	U	3.9	U	3.8	U	3.8	U	4	U	3.9	U	3.9	U
4,4'-DDT	UG/KG	4.2	U	3.8	U	3.6	U	3.9	U	3.8	U	3.8	U	4	U	3.9	U	3.9	U
Aldrin	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
Aroclor-1016	UG/KG	42	U	38	U	36	U	39	U	38	U	38	U	40	U	39	U	39	U
Aroclor-1221	UG/KG	85	U	76	U	72	U	80	U	77	U	78	U	82	U	79	U	80	U
Aroclor-1232	UG/KG	42	U	38	U	36	U	39	U	38	U	38	U	40	U	39	U	39	U
Aroclor-1242	UG/KG	42	U	38	U	36	U	39	U	38	U	38	U	40	U	39	U	39	U
Aroclor-1248	UG/KG	42	U	38	U	36	U	39	U	38	U	38	U	40	U	39	U	39	U
Aroclor-1254	UG/KG	42	U	61		36	U	39	U	38	U	38	U	40	U	39	U	39	U
Aroclor-1260	UG/KG	42	U	38	U	36	U	39	U	38	U	38	U	40	U	39	U	39	U
Dieldrin	UG/KG	4.2	U	3.8	U	3.6	U	3.9	U	3.8	U	3.8	U	4	U	3.9	U	3.9	U
Endosulfan I	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
Endosulfan II	UG/KG	4.2	U	3.8	U	3.6	U	3.9	U	3.8	U	3.8	U	4	U	3.9	U	3.9	U
Endosulfan sulfate	UG/KG	4.2	U	3.8	U	3.6	U	3.9	U	3.8	U	3.8	U	4	U	3.9	U	3.9	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-1		SB17-1		SB17-2		SB17-2		SB17-2		SB17-3		SB17-3		SB17-4	
SAMP ID:		SB17-1-1		SB17-1-2		SB17-1-3		SB17-2-1		SB17-2-10		SB17-2-2		SB17-3-1		SB17-3-2		SB17-4-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		2		4		0		2		2		0		2		0	
BOTTOM:		2		4		6		2		4		4		2		4		2	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		12/1/93		12/1/93		12/1/93		10/27/93		10/27/93		10/27/93		11/30/93		11/30/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Endrin	UG/KG	4.2	U	3.8	U	3.6	U	3.9	U	3.8	U	3.8	U	4	U	3.9	U	3.9	U
Endrin aldehyde	UG/KG	4.2	U	3.8	U	3.6	U	3.9	U	3.8	U	3.8	U	4	U	3.9	U	3.9	U
Endrin ketone	UG/KG	4.2	U	3.8	U	3.6	U	3.9	U	3.8	U	3.8	U	4	U	3.9	U	3.9	U
Heptachlor	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
Heptachlor epoxide	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
Methoxychlor	UG/KG	22	U	19	U	18	U	20	U	19	U	20	U	21	U	20	U	20	U
Toxaphene	UG/KG	220	U	190	U	180	U	200	U	190	U	200	U	210	U	200	U	200	U
alpha-BHC	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
alpha-Chlordane	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
beta-BHC	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
delta-BHC	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
gamma-BHC (Lindane)	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
gamma-Chlordane	UG/KG	2.2	U	1.9	U	1.8	U	2	U	1.9	U	2	U	2.1	U	2	U	2	U
OTHER ANALYSES																			
Nitrate/Nitrite-Nitrogen	MG/KG	0.15		0.33		0.24		0.51		0.01	U	0.05		0.22		0.19		0.41	
NITROAROMATICS																			
1,3,5-Trinitrobenzene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
1,3-Dinitrobenzene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
2,4,6-Trinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
2,4-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
2-amino-4,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
4-amino-2,6-Dinitrotoluene	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-1		SB17-1		SB17-2		SB17-2		SB17-2		SB17-3		SB17-3		SB17-4	
SAMP ID:		SB17-1-1		SB17-1-2		SB17-1-3		SB17-2-1		SB17-2-10		SB17-2-2		SB17-3-1		SB17-3-2		SB17-4-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		2		4		0		2		2		0		2		0	
BOTTOM:		2		4		6		2		4		4		2		4		2	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		12/1/93		12/1/93		12/1/93		10/27/93		10/27/93		10/27/93		11/30/93		11/30/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
HMX	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
RDX	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
Tetryl	UG/KG	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U	130	U
METALS																			
Aluminum	MG/KG	13700		18100		8700		15900		14100		15600		19300		13200		15100	
Antimony	MG/KG	11.7	UJ	11.8	UJ	9	UJ	12.1	UJ	9.6	UJ	11.8	UJ	6.9	UJ	11.9	UJ	6.9	UJ
Arsenic	MG/KG	4.3		5.2		3.4		5.2		6.3		6.9		4.1		5.4		4.9	
Barium	MG/KG	107		114		59.4		158		71.4		68.5		104		73.7		89.2	
Beryllium	MG/KG	0.7	J	0.9	J	0.42	J	0.62	J	0.58	J	0.56	J	0.99		0.63	J	0.72	
Cadmium	MG/KG	0.73	U	0.74	U	0.56	U	2.8		0.6	U	0.74	U	0.43	U	0.74	U	0.43	U
Calcium	MG/KG	2870		20900		72800		48200		115000		44200		2620		4920		3640	
Chromium	MG/KG	17.6		25.1		13.9		27.1		20.3		23.3		27.9		20.1		21.6	
Cobalt	MG/KG	9.9	J	13.3		8.8		10.8	J	9.6		9.4	J	21.7		9	J	9.5	
Copper	MG/KG	46.4		26.9		20		85.1		21.5		18.5		25.9		26.9		24	
Cyanide	MG/KG	0	NA	0	NA	0	NA	0.72	U	0.65	U	0.67	U	0.58	U	0.54	U	0.57	U
Iron	MG/KG	25100		29900		18800		38700		24900		26700		36100		25800		27700	
Lead	MG/KG	266		11.4	J	7.5	J	686		11.2		13		24.6	J	21.2	J	12	J
Magnesium	MG/KG	3330		8490		18100		6630		8370		8380		5820		4600		5170	
Manganese	MG/KG	547		487		391		673		1160		409		1080		338		274	
Mercury	MG/KG	0.05	J	0.06	J	0.03	UJ	0.04	U	0.04	J	0.04	J	0.06	J	0.04	J	0.04	U
Nickel	MG/KG	19.1		42		25.2		34.7		27.4		30.8		37.2		31.5		28.6	
Potassium	MG/KG	628	J	1560		1090		1630		1750		1720		1540		1350		1220	
Selenium	MG/KG	0.25	UJ	0.24	UJ	0.14	UJ	0.25	UJ	0.25	UJ	0.21	UJ	0.26	UJ	0.17	UJ	0.18	UJ

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-1		SB17-1		SB17-2		SB17-2		SB17-2		SB17-3		SB17-3		SB17-4	
SAMP ID:		SB17-1-1		SB17-1-2		SB17-1-3		SB17-2-1		SB17-2-10		SB17-2-2		SB17-3-1		SB17-3-2		SB17-4-1	
QC CODE:		SA		SA		SA		SA		DU		SA		SA		SA		SA	
STUDY ID:		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI		ESI	
TOP:		0		2		4		0		2		2		0		2		0	
BOTTOM:		2		4		6		2		4		4		2		4		2	
MATRIX:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DATE:		12/1/93		12/1/93		12/1/93		10/27/93		10/27/93		10/27/93		11/30/93		11/30/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Silver	MG/KG	1.5	U	1.5	U	1.1	U	1.5	UJ	1.2	UJ	1.5	UJ	0.88	U	1.5	U	0.87	U
Sodium	MG/KG	46.2	J	74.6	J	137	J	145	J	239	J	177	J	70.8	J	80.2	J	65.6	J
Thallium	MG/KG	0.28	UJ	0.26	UJ	0.15	UJ	0.27	U	0.27	U	0.23	U	0.28	UJ	0.18	UJ	0.2	UJ
Vanadium	MG/KG	23.1		27		13.9		27.3		21.8		23.9		30.7		21.1		26.1	
Zinc	MG/KG	93.4		80.2		57.1		172		76.7		63		69.7		69		64.2	
HERBICIDES																			
2,4,5-T	UG/KG	6.4	U	5.8	U	5.4	U	6	U	5.8	U	5.8	U	6.1	U	5.9	U	5.9	U
2,4,5-TP (Silvex)	UG/KG	6.4	U	5.8	U	5.4	U	6	U	5.8	U	5.8	U	6.1	U	5.9	U	5.9	U
2,4-D	UG/KG	64	U	58	U	54	U	60	U	58	U	58	U	61	U	59	U	59	U
2,4-DB	UG/KG	64	U	58	U	54	U	60	U	58	U	58	U	61	U	59	U	59	U
Dalapon	UG/KG	160	U	140	U	130	U	150	U	140	U	140	U	150	U	140	U	150	U
Dicamba	UG/KG	6.4	U	5.8	U	5.4	U	6	U	5.8	U	5.8	U	6.1	U	5.9	U	5.9	U
Dichloroprop	UG/KG	64	U	58	U	54	U	60	U	58	U	58	U	61	U	59	U	59	U
Dinoseb	UG/KG	32	U	29	U	27	U	30	U	29	U	29	U	31	U	30	U	30	U
MCPA	UG/KG	6400	U	5800	U	5400	U	6000	U	5800	U	5800	U	6100	U	5900	U	5900	U
MCPP	UG/KG	6400	U	5800	U	5400	U	6000	U	5800	U	5800	U	6100	U	5900	U	5900	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-4	
SAMP ID:		SB17-1-1		SB17-4-2	
QC CODE:		SA		SA	
STUDY ID:		ESI		ESI	
TOP:		0		2	
BOTTOM:		2		4	
MATRIX:		SOIL		SOIL	
SAMPLE DATE:		12/1/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
VOLATILE ORGANICS					
1,1,1-Trichloroethane	UG/KG	12	U	12	U
1,1,2,2-Tetrachloroethane	UG/KG	12	U	12	U
1,1,2-Trichloroethane	UG/KG	12	U	12	U
1,1-Dichloroethane	UG/KG	12	U	12	U
1,1-Dichloroethene	UG/KG	12	U	12	U
1,2-Dichloroethane	UG/KG	12	U	12	U
1,2-Dichloroethene (total)	UG/KG	12	U	12	U
1,2-Dichloropropane	UG/KG	12	U	12	U
2-Butanone	UG/KG	12	U	12	U
2-Hexanone	UG/KG	12	U	12	U
4-Methyl-2-Pentanone	UG/KG	12	U	12	U
Acetone	UG/KG	12	U	12	U
Benzene	UG/KG	12	U	12	U
Bromodichloromethane	UG/KG	12	U	12	U
Bromoform	UG/KG	12	U	12	U
Bromomethane	UG/KG	12	U	12	U
Carbon Disulfide	UG/KG	12	U	12	U
Carbon Tetrachloride	UG/KG	12	U	12	U
Chlorobenzene	UG/KG	12	U	12	U
Chloroethane	UG/KG	12	U	12	U
Chloroform	UG/KG	12	U	12	U
Chloromethane	UG/KG	12	U	12	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-4	
SAMP ID:		SB17-1-1		SB17-4-2	
QC CODE:		SA		SA	
STUDY ID:		ESI		ESI	
TOP:		0		2	
BOTTOM:		2		4	
MATRIX:		SOIL		SOIL	
SAMPLE DATE:		12/1/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Dibromochloromethane	UG/KG	12	U	12	U
Ethylbenzene	UG/KG	12	U	12	U
Methylene Chloride	UG/KG	12	U	12	U
Styrene	UG/KG	12	U	12	U
Tetrachloroethene	UG/KG	12	U	12	U
Toluene	UG/KG	12	U	12	U
Trichloroethene	UG/KG	12	U	12	U
Vinyl Chloride	UG/KG	12	U	12	U
Xylene (total)	UG/KG	12	U	12	U
cis-1,3-Dichloropropene	UG/KG	12	U	12	U
trans-1,3-Dichloropropene	UG/KG	12	U	12	U
SEMIVOLATILE ORGANICS					
1,2,4-Trichlorobenzene	UG/KG	420	U	360	U
1,2-Dichlorobenzene	UG/KG	420	U	360	U
1,3-Dichlorobenzene	UG/KG	420	U	360	U
1,4-Dichlorobenzene	UG/KG	420	U	360	U
2,2'-oxybis(1-Chloropropane)	UG/KG	420	U	360	U
2,4,5-Trichlorophenol	UG/KG	1000	U	870	U
2,4,6-Trichlorophenol	UG/KG	420	U	360	U
2,4-Dichlorophenol	UG/KG	420	U	360	U
2,4-Dimethylphenol	UG/KG	420	U	360	U
2,4-Dinitrophenol	UG/KG	1000	U	870	U
2,4-Dinitrotoluene	UG/KG	420	U	360	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-4	
SAMP ID:		SB17-1-1		SB17-4-2	
QC CODE:		SA		SA	
STUDY ID:		ESI		ESI	
TOP:		0		2	
BOTTOM:		2		4	
MATRIX:		SOIL		SOIL	
SAMPLE DATE:		12/1/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
2,6-Dinitrotoluene	UG/KG	420	U	360	U
2-Chloronaphthalene	UG/KG	420	U	360	U
2-Chlorophenol	UG/KG	420	U	360	U
2-Methylnaphthalene	UG/KG	420	U	360	U
2-Methylphenol	UG/KG	420	U	360	U
2-Nitroaniline	UG/KG	1000	U	870	U
2-Nitrophenol	UG/KG	420	U	360	U
3,3'-Dichlorobenzidine	UG/KG	420	U	360	U
3-Nitroaniline	UG/KG	1000	U	870	U
4,6-Dinitro-2-methylphenol	UG/KG	1000	U	870	U
4-Bromophenyl-phenylether	UG/KG	420	U	360	U
4-Chloro-3-methylphenol	UG/KG	420	U	360	U
4-Chloroaniline	UG/KG	420	U	360	U
4-Chlorophenyl-phenylether	UG/KG	420	U	360	U
4-Methylphenol	UG/KG	420	U	360	U
4-Nitroaniline	UG/KG	1000	U	870	U
4-Nitrophenol	UG/KG	1000	U	870	U
Acenaphthene	UG/KG	420	U	360	U
Acenaphthylene	UG/KG	420	U	360	U
Anthracene	UG/KG	420	U	360	U
Benzo(a)anthracene	UG/KG	420	U	360	U
Benzo(a)pyrene	UG/KG	420	U	360	U
Benzo(b)fluoranthene	UG/KG	420	U	360	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-4	
SAMP ID:		SB17-1-1		SB17-4-2	
QC CODE:		SA		SA	
STUDY ID:		ESI		ESI	
TOP:		0		2	
BOTTOM:		2		4	
MATRIX:		SOIL		SOIL	
SAMPLE DATE:		12/1/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Benzo(g,h,i)perylene	UG/KG	420	U	360	U
Benzo(k)fluoranthene	UG/KG	420	U	360	U
Butylbenzylphthalate	UG/KG	420	U	360	U
Carbazole	UG/KG	420	U	360	U
Chrysene	UG/KG	420	U	360	U
Di-n-butylphthalate	UG/KG	420	U	360	U
Di-n-octylphthalate	UG/KG	420	U	360	U
Dibenz(a,h)anthracene	UG/KG	420	U	360	U
Dibenzofuran	UG/KG	420	U	360	U
Diethylphthalate	UG/KG	420	U	360	U
Dimethylphthalate	UG/KG	420	U	360	U
Fluoranthene	UG/KG	420	U	360	U
Fluorene	UG/KG	420	U	360	U
Hexachlorobenzene	UG/KG	420	U	360	U
Hexachlorobutadiene	UG/KG	420	U	360	U
Hexachlorocyclopentadiene	UG/KG	420	U	360	U
Hexachloroethane	UG/KG	420	U	360	U
Indeno(1,2,3-cd)pyrene	UG/KG	420	U	360	U
Isophorone	UG/KG	420	U	360	U
N-Nitroso-di-n-propylamine	UG/KG	420	U	360	U
N-Nitrosodiphenylamine (1)	UG/KG	420	U	360	U
Naphthalene	UG/KG	420	U	360	U
Nitrobenzene	UG/KG	420	U	360	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-4	
SAMP ID:		SB17-1-1		SB17-4-2	
QC CODE:		SA		SA	
STUDY ID:		ESI		ESI	
TOP:		0		2	
BOTTOM:		2		4	
MATRIX:		SOIL		SOIL	
SAMPLE DATE:		12/1/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Pentachlorophenol	UG/KG	1000	U	870	U
Phenanthrene	UG/KG	420	U	360	U
Phenol	UG/KG	420	U	360	U
Pyrene	UG/KG	420	U	360	U
bis(2-Chloroethoxy) methane	UG/KG	420	U	360	U
bis(2-Chloroethyl) ether	UG/KG	420	U	360	U
bis(2-Ethylhexyl)phthalate	UG/KG	42	J	27	J
PESTICIDES/PCB					
4,4'-DDD	UG/KG	4.2	U	3.6	U
4,4'-DDE	UG/KG	4.2	U	3.6	U
4,4'-DDT	UG/KG	4.2	U	3.6	U
Aldrin	UG/KG	2.2	U	1.8	U
Aroclor-1016	UG/KG	42	U	36	U
Aroclor-1221	UG/KG	85	U	73	U
Aroclor-1232	UG/KG	42	U	36	U
Aroclor-1242	UG/KG	42	U	36	U
Aroclor-1248	UG/KG	42	U	36	U
Aroclor-1254	UG/KG	42	U	36	U
Aroclor-1260	UG/KG	42	U	36	U
Dieldrin	UG/KG	4.2	U	3.6	U
Endosulfan I	UG/KG	2.2	U	1.8	U
Endosulfan II	UG/KG	4.2	U	3.6	U
Endosulfan sulfate	UG/KG	4.2	U	3.6	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-4	
SAMP ID:		SB17-1-1		SB17-4-2	
QC CODE:		SA		SA	
STUDY ID:		ESI		ESI	
TOP:		0		2	
BOTTOM:		2		4	
MATRIX:		SOIL		SOIL	
SAMPLE DATE:		12/1/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Endrin	UG/KG	4.2	U	3.6	U
Endrin aldehyde	UG/KG	4.2	U	3.6	U
Endrin ketone	UG/KG	4.2	U	3.6	U
Heptachlor	UG/KG	2.2	U	1.8	U
Heptachlor epoxide	UG/KG	2.2	U	1.8	U
Methoxychlor	UG/KG	22	U	18	U
Toxaphene	UG/KG	220	U	180	U
alpha-BHC	UG/KG	2.2	U	1.8	U
alpha-Chlordane	UG/KG	2.2	U	1.8	U
beta-BHC	UG/KG	2.2	U	1.8	U
delta-BHC	UG/KG	2.2	U	1.8	U
gamma-BHC (Lindane)	UG/KG	2.2	U	1.8	U
gamma-Chlordane	UG/KG	2.2	U	1.8	U
OTHER ANALYSES					
Nitrate/Nitrite-Nitrogen	MG/KG	0.15		0.22	
NITROAROMATICS					
1,3,5-Trinitrobenzene	UG/KG	130	U	130	U
1,3-Dinitrobenzene	UG/KG	130	U	130	U
2,4,6-Trinitrotoluene	UG/KG	130	U	130	U
2,4-Dinitrotoluene	UG/KG	130	U	130	U
2,6-Dinitrotoluene	UG/KG	130	U	130	U
2-amino-4,6-Dinitrotoluene	UG/KG	130	U	130	U
4-amino-2,6-Dinitrotoluene	UG/KG	130	U	130	U

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-4	
SAMP ID:		SB17-1-1		SB17-4-2	
QC CODE:		SA		SA	
STUDY ID:		ESI		ESI	
TOP:		0		2	
BOTTOM:		2		4	
MATRIX:		SOIL		SOIL	
SAMPLE DATE:		12/1/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
HMX	UG/KG	130	U	130	U
RDX	UG/KG	130	U	130	U
Tetryl	UG/KG	130	U	130	U
METALS					
Aluminum	MG/KG	13700		11600	
Antimony	MG/KG	11.7	UJ	6.1	UJ
Arsenic	MG/KG	4.3		5.7	
Barium	MG/KG	107		51.6	
Beryllium	MG/KG	0.7	J	0.56	J
Cadmium	MG/KG	0.73	U	0.38	U
Calcium	MG/KG	2870		18100	
Chromium	MG/KG	17.6		18.4	
Cobalt	MG/KG	9.9	J	11	
Copper	MG/KG	46.4		22.7	
Cyanide	MG/KG	0	NA	0.47	U
Iron	MG/KG	25100		25600	
Lead	MG/KG	266		11.7	J
Magnesium	MG/KG	3330		7890	
Manganese	MG/KG	547		403	
Mercury	MG/KG	0.05	J	0.03	J
Nickel	MG/KG	19.1		30.8	
Potassium	MG/KG	628	J	960	
Selenium	MG/KG	0.25	UJ	0.23	UJ

SEAD-17 Analytes Detected in Subsurface Soils
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SB17-1		SB17-4	
SAMP ID:		SB17-1-1		SB17-4-2	
QC CODE:		SA		SA	
STUDY ID:		ESI		ESI	
TOP:		0		2	
BOTTOM:		2		4	
MATRIX:		SOIL		SOIL	
SAMPLE DATE:		12/1/93		11/30/93	
PARAMETER	UNITS	VALUE	Q	VALUE	Q
Silver	MG/KG	1.5	U	0.77	U
Sodium	MG/KG	46.2	J	75.9	J
Thallium	MG/KG	0.28	UJ	0.25	UJ
Vanadium	MG/KG	23.1		18.6	
Zinc	MG/KG	93.4		85.1	
HERBICIDES					
2,4,5-T	UG/KG	6.4	U	5.4	U
2,4,5-TP (Silvex)	UG/KG	6.4	U	5.4	U
2,4-D	UG/KG	64	U	54	U
2,4-DB	UG/KG	64	U	54	U
Dalapon	UG/KG	160	U	130	U
Dicamba	UG/KG	6.4	U	5.4	U
Dichloroprop	UG/KG	64	U	54	U
Dinoseb	UG/KG	32	U	27	U
MCPA	UG/KG	6400	U	5400	U
MCPP	UG/KG	6400	U	5400	U

SEAD-17 Groundwater

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS															
1,1,1,2-Tetrachloroethane	UG/L	0.5	U	0.5	U									0.5	U
1,1,1-Trichloroethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
1,1,2,2-Tetrachloroethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
1,1,2-Trichloroethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
1,1-Dichloroethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
1,1-Dichloroethene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
1,1-Dichloropropene	UG/L	0.5	U	0.5	U									0.5	U
1,2,3-Trichlorobenzene	UG/L	0.5	U	0.5	U									0.5	U
1,2,3-Trichloropropane	UG/L	0.5	U	0.5	U									0.5	U
1,2,4-Trichlorobenzene	UG/L	0.5	U	0.5	U									0.5	U
1,2,4-Trimethylbenzene	UG/L	0.5	U	0.5	U									0.5	U
1,2-Dibromo-3-Chloropropane	UG/L	0.5	U	0.5	U									0.5	U
1,2-Dibromoethane	UG/L	0.5	U	0.5	U									0.5	U
1,2-Dichlorobenzene	UG/L	0.5	U	0.5	U									0.5	U
1,2-Dichloroethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
1,2-Dichloroethene (total)	UG/L					10	U	10	U	10	U	10	U		
1,2-Dichloropropane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
1,3,5-Trimethylbenzene	UG/L	0.5	U	0.5	U									0.5	U
1,3-Dichlorobenzene	UG/L	0.5	U	0.5	U									0.5	U
1,4-Dichlorobenzene	UG/L	0.5	U	0.5	U									0.5	U
1,4-Dioxane	UG/L	50	R	50	R									50	R
2,2-Dichloropropane	UG/L	0.5	U	0.5	U									0.5	U

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2-Butanone	UG/L	5	R	5	R	10	U	10	U	10	U	10	U	5	R
2-Chlorotoluene	UG/L	0.5	U	0.5	U									0.5	U
2-Hexanone	UG/L	5	U	5	U	10	U	10	U	10	U	10	U	5	U
4-Chlorotoluene	UG/L	0.5	U	0.5	U									0.5	U
4-Methyl-2-Pentanone	UG/L	5	U	5	U	10	U	10	U	10	U	10	U	5	U
Acetone	UG/L	5	U	5	U	10	U	10	U	10	U	10	U	5	U
Benzene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Bromobenzene	UG/L	0.5	U	0.5	U									0.5	U
Bromochloromethane	UG/L	0.5	U	0.5	U									0.5	U
Bromodichloromethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Bromoform	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Bromomethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Carbon Disulfide	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Carbon Tetrachloride	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Chlorobenzene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Chloroethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Chloroform	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Chloromethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Dibromochloromethane	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Dibromomethane	UG/L	0.5	U	0.5	U									0.5	U
Dichlorodifluromethane	UG/L	0.5	U	0.5	U									0.5	U
Ethylbenzene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Hexachlorobutadiene	UG/L	0.5	U	0.5	U									0.5	U

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Isopropylbenzene	UG/L	0.5	U	0.5	U									0.5	U
Methylene Chloride	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Naphthalene	UG/L	0.5	U	0.5	U									0.5	U
Styrene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Tetrachloroethene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Tetrahydrofuran	UG/L	50	U	50	U									50	U
Toluene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Trichloroethene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Trichlorofluoromethane	UG/L	0.5	U	0.5	U									0.5	U
Vinyl Chloride	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
Xylene (total)	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
cis-1,2-Dichloroethane	UG/L	0.5	U	0.5	U									0.5	U
cis-1,3-Dichloropropene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
n-Butylbenzene	UG/L	0.5	U	0.5	U									0.5	U
n-Propylbenzene	UG/L	0.5	U	0.5	U									0.5	U
p-Isopropyltoluene	UG/L	0.5	U	0.5	U									0.5	U
sec-Butylbenzene	UG/L	0.5	U	0.5	U									0.5	U
tert-Butylbenzene	UG/L	0.5	U	0.5	U									0.5	U
trans-1,2-Dichloroethene	UG/L	0.5	U	0.5	U									0.5	U
trans-1,3-Dichloropropene	UG/L	0.5	U	0.5	U	10	U	10	U	10	U	10	U	0.5	U
SEMIVOLATILE ORGANICS															
1,2,4-Trichlorobenzene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
1,2-Dichlorobenzene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
1,3-Dichlorobenzene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
1,4-Dichlorobenzene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2,2'-oxybis(1-Chloropropane)	UG/L					11	U	11	U	10	U	11	U		
2,4,5-Trichlorophenol	UG/L	25	U	25	U	26	U	27	U	26	U	26	U	25	U
2,4,6-Trichlorophenol	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2,4-Dichlorophenol	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2,4-Dimethylphenol	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2,4-Dinitrophenol	UG/L	25	UJ	25	UJ	26	U	27	U	26	U	26	U	25	UJ
2,4-Dinitrotoluene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2,6-Dinitrotoluene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2-Chloronaphthalene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2-Chlorophenol	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2-Methylnaphthalene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2-Methylphenol	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
2-Nitroaniline	UG/L	25	U	25	U	26	U	27	U	26	U	26	U	25	U
2-Nitrophenol	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
3,3'-Dichlorobenzidine	UG/L	10	UJ	10	UJ	11	U	11	U	10	U	11	U	10	UJ
3-Nitroaniline	UG/L	25	U	25	U	26	U	27	U	26	U	26	U	25	U
4,6-Dinitro-2-methylphenol	UG/L	25	U	25	U	26	U	27	U	26	U	26	U	25	U
4-Bromophenyl-phenylether	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
4-Chloro-3-methylphenol	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
4-Chloroaniline	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
4-Chlorophenyl-phenylether	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
4-Methylphenol	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
4-Nitroaniline	UG/L	25	U	25	U	26	U	27	U	26	U	26	U	25	U
4-Nitrophenol	UG/L	25	U	25	U	26	U	27	U	26	U	26	U	25	U
Acenaphthene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Acenaphthylene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Anthracene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Benzo(a)anthracene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Benzo(a)pyrene	UG/L	0.7	J	10	U	11	U	11	U	10	U	11	U	10	U
Benzo(b)fluoranthene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Benzo(g,h,i)perylene	UG/L	2	J	1	J	11	U	11	U	10	U	11	U	10	U
Benzo(k)fluoranthene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Butylbenzylphthalate	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Carbazole	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Chrysene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Di-n-butylphthalate	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Di-n-octylphthalate	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Dibenz(a,h)anthracene	UG/L	1	J	0.9	J	11	U	11	U	10	U	11	U	10	U
Dibenzofuran	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Diethylphthalate	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Dimethylphthalate	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Fluoranthene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Fluorene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Hexachlorobenzene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Hexachlorobutadiene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Hexachlorocyclopentadiene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Hexachloroethane	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Indeno(1,2,3-cd)pyrene	UG/L	2	J	1	J	11	U	11	U	10	U	11	U	10	U
Isophorone	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
N-Nitroso-di-n-propylamine	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
N-Nitrosodiphenylamine (1)	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Naphthalene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Nitrobenzene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Pentachlorophenol	UG/L	25	U	25	U	26	U	27	U	26	U	26	U	25	U
Phenanthrene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Phenol	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
Pyrene	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
bis(2-Chloroethoxy) methane	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
bis(2-Chloroethyl) ether	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
bis(2-Chloroisopropyl) ether	UG/L	10	U	10	U									10	U
bis(2-Ethylhexyl)phthalate	UG/L	10	U	10	U	11	U	11	U	10	U	11	U	10	U
PESTICIDES/PCB															
4,4'-DDD	UG/L	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U	0.11	U	0.1	U
4,4'-DDE	UG/L	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U	0.11	U	0.1	U
4,4'-DDT	UG/L	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U	0.11	U	0.1	U
Aldrin	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U
Aroclor-1016	UG/L	1	U	1	U	1	U	1.1	U	1	U	1.1	U	1	U

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1221	UG/L	2	U	2	U	2.1	U	2.1	U	2.1	U	2.1	U	2	U
Aroclor-1232	UG/L	1	U	1	U	1	U	1.1	U	1	U	1.1	U	1	U
Aroclor-1242	UG/L	1	U	1	U	1	U	1.1	U	1	U	1.1	U	1	U
Aroclor-1248	UG/L	1	U	1	U	1	U	1.1	U	1	U	1.1	U	1	U
Aroclor-1254	UG/L	1	U	1	U	1	U	1.1	U	1	U	1.1	U	1	U
Aroclor-1260	UG/L	1	U	1	U	1	U	1.1	U	1	U	1.1	U	1	U
Dieldrin	UG/L	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U	0.11	U	0.1	U
Endosulfan I	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U
Endosulfan II	UG/L	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U	0.11	U	0.1	U
Endosulfan sulfate	UG/L	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U	0.11	U	0.1	U
Endrin	UG/L	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U	0.11	U	0.1	U
Endrin aldehyde	UG/L	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U	0.11	U	0.1	U
Endrin ketone	UG/L	0.1	U	0.1	U	0.1	U	0.11	U	0.1	U	0.11	U	0.1	U
Heptachlor	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U
Heptachlor epoxide	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U
Methoxychlor	UG/L	0.5	U	0.5	U	0.52	U	0.53	U	0.52	U	0.53	U	0.5	U
Toxaphene	UG/L	5	U	5	U	5.2	U	5.3	U	5.2	U	5.3	U	5	U
alpha-BHC	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U
alpha-Chlordane	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U
beta-BHC	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U
delta-BHC	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U
gamma-BHC (Lindane)	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U
gamma-Chlordane	UG/L	0.05	U	0.05	U	0.052	U	0.053	U	0.052	U	0.053	U	0.05	U

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
OTHER ANALYSES															
Nitrate/Nitrite-Nitrogen	MG/L	0.24		0.23		0.26		0.13		0.09		0.05		0.04	
Percent Moisture (PEST/PCB)															
Percent Moisture (SVOCs)															
Percent Moisture (VOCs)															
Percent Solids (Metals)		0		0										0	
Total Petroleum Hydrocarbons	MG/L	0.43	U	0.43	U									0.4	U
NITROAROMATICS															
1,3,5-Trinitrobenzene	UG/L	0.26	U	0.26	U	0.13	U	0.13	U	0.13	U	0.13	U	0.26	U
1,3-Dinitrobenzene	UG/L	0.26	U	0.26	U	0.13	U	0.13	U	0.13	U	0.13	U	0.26	U
2,4,6-Trinitrotoluene	UG/L	0.26	U	0.26	U	0.13	U	0.13	U	0.13	U	0.13	U	0.26	U
2,4-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.13	U	0.13	U	0.13	U	0.13	U	0.26	U
2,6-Dinitrotoluene	UG/L	0.26	UJ	0.26	UJ	0.13	U	0.13	U	0.13	U	0.13	U	0.26	UJ
2-amino-4,6-Dinitrotoluene	UG/L	0.26	UJ	0.26	U	0.13	U	0.13	U	0.13	U	0.13	U	0.26	UJ
4-amino-2,6-Dinitrotoluene	UG/L	0.26	U	0.26	UJ	0.13	U	0.13	U	0.13	U	0.13	U	0.26	U
HMX	UG/L	0.26	U	0.26	U	0.13	U	0.13	U	0.13	U	0.2	U	0.26	U
Nitrobenzene	UG/L	0.26	U	0.26	U									0.26	U
RDX	UG/L	0.26	U	0.26	U	0.13	U	0.13	U	0.13	U	0.13	U	0.26	U
Tetryl	UG/L	0.26	U	0.26	U	0.13	U	0.08	J	0.13	U	0.13	U	0.26	U
METALS															
Aluminum	UG/L	90.4		54.6		10800		7220		1070		774		39.9	
Antimony	UG/L	2	U	2	U	21.4	U	52.4	U	21.6	UJ	21.6	U	2	U
Arsenic	UG/L	2.7	U	2.7	U	5.8	J	3.2	J	1.4	U	0.87	J	2.7	U

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Barium	UG/L	85		87		147	J	77.9	J	24.4	J	33.4	J	92.5	
Beryllium	UG/L	0.26		0.21		0.52	J	0.4	J	0.4	U	0.4	U	0.23	
Cadmium	UG/L	0.3	U	0.31		2.1	U	3.3	U	2.1	U	2.1	U	0.3	U
Calcium	UG/L	108000		110000		170000		149000		110000		113000		108000	
Chromium	UG/L	1	U	1.5		17.3		12.9		2.6	U	2.6	U	1	U
Cobalt	UG/L	1.2	U	1.4		11.4	J	7	J	4.4	U	4.4	U	1.2	U
Copper	UG/L	3.1		4.3		18	J	11.7	J	3.1	U	3.1	U	3.3	
Cyanide	UG/L	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Iron	UG/L	119		90.6		18300		12200		1870		1100		56.8	
Lead	UG/L	1.7	U	1.7	U	8.7		32.3		0.52	J	1.9	J	1.7	U
Magnesium	UG/L	22600		23000		40200		24400		17800		17800		17700	
Manganese	UG/L	21.3		20		473		459		164		550		73.2	
Mercury	UG/L	0.1	U	0.1	U	0.05	J	0.07	UJ	0.04	U	0.07	J	0.1	U
Nickel	UG/L	1.8		2.2		24.4	J	15.4	J	4	U	4	U	2.4	
Potassium	UG/L	472		574		4740	J	4280	J	3590	J	5820		853	
Selenium	UG/L	2.4	U	2.4	U	2	J	0.79	U	0.69	U	0.7	U	2.4	U
Silver	UG/L	1.3	U	2.3		4.2	U	6.6	U	4.2	U	4.2	U	1.3	U
Sodium	UG/L	9290		9620		8270		44300		46100		17200		11700	
Thallium	UG/L	4.4		7.1		1.2	U	1.8	U	1.2	U	1.2	U	4.7	
Vanadium	UG/L	1.2	U	1.4		19.9	J	12.8	J	3.7	U	3.7	U	1.2	U
Zinc	UG/L	2.5	R	3.2	R	100		33		16.4	J	13	J	6.2	R
HERBICIDES															
2,4,5-T	UG/L					0.11	U	0.11	U	0.11	U	0.11	U		

SEAD-17 Analytes Detected in Groundwater
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		MW17-1		MW17-1		MW17-1		MW17-2		MW17-3		MW17-4		MW17-5	
SAMP ID:		16108		16109		MW17-1-1		MW17-2-1		MW17-3-1		MW17-4-1		16106	
QC CODE:		SA		DU		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		ESI		ESI		ESI		ESI		RI ROUND1	
TOP:		3.4		3.4		3.4		3.3		3.1		3.1		3.4	
BOTTOM:		7.4		7.4		7.4		5.3		5.1		5.1		7.9	
MATRIX:		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
SAMPLE DATE:		8/29/96		8/29/96		1/25/94		11/18/93		1/26/94		1/25/94		8/29/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4,5-TP (Silvex)	UG/L					0.11	U	0.11	U	0.11	U	0.11	U		
2,4-D	UG/L					1.1	U	1.1	U	1.1	U	1.1	U		
2,4-DB	UG/L					1.1	U	1.1	U	1.1	U	1.1	U		
Dalapon	UG/L					2.5	U	2.5	U	2.5	U	2.5	U		
Dicamba	UG/L					0.11	U	0.11	U	0.11	U	0.11	U		
Dichloroprop	UG/L					1.1	U	1.1	U	1.1	U	1.1	U		
Dinoseb	UG/L					0.53	U	0.54	U	0.54	U	0.54	U		
MCPA	UG/L					110	U	110	U	110	U	110	U		
MCPP	UG/L					110	U	110	U	110	U	110	U		

SEAD-17 Surface Water

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120		16123		16130		16131		16136		16137		16121		16132	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Butanone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Hexanone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acetone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Bromoform	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Bromomethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Carbon Disulfide	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Carbon Tetrachloride	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chloroform	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120		16123		16130		16131		16136		16137		16121		16132	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Methylene Chloride	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Styrene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Toluene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Trichloroethene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Vinyl Chloride	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Xylene (total)	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
2,4,6-Trichlorophenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	UG/L	25	U	25	U	25	U	25	U	25	UJ	25	UJ	25	UJ	25	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120		16123		16130		16131		16136		16137		16121		16132	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrotoluene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,6-Dinitrotoluene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
2-Nitrophenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
4,6-Dinitro-2-methylphenol	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
4-Bromophenyl-phenylether	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
4-Nitrophenol	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Acenaphthene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Anthracene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120		16123		16130		16131		16136		16137		16121		16132	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)pyrene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Butylbenzylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Carbazole	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Chrysene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Di-n-butylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Di-n-octylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)anthracene	UG/L	10	U	10	U	10	U	10	U	10	UJ	10	UJ	10	UJ	10	U
Dibenzofuran	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Dimethylphthalate	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Fluoranthene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Fluorene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	UG/L	10	U	10	U	10	U	10	U	10	UJ	10	U	10	U	10	U
Isophorone	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120		16123		16130		16131		16136		16137		16121		16132	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitrosodiphenylamine (1)	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Naphthalene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	UG/L	25	U	25	U	25	U	25	U	25	U	25	U	25	U	25	U
Phenanthrene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Phenol	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Pyrene	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethoxy) methane	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroethyl) ether	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Chloroisopropyl) ether	UG/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	UG/L	10	U	10	U	10	U	2	J	10	U	10	U	10	U	1	J
PESTICIDES/PCB																	
4,4'-DDD	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
4,4'-DDE	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
4,4'-DDT	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Aldrin	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Aroclor-1016	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor-1221	UG/L	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Aroclor-1232	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor-1242	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor-1248	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Aroclor-1254	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120		16123		16130		16131		16136		16137		16121		16132	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1260	UG/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dieldrin	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endosulfan I	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Endosulfan II	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endosulfan sulfate	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endrin	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endrin aldehyde	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Endrin ketone	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Heptachlor	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Heptachlor epoxide	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Methoxychlor	UG/L	0.51	U	0.51	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toxaphene	UG/L	5.1	U	5.1	U	5	U	5	U	5	U	5	U	5	U	5	U
alpha-BHC	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
alpha-Chlordane	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
beta-BHC	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
delta-BHC	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
gamma-BHC (Lindane)	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
gamma-Chlordane	UG/L	0.051	U	0.051	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/L	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
Percent Moisture (PEST/PCB)																	
Percent Moisture (SVOCs)																	

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120		16123		16130		16131		16136		16137		16121		16132	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (VOCs)																	
Percent Solids (Metals)		0		0		0		0		0		0		0		0	
Total Organic Carbon	MG/L	7.3		11.6		8.4		3.9		6.1		6.8		3.8		5.9	
pH	MG/L	7.87		7.44		7.81		7.81		7.43		7.52		7.62		7.53	
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
1,3-Dinitrobenzene	UG/L	0.26	U	0.26	U	0.26	UJ	0.26	UJ	0.26	U	0.26	U	0.26	U	0.26	UJ
2,4,6-Trinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
2,4-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
2,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
2-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
2-amino-4,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
3-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
4-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
4-amino-2,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
HMX	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
Nitrobenzene	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
RDX	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
Tetryl	UG/L	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U	0.26	U
METALS																	
Aluminum	UG/L	443	R	69.1	R	83	R	57.6	R	108	R	108	R	94.7	R	368	R
Antimony	UG/L	5.4	J	2	U	4.1	J	12.6	J	2	U	2	U	2	U	23.6	J

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120		16123		16130		16131		16136		16137		16121		16132	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:																	
BOTTOM:																	
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Arsenic	UG/L	2.7	U	3.9	J	2.7	U	4.6	J	2.9	J	2.7	U	2.7	U	3.8	J
Barium	UG/L	42.6	J	30.4	J	43.6	J	91.8	J	41.7	J	40.5	J	38.8	J	100	J
Beryllium	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Cadmium	UG/L	0.32	J	0.3	U	0.47	J	0.63	J	0.44	J	0.3	U	0.3	U	1.3	J
Calcium	UG/L	46400		50100		48300		68200		73500		72900		71800		38800	
Chromium	UG/L	1	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Cobalt	UG/L	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
Copper	UG/L	18.4		17.4		12.6		9.5		6.9		6.8		6.7		32.7	
Cyanide	UG/L	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Iron	UG/L	322	J	81.1	J	174	J	169	J	134	J	141	J	112	J	222	J
Lead	UG/L	14.9		1.8		9.7		3.3		1.9		1.7	U	1.7	U	37.1	
Magnesium	UG/L	3810		3430		6390		8730		9280		9160		8990		3730	
Manganese	UG/L	6.6		2.7		16		8.8		13.3		19.6		4.7		9.1	
Mercury	UG/L	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	UG/L	1.6	U	1.6	U	1.7		1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
Potassium	UG/L	3270		3830		2470		4380		1980		2020		1990		3700	
Selenium	UG/L	2.4	U	2.4	U	3.4	J	3.5	J	2.5	J	2.9	J	2.4	U	3.4	J
Silver	UG/L	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U
Sodium	UG/L	3090		2990		2880		5830		9460		9260		8950		6410	
Thallium	UG/L	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U
Vanadium	UG/L	1.8	J	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
Zinc	UG/L	20.9		50.5		40.8		29.1		3.6		3.3		2.8		61.7	

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120		16124		16122	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:							
BOTTOM:							
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS							
1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
1,1-Dichloroethane	UG/L	10	U	10	U	10	U
1,1-Dichloroethene	UG/L	10	U	10	U	10	U
1,2-Dichloroethane	UG/L	10	U	10	U	10	U
1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U
1,2-Dichloropropane	UG/L	10	U	10	U	10	U
2-Butanone	UG/L	10	U	10	U	10	U
2-Hexanone	UG/L	10	U	10	U	10	U
4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
Acetone	UG/L	10	U	10	U	10	U
Benzene	UG/L	10	U	10	U	10	U
Bromodichloromethane	UG/L	10	U	10	U	10	U
Bromoform	UG/L	10	U	10	U	10	U
Bromomethane	UG/L	10	U	10	U	10	U
Carbon Disulfide	UG/L	10	U	10	U	10	U
Carbon Tetrachloride	UG/L	10	U	10	U	10	U
Chlorobenzene	UG/L	10	U	10	U	10	U
Chloroethane	UG/L	10	U	10	U	10	U
Chloroform	UG/L	10	U	10	U	10	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120		16124		16122	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:							
BOTTOM:							
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Chloromethane	UG/L	10	U	10	U	10	U
Dibromochloromethane	UG/L	10	U	10	U	10	U
Ethylbenzene	UG/L	10	U	10	U	10	U
Methylene Chloride	UG/L	10	U	10	U	10	U
Styrene	UG/L	10	U	10	U	10	U
Tetrachloroethene	UG/L	10	U	10	U	10	U
Toluene	UG/L	10	U	10	U	10	U
Trichloroethene	UG/L	10	U	10	U	10	U
Vinyl Chloride	UG/L	10	U	10	U	10	U
Xylene (total)	UG/L	10	U	10	U	10	U
cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
SEMIVOLATILE ORGANICS							
1,2,4-Trichlorobenzene	UG/L	10	U	10	U	10	U
1,2-Dichlorobenzene	UG/L	10	U	10	U	10	U
1,3-Dichlorobenzene	UG/L	10	U	10	U	10	U
1,4-Dichlorobenzene	UG/L	10	U	10	U	10	U
2,4,5-Trichlorophenol	UG/L	25	U	25	U	25	U
2,4,6-Trichlorophenol	UG/L	10	U	10	U	10	U
2,4-Dichlorophenol	UG/L	10	U	10	U	10	U
2,4-Dimethylphenol	UG/L	10	U	10	U	10	U
2,4-Dinitrophenol	UG/L	25	U	25	U	25	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120		16124		16122	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:							
BOTTOM:							
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
2,4-Dinitrotoluene	UG/L	10	U	10	U	10	U
2,6-Dinitrotoluene	UG/L	10	U	10	U	10	U
2-Chloronaphthalene	UG/L	10	U	10	U	10	U
2-Chlorophenol	UG/L	10	U	10	U	10	U
2-Methylnaphthalene	UG/L	10	U	10	U	10	U
2-Methylphenol	UG/L	10	U	10	U	10	U
2-Nitroaniline	UG/L	25	U	25	U	25	U
2-Nitrophenol	UG/L	10	U	10	U	10	U
3,3'-Dichlorobenzidine	UG/L	10	U	10	U	10	U
3-Nitroaniline	UG/L	25	U	25	U	25	U
4,6-Dinitro-2-methylphenol	UG/L	25	U	25	U	25	U
4-Bromophenyl-phenylether	UG/L	10	U	10	U	10	U
4-Chloro-3-methylphenol	UG/L	10	U	10	U	10	U
4-Chloroaniline	UG/L	10	U	10	U	10	U
4-Chlorophenyl-phenylether	UG/L	10	U	10	U	10	U
4-Methylphenol	UG/L	10	U	10	U	10	U
4-Nitroaniline	UG/L	25	U	25	U	25	U
4-Nitrophenol	UG/L	25	U	25	U	25	U
Acenaphthene	UG/L	10	U	10	U	10	U
Acenaphthylene	UG/L	10	U	10	U	10	U
Anthracene	UG/L	10	U	10	U	10	U
Benzo(a)anthracene	UG/L	10	U	10	U	10	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120		16124		16122	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:							
BOTTOM:							
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(a)pyrene	UG/L	10	U	10	U	10	U
Benzo(b)fluoranthene	UG/L	10	U	10	U	10	U
Benzo(g,h,i)perylene	UG/L	10	U	10	U	10	U
Benzo(k)fluoranthene	UG/L	10	U	10	U	10	U
Butylbenzylphthalate	UG/L	10	U	10	U	10	U
Carbazole	UG/L	10	U	10	U	10	U
Chrysene	UG/L	10	U	10	U	10	U
Di-n-butylphthalate	UG/L	10	U	10	U	10	U
Di-n-octylphthalate	UG/L	10	U	10	U	10	U
Dibenz(a,h)anthracene	UG/L	10	U	10	U	10	U
Dibenzofuran	UG/L	10	U	10	U	10	U
Diethylphthalate	UG/L	10	U	10	U	10	U
Dimethylphthalate	UG/L	10	U	10	U	10	U
Fluoranthene	UG/L	10	U	10	U	10	U
Fluorene	UG/L	10	U	10	U	10	U
Hexachlorobenzene	UG/L	10	U	10	U	10	U
Hexachlorobutadiene	UG/L	10	U	10	U	10	U
Hexachlorocyclopentadiene	UG/L	10	U	10	U	10	U
Hexachloroethane	UG/L	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	UG/L	10	U	10	U	10	U
Isophorone	UG/L	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	UG/L	10	U	10	U	10	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120		16124		16122	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:							
BOTTOM:							
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
N-Nitrosodiphenylamine (1)	UG/L	10	U	10	U	10	U
Naphthalene	UG/L	10	U	10	U	10	U
Nitrobenzene	UG/L	10	U	10	U	10	U
Pentachlorophenol	UG/L	25	U	25	U	25	U
Phenanthrene	UG/L	10	U	10	U	10	U
Phenol	UG/L	10	U	10	U	10	U
Pyrene	UG/L	10	U	10	U	10	U
bis(2-Chloroethoxy) methane	UG/L	10	U	10	U	10	U
bis(2-Chloroethyl) ether	UG/L	10	U	10	U	10	U
bis(2-Chloroisopropyl) ether	UG/L	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	UG/L	10	U	10	U	10	U
PESTICIDES/PCB							
4,4'-DDD	UG/L	0.1	U	0.1	U	0.1	U
4,4'-DDE	UG/L	0.1	U	0.1	U	0.1	U
4,4'-DDT	UG/L	0.1	U	0.1	U	0.1	U
Aldrin	UG/L	0.051	U	0.05	U	0.05	U
Aroclor-1016	UG/L	1	U	1	U	1	U
Aroclor-1221	UG/L	2	U	2	U	2	U
Aroclor-1232	UG/L	1	U	1	U	1	U
Aroclor-1242	UG/L	1	U	1	U	1	U
Aroclor-1248	UG/L	1	U	1	U	1	U
Aroclor-1254	UG/L	1	U	1	U	1	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120		16124		16122	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:							
BOTTOM:							
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Aroclor-1260	UG/L	1	U	1	U	1	U
Dieldrin	UG/L	0.1	U	0.1	U	0.1	U
Endosulfan I	UG/L	0.051	U	0.05	U	0.05	U
Endosulfan II	UG/L	0.1	U	0.1	U	0.1	U
Endosulfan sulfate	UG/L	0.1	U	0.1	U	0.1	U
Endrin	UG/L	0.1	U	0.1	U	0.1	U
Endrin aldehyde	UG/L	0.1	U	0.1	U	0.1	U
Endrin ketone	UG/L	0.1	U	0.1	U	0.1	U
Heptachlor	UG/L	0.051	U	0.05	U	0.05	U
Heptachlor epoxide	UG/L	0.051	U	0.05	U	0.05	U
Methoxychlor	UG/L	0.51	U	0.5	U	0.5	U
Toxaphene	UG/L	5.1	U	5	U	5	U
alpha-BHC	UG/L	0.051	U	0.05	U	0.05	U
alpha-Chlordane	UG/L	0.051	U	0.05	U	0.05	U
beta-BHC	UG/L	0.051	U	0.05	U	0.05	U
delta-BHC	UG/L	0.051	U	0.05	U	0.05	U
gamma-BHC (Lindane)	UG/L	0.051	U	0.05	U	0.05	U
gamma-Chlordane	UG/L	0.051	U	0.05	U	0.05	U
OTHER ANALYSES							
Nitrate/Nitrite-Nitrogen	MG/L	0.01	U	0.01	U	0.01	U
Percent Moisture (PEST/PCB)							
Percent Moisture (SVOCs)							

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120		16124		16122	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:							
BOTTOM:							
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Percent Moisture (VOCs)							
Percent Solids (Metals)		0		0		0	
Total Organic Carbon	MG/L	7.3		11.1		10.1	
pH	MG/L	7.87		7.89		7.54	
NITROAROMATICS							
1,3,5-Trinitrobenzene	UG/L	0.26	U	0.26	U	0.26	U
1,3-Dinitrobenzene	UG/L	0.26	U	0.26	U	0.26	U
2,4,6-Trinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U
2,4-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U
2,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U
2-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U
2-amino-4,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U
3-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U
4-Nitrotoluene	UG/L	0.26	U	0.26	U	0.26	U
4-amino-2,6-Dinitrotoluene	UG/L	0.26	U	0.26	U	0.26	U
HMX	UG/L	0.26	U	0.26	U	0.26	U
Nitrobenzene	UG/L	0.26	U	0.26	U	0.26	U
RDX	UG/L	0.26	U	0.26	U	0.26	U
Tetryl	UG/L	0.26	U	0.26	U	0.26	U
METALS							
Aluminum	UG/L	443	R	50.6	R	73.1	R
Antimony	UG/L	5.4	J	2	U	2	U

SEAD-17 Analytes Detected in Surface Water
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120		16124		16122	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:							
BOTTOM:							
MATRIX:		SURFACE WATER		SURFACE WATER		SURFACE WATER	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Arsenic	UG/L	2.7	U	4	J	3.2	J
Barium	UG/L	42.6	J	16	J	24.7	J
Beryllium	UG/L	0.1	U	0.1	U	0.1	U
Cadmium	UG/L	0.32	J	0.3	U	0.3	U
Calcium	UG/L	46400		29300		37100	
Chromium	UG/L	1	J	1	U	1	U
Cobalt	UG/L	1.2	U	1.2	U	1.2	U
Copper	UG/L	18.4		10.5		8.9	
Cyanide	UG/L	5	UJ	5	UJ	5	UJ
Iron	UG/L	322	J	59.4	J	48.5	J
Lead	UG/L	14.9		1.7	U	1.7	U
Magnesium	UG/L	3810		2610		2910	
Manganese	UG/L	6.6		1.4		2.1	
Mercury	UG/L	0.1	U	0.1	U	0.1	U
Nickel	UG/L	1.6	U	1.6	U	1.6	U
Potassium	UG/L	3270		2630		3800	
Selenium	UG/L	2.4	U	2.4	U	2.4	U
Silver	UG/L	1.3	U	1.3	U	1.3	U
Sodium	UG/L	3090		1600		1620	
Thallium	UG/L	4.2	U	4.2	U	4.2	U
Vanadium	UG/L	1.8	J	1.2	U	1.2	U
Zinc	UG/L	20.9		6.8		21.8	

SEAD-17 Sediment

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120A		16123A		16130A		16131A		16136A		16137A		16121A		16132A	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																	
1,1,1-Trichloroethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
1,1,2,2-Tetrachloroethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
1,1,2-Trichloroethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
1,1-Dichloroethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
1,1-Dichloroethene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
1,2-Dichloroethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
1,2-Dichloroethene (total)	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
1,2-Dichloropropane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
2-Butanone	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
2-Hexanone	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
4-Methyl-2-Pentanone	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Acetone	UG/KG	15		13	U	14	U	15	U	20	U	20	U	26		13	U
Benzene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Bromodichloromethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Bromoform	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Bromomethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Carbon Disulfide	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Carbon Tetrachloride	UG/KG	14	U	13	U	14	U	14	U	10	U	20	U	14	U	13	U
Chlorobenzene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Chloroethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Chloroform	UG/KG	14	U	13	U	14	U	14	U	10	U	20	U	14	U	13	U
Chloromethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120A		16123A		16130A		16131A		16136A		16137A		16121A		16132A	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Dibromochloromethane	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Ethylbenzene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Methylene Chloride	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Styrene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Tetrachloroethene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Toluene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	8	J	13	U
Trichloroethene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Vinyl Chloride	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
Xylene (total)	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
cis-1,3-Dichloropropene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
trans-1,3-Dichloropropene	UG/KG	14	U	13	U	14	U	14	U	20	U	20	U	14	U	13	U
SEMIVOLATILE ORGANICS																	
1,2,4-Trichlorobenzene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
1,2-Dichlorobenzene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
1,3-Dichlorobenzene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
1,4-Dichlorobenzene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
2,4,5-Trichlorophenol	UG/KG	1100	U	1000	U	1300	U	1200	U	1500	U	1400	U	1400	U	1200	U
2,4,6-Trichlorophenol	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
2,4-Dichlorophenol	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
2,4-Dimethylphenol	UG/KG	32	J	430	U	530	U	480	U	610	U	570	U	560	U	500	U
2,4-Dinitrophenol	UG/KG	1100	U	1000	U	1300	U	1200	U	1500	U	1400	U	1400	U	1200	U
2,4-Dinitrotoluene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
2,6-Dinitrotoluene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120A		16123A		16130A		16131A		16136A		16137A		16121A		16132A	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2-Chloronaphthalene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
2-Chlorophenol	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
2-Methylnaphthalene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
2-Methylphenol	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
2-Nitroaniline	UG/KG	1100	U	1000	U	1300	U	1200	U	1500	U	1400	U	1400	U	1200	U
2-Nitrophenol	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
3,3'-Dichlorobenzidine	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
3-Nitroaniline	UG/KG	1100	U	1000	U	1300	U	1200	U	1500	U	1400	U	1400	U	1200	U
4,6-Dinitro-2-methylphenol	UG/KG	1100	U	1000	U	1300	U	1200	U	1500	U	1400	U	1400	U	1200	U
4-Bromophenyl-phenylether	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
4-Chloro-3-methylphenol	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
4-Chloroaniline	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
4-Chlorophenyl-phenylether	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
4-Methylphenol	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
4-Nitroaniline	UG/KG	1100	U	1000	U	1300	U	1200	U	1500	U	1400	U	1400	U	1200	U
4-Nitrophenol	UG/KG	1100	U	1000	U	1300	U	1200	U	1500	U	1400	U	1400	U	1200	U
Acenaphthene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Acenaphthylene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Anthracene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Benzo(a)anthracene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Benzo(a)pyrene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Benzo(b)fluoranthene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Benzo(g,h,i)perylene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120A		16123A		16130A		16131A		16136A		16137A		16121A		16132A	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(k)fluoranthene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Butylbenzylphthalate	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Carbazole	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Chrysene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Di-n-butylphthalate	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Di-n-octylphthalate	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Dibenz(a,h)anthracene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Dibenzofuran	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Diethylphthalate	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Dimethylphthalate	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Fluoranthene	UG/KG	460	U	36	J	530	U	480	U	610	U	570	U	560	U	500	U
Fluorene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Hexachlorobenzene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Hexachlorobutadiene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Hexachlorocyclopentadiene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Hexachloroethane	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Indeno(1,2,3-cd)pyrene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Isophorone	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
N-Nitroso-di-n-propylamine	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
N-Nitrosodiphenylamine (1)	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Naphthalene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Nitrobenzene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Pentachlorophenol	UG/KG	1100	U	1000	U	1300	U	1200	U	1500	U	1400	U	1400	U	1200	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120A		16123A		16130A		16131A		16136A		16137A		16121A		16132A	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Phenanthrene	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Phenol	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
Pyrene	UG/KG	460	U	26	J	530	U	480	U	610	U	570	U	560	U	500	U
bis(2-Chloroethoxy) methane	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
bis(2-Chloroethyl) ether	UG/KG	460	U	430	U	530	U	480	UJ	610	UJ	570	U	560	UJ	500	UJ
bis(2-Chloroisopropyl) ether	UG/KG	460	U	430	U	530	U	480	U	610	U	570	U	560	U	500	U
bis(2-Ethylhexyl)phthalate	UG/KG	54	J	430	U	530	U	480	U	36	J	570	U	560	U	500	U
PESTICIDES/PCB																	
4,4'-DDD	UG/KG	4.6	U	4.3	U	4.6	U	4.9	U	7.8		3.2	J	5.6	U	5	U
4,4'-DDE	UG/KG	4.6	U	2.8	J	4.6	U	4.9	U	28		13		6.5		5	U
4,4'-DDT	UG/KG	4.6	U	4.3	U	4.6	U	4.9	U	6.1	U	5.7	U	3	J	5	U
Aldrin	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
Aroclor-1016	UG/KG	46	U	43	U	46	U	49	U	61	U	57	U	56	U	50	U
Aroclor-1221	UG/KG	94	U	87	U	93	U	99	U	120	U	120	U	110	U	100	U
Aroclor-1232	UG/KG	46	U	43	U	46	U	49	U	61	U	57	U	56	U	50	U
Aroclor-1242	UG/KG	46	U	43	U	46	U	49	U	61	U	57	U	56	U	50	U
Aroclor-1248	UG/KG	46	U	43	U	46	U	49	U	61	U	57	U	56	U	50	U
Aroclor-1254	UG/KG	46	U	43	U	46	U	49	U	61	U	57	U	56	U	50	U
Aroclor-1260	UG/KG	46	U	43	U	46	U	49	U	61	U	57	U	56	U	50	U
Dieldrin	UG/KG	4.6	U	5		4.6	U	4.9	U	6.1	U	5.7	U	5.6	U	5	U
Endosulfan I	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
Endosulfan II	UG/KG	4.6	U	4.3	U	4.6	U	4.9	U	3.8	J	5.7	U	3.7	J	5	U
Endosulfan sulfate	UG/KG	4.6	U	4.3	U	4.6	U	4.9	U	6.1	U	5.7	U	5.6	U	5	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120A		16123A		16130A		16131A		16136A		16137A		16121A		16132A	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Endrin	UG/KG	4.6	U	4.3	U	4.6	U	4.9	U	6.1	U	5.7	U	5.6	U	5	U
Endrin aldehyde	UG/KG	4.6	U	4.3	U	4.6	U	4.9	U	6.1	U	5.7	U	5.6	U	5	U
Endrin ketone	UG/KG	4.6	U	4.3	U	4.6	U	4.9	U	6.1	U	5.7	U	5.6	U	5	U
Heptachlor	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
Heptachlor epoxide	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
Methoxychlor	UG/KG	24	U	22	U	24	U	25	U	31	U	29	U	29	U	26	U
Toxaphene	UG/KG	240	U	220	U	240	U	250	U	310	U	290	U	290	U	260	U
alpha-BHC	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
alpha-Chlordane	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
beta-BHC	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
delta-BHC	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
gamma-BHC (Lindane)	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
gamma-Chlordane	UG/KG	2.4	U	2.2	U	2.4	U	2.5	U	3.1	U	2.9	U	2.9	U	2.6	U
OTHER ANALYSES																	
Nitrate/Nitrite-Nitrogen	MG/KG	0.04		0.05		0.06		0.07		0.24		0.02		0.1		0.06	
Percent Moisture (PEST/PCB)		29		23		28		32		46		42		41		34	
Percent Moisture (SVOCs)		29		23		38		32		46		42		41		34	
Percent Moisture (VOCs)		26		23		28		26		49		51		30		25	
Percent Solids (Metals)		70.8		76.8		72		67.8		53.9		58.2		58.7		66	
Total Organic Carbon	MG/KG	141	U	10700		5650		10000		12800		7900		36100		5910	
NITROAROMATICS																	
1,3,5-Trinitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120A		16123A		16130A		16131A		16136A		16137A		16121A		16132A	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
2,4,6-Trinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2-Nitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
3-Nitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
4-Nitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
HMX	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
Nitrobenzene	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
RDX	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
Tetryl	UG/KG	120	U	120	U	120	U	120	U	120	U	120	U	120	U	120	U
METALS																	
Aluminum	MG/KG	18900		12100		19600		11400		16600		14800		15900		15200	
Antimony	MG/KG	0.61	UJ	0.84	UJ	1.6	J	5.5	J	2	J	0.88	UJ	1.2	UJ	0.85	UJ
Arsenic	MG/KG	6.2		3.3		7.3		4.5		4.1		4.8		4.2		6	
Barium	MG/KG	128		51.1		162		121		106		103		73.2		124	
Beryllium	MG/KG	0.99		0.26		0.86		0.57		0.67		0.62		0.5		0.75	
Cadmium	MG/KG	0.32		0.28		1.1		4.8		2.4		2.1		1.1		0.68	
Calcium	MG/KG	4100		1950		3790		25000		6860		3070		2780		4420	
Chromium	MG/KG	25.8		13.7		25.4		16.3		23.5		19.8		23.8		22.3	
Cobalt	MG/KG	11.5		5.8		10.7		8.4		9.9		10		11		11	
Copper	MG/KG	38.6	J	27.1	J	42	J	98.1	J	75.3	J	46.6	J	36.4	J	26	J

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-10		SW/SD17-2		SW/SD17-3		SW/SD17-4		SW/SD17-5		SW/SD17-6		SW/SD17-7	
SAMP ID:		16120A		16123A		16130A		16131A		16136A		16137A		16121A		16132A	
QC CODE:		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0		0		0		0		0		0	
BOTTOM:		6		6		6		6		6		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96		9/18/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Cyanide	MG/KG	0.58	U	0.6	U	0.57	U	0.56	U	0.79	U	0.67	U	0.83	U	0.63	U
Iron	MG/KG	30800		17400		27800		20700		24500		24200		27800		27800	
Lead	MG/KG	68.3		72.9		166		1050		258		136		106		77.5	
Magnesium	MG/KG	4970		2250		5140		6490		5780		4210		5570		5080	
Manganese	MG/KG	566	J	362	J	348	J	415	J	275		347		488	J	317	J
Mercury	MG/KG	0.04		0.03	U	0.04	U	0.03	U	0.16		0.04	U	0.06	U	0.04	U
Nickel	MG/KG	29.8	J	10.8	J	30	J	23.7	J	30.6	J	24.7	J	30.6	J	31.6	J
Potassium	MG/KG	1310	J	1250	J	2480	J	1450	J	2630	J	1660	J	1980	J	1810	J
Selenium	MG/KG	0.8	U	1.1	U	0.84	U	1.3	U	1.4	U	1.9		1.6	U	1.1	U
Silver	MG/KG	0.25	U	0.35	U	0.27	U	0.43	U	0.46	U	0.37	U	0.51	U	0.36	U
Sodium	MG/KG	79.4		76.3	U	429		338		109		98.6		112	U	452	
Thallium	MG/KG	1.3		0.95	U	0.73	U	1.2	U	1.3	U	1		1.4	U	0.97	U
Vanadium	MG/KG	32.1		24.8		33		18.8		26.4		25		21.3		22.7	
Zinc	MG/KG	78.4		57.6		85.5		278		158		96.6		97.6		98.6	

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120A		16124A		16122A	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0	
BOTTOM:		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS							
1,1,1-Trichloroethane	UG/KG	14	U	14	U	14	U
1,1,2,2-Tetrachloroethane	UG/KG	14	U	14	U	14	U
1,1,2-Trichloroethane	UG/KG	14	U	14	U	14	U
1,1-Dichloroethane	UG/KG	14	U	14	U	14	U
1,1-Dichloroethene	UG/KG	14	U	14	U	14	U
1,2-Dichloroethane	UG/KG	14	U	14	U	14	U
1,2-Dichloroethene (total)	UG/KG	14	U	14	U	14	U
1,2-Dichloropropane	UG/KG	14	U	14	U	14	U
2-Butanone	UG/KG	14	U	14	U	14	U
2-Hexanone	UG/KG	14	U	14	U	14	U
4-Methyl-2-Pentanone	UG/KG	14	U	14	U	14	U
Acetone	UG/KG	15		10	J	14	U
Benzene	UG/KG	14	U	14	U	14	U
Bromodichloromethane	UG/KG	14	U	14	U	14	U
Bromoform	UG/KG	14	U	14	U	14	U
Bromomethane	UG/KG	14	U	14	U	14	U
Carbon Disulfide	UG/KG	14	U	14	U	14	U
Carbon Tetrachloride	UG/KG	14	U	14	U	14	U
Chlorobenzene	UG/KG	14	U	14	U	14	U
Chloroethane	UG/KG	14	U	14	U	14	U
Chloroform	UG/KG	14	U	14	U	14	U
Chloromethane	UG/KG	14	U	14	U	14	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120A		16124A		16122A	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0	
BOTTOM:		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Dibromochloromethane	UG/KG	14	U	14	U	14	U
Ethylbenzene	UG/KG	14	U	14	U	14	U
Methylene Chloride	UG/KG	14	U	14	U	14	U
Styrene	UG/KG	14	U	14	U	14	U
Tetrachloroethene	UG/KG	14	U	14	U	14	U
Toluene	UG/KG	14	U	14	U	14	U
Trichloroethene	UG/KG	14	U	14	U	14	U
Vinyl Chloride	UG/KG	14	U	14	U	14	U
Xylene (total)	UG/KG	14	U	14	U	14	U
cis-1,3-Dichloropropene	UG/KG	14	U	14	U	14	U
trans-1,3-Dichloropropene	UG/KG	14	U	14	U	14	U
SEMIVOLATILE ORGANICS							
1,2,4-Trichlorobenzene	UG/KG	460	U	500	U	460	U
1,2-Dichlorobenzene	UG/KG	460	U	500	U	460	U
1,3-Dichlorobenzene	UG/KG	460	U	500	U	460	U
1,4-Dichlorobenzene	UG/KG	460	U	500	U	460	U
2,4,5-Trichlorophenol	UG/KG	1100	U	1200	U	1100	U
2,4,6-Trichlorophenol	UG/KG	460	U	500	U	460	U
2,4-Dichlorophenol	UG/KG	460	U	500	U	460	U
2,4-Dimethylphenol	UG/KG	32	J	500	U	460	U
2,4-Dinitrophenol	UG/KG	1100	U	1200	U	1100	U
2,4-Dinitrotoluene	UG/KG	460	U	450	J	460	U
2,6-Dinitrotoluene	UG/KG	460	U	500	U	460	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120A		16124A		16122A	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0	
BOTTOM:		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
2-Chloronaphthalene	UG/KG	460	U	500	U	460	U
2-Chlorophenol	UG/KG	460	U	500	U	460	U
2-Methylnaphthalene	UG/KG	460	U	500	U	460	U
2-Methylphenol	UG/KG	460	U	500	U	460	U
2-Nitroaniline	UG/KG	1100	U	1200	U	1100	U
2-Nitrophenol	UG/KG	460	U	500	U	460	U
3,3'-Dichlorobenzidine	UG/KG	460	U	500	U	460	U
3-Nitroaniline	UG/KG	1100	U	1200	U	1100	U
4,6-Dinitro-2-methylphenol	UG/KG	1100	U	1200	U	1100	U
4-Bromophenyl-phenylether	UG/KG	460	U	500	U	460	U
4-Chloro-3-methylphenol	UG/KG	460	U	500	U	460	U
4-Chloroaniline	UG/KG	460	U	500	U	460	U
4-Chlorophenyl-phenylether	UG/KG	460	U	500	U	460	U
4-Methylphenol	UG/KG	460	U	500	U	460	U
4-Nitroaniline	UG/KG	1100	U	1200	U	1100	U
4-Nitrophenol	UG/KG	1100	U	1200	U	1100	U
Acenaphthene	UG/KG	460	U	500	U	460	U
Acenaphthylene	UG/KG	460	U	500	U	460	U
Anthracene	UG/KG	460	U	500	U	460	U
Benzo(a)anthracene	UG/KG	460	U	25	J	460	U
Benzo(a)pyrene	UG/KG	460	U	30	J	460	U
Benzo(b)fluoranthene	UG/KG	460	U	43	J	460	U
Benzo(g,h,i)perylene	UG/KG	460	U	31	J	460	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120A		16124A		16122A	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0	
BOTTOM:		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Benzo(k)fluoranthene	UG/KG	460	U	33	J	460	U
Butylbenzylphthalate	UG/KG	460	U	500	U	460	U
Carbazole	UG/KG	460	U	500	U	460	U
Chrysene	UG/KG	460	U	48	J	460	U
Di-n-butylphthalate	UG/KG	460	U	500	U	460	U
Di-n-octylphthalate	UG/KG	460	U	500	U	460	U
Dibenz(a,h)anthracene	UG/KG	460	U	500	U	460	U
Dibenzofuran	UG/KG	460	U	500	U	460	U
Diethylphthalate	UG/KG	460	U	500	U	460	U
Dimethylphthalate	UG/KG	460	U	500	U	460	U
Fluoranthene	UG/KG	460	U	70	J	460	U
Fluorene	UG/KG	460	U	500	U	460	U
Hexachlorobenzene	UG/KG	460	U	500	U	460	U
Hexachlorobutadiene	UG/KG	460	U	500	U	460	U
Hexachlorocyclopentadiene	UG/KG	460	U	500	U	460	U
Hexachloroethane	UG/KG	460	U	500	U	460	U
Indeno(1,2,3-cd)pyrene	UG/KG	460	U	24	J	460	U
Isophorone	UG/KG	460	U	500	U	460	U
N-Nitroso-di-n-propylamine	UG/KG	460	U	500	U	460	U
N-Nitrosodiphenylamine (1)	UG/KG	460	U	500	U	460	U
Naphthalene	UG/KG	460	U	500	U	460	U
Nitrobenzene	UG/KG	460	U	500	U	460	U
Pentachlorophenol	UG/KG	1100	U	1200	U	1100	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120A		16124A		16122A	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0	
BOTTOM:		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Phenanthrene	UG/KG	460	U	35	J	460	U
Phenol	UG/KG	460	U	500	U	460	U
Pyrene	UG/KG	460	U	47	J	460	U
bis(2-Chloroethoxy) methane	UG/KG	460	U	500	U	460	U
bis(2-Chloroethyl) ether	UG/KG	460	U	500	U	460	U
bis(2-Chloroisopropyl) ether	UG/KG	460	U	500	U	460	U
bis(2-Ethylhexyl)phthalate	UG/KG	54	J	77	J	460	U
PESTICIDES/PCB							
4,4'-DDD	UG/KG	4.6	U	13	J	4.6	U
4,4'-DDE	UG/KG	4.6	U	62	J	2.9	J
4,4'-DDT	UG/KG	4.6	U	12	J	4.6	U
Aldrin	UG/KG	2.4	U	2.6	UJ	2.4	U
Aroclor-1016	UG/KG	46	U	50	UJ	46	U
Aroclor-1221	UG/KG	94	U	100	UJ	94	U
Aroclor-1232	UG/KG	46	U	50	UJ	46	U
Aroclor-1242	UG/KG	46	U	50	UJ	46	U
Aroclor-1248	UG/KG	46	U	50	UJ	46	U
Aroclor-1254	UG/KG	46	U	50	UJ	46	U
Aroclor-1260	UG/KG	46	U	50	UJ	46	U
Dieldrin	UG/KG	4.6	U	5	UJ	4.6	U
Endosulfan I	UG/KG	2.4	U	1.6	J	2.4	U
Endosulfan II	UG/KG	4.6	U	5	UJ	4.6	U
Endosulfan sulfate	UG/KG	4.6	U	5	UJ	4.6	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120A		16124A		16122A	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0	
BOTTOM:		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Endrin	UG/KG	4.6	U	5	UJ	4.6	U
Endrin aldehyde	UG/KG	4.6	U	5	UJ	4.6	U
Endrin ketone	UG/KG	4.6	U	5	UJ	4.6	U
Heptachlor	UG/KG	2.4	U	2.6	UJ	2.4	U
Heptachlor epoxide	UG/KG	2.4	U	2.6	UJ	2.4	U
Methoxychlor	UG/KG	24	U	26	UJ	24	U
Toxaphene	UG/KG	240	U	260	UJ	240	U
alpha-BHC	UG/KG	2.4	U	2.6	UJ	2.4	U
alpha-Chlordane	UG/KG	2.4	U	2.6	UJ	2.4	U
beta-BHC	UG/KG	2.4	U	2.6	UJ	2.4	U
delta-BHC	UG/KG	2.4	U	2.6	UJ	2.4	U
gamma-BHC (Lindane)	UG/KG	2.4	U	2.6	UJ	2.4	U
gamma-Chlordane	UG/KG	2.4	U	2.6	UJ	2.4	U
OTHER ANALYSES							
Nitrate/Nitrite-Nitrogen	MG/KG	0.04		0.09		0.04	
Percent Moisture (PEST/PCB)		29		34		29	
Percent Moisture (SVOCs)		29		34		29	
Percent Moisture (VOCs)		26		29		29	
Percent Solids (Metals)		70.8		65.8		70.9	
Total Organic Carbon	MG/KG	141	U	17800		4090	
NITROAROMATICS							
1,3,5-Trinitrobenzene	UG/KG	120	U	120	U	120	U
1,3-Dinitrobenzene	UG/KG	120	U	120	U	120	U

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120A		16124A		16122A	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0	
BOTTOM:		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
2,4,6-Trinitrotoluene	UG/KG	120	U	120	U	120	U
2,4-Dinitrotoluene	UG/KG	120	U	120	U	120	U
2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U
2-Nitrotoluene	UG/KG	120	U	120	U	120	U
2-amino-4,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U
3-Nitrotoluene	UG/KG	120	U	120	U	120	U
4-Nitrotoluene	UG/KG	120	U	120	U	120	U
4-amino-2,6-Dinitrotoluene	UG/KG	120	U	120	U	120	U
HMX	UG/KG	120	U	120	U	120	U
Nitrobenzene	UG/KG	120	U	120	U	120	U
RDX	UG/KG	120	U	120	U	120	U
Tetryl	UG/KG	120	U	120	U	120	U
METALS							
Aluminum	MG/KG	18900		17100		22100	
Antimony	MG/KG	0.61	UJ	4.7	J	0.73	UJ
Arsenic	MG/KG	6.2		5		7.5	
Barium	MG/KG	128		157		92.4	
Beryllium	MG/KG	0.99		0.44		0.76	
Cadmium	MG/KG	0.32		2.7		0.25	
Calcium	MG/KG	4100		6150		2190	
Chromium	MG/KG	25.8		23.3		27.7	
Cobalt	MG/KG	11.5		12		17.8	
Copper	MG/KG	38.6	J	309	J	34.1	J

SEAD-17 Analytes Detected in Sediments
Complete Results of Analyses

SEAD-17 Remedial Investigation
Seneca Army Depot Activity

LOC_ID:		SW/SD17-1		SW/SD17-8		SW/SD17-9	
SAMP ID:		16120A		16124A		16122A	
QC CODE:		SA		SA		SA	
STUDY ID:		RI ROUND1		RI ROUND1		RI ROUND1	
TOP:		0		0		0	
BOTTOM:		6		6		6	
MATRIX:		SEDIMENT		SEDIMENT		SEDIMENT	
SAMPLE DATE:		9/17/96		9/17/96		9/17/96	
PARAMETER	UNITS	VALUE	Q	VALUE	Q	VALUE	Q
Cyanide	MG/KG	0.58	U	0.53	U	0.6	U
Iron	MG/KG	30800		29400		35000	
Lead	MG/KG	68.3		678		90.5	
Magnesium	MG/KG	4970		4580		4830	
Manganese	MG/KG	566	J	768	J	565	J
Mercury	MG/KG	0.04		0.07		0.04	
Nickel	MG/KG	29.8	J	28.8	J	31.4	J
Potassium	MG/KG	1310	J	2470	J	1950	J
Selenium	MG/KG	0.8	U	1.6		0.96	
Silver	MG/KG	0.25	U	0.43	U	0.3	U
Sodium	MG/KG	79.4		137		69	
Thallium	MG/KG	1.3		1.2	U	0.83	U
Vanadium	MG/KG	32.1		29.8		33.8	
Zinc	MG/KG	78.4		242		108	

SEAD-16 and SEAD-17 TICs

ESI VOCs

		Sample ID: MW17-3		
1E	AHH1MW173	0		
			Total:	0

		Sample ID: MW17-1		
1E	AFH1MW171	0		
			Total:	0
		Sample ID: MW17-4		
1E	AGH1MW174	0		
			Total:	0

	Location ID: MSB			
1E	AAH1MSB 0			
		Total:	0	
	Location ID: SS16-3			
1E	ABH1SS163 2			
1E	ABD1 1 95-13-1H-INDENE	24	24	JXN
1E	ABD1 2 UNKNOWN TRIMETHYLBENZENE	27.55	49	JX
		Total:	73	
	Location ID: SS17-1			
1E	ACH1SS171 2			
1E	ACD1 1 UNKNOWN TERPENE	23.55	7	JX
1E	ACD1 2 95-13-1H-INDENE W/ ALKANE	24.1	12	JXNZ
		Total:	19	
	Location ID: SS17-12			
1E	ADH1SS1712 0			
		Total:	0	
	Location ID: SS17-14			
1E	AEH1SS1714 0			
		Total:	0	
	Location ID: SS17-16			
1E	AFH1SS1716 0			
		Total:	0	
	Location ID: SS17-17			
1E	AGH1SS1717 0			
		Total:	0	
	Location ID: SS17-18			
1E	AHH1SS1718 0			
		Total:	0	
	Location ID: SS17-18			
1E	AIH1SS1718R 0			
		Total:	0	
	Location ID: SS17-19			
1E	AJH1SS1719 5			
1E	AJD1 1 24524-58-BICYCLO[3.1.0]HEXANE, 6-ISOP	19.25	33	JXN
1E	AJD1 2 UNKNOWN TERPENE	22.45	61	JX
1E	AJD1 3 UNKNOWN TERPENE	23.6	430	JX
1E	AJD1 4 UNKNOWN TERPENE	24.2	440	JX
1E	AJD1 5 470-82-CINEOLE	25.35	19	JXN
		Total:	983	
	Location ID: SS17-2			
1E	AKH1SS172 3			
1E	AKD1 1 565-80-3-PENTANONE, 2,4-DIMETHYL-	20.55	11	JXN
1E	AKD1 2 UNKNOWN TERPENE	23.55	47	JX
1E	AKD1 3 UNKNOWN TERPENE	24.1	9	JX
		Total:	67	
	Location ID: SS17-20			
1E	ALH1SS1720 0			
		Total:	0	
	Location ID: SS17-21			

1E	AMH1SS1721 0			
		Total:	0	
	Location ID: SS17-3			
1E	ANH1SS173 1			
1E	AND1 1 106-68-3-OCTANONE	29.55	16	JXN
		Total:	16	
	Location ID: SS17-4			
1E	AOH1SS174 0			
		Total:	0	
	Location ID: SS17-5			
1E	APH1SS175 0			
		Total:	0	
	Location ID: SS17-6			
1E	AQH1SS176 0			
		Total:	0	
	Location ID: SS17-7			
1E	ARH1SS177 0			
		Total:	0	
	Location ID: SS17-8			
1E	ASH1SS178 1			
1E	ASD1 1 UNKNOWN	3	7	JX
		Total:	7	
	Location ID: LAB BLANK			
1E	ATH1VBLKY9 0			
		Total:	0	
	Location ID: LAB BLANK			
1E	AUH1VBLKZ4 0			
		Total:	0	
	Location ID: LAB BLANK			
1E	AVH1VBLKZ8 0			
		Total:	0	
	Location ID: LAB BLANK			
1E	AWH1VBLKA4 0			
		Total:	0	
	Location ID: LAB BLANK			
1E	AXH1VBLKA9 0			
		Total:	0	

		Sample ID: SB17-1-1			
1E	ABH1SB1711		0		
				Total:	0
		Sample ID: SB17-1-2			
1E	ACH1SB1712		0		
				Total:	0
		Sample ID: SB17-1-3			
1E	ADH1SB1713		0		
				Total:	0
		Sample ID: SB17-3-1			
1E	AEH1SB1731		0		
				Total:	0
		Sample ID: SB17-3-2			
1E	AFH1SB1732		0		
				Total:	0
		Sample ID: SB17-4-1			
1E	AGH1SB1741		0		
				Total:	0
		Sample ID: SB17-4-2			
1E	AHH1SB1742		0		
				Total:	0

		Sample ID:			
1E	AAH1172.10	0			
			Total:	0	
		Sample ID:			
1E	ABH1172.2R	0			
			Total:	0	
		Sample ID:			
1E	ACH1B172.1	1			
1E	ACD1 1	Unknown cycloalkane	28.693	7	J
			Total:	7	
		Sample ID:			
1E	ADH1B172.1RE	0			
			Total:	0	
		Sample ID:			
1E	AEH1B172.2	0			
			Total:	0	

		Sample ID: SS17-22			
1E	AAH1SS1722	8			
1E	AAD1 1	Unknown alkane	22.561	8	J
1E	AAD1 2	Unknown cyclic hydrocarbon	25.713	7	J
1E	AAD1 3	Unknown alkane	26.454	7	J
1E	AAD1 4	Unknown alkane	26.919	37	J
1E	AAD1 5	Unknown alkane	27.677	8	J
1E	AAD1 6	Unknown alkane	27.952	10	J
1E	AAD1 7	Unknown alkane w/substituted	28.452	16	JZ
1E	AAD1 8	Unknown alkane	28.607	14	J
			Total:	107	
		Sample ID: SS17-23			
1E	ABH1SS1723	0			
			Total:	0	
		Sample ID: SS17-24			
1E	ACH1SS1724	0			
			Total:	0	
		Sample ID: SS17-24			
1E	ADH1SS1724RE	0			
			Total:	0	

		Sample ID: MW16-1		
1E	ADH1MW161	0		
			Total:	0
		Sample ID: MW16-2		
1E	AEH1MW162	0		
			Total:	0
		Sample ID: MW16-2		
1E	AFH1MW162R	0		
			Total:	0
		Sample ID: MW16-3		
1E	AGH1MW163	0		
			Total:	0
		Sample ID: MW16-41		
1E	AHH1MW1641	0		
			Total:	0
		Sample ID: MW17-2		
1E	AIH1MW172	0		
			Total:	0

		Sample ID: SS16-10			
1E	AGH1SS1610	5			
1E	AGD1 1 75-71-	METHANE, DICHLORODIFLUORO-	1.6	21	JXN
1E	AGD1 2 281-23-	TRICYCLO[3.3.1.13,7]DECANE	22.35	11	JXN
1E	AGD1 3	UNKNOWN CYCLOALKANES	23.95	6	JXZ
1E	AGD1 4	UNKNOWN	25.2	8	JX
1E	AGD1 5	UNKNOWN 1,4-DIMETHYLCYCLOOCT	29	9	JX
			Total:	55	
		Sample ID: SS16-9			
1E	AHH1SS169	5			
1E	AHD1 1 75-71-	METHANE, DICHLORODIFLUORO-	1.7	29	JXN
1E	AHD1 2 281-23-	TRICYCLO[3.3.1.13,7]DECANE	22.35	15	JXN
1E	AHD1 3	UNKNOWN CYCLOALKANES	23.9	9	JXZ
1E	AHD1 4	UNKNOWN	25.25	8	JX
1E	AHD1 5	UNKNOWN 1,4-DIMETHYLCYCLOOCT	28.95	9	JX
			Total:	70	
		Sample ID: SS17-10			
1E	AIH1SS1710	1			
1E	AID1 1 75-71-	METHANE, DICHLORODIFLUORO-	2.25	45	JXN
			Total:	45	
		Sample ID: SS17-10			
1E	AJH1SS1711	1			
1E	AJD1 1 75-71-	METHANE, DICHLORODIFLUORO-	2.25	23	JXN
			Total:	23	

		Sample ID: SS16-1			
1E	AAH1SS161	0			
			Total:	0	
		Sample ID: SS16-11			
1E	ABH1SS1611	0			
			Total:	0	
		Sample ID: SS16-12			
1E	ACH1SS1612	10			
1E	ACD1 1	Unknown alkane	21.569	7	JX
1E	ACD1 2	Unknown alkane	22.138	10	JX
1E	ACD1 3	Unknown alkane	23.122	9	JX
1E	ACD1 4	Unknown alkene	24.071	7	JX
1E	ACD1 5	Unknown alkane	24.814	14	JX
1E	ACD1 6	Unknown alkene	25.28	18	JX
1E	ACD1 72847-72-5	Decane, 4-methyl-	26.471	44	NJX
1E	ACD1 8	Unknown alkane	27.576	8	JX
1E	ACD1 9	Unknown alkane	28.285	35	JX
1E	ACD110	Unknown alkane	28.786	28	JX
			Total:	180	
		Sample ID: SS16-12			
1E	ADH1SS1612RE	0			
			Total:	0	
		Sample ID: SS16-13			
1E	AEH1SS1613	0			
			Total:	0	
		Sample ID: SS16-13			
1E	AFH1SS1613RE	0			
			Total:	0	
		Sample ID: SS16-14			
1E	AGH1SS1614	0			
			Total:	0	
		Sample ID: SS16-15			
1E	AHH1SS1615	1			
1E	AHD1 195-36-3	1,2,4-Trimethylbenzene	28.05	6	NJ
			Total:	6	
		Sample ID: SS16-15			
1E	AIH1SS1615RE	3			
1E	AID1 1	Unknown	23.927	6	J
1E	AID1 2	Unknown	28.235	6	J
1E	AID1 3	Unknown	28.735	41	J
			Total:	53	
		Sample ID: SS16-16			
1E	AJH1SS1616	8			
1E	AJD1 1	Unknown alkane	22.103	7	J
1E	AJD1 2	Unknown alkane	23.121	6	J
1E	AJD1 3	Unknown alkane	24.812	6	J
1E	AJD1 4	Unknown alkane	25.226	11	J
1E	AJD1 5	Unknown alkane	26.451	22	J
1E	AJD1 6	Unknown alkane	28.299	17	J

1E	AJD1 7	Unknown alkane	28.42	14	J
1E	AJD1 8	Unknown alkane	28.783	15	J
			Total:	98	
		Sample ID: SS16-2			
1E	AKH1SS162	0			
			Total:	0	
		Sample ID: SS16-4			
1E	ALH1SS164	0			
			Total:	0	
		Sample ID: SS16-5			
1E	AMH1SS165	4			
1E	AMD1 1	Unknown terpene	23.031	12	J
1E	AMD1 2	Unknown cyclohexene derivati	28.066	85	J
1E	AMD1 3138-86-3	Limonene	28.532	12	NJ
1E	AMD1 4	Unknown methyl methylethyl b	28.722	13	J
			Total:	122	
		Sample ID: SS16-6			
1E	ANH1SS166	7			
1E	AND1 1	Unknown cyclohexane derivati	24.524	10	J
1E	AND1 2	Unknown	25.713	12	J
1E	AND1 3	Unknown alkane	26.92	18	J
1E	AND1 4	Unknown	27.248	7	J
1E	AND1 5	Unknown	27.575	7	J
1E	AND1 6	Unknown	27.955	11	J
1E	AND1 7	Unknown cyclohexane derivati	28.403	25	J
			Total:	90	
		Sample ID: SS16-7			
1E	AOH1SS167	10			
1E	AOD1 1	Unknown alkane	22.021	330	J
1E	AOD1 2	Unknown alkane	22.573	490	J
1E	AOD1 3	Unknown alkane	23.609	400	J
1E	AOD1 4	Unknown alkene	24.558	440	J
1E	AOD1 5	Unknown cyclohexane derivati	25.439	290	J
1E	AOD1 6	Unknown cyclohexane derivati	25.732	700	J
1E	AOD1 7	Unknown alkane	26.976	1100	J
1E	AOD1 8611-14-3	Benzene, 1-ethyl-2-methyl-	27.494	670	NJ
1E	AOD1 9	Unknown alkane	27.995	300	J
1E	AOD110	Unknown alkane	28.618	590	J
			Total:	5310	
		Sample ID: SS16-8			
1E	APH1SS168	0			
			Total:	0	
		Sample ID: SS17-13			
1E	AQH1SS1713	0			
			Total:	0	
		Sample ID: SS17-15			
1E	ARH1SS1715	0			
			Total:	0	
		Sample ID: SS17-9			

1E	ASH1SS179	0			
			Total:	0	
		Sample ID: SS17-9			
1E	ATH1SS179RE	1			
1E	ATD1 1	Unknown	28.743	11	J
			Total:	11	
		Sample ID: LAB BLANK			
1E	AUH1VBLK1K	0			
			Total:	0	
		Sample ID: LAB BLANK			
1E	AVH1VBLKR5	0			
			Total:	0	
		Sample ID: LAB BLANK			
1E	AWH1VBLKR7	0			
			Total:	0	
		Sample ID: LAB BLANK			
1E	AXH1VBLKT5	0			
			Total:	0	

		Sample ID: SW16-1		
1E	ALH1SW161	0		
			Total:	0
		Sample ID: SW16-2		
1E	AMH1SW162	0		
			Total:	0

		Sample ID: FS16-5			
1E	AAH1FS165	0			
			Total:	0	
		Sample ID: FS16-6			
1E	ABH1FS166	0			
			Total:	0	
		Sample ID: FS16-7			
1E	ACH1FS167	2			
1E	ACD1 175-18-3	Dimethyl sulfide	5.25	30	NJ
1E	ACD1 2110-54-3	Hexane	6.902	13	NJ
			Total:	43	
		Sample ID: FS16-7			
1E	ADH1FS167RE	0			
			Total:	0	
		Sample ID: FS16-8			
1E	AEH1FS168	0			
			Total:	0	

		Sample ID: FS16-1		
1E	AAH1FS161	0		
			Total:	0
		Sample ID: FS16-2		
1E	ABH1FS162	0		
			Total:	0
		Sample ID: FS16-3		
1E	ACH1FS163	0		
			Total:	0
		Sample ID: FS16-4		
1E	ADH1FS164	0		
			Total:	0

RI VOCs

		Location ID: FIELD BLANK			
1E	AAH116029	0			
			Total:	0	
		Location ID: SB16-4			
1E	ABH116030	2			
1E	ABD1 1110-82-7	Cyclohexane	6.829	15	J
1E	ABD1 2	Unknown terpene	12.835	6	J
			Total:	21	
		Location ID: SB16-4			
1E	ACH116031	10			
1E	ACD1 1	Unknown aliphatic compound	12.479	9	J
1E	ACD1 2	Unknown	12.704	7	J
1E	ACD1 3	Unknown alkane	13.049	6	J
1E	ACD1 491-17-8	Naphthalene, decahydro-	13.897	19	NJ
1E	ACD1 5	Unknown alkylcyclohexane	14.156	6	J
1E	ACD1 6	Unknown	14.572	13	J
1E	ACD1 72958-76-1	Naphthalene, decahydro-2-met	14.797	12	NJ
1E	ACD1 8	Unknown aromatic compound	15.247	8	J
1E	ACD1 9	Unknown	15.437	8	J
1E	ACD110	Unknown aromatic compound	15.836	6	J
			Total:	94	
		Location ID: SB16-3			
1E	ADH116032	6			
1E	ADD1 1493-02-7	Naphthalene, decahydro-, tra	13.893	12	NJ
1E	ADD1 2	Unknown alcohol	14.568	11	J
1E	ADD1 32958-76-1	Naphthalene, decahydro-2-met	14.793	11	NJ
1E	ADD1 4	Unknown	15.243	5	J
1E	ADD1 5	Unknown	15.434	8	J
1E	ADD1 6	Unknown	16.092	7	J
			Total:	54	
		Location ID: SB16-3			
1E	AEH116033	10			
1E	AED1 1	Unknown alkane	13.036	71	J
1E	AED1 2493-02-7	Naphthalene, decahydro-, tra	13.885	99	NJ
1E	AED1 3	Unknown alkylcyclohexane	14.059	46	J
1E	AED1 4	Unknown alkylcyclohexane	14.163	56	J
1E	AED1 5	Unknown	14.561	98	J
1E	AED1 62958-76-1	Naphthalene, decahydro-2-met	14.787	72	NJ
1E	AED1 7	Unknown alkane	15.29	84	J
1E	AED1 8	Unknown	15.429	83	J
1E	AED1 9	Unknown alkane w/unknown	16.088	78	JZ
1E	AED110	Unknown	16.626	35	J
			Total:	722	
		Location ID: SB16-3			
1E	AFH116033RE	10			
1E	AFD1 1	Unknown alkane	3.431	11	J
1E	AFD1 2	Unknown alkane	5.036	6	J
1E	AFD1 3	Unknown alkane	12.285	6	J
1E	AFD1 4	Unknown alkane	13.511	12	J

1E	AFD1 5493-02-7	Naphthalene, decahydro-, tra	14.6	16	NJ
1E	AFD1 6	Unknown substituted cyclohex	14.825	6	J
1E	AFD1 7	Unknown	14.98	10	J
1E	AFD1 8	Unknown	15.568	17	J
1E	AFD1 9	Unknown	15.811	6	J
1E	AFD110	Unknown aromatic compound	15.914	12	J
			Total:	102	
		Location ID: SB16-5			
1E	AGH116034	0			
			Total:	0	
		Location ID: SB16-5			
1E	AHH116035	1			
1E	AHD1 154832-83-6	1H-Indene, octahydro-2,2,4,4	14.222	9	NJ
			Total:	9	
		Location ID: SB16-2			
1E	AIH116036	0			
			Total:	0	
		Location ID: SB16-1			
1E	AJH116037	0			
			Total:	0	
		Location ID: SB16-1			
1E	AKH116038	0			
			Total:	0	
		Location ID: SB16-1			
1E	ALH116039	0			
			Total:	0	
		Location ID: SS16-17			
1E	AMH116040	0			
			Total:	0	
		Location ID: SS16-18			
1E	ANH116041	0			
			Total:	0	
		Location ID: SS16-19			
1E	AOH116042	1			
1E	AOD1 1124-38-9	Carbon dioxide	2.033	170	NJ
			Total:	170	
		Location ID: SS16-20			
1E	APH116043	2			
1E	APD1 1107-92-6	Butanoic acid	3.085	6	NJ
1E	APD1 2	Unknown	3.258	5	J
			Total:	11	
		Location ID: SS16-28			
1E	AQH116044	0			
			Total:	0	
		Location ID: SS16-29			
1E	ARH116045	4			
1E	ARD1 1	Unknown	13.907	18	J
1E	ARD1 2	Unknown	14.477	75	J
1E	ARD1 3	Unknown aromatic compound	14.891	5	J

1E	ARD1 4	Unknown	15.669	24	J
			Total:	122	
		Location ID: SS16-29			
1E	ASH116045RE	0			
			Total:	0	
		Location ID: SS16-26			
1E	ATH116046	0			
			Total:	0	
		Location ID: SS16-27			
1E	AUH116047	0			
			Total:	0	
		Location ID: SS16-30			
1E	AVH116048	1			
1E	AVD1 1109-52-4	Pentanoic acid	3.085	6	NJ
			Total:	6	
		Location ID: SS16-30			
1E	AWH116048RE	0			
			Total:	0	
		Location ID: SS16-22			
1E	AXH116049	2			
1E	AXD1 1	Unknown	3.105	7	J
1E	AXD1 2121-43-7	Boric acid, trimethyl ester	3.312	6	NJ
			Total:	13	
		Location ID: SS16-22			
1E	AYH116049RE	6			
1E	AYD1 1	Unknown	12.218	17	J
1E	AYD1 2	Unknown	13.859	6	J
1E	AYD1 3	Unknown	14.411	12	J
1E	AYD1 4	Unknown alkylcyclohexane	14.878	41	J
1E	AYD1 5	Unknown	15.034	6	J
1E	AYD1 6	Unknown	15.828	7	J
			Total:	89	
		Location ID: SS16-25			
1E	AZH116050	1			
1E	AZD1 1	Unknown alkane	3.224	7	J
			Total:	7	
		Location ID: SS16-25			
1E	BAH116050RE	1			
1E	BAD1 1121-43-7	Boric acid, trimethyl ester	3.206	7	NJX
			Total:	7	
		Location ID: LAB BLANK			
1E	BBH1VBLKR9	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BCH1VBLKT5	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BDH1VBLKT6	0			
			Total:	0	

		Location ID: LAB BLANK			
1E	BEH1VBLKU3	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BFH1VBLKU6	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BGH1VBLKU9	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BHH1VBLKV2	0			
			Total:	0	

		Location ID: SW/SD16-4			
1E	AAH116119A	1			
1E	AAD1 1	Unknown	3.623	16	J
			Total:	16	
		Location ID: SW/SD17-1			
1E	ABH116120A	0			
			Total:	0	
		Location ID: SW/SD17-6			
1E	ACH116121A	1			
1E	ACD1 1	Unknown siloxane derivative	12.774	23	J
			Total:	23	
		Location ID: SW/SD17-9			
1E	ADH116122A	0			
			Total:	0	
		Location ID: SW/SD17-10			
1E	AEH116123A	0			
			Total:	0	
		Location ID: SW/SD17-8			
1E	AFH116124A	0			
			Total:	0	
		Location ID: SW/SD16-4			
1E	AGH116125A	1			
1E	AGD1 1127-91-3	.beta.-Pinene	11.427	24	J
			Total:	24	
		Location ID: SW/SD16-6			
1E	AHH116126A	2			
1E	AHD1 180-56-8	.alpha.-Pinene	10.718	9	J
1E	AHD1 2127-91-3	.beta.-Pinene	11.427	22	J
			Total:	31	
		Location ID: SW/SD16-6			
1E	AIH116126ARE	3			
1E	AID1 1127-91-3	.beta.-Pinene	11.427	8	NJ
1E	AID1 25989-27-5	D-Limonene	11.979	14	NJ
1E	AID1 3	Unknown siloxane derivative	14.276	8	J
			Total:	40	
		Location ID: SW/SD16-7			
1E	AJH116127A	2			
1E	AJD1 17440-63-3	Xenon	2.122	300	NJ
1E	AJD1 2	Unknown	2.933	8	J
			Total:	308	
		Location ID: SW/SD16-7			
1E	AKH116127ARE	1			
1E	AKD1 118172-67-	3Bicyclo[3.1.1]heptane, 6,6-d	11.427	8	NJ
			Total:	8	
		Location ID: SW/SD16-9			
1E	ALH116128A	0			
			Total:	0	
		Location ID: SW/SD16-10			
1E	AMH116129A	0			
			Total:	0	

		Location ID: SW/SD16-10			
1E	ANH116129ARE	0			
			Total:	0	
		Location ID: SW/SD17-2			
1E	AOH116130A	0			
			Total:	0	
		Location ID: SW/SD17-3			
1E	APH116131A	0			
			Total:	0	
		Location ID: SW/SD17-7			
1E	AQH116132A	0			
			Total:	0	
		Location ID: SW/SD16-3			
1E	ARH116133A	0			
			Total:	0	
		Location ID: SW/SD16-8			
1E	ASH116134A	0			
			Total:	0	
		Location ID: SW/SD16-2			
1E	ATH116135A	0			
			Total:	0	
		Location ID: SW/SD17-4			
1E	AUH116136A	0			
			Total:	0	
		Location ID: SW/SD17-5			
1E	AVH116137A	0			
			Total:	0	
		Location ID: SW/SD16-5			
1E	AWH116142A	0			
			Total:	0	
		Location ID: SW/SD16-1			
1E	AXH116143A	1			
1E	AXD1 1	Unknown	2.122	360	J
			Total:	360	
		Location ID: LAB BLANK			
1E	AYH1VBLKJ4	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	AZH1VBLKJ8	1			
1E	AZD1 15989-27-5	D-Limonene	11.978	8	NJ
			Total:	8	
		Location ID: LAB BLANK			
1E	BAH1VBLKJ9	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BBH1VBLKK3	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BCH1VBLKK5	0			
			Total:	0	

		Location ID: FIELD BLANK			
1E	AAH116116	0			
			Total:	0	
		Location ID: TRIP BLANK			
1E	ABH116118	0			
			Total:	0	
		Location ID: SW/SD16-4			
1E	ACH116119	0			
			Total:	0	
		Location ID: SW/SD17-1			
1E	ADH116120	0			
			Total:	0	
		Location ID: SW/SD17-6			
1E	AEH116121	1			
1E	AED1 1141-78-6	Ethyl Acetate	7.619	5	NJ
			Total:	5	
		Location ID: SW/SD17-9			
1E	AFH116122	0			
			Total:	0	
		Location ID: SW/SD17-10			
1E	AGH116123	0			
			Total:	0	
		Location ID: SW/SD17-8			
1E	AHH116124	0			
			Total:	0	
		Location ID: SW/SD16-4			
1E	AIH116125	0			
			Total:	0	
		Location ID: SW/SD16-6			
1E	AJH116126	0			
			Total:	0	
		Location ID: SW/SD16-7			
1E	AKH116127	1			
1E	AKD1 1141-78-6	Ethyl Acetate	7.602	5	NJ
			Total:	5	
		Location ID: SW/SD16-9			
1E	ALH116128	1			
1E	ALD1 1141-78-6	Ethyl Acetate	7.602	6	NJ
			Total:	6	
		Location ID: SW/SD16-10			
1E	AMH116129	0			
			Total:	0	
		Location ID: SW/SD17-2			
1E	ANH116130	0			
			Total:	0	
		Location ID: SW/SD17-3			
1E	AOH116131	0			
			Total:	0	
		Location ID: SW/SD17-7			

1E	APH116132	0			
			Total:	0	
		Location ID: SW/SD16-3			
1E	AQH116133	0			
			Total:	0	
		Location ID: SW/SD16-8			
1E	ARH116134	0			
			Total:	0	
		Location ID: SW/SD16-2			
1E	ASH116135	0			
			Total:	0	
		Location ID: SW/SD17-4			
1E	ATH116136	0			
			Total:	0	
		Location ID: SW/SD17-5			
1E	AUH116137	0			
			Total:	0	
		Location ID: SW/SD16-5			
1E	AVH116142	1			
1E	AVD1 1141-78-6	Ethyl Acetate	7.584	8	NJ
			Total:	8	
		Location ID: SW/SD16-1			
1E	AWH116143	0			
			Total:	0	
		Location ID:			
1E	AXH116145	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	AYH1MSBAH	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	AZH1VBLKK5	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BAH1VBLKK8	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BBH1VBLKK9	0			
			Total:	0	

		Location ID: FIELD BLANK			
1E	AAH116100	1			
1E	AAD1 167-63-0	Isopropyl Alcohol	5.575	450	NJ
			Total:	450	
		Location ID: MW16-1			
1E	ABH116101	0			
			Total:	0	
		Location ID: MW16-2			
1E	ACH116102	2			
1E	ACD1 1	Unknown	5.126	0.8	J
1E	ACD1 2	Unknown	8.445	0.8	J
			Total:	1.6	
		Location ID: FIELD BLANK			
1E	ADH116103	2			
1E	ADD1 167-63-0	Isopropyl Alcohol	5.575	6100	NJ
1E	ADD1 2	Unknown	17.79	75	J
			Total:	6175	
		Location ID: MW16-7			
1E	AEH116104	0			
			Total:	0	
		Location ID: MW16-4			
1E	AFH116105	1			
1E	AFD1 1	Unknown	6.803	0.9	J
			Total:	0.9	
		Location ID: MW17-5			
1E	AGH116106	3			
1E	AGD1 1	Unknown	5.126	1	J
1E	AGD1 267-63-0	Isopropyl Alcohol	5.576	1	NJ
1E	AGD1 384-66-2	Diethyl Phthalate	24.189	1	NJ
			Total:	3	
		Location ID: FIELD BLANK			
1E	AHH116107	2			
1E	AHD1 167-63-0	Isopropyl Alcohol	5.575	46	NJ
1E	AHD1 2	Unknown	17.791	2	J
			Total:	48	
		Location ID: MW17-1			
1E	AIH116108	0			
			Total:	0	
		Location ID: MW17-1			
1E	AJH116109	0			
			Total:	0	
		Location ID: MW16-3			
1E	AKH116110	0			
			Total:	0	
		Location ID: MW16-6			
1E	ALH116111	1			
1E	ALD1 1	Unknown	5.109	1	J
			Total:	1	
		Location ID: MW16-6			

1E	AMH116112	0			
			Total:	0	
		Location ID: TRIP BLANK			
1E	ANH116113	1			
1E	AND1 1	Unknown siloxane derivative	23.059	1	J
			Total:	1	
		Location ID: FIELD BLANK			
1E	AOH116114	0			
			Total:	0	
		Location ID: MW16-3			
1E	APH116115	0			
			Total:	0	
		Location ID: TRIP BLANK			
1E	AQH1TB8-30	0			
			Total:	0	
		Location ID: TRIP BLANK			
1E	ARH1TB828	0			
			Total:	0	
		Location ID: TRIP BLANK			
1E	ASH1TB829	0			
			Total:	0	
		Location ID: TRIP BLANK			
1E	ATH1TB9-3	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	AUH1VBLKB8	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	AVH1VBLKC2	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	AWH1VBLKD4	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	AXH1VBLKH2	0			
			Total:	0	

		Location ID: SS16-35			
1E	AAH116066	0			
			Total:	0	
		Location ID: SS16-33			
1E	ABH116067	0			
			Total:	0	
		Location ID: SS16-38			
1E	ACH116068	1			
1E	ACD1 1	Unknown	3.051	5	J
			Total:	5	
		Location ID: SS17-26			
1E	ADH116069	0			
			Total:	0	
		Location ID: SS17-30			
1E	AEH116070	0			
			Total:	0	
		Location ID: SS17-31			
1E	AFH116071	1			
1E	AFD1 1	Unknown	12.147	6	J
			Total:	6	
		Location ID: SS17-24			
1E	AGH116072	0			
			Total:	0	
		Location ID: SS17-24			
1E	AHH116072RE	4			
1E	AHD1 1	Unknown	12.148	28	J
1E	AHD1 2	Unknown	12.873	33	J
1E	AHD1 35989-27-5	D-Limonene	13.461	14	NJ
1E	AHD1 4	Unknown alkane	13.979	12	J
			Total:	87	
		Location ID: SS17-25			
1E	AIH116073	0			
			Total:	0	
		Location ID: SS16-500-N			
1E	AJH116074	0			
			Total:	0	
		Location ID: SS17-39			
1E	AKH116075	0			
			Total:	0	
		Location ID: SS17-38			
1E	ALH116076	0			
			Total:	0	
		Location ID: SS17-36			
1E	AMH116077	0			
			Total:	0	
		Location ID: SS17-35			
1E	ANH116078	0			
			Total:	0	
		Location ID: SS17-35			

1E	AOH116078RE	0			
			Total:	0	
		Location ID: SS17-34			
1E	APH116079	0			
			Total:	0	
		Location ID: SS17-37			
1E	AQH116080	0			
			Total:	0	
		Location ID: SS17-37			
1E	ARH116080RE	1			
1E	ARD1 15989-27-5	D-Limonene	13.459	13	NJ
			Total:	13	
		Location ID: SS17-500-N			
1E	ASH116081	0			
			Total:	0	
		Location ID: SS17-500-S			
1E	ATH116082	0			
			Total:	0	
		Location ID: 1000-N			
1E	AUH116083	0			
			Total:	0	
		Location ID: 1000-N			
1E	AVH116083RE	0			
			Total:	0	
		Location ID: 3500-N			
1E	AWH116084	0			
			Total:	0	
		Location ID: 3500-N			
1E	AXH116084RE	0			
			Total:	0	
		Location ID: 2000-S			
1E	AYH116085	0			
			Total:	0	
		Location ID: LAB SAMPLE			
1E	AZH1MSBAD	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BAH1VBLKA6	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BBH1VBLKV3	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	BCH1VBLKV6	1			
1E	BCD1 1	Unknown substituted benzene	11.39	8	J
			Total:	8	

		Location ID: FS-50			
1E	AAH116021	0			
			Total:	0	
		Location ID: FS-50			
1E	ABH116023	2			
1E	ABD1 1	Unknown	3.035	13	J
1E	ABD1 2124-18-5	Decane	12.735	24	J
			Total:	37	
		Location ID: BS-10			
1E	ACH116024	4			
1E	ACD1 1	Unknown	3.154	28	J
1E	ACD1 2	Unknown siloxane derivative	9.748	38	J
1E	ACD1 3124-18-5	Decane	12.735	94	J
1E	ACD1 41120-21-4	Undecane	13.944	37	J
			Total:	197	
		Location ID: FS-50			
1E	ADH116028	3			
1E	ADD1 1124-18-5	Decane	12.736	38	J
1E	ADD1 2	Unknown alkane	13.047	13	J
1E	ADD1 31120-21-4	Undecane	13.945	32	J
			Total:	83	
		Location ID: LAB BLANK			
1E	AEH1VBLKQ7	2			
1E	AED1 1	Unknown	3.257	5	J
1E	AED1 2	Unknown aromatic compound	15.691	5	J
			Total:	10	
		Location ID: LAB BLANK			
1E	AFH1VBLKR3	0			
			Total:	0	
		Location ID: LAB BLANK			
1E	AGH1VBLKS2	0			
			Total:	0	

		Location ID: SS16-23			
1E	AAH116051	1			
1E	AAD1 1	Unknown	14.347	35	J
			Total:	35	
		Location ID: SS16-32			
1E	ABH116052	10			
1E	ABD1 1	Unknown	13.661	11	J
1E	ABD1 2	Unknown	13.765	9	J
1E	ABD1 3	Unknown	13.834	12	J
1E	ABD1 4	Unknown	14.13	8	J
1E	ABD1 5	Unknown	14.407	18	J
1E	ABD1 6	Unknown	14.911	11	J
1E	ABD1 7	Unknown alkane	15.102	10	J
1E	ABD1 8	Unknown polycyclic hydrocarb	15.241	10	J
1E	ABD1 9	Unknown polycyclic hydrocarb	15.38	12	J
1E	ABD110	Unknown	15.814	15	J
			Total:	116	
		Location ID: SS16-34			
1E	ACH116053	10			
1E	ACD1 1	Unknown alkane	13.24	370	J
1E	ACD1 2493-02-7	Naphthalene, decahydro-, tra	14.124	570	NJ
1E	ACD1 3	Unknown	14.384	310	J
1E	ACD1 4	Unknown	14.731	640	J
1E	ACD1 5	Unknown polycyclic hydrocarb	14.905	370	J
1E	ACD1 6	Unknown alkane	15.27	830	J
1E	ACD1 7	Unknown	15.357	450	J
1E	ACD1 8	Unknown aromatic compound	15.548	200	J
1E	ACD1 9	Unknown aromatic compound	15.652	320	J
1E	ACD110	Unknown alkane	15.809	460	J
			Total:	4520	
		Location ID: SS16-34			
1E	ADH116053DL	6			
1E	ADD1 1	Unknown alkylcyclohexane	11.665	50	J
1E	ADD1 2	Unknown alkane	12.01	81	J
1E	ADD1 3	Unknown	12.252	38	J
1E	ADD1 4	Unknown alkylcyclohexane	12.564	130	J
1E	ADD1 5	Unknown	12.719	80	J
1E	ADD1 6	Unknown alkylcyclohexane	12.823	88	J
			Total:	467	
		Location ID: SS16-37			
1E	AEH116054	10			
1E	AED1 1	Unknown alkane	13.238	21	J
1E	AED1 291-17-8	Naphthalene, decahydro-	14.12	47	NJ
1E	AED1 3	Unknown	14.38	22	J
1E	AED1 4	Unknown	14.727	49	J

1E	AED1 5	Unknown polycyclic hydrocarb	14.917	34	J
1E	AED1 6	Unknown aromatic compound	15.004	13	J
1E	AED1 7	Unknown alkane	15.265	69	J
1E	AED1 8	Unknown aromatic compound	15.369	40	J
1E	AED1 9	Unknown aromatic compound	15.629	25	J
1E	AED110	Unknown alkane	15.803	54	J
			Total:	374	
		Location ID: 3500S			
1E	AFH116055	3			
1E	AFD1 1	Unknown	13.149	6	J
1E	AFD1 2	Unknown	13.635	6	J
1E	AFD1 3	Unknown	14.433	11	J
			Total:	23	
		Location ID: 3000S			
1E	AGH116056	0			
			Total:	0	
		Location ID: Field Blank			
1E	AHH116057	0			
			Total:	0	
		Location ID: SS16-21			
1E	AIH116058	0			
			Total:	0	
		Location ID: SS16-21			
1E	AJH116059	0			
			Total:	0	
		Location ID: SS16-21			
1E	AKH116059RE	1			
1E	AKD1 1109-52-4	Pentanoic acid	3.001	5	J
			Total:	5	
		Location ID: SS16-24			
1E	ALH116060	0			
			Total:	0	
		Location ID: SS16-36			
1E	AMH116061	1			
1E	AMD1 1141-78-6	Ethyl Acetate	6.314	76	J
			Total:	76	
		Location ID: SS16-31			
1E	ANH116062	0			
			Total:	0	

		Location ID:			
1E	AOH116063	0			
			Total:	0	
		Location ID:			
1E	APH116064	0			
			Total:	0	
		Location ID:			
1E	AQH116065	1			
1E	AQD1 1121-43-7	Boric acid, trimethyl ester	3.206	7	NJX
			Total:	7	
		Location ID:			
1E	ARH116065RE	0			
			Total:	0	
		Location ID:			
1E	ASH1VBLKU6	0			
			Total:	0	
		Location ID:			
1E	ATH1VBLKU9	0			
			Total:	0	
		Location ID:			
1E	AUH1VBLKV2	0			
			Total:	0	
		Location ID:			
1E	AVH1VBLKV3	0			
			Total:	0	

ESI SVOCs

		Location ID: FS16-5			
1F	AAH1FS165	21			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	9.187	13000	NJAB
1F	AAD1 21921-70-6	Pentadecane, 2,6,10,14-tetra	26.704	310	NJ
1F	AAD1 3638-36-8	Hexadecane, 2,6,10,14-tetram	28.337	290	NJ
1F	AAD1 4629-92-5	Nonadecane	29.656	220	NJ
1F	AAD1 557-10-3	Hexadecanoic acid	30.574	700	NJ
1F	AAD1 6629-97-0	Docosane	33.586	240	NJ
1F	AAD1 772-55-9	p,p'-DDE	34.133	720	NJ
1F	AAD1 8638-67-5	Tricosane	34.492	350	NJ
1F	AAD1 9646-31-1	Tetracosane w/unknowns	35.317	540	NJZ
1F	AAD110	Unknown chlorinated compound	35.744	390	J
1F	AAD111629-99-2	Pentacosane	36.183	400	NJ
1F	AAD112593-49-7	Heptacosane	38.208	380	NJ
1F	AAD113	Unknown phosphoric acid este	38.861	290	J
1F	AAD114630-02-4	Octacosane	39.446	260	NJ
1F	AAD115630-03-5	Nonacosane	40.882	890	NJ
1F	AAD116	Unknown sterane derivative	41.271	460	J
1F	AAD117638-68-6	Triacontane	42.568	450	NJ
1F	AAD118630-04-6	Hentriacontane	44.569	860	NJ
1F	AAD119	Unknown naphthalene derivati	46.112	650	J
1F	AAD120	Unknown polycyclic hydrocarb	47.016	520	J
1F	AAD121	Unknown polycyclic hydrocarb	49.301	550	J
			Total:	22470	
			Adj. Total:	9470	
		Location ID: FS16-5			
1F	ABH1FS165RE	21			
1F	ABD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	9.096	11000	NJAB
1F	ABD1 2	Unknown	25.163	370	J
1F	ABD1 31921-70-6	Pentadecane, 2,6,10,14-tetra	26.663	280	NJ
1F	ABD1 4638-36-8	Hexadecane, 2,6,10,14-tetram	28.296	280	NJ
1F	ABD1 5629-92-5	Nonadecane	29.617	210	NJ
1F	ABD1 657-10-3	Hexadecanoic acid	30.538	550	NJ
1F	ABD1 7629-94-7	Heneicosane	32.379	220	NJ
1F	ABD1 8629-97-0	Docosane	33.547	300	NJ
1F	ABD1 9072-55-9	p,p'-DDE	34.096	600	NJ
1F	ABD110638-67-5	Tricosane	34.449	360	NJ
1F	ABD111646-31-1	Tetracosane w/unknowns	35.271	590	NJZ
1F	ABD11250-29-3	Chlorophenothane	35.692	320	NJ
1F	ABD113629-99-2	Pentacosane w/C18H14 PAH	36.134	440	NJZ
1F	ABD114593-49-7	Heptacosane	38.149	390	NJ
1F	ABD115630-02-4	Octacosane	39.367	270	NJ
1F	ABD116	Unknown	40.487	650	J
1F	ABD117630-03-5	Nonacosane	40.797	910	NJ
1F	ABD118638-68-6	Triacontane	42.457	450	NJ
1F	ABD119630-04-6	Hentriacontane	44.466	750	NJ
1F	ABD120	Unknown polycyclic hydrocarb	46.867	600	J
1F	ABD121	Unknown polycyclic hydrocarb	49.114	570	J
			Total:	20110	

			Adj. Total:	9110	
		Location ID: FS16-6			
1F	ACH1FS166	10			
1F	ACD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	9.297	9600	NJAB
1F	ACD1 2	Unknown aliphatic compound	26.636	150	J
1F	ACD1 3630-01-3	Tricosane w/unknowns	34.574	77	NJZ
1F	ACD1 4836-30-6	Benzenamine, 4-nitro-N-pheny	34.884	120	NJZ
1F	ACD1 5	Unknown hexanedioic acid est	35.518	240	J
1F	ACD1 6629-99-2	Pentacosane w/benz[de]anthra	36.309	87	NJZ
1F	ACD1 7	Unknown	39.423	74	J
1F	ACD1 8630-03-5	Nonacosane	41.128	130	NJ
1F	ACD1 9192-97-2	Benzo[e]pyrene	43.51	160	NJ
1F	ACD110630-04-6	Hentriacontane	44.956	110	NJ
			Total:	10748	
			Adj. Total:	1148	
		Location ID: FS16-6			
1F	ADH1FS166RE	3			
1F	ADD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	7.462	4000	NJAB
1F	ADD1 2	Unknown aliphatic compound	24.885	180	J
1F	ADD1 3	Unknown hexanedioic acid est	34.195	150	J
			Total:	4330	
			Adj. Total:	330	
		Location ID: FS16-7			
1F	AEH1FS167	21			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	9.178	57000	NJAB
1F	AED1 257-10-3	Hexadecanoic acid	30.723	8000	NJ
1F	AED1 3	Unknown octadecadienoic acid	33.145	1300	J
1F	AED1 4638-67-5	Tricosane w/unknowns	34.574	1200	NJZ
1F	AED1 5646-31-1	Tetracosane w/1-methylpyrene	35.423	1100	NJZ
1F	AED1 6629-99-2	Pentacosane w/benz[de]anthra	36.312	2000	NJZ
1F	AED1 7630-01-3	Hexacosane	37.288	1100	NJ
1F	AED1 8593-49-7	Heptacosane	38.39	2800	NJ
1F	AED1 9630-02-4	Octacosane	39.661	1500	NJ
1F	AED110630-03-5	Nonacosane	41.147	27000	NJ
1F	AED111638-68-6	Triacontane	42.875	11000	NJ
1F	AED112	Unknown	44.671	4100	J
1F	AED113630-04-6	Hentriacontane	45.028	41000	NJ
1F	AED114	Unknown	47.176	7100	J
1F	AED115544-85-4	Dotriacontane	47.487	4500	NJ
1F	AED11657-88-5	Cholesterol	48.549	31000	NJ
1F	AED117	Unknown sterane derivative	50.062	6100	J
1F	AED118630-05-7	Tritriacontane	50.485	3500	NJ
1F	AED119	Unknown cholesten-3-one	52.898	47000	J
1F	AED120	Unknown sterane derivative	53.829	4300	J
1F	AED121	Unknown sitosterol	55.179	12000	J
			Total:	274600	
			Adj. Total:	217600	
		Location ID: FS16-7			
1F	AFH1FS167RE	21			

1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	9.061	38000	NJAB
1F	AFD1 257-10-3	Hexadecanoic acid	30.551	6900	NJ
1F	AFD1 3112-95-8	Tricosane w/C17H12 PAH	34.432	1100	NJZ
1F	AFD1 4646-31-1	Tetracosane	35.26	1200	NJ
1F	AFD1 5629-99-2	Pentacosane	36.122	1600	NJ
1F	AFD1 6630-01-3	Hexacosane	37.063	1000	NJ
1F	AFD1 7593-49-7	Heptacosane	38.132	3000	NJ
1F	AFD1 8630-02-4	Octacosane	39.352	1500	NJ
1F	AFD1 9630-03-5	Nonacosane	40.785	37000	NJ
1F	AFD110638-68-6	Triacontane	42.449	7800	NJ
1F	AFD111	Unknown	44.151	3300	J
1F	AFD112630-04-6	Hentriacontane	44.477	30000	NJ
1F	AFD113	Unknown	46.545	4800	J
1F	AFD114544-85-4	Dotriacontane w/polycyclic h	46.857	4200	NJZ
1F	AFD11557-88-5	Cholesterol	47.865	9800	NJ
1F	AFD116	Unknown sterane derivative	49.311	4500	J
1F	AFD117630-05-7	Tritriacontane	49.781	3500	NJ
1F	AFD118	Unknown sterane derivative	51.124	2700	J
1F	AFD119	Unknown cholesten-3-one	51.94	6500	J
1F	AFD120	Unknown	52.133	2600	J
1F	AFD121	Unknown sterane derivative	52.907	4600	J
			Total:	175600	
			Adj. Total:	137600	
		Location ID: FS16-8			
1F	AGH1FS168	20			
1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	9.125	58000	NJAB
1F	AGD1 2142-62-1	Hexanoic acid	12.093	1200	NJ
1F	AGD1 3124-07-2	Octanoic Acid	16.626	1600	NJ
1F	AGD1 4112-05-0	Nonanoic acid	18.733	2000	NJ
1F	AGD1 5	Unknown aliphatic compound	26.641	1300	J
1F	AGD1 6544-63-8	Tetradecanoic acid	27.673	2300	NJ
1F	AGD1 757-10-3	Hexadecanoic acid	30.751	21000	NJ
1F	AGD1 8629-94-7	Heneicosane w/unknown	32.549	1100	NJZ
1F	AGD1 9	Unknown octadecenoic acid	33.157	2200	J
1F	AGD11057-11-4	Octadecanoic acid	33.369	16000	NJ
1F	AGD111638-67-5	Tricosane	34.577	1200	NJ
1F	AGD112	Unknowns	35.089	1100	JZ
1F	AGD113	Unknown	35.428	1400	J
1F	AGD114629-99-2	Pentacosane w/benz[de]anthra	36.312	1800	NJZ
1F	AGD115593-49-7	Heptacosane	38.39	1800	NJ
1F	AGD116	Unknown	38.708	1000	J
1F	AGD117	Unknown	39.435	5500	J
1F	AGD118630-03-5	Nonacosane	41.143	13000	NJ
1F	AGD119630-04-6	Hentriacontane	44.966	7400	NJ
1F	AGD120	Unknown	46.399	6600	J
			Total:	147500	
			Adj. Total:	89500	
		Location ID: FS16-8			
1F	AHH1FS168RE	11			

1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.99	43000	NJAB
1F	AHD1 2112-05-0	Nonanoic acid	18.589	1000	NJ
1F	AHD1 3544-63-8	Tetradecanoic acid	27.509	1200	NJ
1F	AHD1 4	Unknown aliphatic compound	30.31	1300	J
1F	AHD1 557-10-3	Hexadecanoic acid	30.54	11000	NJ
1F	AHD1 6	Unknown	33.104	1800	J
1F	AHD1 7	Unknown	39.103	4800	J
1F	AHD1 8630-03-5	Nonacosane	40.761	3400	NJ
1F	AHD1 9630-04-6	Hentriacontane	44.434	1800	NJ
1F	AHD110	Unknown	46.066	3200	J
1F	AHD111	Unknown	46.152	3600	J
			Total:	76100	
			Adj. Total:	33100	

	Location ID: FS16-1			
1F	AAH1FS161 21			
1F	AAD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.27	3500	BJXNA
1F	AAD1 2 57-10-HEXADECANOIC ACID	32.93	2700	JXN
1F	AAD1 3 UNKNOWN OCTADECENOIC ACID	35.3	890	JX
1F	AAD1 4 57-11-OCTADECANOIC ACID	35.55	1300	JXN
1F	AAD1 5 593-49-HEPTACOSANE	41.48	1200	JXN
1F	AAD1 6 UNKNOWN	42.97	660	JXB
1F	AAD1 7 630-03-NONACOSANE	43.53	5300	JXN
1F	AAD1 8 UNKNOWN POLYTERPENE DERIVATI	44.37	620	JX
1F	AAD1 9 UNKNOWN POLYTERPENE DERIVATI	45.55	520	JX
1F	AAD110 630-04-HENTRIACONTANE	46.07	2700	JXN
1F	AAD111 57-88-CHOLESTEROL	48	4900	JXN
1F	AAD112 UNKNOWN POLYTERPENE DERIVATI	48.9	1300	JX
1F	AAD113 630-05-TRITRIACONTANE	49.45	750	JXN
1F	AAD114 UNKNOWN CHOLESTENONE	50.58	5200	JX
1F	AAD115 UNKNOWN POLYTERPENE DERIVATI	51.18	510	JX
1F	AAD116 UNKNOWN POLYTERPENE DERIVATI	51.58	890	JX
1F	AAD117 UNKNOWN SITOSTEROL	51.98	780	JX
1F	AAD118 UNKNOWN POLYTERPENE DERIVATI	52.7	1500	JX
1F	AAD119 UNKNOWN POLYTERPENE DERIVATI	53.08	860	JX
1F	AAD120 UNKNOWN POLYTERPENE DERIVATI	53.82	690	JX
1F	AAD121 UNKNOWN POLYTERPENE DERIVATI	53.9	1000	JX
		Total	37770	
		Adj. Total:	34270	
	Location ID: FS16-2			
1F	ABH1FS162 21			
1F	ABD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.28	3100	BJXNA
1F	ABD1 2 544-76-HEXADECANE	27.5	240	JXN
1F	ABD1 3 629-78-HEPTADECANE	29.08	560	JXN
1F	ABD1 4 1921-70-PENTADECANE, 2,6,10,14-TETRA	29.18	380	JXN
1F	ABD1 5 486-25-9H-FLUOREN-9-ONE	30.45	870	JXN
1F	ABD1 6 593-45-OCTADECANE	30.58	950	JXN
1F	ABD1 7 638-36-HEXADECANE, 2,6,10,14-TETRAM	30.75	460	JXN
1F	ABD1 8 629-92-NONADECANE	32.02	1400	JXN
1F	ABD1 9 832-71-PHENANTHRENE, 3-METHYL-	32.78	280	JXN
1F	ABD110 2531-84-PHENANTHRENE, 2-METHYL- W/ A	32.88	500	JXNZ
1F	ABD111 548-39-1H-PHENALEN-1-ONE	32.98	260	JXN
1F	ABD112 UNKNOWN METHYLPHENANTHRENE W	33.17	300	JXZ
1F	ABD113 112-95-EICOSANE	33.38	1400	JXN
1F	ABD114 84-65-9,10-ANTHRACENEDIONE	33.9	1000	JXN
1F	ABD115 629-94-HENEICOSANE W/ DIMETHYLPHENA	34.68	1300	JXNZ
1F	ABD116 UNKNOWN AROMATIC	34.98	510	JX
1F	ABD117 629-97-DOCOSANE W/ BENZONAPHTHOFURA	35.92	730	JXNZ
1F	ABD118 638-67-TRICOSANE	37.12	490	JXN
1F	ABD119 646-31-TETRACOSANE	38.27	340	JXN
1F	ABD120 27208-37-CYCLOPENTA[CD]PYRENE W/ PENT	39.38	240	JXNZ
1F	ABD121 630-03-NONACOSANE	43.48	310	JXN
		Total	15620	

		Adj. Total:	12520	
	Location ID: FS16-3			
1F	ACH1FS163 21			
1F	ACD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.2	11000	BJXNA
1F	ACD1 2 99-87-BENZENE, 1-METHYL-4-(1-METHY	15.98	10000	JXN
1F	ACD1 3 UNKNOWN C10H16 HYDROCARBON	16.12	17000	JX
1F	ACD1 4 UNKNOWN ALIPHATIC	19.12	11000	JX
1F	ACD1 5 98-55-3-CYCLOHEXENE-1-METHANOL,.AL	20.22	100000	JXN
1F	ACD1 6 90-12-NAPHTHALENE, 1-METHYL-	22.93	27000	JXN
1F	ACD1 7 939-27-NAPHTHALENE, 2-ETHYL- W/ ALI	24.5	16000	JXNZ
1F	ACD1 8 581-42-NAPHTHALENE, 2,6,-DIMETHYL-	24.72	18000	JXN
1F	ACD1 9 575-41-NAPHTHALENE, 1,3-DIMETHYL-	25	28000	JXN
1F	ACD110 575-43-NAPHTHALENE, 1,6-DIMETHYL-	25.08	14000	JXN
1F	ACD111 581-40-NAPHTHALENE, 2,3-DIMETHYL-	25.4	13000	JXN
1F	ACD112 573-98-NAPHTHALENE, 1,2-DIMETHYL-	25.7	10000	JXN
1F	ACD113 644-08-1,1'-BIPHENYL, 4-METHYL-	26.1	8300	JXN
1F	ACD114 UNKNOWN TRIMETHYLNAPHTHALENE	27.27	11000	JX
1F	ACD115 UNKNOWN TRIMETHYLNAPHTHALENE	27.57	8900	JXZ
1F	ACD116 UNKNOWN METHYLFLUORENE	29.98	9100	JX
1F	ACD117 832-71-PHENANTHRENE, 3-METHYL-	32.87	14000	JXN
1F	ACD118 2531-84-PHENANTHRENE, 2-METHYL- W/ H	32.97	18000	JXNZ
1F	ACD119 UNKNOWN METHYLPHENANTHRENE	33.27	18000	JX
1F	ACD120 832-69-PHENANTHRENE, 1-METHYL-	33.35	12000	JXN
1F	ACD121 UNKNOWN DIMETHYLPHENANTHRENE	34.78	11000	JX
		Total	385300	
		Adj. Total:	374300	
	Location ID: FS16-4			
1F	ADH1FS164 21			
1F	ADD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.2	5200	BJXNA
1F	ADD1 2 629-78-HEPTADECANE	29.07	1100	JXN
1F	ADD1 3 1921-70-PENTADECANE, 2,6,10,14-TETRA	29.17	1200	JXN
1F	ADD1 4 593-45-OCTADECANE	30.57	1800	JXN
1F	ADD1 5 638-36-HEXADECANE, 2,6,10,14-TETRAM	30.73	1500	JXN
1F	ADD1 6 UNKNOWN ALKANE	31.92	640	JX
1F	ADD1 7 629-92-NONADECANE	32	2600	JXN
1F	ADD1 8 57-10-HEXADECANOIC ACID	32.87	1100	JXN
1F	ADD1 9 UNKNOWN ALKANE W/ CYCLOHEXAN	33.15	550	JXZ
1F	ADD110 112-95-EICOSANE	33.37	2700	JXN
1F	ADD111 629-94-HENEICOSANE	34.67	2400	JXN
1F	ADD112 629-97-DOCOSANE	35.92	1900	JXN
1F	ADD113 638-67-TRICOSANE	37.12	1700	JXN
1F	ADD114 646-31-TETRACOSANE	38.27	1100	JXN
1F	ADD115 629-99-PENTACOSANE	39.37	1000	JXN
1F	ADD116 630-01-HEXACOSANE	40.42	640	JXN
1F	ADD117 593-49-HEPTACOSANE	41.45	860	JXN
1F	ADD118 UNKNOWN	42.95	970	JXB
1F	ADD119 630-03-NONACOSANE	43.5	1700	JXN
1F	ADD120 638-68-TRIACONTANE	44.67	690	JXN
1F	ADD121 630-04-HENTRIACONTANE	46.02	960	JXN

		Total	32310	
		Adj. Total:	27110	

	Location ID: SB17-1-1			
1F	ABH1SB1711 21			
1F	ABD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.47	3400	BJXNA
1F	ABD1 2 74381-40-PROPANOIC ACID, 2-METHYL-, 1	27.72	160	JXN
1F	ABD1 3 1002-84-PENTADECANOIC ACID	30.97	130	JXN
1F	ABD1 4 UNKNOWN HEXADECENOIC ACID	32.8	140	JX
1F	ABD1 5 57-10-HEXADECANOIC ACID	32.88	420	JXN
1F	ABD1 6 UNKNOWN	33.52	150	JX
1F	ABD1 7 UNKNOWN ALIPHATIC W/ FLUORAN	35.28	210	JXZ
1F	ABD1 8 UNKNOWN OCTADECENOIC ACID	35.33	150	JX
1F	ABD1 9 629-99-PENTACOSANE	39.4	180	BJXN
1F	ABD110 661-19-1-DOCOSANOL	39.6	210	JXN
1F	ABD111 630-01-HEXACOSANE	40.45	180	BJXN
1F	ABD112 593-49-HEPTACOSANE	41.48	520	BJXN
1F	ABD113 506-51-1-TETRACOSANOL	41.72	250	JXN
1F	ABD114 630-02-OCTACOSANE	42.47	320	BJXN
1F	ABD115 UNKNOWN ALIPHATIC ALDEHYDE	42.97	460	JX
1F	ABD116 630-03-NONACOSANE	43.53	1400	BJXN
1F	ABD117 506-52-1-HEXACOSANOL	43.87	180	JXN
1F	ABD118 UNKNOWN ALIPHATIC	44.38	180	JX
1F	ABD119 638-68-TRIACONTANE	44.7	270	BJXN
1F	ABD120 630-04-HENTRIACONTANE	46.07	1300	BJXN
1F	ABD121 630-05-TRITRIACONTANE	49.43	300	BJXN
		Total:	10510	
		Adj. Total:	7110	
	Location ID: SB17-1-2			
1F	ACH1SB1712 12			
1F	ACD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.53	5700	BJXNA
1F	ACD1 2 74381-40-PROPANOIC ACID, 2-METHYL-, 1	27.77	150	JXN
1F	ACD1 3 UNKNOWN HEXANEDIOATE	38.43	150	JX
1F	ACD1 4 629-99-PENTACOSANE	39.43	80	BJXN
1F	ACD1 5 630-01-HEXACOSANE	40.5	96	BJXN
1F	ACD1 6 593-49-HEPTACOSANE	41.53	130	BJXN
1F	ACD1 7 630-02-OCTACOSANE	42.52	110	BJXN
1F	ACD1 8 UNKNOWN	43.03	130	JX
1F	ACD1 9 630-03-NONACOSANE	43.58	190	BJXN
1F	ACD110 638-68-TRIACONTANE	44.75	100	BJXN
1F	ACD111 UNKNOWN	45.78	120	JX
1F	ACD112 630-04-HENTRIACONTANE	46.1	110	BJXN
		Total:	7066	
		Adj. Total:	1366	
	Location ID: SB17-1-3			
1F	ADH1SB1713 11			
1F	ADD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.47	2900	BJXNA
1F	ADD1 2 UNKNOWN OCTADECANOATE	38.2	76	JX
1F	ADD1 3 646-31-TETRACOSANE	38.3	76	BJXN
1F	ADD1 4 629-99-PENTACOSANE	39.4	130	BJXN
1F	ADD1 5 630-01-HEXACOSANE	40.47	160	BJXN
1F	ADD1 6 593-49-HEPTACOSANE	41.5	190	BJXN

1F	ADD1 7 630-02-OCTACOSANE	42.48	170	BJXN
1F	ADD1 8 UNKNOWN	43	110	JXB
1F	ADD1 9 630-03-NONACOSANE	43.55	230	BJXN
1F	ADD110 638-68-TRIACONTANE	44.73	160	BJXN
1F	ADD111 630-04-HENTRIACONTANE	46.1	130	BJXN
		Total:	4332	
		Adj. Total:	1432	
	Location ID: SB17-3-1			
1F	AEH1SB1731 15			
1F	AED1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.48	4400	BJXNA
1F	AED1 2 74381-40-PROPANOIC ACID, 2-METHYL-, 1	27.78	110	JXN
1F	AED1 3 57-10-HEXADECANOIC ACID	32.95	300	JXN
1F	AED1 4 UNKNOWN ALIPHATIC ALDEHYDE	35.35	100	JX
1F	AED1 5 UNKNOWN HEXANEDIOATE	38.45	240	JXB
1F	AED1 6 593-49-HEPTACOSANE	41.55	230	JXN
1F	AED1 7 506-51-1-TETRACOSANOL	41.72	120	JXN
1F	AED1 8 630-02-OCTACOSANE	42.55	110	JXN
1F	AED1 9 UNKNOWN ALIPHATIC ALDEHYDE W	43.03	310	JXZ
1F	AED110 630-03-NONACOSANE	43.6	550	JXN
1F	AED111 506-52-1-HEXACOSANOL	43.83	130	JXN
1F	AED112 UNKNOWN ALIPHATIC ALDEHYDE	45.43	89	JX
1F	AED113 UNKNOWN	45.8	98	JX
1F	AED114 630-04-HENTRIACONTANE	46.12	430	JXN
1F	AED115 UNKNOWN ALIPHATIC	49.5	98	JX
		Total:	7315	
		Adj. Total:	2915	
	Location ID: SB17-3-2			
1F	AFH1SB1732 12			
1F	AFD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.42	4600	BJXNA
1F	AFD1 2 74381-40-PROPANOIC ACID, 2-METHYL-, 1	27.68	94	JXN
1F	AFD1 3 UNKNOWN HEXANEDIOATE	38.37	130	JXB
1F	AFD1 4 629-99-PENTACOSANE	39.37	130	JXN
1F	AFD1 5 630-01-HEXACOSANE	40.43	230	JXN
1F	AFD1 6 593-49-HEPTACOSANE	41.47	310	JXN
1F	AFD1 7 630-02-OCTACOSANE	42.45	280	JXN
1F	AFD1 8 UNKNOWN	42.97	180	JXB
1F	AFD1 9 630-03-NONACOSANE	43.5	370	JXN
1F	AFD110 638-68-TRIACONTANE	44.68	180	JXN
1F	AFD111 UNKNOWN	45.72	140	JX
1F	AFD112 630-04-HENTRIACONTANE	46.05	160	JXN
		Total:	6804	
		Adj. Total:	2204	
	Location ID: SB17-4-1			
1F	AGH1SB1741 18			
1F	AGD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.43	4800	BJXNA
1F	AGD1 2 74381-40-PROPANOIC ACID, 2-METHYL-, 1	27.7	130	JXN
1F	AGD1 3 57-10-HEXADECANOIC ACID	32.88	99	JXN
1F	AGD1 4 638-67-TRICOSANE	37.13	87	JXN
1F	AGD1 5 646-31-TETRACOSANE W/ UNKNOWN	38.3	91	JXNZ

1F	AGD1 6 UNKNOWN HEXANEDIOATE	38.38	190	JXB
1F	AGD1 7 629-99-PENTACOSANE	39.4	150	JXN
1F	AGD1 8 661-19-1-DOCOSANOL	39.52	87	JXN
1F	AGD1 9 630-01-HEXACOSANE	40.45	230	JXN
1F	AGD110 593-49-HEPTACOSANE	41.48	350	JXN
1F	AGD111 506-51-1-TETRACOSANOL	41.65	250	JXN
1F	AGD112 630-02-OCTACOSANE	42.48	290	JXN
1F	AGD113 UNKNOWN	42.98	190	JXB
1F	AGD114 630-03-NONACOSANE	43.53	460	JXN
1F	AGD115 638-68-TRIACONTANE	44.72	190	JXN
1F	AGD116 UNKNOWN	45.73	330	JX
1F	AGD117 630-04-HENTRIACONTANE	46.07	230	JXN
1F	AGD118 UNKNOWN	52.42	100	JX
		Total:	8254	
		Adj. Total:	3454	
	Location ID: SB17-4-2			
1F	AHH1SB1742 16			
1F	AHD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.52	3000	BJXNA
1F	AHD1 2 74381-40-PROPANOIC ACID, 2-METHYL-, 1	27.77	170	JXN
1F	AHD1 3 57-10-HEXADECANOIC ACID	32.95	100	JXN
1F	AHD1 4 646-31-TETRACOSANE W/ UNKNOWN	38.35	98	JXNZ
1F	AHD1 5 UNKNOWN HEXANEDIOATE	38.43	220	JXB
1F	AHD1 6 629-99-PENTACOSANE	39.45	190	JXN
1F	AHD1 7 630-01-HEXACOSANE	40.52	360	JXN
1F	AHD1 8 593-49-HEPTACOSANE	41.55	460	JXN
1F	AHD1 9 UNKNOWN	42.28	80	JX
1F	AHD110 630-02-OCTACOSANE	42.53	420	JXN
1F	AHD111 UNKNOWN	43.05	300	JXB
1F	AHD112 630-03-NONACOSANE	43.6	530	JXN
1F	AHD113 638-68-TRIACONTANE	44.77	250	JXN
1F	AHD114 UNKNOWN	45.8	80	JX
1F	AHD115 630-04-HENTRIACONTANE	46.12	320	JXN
1F	AHD116 630-05-TRITRIACONTANE	49.5	94	JXN
		Total:	6672	
		Adj. Total:	3672	

	Location ID: MW16-1			
1F	ADH1MW161 4			
1F	ADD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.58	13	BJXNA
1F	ADD1 2 57-10-HEXADECANOIC ACID	33.13	3	BJXN
1F	ADD1 3 UNKNOWN ALIPHATIC	35.75	6	JXB
1F	ADD1 4 UNKNOWN	43.3	4	JX
		Total:	26	
		Adj. Total:	13	
	Location ID: MW16-2			
1F	AEH1MW162 3			
1F	AED1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.6	14	BJXNA
1F	AED1 2 UNKNOWN ALIPHATIC	35.77	3	JXB
1F	AED1 3 791-28-PHOSPHINE OXIDE, TRIPHENYL-	40.87	3	JXN
		Total:	20	
		Adj. Total:	6	
	Location ID: MW16-2			
1F	AFH1MW162R 14			
1F	AFD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.6	12	BJXNA
1F	AFD1 2 143-07-DODECANOIC ACID	27.15	10	JXN
1F	AFD1 3 57-10-HEXADECANOIC ACID	33.13	3	BJXN
1F	AFD1 4 UNKNOWN ALIPHATIC	35.53	10	JX
1F	AFD1 5 UNKNOWN ALIPHATIC	35.77	8	JXB
1F	AFD1 6 629-97-DOCOSANE	36.22	5	JXN
1F	AFD1 7 638-67-TRICOSANE	37.42	8	JXN
1F	AFD1 8 646-31-TETRACOSANE	38.57	10	JXN
1F	AFD1 9 629-99-PENTACOSANE	39.68	9	JXN
1F	AFD110 630-01-HEXACOSANE	40.75	8	JXN
1F	AFD111 593-49-HEPTACOSANE	41.78	7	JXN
1F	AFD112 630-02-OCTACOSANE	42.78	6	JXN
1F	AFD113 630-03-NONACOSANE	43.87	7	JXN
1F	AFD114 638-68-TRIACONTANE	45.1	5	JXN
		Total:	108	
		Adj. Total:	96	
	Location ID: MW16-3			
1F	AGH1MW163 3			
1F	AGD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.58	15	BJXNA
1F	AGD1 2 57-10-HEXADECANOIC ACID	33.1	4	BJXN
1F	AGD1 3 UNKNOWN ALIPHATIC	35.73	8	JXB
		Total:	27	
		Adj. Total:	12	
	Location ID: MW16-3			
1F	AHH1MW163RE 2			
1F	AHD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.18	4	BJXNA
1F	AHD1 2 UNKNOWN	43.07	2	JXB
		Total:	6	
		Adj. Total:	2	
	Location ID: MW16-41			
1F	AIH1MW1641 4			
1F	AID1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.62	14	BJXNA

1F	AID1 2 UNKNOWN ALIPHATIC	35.77	5	JXB
1F	AID1 3 UNKNOWN OCTADECANOATE	38.45	2	JX
1F	AID1 4 UNKNOWN	43.3	4	JXY
		Total:	25	
		Adj. Total:	11	
	Location ID: MW17-2			
1F	AJH1MW172 10			
1F	AJD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.57	15	BJXNA
1F	AJD1 2 57-10-HEXADECANOIC ACID	33.1	2	BJXN
1F	AJD1 3 UNKNOWN ALIPHATIC	35.72	7	JXB
1F	AJD1 4 630-01-HEXACOSANE	40.7	4	JXN
1F	AJD1 5 593-49-HEPTACOSANE	41.73	5	JXN
1F	AJD1 6 630-02-OCTACOSANE	42.73	5	JXN
1F	AJD1 7 UNKNOWN	43.27	4	JX
1F	AJD1 8 630-03-NONACOSANE	43.82	8	JXN
1F	AJD1 9 638-68-TRIACONTANE	45.05	5	JXN
1F	AJD110 UNKNOWN ALIPHATIC	46.47	3	JX
		Total:	58	
		Adj. Total:	43	

	Location: SS16-10			
1F	AGH1SS1610 21			
1F	AGD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.25	19000	BJXNA
1F	AGD1 2 UNKNOWN METHYLDECAHYDRONAPHT	16.52	1500	JX
1F	AGD1 3 UNKNOWN METHYLDECAHYDRONAPHT	16.93	1900	JX
1F	AGD1 4 UNKNOWN PHTHALATE	18.1	1400	JX
1F	AGD1 5 UNKNOWN ALKANE	18.67	4600	JX
1F	AGD1 6 UNKNOWN ALIPHATIC	19.48	1300	JX
1F	AGD1 7 26730-14-TRIDECANE, 7-METHYL-	19.85	7500	JXN
1F	AGD1 8 UNKNOWN ALIPHATIC	20.6	1300	JX
1F	AGD1 9 UNKNOWN CYCLOALKANE	20.68	1400	JX
1F	AGD110 UNKNOWN ALKANE	20.72	2100	JX
1F	AGD111 UNKNOWN ALKYLCYCLOHEXANE	21.32	1300	JX
1F	AGD112 UNKNOWN ALIPHATIC	21.47	1900	JX
1F	AGD113 UNKNOWN ALIPHATIC	21.72	1400	JX
1F	AGD114 74645-98-DODECANE, 2,7,10-TRIMETHYL-	21.8	4700	JXN
1F	AGD115 UNKNOWN SESQUITERPENE	22.03	2000	JX
1F	AGD116 UNKNOWN ALKANE	22.27	1300	JX
1F	AGD117 UNKNOWN SESQUITERPENE	23.02	5400	JX
1F	AGD118 UNKNOWN ALKANE	23.27	4900	JX
1F	AGD119 UNKNOWN SESQUITERPENE	23.53	1300	JX
1F	AGD120 UNKNOWN SESQUITERPENE	23.67	3700	JX
1F	AGD121 1921-70-PENTADECANE, 2,6,10,14-TETRA	27.08	2100	BJXN
		Total:	72000	
		Adj. Total:	53000	
	Location ID: SS16-9			
1F	AHH1SS169 21			
1F	AHD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.1	37000	BJXNA
1F	AHD1 2 112-40-DODECANE	18.42	2900	JXN
1F	AHD1 3 17301-23-UNDECANE, 2,6-DIMETHYL-	18.72	6000	JXN
1F	AHD1 4 26730-14-TRIDECANE, 7-METHYL-	19.9	9100	JXN
1F	AHD1 5 629-50-TRIDECANE	20.42	3000	JXN
1F	AHD1 6 UNKNOWN ALKYLCYCLOHEXANE	21.35	3000	JX
1F	AHD1 7 UNKNOWN ALIPHATIC	21.5	3400	JX
1F	AHD1 8 74645-98-DODECANE, 2,7,10-TRIMETHYL-	21.83	7000	JNX
1F	AHD1 9 UNKNOWN SESQUITERPENE	22.08	3400	JX
1F	AHD110 629-59-TETRADECANE	22.25	3000	JXN
1F	AHD111 UNKNOWN SESQUITERPENE	23.07	9300	JX
1F	AHD112 UNKNOWN ALKANE	23.32	8100	JX
1F	AHD113 UNKNOWN SESQUITERPENE	23.7	5800	JX
1F	AHD114 1921-70-PENTADECANE, 2,6,10,14-TETRA	27.13	3400	BJNX
1F	AHD115 629-99-PENTACOSANE	36.83	3000	JXN
1F	AHD116 630-01-HEXACOSANE	37.85	2800	JXN
1F	AHD117 593-49-HEPTACOSANE	38.83	2800	JXN
1F	AHD118 630-02-OCTACOSANE	39.8	2900	JXN
1F	AHD119 630-03-NONACOSANE	40.73	2800	JXN
1F	AHD120 638-68-TRIACONTANE	41.67	2700	JXN
1F	AHD121 630-04-HENTRIACONTANE	42.68	2900	JXN
		Total:	124300	

		Adj. Total:	87300	
	Location ID: SS17-10			
1F	AIH1SS1710 21			
1F	AID1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.65	3300	BJXNA
1F	AID1 2 629-62-PENTADECANE	23.9	120	JXN
1F	AID1 3 544-76-HEXADECANE	25.5	140	JXN
1F	AID1 4 74381-40-PROPANOIC ACID, 2-METHYL-, 1	25.63	240	JXN
1F	AID1 5 629-78-HEPTADECANE	27	210	JXN
1F	AID1 6 593-45-OCTADECANE	28.42	230	JXN
1F	AID1 7 638-36-HEXADECANE, 2,6,10,14-TETRAM	28.57	130	JXN
1F	AID1 8 629-92-NONADECANE	29.78	270	JXN
1F	AID1 9 57-10-HEXADECANOIC ACID	30.6	130	JXN
1F	AID110 314-40-BROMACIL	30.95	230	JXN
1F	AID111 112-95-EICOSANE	31.08	240	JXN
1F	AID112 629-94-HENEICOSANE	32.32	250	JXN
1F	AID113 629-97-DOCOSANE	33.5	130	JXN
1F	AID114 638-67-TRICOSANE	34.65	130	JXN
1F	AID115 629-99-PENTACOSANE	36.8	220	JXN
1F	AID116 593-49-HEPTACOSANE	38.8	180	JXN
1F	AID117 630-02-OCTACOSANE	39.75	110	JXN
1F	AID118 UNKNOWN	40.18	130	JXB
1F	AID119 630-03-NONACOSANE	40.68	320	JXN
1F	AID120 630-04-HENTRIACONTANE	42.63	220	JXN
1F	AID121 UNKNOWN POLYTERPENE DERIVATI	50.22	160	JX
		Total:	7090	
		Adj. Total:	3790	
	Location ID: SS17-11			
1F	AJH1SS1711 21			
1F	AJD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.57	6800	BJXNA
1F	AJD1 2 UNKNOWN	26.47	330	JX
1F	AJD1 3 UNKNOWN HEXADECENOIC ACID	30.4	250	JX
1F	AJD1 4 UNKNOWN HEXADECENOIC ACID	30.52	540	JX
1F	AJD1 5 57-10-HEXADECANOIC ACID	30.62	730	JXN
1F	AJD1 6 UNKNOWN ALIPHATIC	31.17	190	JX
1F	AJD1 7 UNKNOWN	32.5	150	JX
1F	AJD1 8 UNKNOWN OCTADECENOIC ACID	32.87	240	JX
1F	AJD1 9 UNKNOWN OCTADECENOIC ACID	32.92	200	JX
1F	AJD110 661-19-1-DOCOSANOL W/PENTACOSANE	36.78	230	JXNZ
1F	AJD111 593-49-HEPTACOSANE	38.78	250	JXN
1F	AJD112 506-51-1-TETRACOSANOL	38.83	220	JXN
1F	AJD113 630-02-OCTACOSANE	39.75	170	JXN
1F	AJD114 UNKNOWN	40.18	640	JXB
1F	AJD115 630-03-NONACOSANE	40.68	1100	JXN
1F	AJD116 506-52-1-HEXACOSANOL	40.77	630	JXN
1F	AJD117 630-04-HENTRIACONTANE	42.62	1200	JXN
1F	AJD118 630-05-TRITRIACONTANE	45.07	220	JXN
1F	AJD119 UNKNOWN ERGOSTENOL	45.28	280	JX
1F	AJD120 UNKNOWN SITOSTEROL	46.63	540	JX
1F	AJD121 UNKNOWN POLYTERPENE DERIVATI	49.95	400	JX

		Total:	15310	
		Adj. Total:	8510	

	Location ID: SB17-2-10			
1F	AAH1172_10 3			
1F	AAD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	10.18	6400	BJXNA
1F	AAD1 2 UNKNOWN HEXANEDIOATE	39.18	150	JX
1F	AAD1 3 UNKNOWN	44.02	140	JXB
		Total:	6690	
		Adj. Total:	290	
	Location ID: SB17-2			
1F	ABH1172_2R 5			
1F	ABD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	9.87	16	BJXNA
1F	ABD1 2 UNKNOWN TRICHLOROPROPENE	14.08	7	JXB
1F	ABD1 3 UNKNOWN POLYALKOXYALCOHOL	36.2	2	JXB
1F	ABD1 4 791-28-PHOSPHINE OXIDE, TRIPHENYL-	41.35	7	JXN
1F	ABD1 5 UNKNOWN	43.92	13	JXB
		Total:	45	
		Adj. Total:	29	
	Location ID: SB17-2-1			
1F	ACH1B172_1 10			
1F	ACD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	10.2	5100	BJXNA
1F	ACD1 2 661-19-1-DOCOSANOL W/ PENTACOSANE	40.28	120	JXNZ
1F	ACD1 3 593-49-HEPTACOSANE	42.38	100	JXN
1F	ACD1 4 506-51-1-TETRACOSANOL	42.47	120	JXN
1F	ACD1 5 UNKNOWN ALIPHATIC ALDEHYDE	44.03	120	JX
1F	ACD1 6 UNKNOWN	44.07	140	JXB
1F	ACD1 7 630-03-NONACOSANE	44.68	520	JXN
1F	ACD1 8 506-52-1-HEXACOSANOL	44.83	160	JXN
1F	ACD1 9 630-04-HENTRIACONTANE	47.63	500	JXN
1F	ACD110 630-05-TRITRIACONTANE	51.65	140	JXN
		Total:	7020	
		Adj. Total:	1920	
	Location ID: SB17-2-2			
1F	ADH1B172_2 5			
1F	ADD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	10.22	6500	BJXNA
1F	ADD1 2 UNKNOWN HEXANEDIOATE	39.25	160	JX
1F	ADD1 3 UNKNOWN	43.9	93	JX
1F	ADD1 4 UNKNOWN	44.08	150	JXB
1F	ADD1 5 UNKNOWN	48.07	120	JX
		Total:	7023	
		Adj. Total:	523	

	Location ID: LAB BLANK			
1F	AAH1MSB 1			
1F	AAD1 1123-42-2 2-Pentanone, 4-hydroxy-4-met	6.754	2600	NJ
		Total:	2600	
		Adj. Total:	0	
	Location ID: LAB BLANK			
1F	ABH1SBLK8U 1			
1F	ABD1 1123-42-2 2-Pentanone, 4-hydroxy-4-met	6.438	12	NJA
		Total:	12	
		Adj. Total:	0	
	Location ID: LAB BLANK			
1F	ACH1SBLKN5 1			
1F	ACD1 1123-42-2 2-Pentanone, 4-hydroxy-4-met	6.846	5700	NJAZ
		Total:	5700	
		Adj. Total:	0	
	Location ID: SS17-22			
1F	ADH1SS1722 17			
1F	ADD1 1123-42-2 2-Pentanone, 4-hydroxy-4-met	6.826	6900	NJABZ
1F	ADD1 2 Unknown aliphatic compound	23.955	100	J
1F	ADD1 3 Unknown aliphatic compound	27.892	100	J
1F	ADD1 457-10-3 Hexadecanoic acid	28.011	200	NJ
1F	ADD1 5629-99-2 Pentacosane	35.636	240	NJ
1F	ADD1 6630-01-3 Hexacosane	36.448	96	NJ
1F	ADD1 7 Unknown	36.706	110	J
1F	ADD1 8 Unknown aliphatic aldehyde	36.891	160	J
1F	ADD1 9593-49-7 Heptacosane	37.379	1200	NJ
1F	ADD110630-02-4 Octacosane	38.446	100	NJ
1F	ADD111630-03-5 Nonacosane	39.712	1100	NJ
1F	ADD112 Unknown	40.89	140	J
1F	ADD113630-04-6 Hentriacontane	42.973	350	NJ
1F	ADD114 Unknown	45.503	120	J
1F	ADD115 Unknown polycyclic hydrocarb	45.911	170	J
1F	ADD116 Unknown	46.628	97	J
1F	ADD117 Unknown	46.806	88	J
		Total:	11271	
		Adj. Total:	4371	
	Location ID: SS17-23			
1F	AEH1SS1723 18			
1F	AED1 1123-42-2 2-Pentanone, 4-hydroxy-4-met	6.833	6800	NJABZ
1F	AED1 257-10-3 Hexadecanoic acid	27.99	95	NJ
1F	AED1 3 Unknown polycyclic compound	35.044	160	J
1F	AED1 4629-99-2 Pentacosane	35.633	120	NJ
1F	AED1 5 Unknown polycyclic hydrocarb	36.09	180	J
1F	AED1 6 Unknown	36.725	88	J
1F	AED1 7 Unknown aliphatic aldehyde	36.891	220	J
1F	AED1 8593-49-7 Heptacosane	37.379	1300	NJ
1F	AED1 9 Unknown	37.669	130	J
1F	AED110 Unknown polycyclic hydrocarb	38.098	240	J
1F	AED111630-02-4 Octacosane	38.448	180	NJ

1F	AED112 Unknown polycyclic hydrocarb	38.561	320	J
1F	AED113630-03-5 Nonacosane	39.71	1200	NJ
1F	AED114 Unknown polycyclic hydrocarb	40.16	430	J
1F	AED115630-04-6 Hentriacontane	42.976	360	NJ
1F	AED116 Unknown	45.52	150	J
1F	AED117 Unknown polycyclic hydrocarb	45.909	120	J
1F	AED118 Unknown	46.238	200	J
		Total:	12293	
		Adj. Total:	5493	
	Location ID: SS17-24			
1F	AFH1SS1724 15			
1F	AFD1 1123-42-2 2-Pentanone, 4-hydroxy-4-met	6.846	6500	NJABZ
1F	AFD1 2629-62-9 Pentadecane	20.665	94	NJ
1F	AFD1 3544-76-3 Hexadecane	22.392	110	NJ
1F	AFD1 4629-78-7 Heptadecane	24.029	190	NJ
1F	AFD1 5593-45-3 Octadecane	25.581	220	NJ
1F	AFD1 6629-92-5 Nonadecane	27.052	230	NJ
1F	AFD1 7112-95-8 Eicosane	28.466	200	NJ
1F	AFD1 8629-94-7 Heneicosane	29.816	170	NJ
1F	AFD1 9629-99-2 Pentacosane	35.643	130	NJ
1F	AFD110 Unknown aliphatic aldehyde	36.903	270	J
1F	AFD111593-49-7 Heptacosane	37.398	1300	NJ
1F	AFD112630-03-5 Nonacosane	39.73	1200	NJ
1F	AFD113 Unknown polycyclic hydrocarb	40.163	220	J
1F	AFD114630-04-6 Hentriacontane	43.006	300	NJ
1F	AFD115 Unknown	46.269	170	J
		Total:	11304	
		Adj. Total:	4804	

	Location ID: MSB			
1F	AAH1MSB 0			
		Total:	0	
	Location ID: SS16-3			
1F	ABH1SS163 21			
1F	ABD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.18	21000	BJXNA
1F	ABD1 2 90-12-NAPHTHALENE, 1-METHYL-	21.02	510	JXN
1F	ABD1 3 575-41-NAPHTHALENE, 1,3-DIMETHYL-	23	350	JXN
1F	ABD1 4 629-78-HEPTADECANE	27.07	510	JXN
1F	ABD1 5 1921-70-PENTADECANE, 2,6,10,14-TETRA	27.15	1200	JXN
1F	ABD1 6 593-45-OCTADECANE	28.48	620	JXN
1F	ABD1 7 629-92-NONADECANE	29.85	660	JXN
1F	ABD1 8 112-95-EICOSANE	31.13	660	JXN
1F	ABD1 9 629-94-HENEICOSANE W/ PAH	32.37	660	JXNZ
1F	ABD110 629-97-DOCOSANE	33.57	360	JXN
1F	ABD111 638-67-TRICOSANE	34.7	390	JXN
1F	ABD112 646-31-TETRACOSANE	35.8	390	JXN
1F	ABD113 629-99-PENTACOSANE	36.85	510	JXN
1F	ABD114 630-01-HEXACOSANE	37.87	430	JXN
1F	ABD115 593-49-HEPTACOSANE	38.85	610	JXN
1F	ABD116 630-02-OCTACOSANE	39.82	570	JXN
1F	ABD117 630-03-NONACOSANE	40.75	1400	JXN
1F	ABD118 638-68-TRIACONTANE	41.67	360	JXN
1F	ABD119 UNKNOWN ALIPHATIC	42.62	530	JX
1F	ABD120 630-04-HENTRIACONTANE	42.68	690	JXN
1F	ABD121 UNKNOWN	46.92	480	JX
		Total:	32890	
		Adj. total:	11890	
	Location ID: SS17-1			
1F	ACH1SS171 21			
1F	ACD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.52	4600	BJXNA
1F	ACD1 2 138-86-LIMONENE	14.33	1300	JXN
1F	ACD1 3 UNKNOWN	26.47	2300	JX
1F	ACD1 4 UNKNOWN HEXADECENOIC ACID	30.52	1900	JX
1F	ACD1 5 57-10-HEXADECANOIC ACID	30.62	2000	JXN
1F	ACD1 6 UNKNOWN ALIPHATIC	32.47	5200	JX
1F	ACD1 7 UNKNOWN OCTADECENOIC ACID	32.83	600	JX
1F	ACD1 8 UNKNOWN ALIPHATIC	35.95	640	JX
1F	ACD1 9 UNKNOWN ALIPHATIC	36.15	1700	JX
1F	ACD110 UNKNOWN	38.05	700	JX
1F	ACD111 UNKNOWN	38.4	1900	JX
1F	ACD112 593-49-HEPTACOSANE	38.72	870	JXN
1F	ACD113 UNKNOWN ALIPHATIC ALDEHYDE	40.12	1800	JX
1F	ACD114 630-03-NONACOSANE	40.62	1800	JXN
1F	ACD115 506-52-1-HEXACOSANOL	40.7	2800	JXN
1F	ACD116 UNKNOWN ALIPHATIC ALDEHYDE	42.02	800	JX
1F	ACD117 630-04-HENTRIACONTANE	42.53	2300	JXN
1F	ACD118 UNKNOWN ERGOSTENOL	45.17	740	JX
1F	ACD119 UNKNOWN SITOSTEROL	46.52	1700	JX

1F	ACD120 1058-61-STIGMAST-4-EN-3-ONE	49	670	JXN
1F	ACD121 UNKNOWN POLYTERPENE DERIVATI	49.85	3200	JX
		Total:	39520	
		Adj. total:	34920	
	Location ID: SS17-12			
1F	ADH1SS1712 10			
1F	ADD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.3	10000	BJXNA
1F	ADD1 2 UNKNOWN HEXADECENOIC ACID	30.53	170	JX
1F	ADD1 3 57-10-HEXADECANOIC ACID	30.63	200	JXN
1F	ADD1 4 593-49-HEPTACOSANE	38.83	130	JXN
1F	ADD1 5 UNKNOWN ALIPHATIC ALDEHYDE W	40.23	200	JXZ
1F	ADD1 6 630-03-NONACOSANE	40.72	300	JXN
1F	ADD1 7 506-52-1-HEXACOSANOL	40.83	110	JXN
1F	ADD1 8 630-04-HENTRIACONTANE	42.67	380	JXN
1F	ADD1 9 UNKNOWN SITOSTEROL	46.68	210	JX
1F	ADD110 UNKNOWN POLYTERPENE DERIVATI	50	170	JX
		Total:	11870	
		Adj. total:	1870	
	Location ID: SS17-14			
1F	AEH1SS1714 6			
1F	AED1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.57	3600	BJXNA
1F	AED1 2 UNKNOWN	32.95	78	JX
1F	AED1 3 UNKNOWN HEXANEDIOATE	35.7	99	JX
1F	AED1 4 630-03-NONACOSANE	40.55	120	JXN
1F	AED1 5 630-04-HENTRIACONTANE	42.47	74	JXN
1F	AED1 6 123-28-PROPANOIC ACID, 3,3'-THIOBIS	50.92	110	BJXN
		Total:	4081	
		Adj. total:	481	
	Location ID: SS17-16			
1F	AFH1SS1716 21			
1F	AFD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.57	5100	BJXNA
1F	AFD1 2 1002-84-PENTADECANOIC ACID	28.73	660	JXN
1F	AFD1 3 5746-58-TETRADECANOIC ACID, 12-METHY	28.85	540	JXN
1F	AFD1 4 UNKNOWN HEXADECENOIC ACID	30.35	540	JX
1F	AFD1 5 UNKNOWN HEXADECENOIC ACID	30.47	760	JX
1F	AFD1 6 57-10-HEXADECANOIC ACID	30.58	1300	JXN
1F	AFD1 7 UNKNOWN ALIPHATIC	31.13	1000	JX
1F	AFD1 8 UNKNOWN OCTADECENOIC ACID	32.82	670	JX
1F	AFD1 9 UNKNOWN OCTADECENOIC ACID	32.87	730	JX
1F	AFD110 661-19-1-DOCOSANOL	36.72	410	JXN
1F	AFD111 593-49-HEPTACOSANE	38.72	610	JXN
1F	AFD112 630-02-OCTACOSANE	39.67	440	JXN
1F	AFD113 630-03-NONACOSANE	40.6	2200	JXN
1F	AFD114 506-52-1-HEXACOSANOL	40.68	2000	JXN
1F	AFD115 630-04-HENTRIACONTANE	42.53	2700	JXN
1F	AFD116 630-05-TRITRIACONTANE	44.95	690	JXN
1F	AFD117 UNKNOWN ERGOSTENOL	45.15	510	JX
1F	AFD118 UNKNOWN SITOSTEROL	46.5	1500	JX
1F	AFD119 1058-61-STIGMAST-4-EN-3-ONE	48.97	660	JXN

1F	AFD120 UNKNOWN POLYTERPENE DERIVATI	50.58	470	JX
1F	AFD121 559-74-FRIEDELIN	51.13	410	JXN
		Total:	23900	
		Adj. total:	18800	
	Location ID: SS17-17			
1F	AGH1SS1717 21			
1F	AGD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.57	4600	BJXNA
1F	AGD1 2 1002-84-PENTADECANOIC ACID	28.73	450	JXN
1F	AGD1 3 5746-58-TETRADECANOIC ACID, 12-METHY	28.87	460	JXN
1F	AGD1 4 UNKNOWN HEXADECENOIC ACID	30.35	330	JX
1F	AGD1 5 UNKNOWN HEXADECENOIC ACID	30.47	1000	JX
1F	AGD1 6 57-10-HEXADECANOIC ACID	30.58	1300	JXN
1F	AGD1 7 UNKNOWN ALIPHATIC	31.13	600	JX
1F	AGD1 8 60-33-9,12-OCTADECADIENOIC ACID	32.77	630	JXN
1F	AGD1 9 UNKNOWN OCTADECENOIC ACID	32.82	530	JX
1F	AGD110 UNKNOWN OCTADECENOIC ACID	32.87	380	JX
1F	AGD111 661-19-1-DOCOSANOL W/ PENTACOSANE	36.72	290	JXNZ
1F	AGD112 UNKNOWN ALIPHATIC ALDEHYDE W	40.1	360	JXZ
1F	AGD113 630-03-NONACOSANE	40.6	1100	JXN
1F	AGD114 506-52-1-HEXACOSANOL	40.68	470	JXN
1F	AGD115 630-04-HENTIACONTANE	42.52	1700	JXN
1F	AGD116 630-05-TRITRIACONTANE	44.93	350	JXN
1F	AGD117 UNKNOWN ERGOSTENOL	45.13	330	JX
1F	AGD118 UNKNOWN SITOSTEROL	46.48	680	JX
1F	AGD119 UNKNOWN POLYTERPENE DERIVATI	48	390	JX
1F	AGD120 UNKNOWN POLYTERPENE DERIVATI	50.58	360	JX
1F	AGD121 UNKNOWN POLYTERPENE DERIVATI	51.15	600	JX
		Total:	16910	
		Adj. total:	12310	
	Location ID: SS17-18			
1F	AHH1SS1718 21			
1F	AHD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.55	4700	BJXNA
1F	AHD1 2 593-45-OCTADECANE	28.35	400	JXN
1F	AHD1 3 629-92-NONADECANE	29.7	460	JXN
1F	AHD1 4 UNKNOWN HEXADECENOIC ACID	30.43	820	JX
1F	AHD1 5 57-10-HEXADECANOIC ACID	30.55	1100	JXN
1F	AHD1 6 112-95-EICOSANE	31	500	JXN
1F	AHD1 7 629-94-HENEICOSANE	32.23	420	JXN
1F	AHD1 8 60-33-9,12-OCTADECADIENOIC ACID	32.73	500	JXN
1F	AHD1 9 UNKNOWN OCTADECENOIC ACID	32.78	530	JX
1F	AHD110 629-99-PENTACOSANE	36.68	500	JXN
1F	AHD111 593-49-HEPTACOSANE	38.68	710	JXN
1F	AHD112 630-02-OCTACOSANE	39.63	420	JXN
1F	AHD113 UNKNOWN ALIPHATIC ALDEHYDE	40.08	540	JX
1F	AHD114 630-03-NONACOSANE	40.57	1400	JXN
1F	AHD115 506-52-1-HEXACOSANOL	40.65	1000	JXN
1F	AHD116 630-04-HENTRIACONTANE	42.48	1600	JXN
1F	AHD117 UNKNOWN ERGOSTENOL	45.12	730	JX
1F	AHD118 83-48-STIGMASTEROL	45.55	540	JXN

1F	AHD119 UNKNOWN SITOSTEROL	46.47	1900	JX
1F	AHD120 1058-61-STGMAST-4-EN-3-ONE	48.95	690	JXN
1F	AHD121 UNKNOWN POLYTERPENE DERIVATI	49.73	920	JX
		Total:	20380	
		Adj. total:	15680	
	Location ID: SS17-18			
1F	AIH1SS1718R 3			
1F	AID1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.08	9	BJXNA
1F	AID1 2 74381-40-PROPANOIC ACID, 2-METHYL-1-(	25.58	5	JXN
1F	AID1 3 UNKNOWN	32.98	4	JXB
		Total:	18	
		Adj. total:	9	
	Location ID: SS17-19			
1F	AJH1SS1719 21			
1F	AJD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.27	27000	BJXNA
1F	AJD1 2 UNKNOWN TERPENE	12.77	1200	JX
1F	AJD1 3 138-86-LIMONENE	14.35	13000	JXN
1F	AJD1 4 UNKNOWN ALIPHATIC	26.45	4700	JX
1F	AJD1 5 UNKNOWN HEXADECENOIC ACID	30.45	1100	JX
1F	AJD1 6 57-10-HEXADECANOIC ACID	30.55	1500	JXN
1F	AJD1 7 UNKNOWN ALIPHATIC	32.45	12000	JX
1F	AJD1 8 UNKNOWN ALIPHATIC	32.58	820	JX
1F	AJD1 9 UNKNOWN	33.3	5200	JX
1F	AJD110 UNKNOWN	34.03	890	JX
1F	AJD111 UNKNOWN ALIPHATIC	34.88	710	JX
1F	AJD112 UNKNOWN ALIPHATIC	35	730	JX
1F	AJD113 UNKNOWN ALIPHATIC	35.37	980	JX
1F	AJD114 UNKNOWN ALIPHATIC	35.97	3600	JX
1F	AJD115 UNKNOWN ALIPHATIC	36.13	5600	JX
1F	AJD116 UNKNOWN ALIPHATIC	36.98	690	JX
1F	AJD117 UNKNOWN ALIPHATIC	38.05	1200	JX
1F	AJD118 UNKNOWN ALIPHATIC	38.4	4000	JX
1F	AJD119 630-03-NONACOSANE	40.6	1300	JXN
1F	AJD120 630-04-HENTRIACONTANE	42.53	2100	JXN
1F	AJD121 UNKNOWN POLYTERPENE DERIVATI	49.78	5300	JX
		Total:	93620	
		Adj. total:	66620	
	Location ID: SS17-2			
1F	AKH1SS172 21			
1F	AKD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.62	5400	BJXNA
1F	AKD1 2 UNKNOWN TERPENE	11.3	530	JX
1F	AKD1 3 UNKNOWN	24.3	570	JX
1F	AKD1 4 5746-58-TETRADECANOIC ACID, 12-METHY	28.88	700	JXN
1F	AKD1 5 UNKNOWN HEXADECENOIC ACID	30.48	750	JX
1F	AKD1 6 57-10-HEXADECANOIC ACID	30.6	1800	JXN
1F	AKD1 7 UNKNOWN ALIPHATIC	31.15	560	JX
1F	AKD1 8 UNKNOWN OCTADECENOIC ACID	32.83	500	JX
1F	AKD1 9 UNKNOWN OCTADECENOIC ACID	32.88	710	JX
1F	AKD110 661-19-1-DOCOSANOL	36.73	1200	JXN

1F	AKD111 593-49-HEPTACOSANE	38.75	640	JXN
1F	AKD112 506-51-1-TETRACOSANOL	38.78	920	JXN
1F	AKD113 UNKNOWN ALIPHATIC ALDEHYDE	40.13	1200	JX
1F	AKD114 630-03-NONACOSANE	40.63	2300	JXN
1F	AKD115 506-52-1-HEXACOSANOL	40.72	1800	JXN
1F	AKD116 630-04-HENTRIACONTANE	42.55	2900	JXN
1F	AKD117 630-05-TRITRIACONTANE	44.97	610	JXN
1F	AKD118 UNKNOWN ERGOSTENOL	45.18	600	JX
1F	AKD119 UNKNOWN SITOSTEROL	46.53	1600	JX
1F	AKD120 1058-61-STIGMAST-4-EN-3-ONE	49	570	JXN
1F	AKD121 UNKNOWN POLYTERPENE DERIVATI	50.05	590	JX
		Total:	26450	
		Adj. total:	21050	
	Location ID: SS17-20			
1F	ALH1SS1720 21			
1F	ALD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.6	8300	BJXNA
1F	ALD1 2 UNKNOWN HEXADECENOIC ACID	30.48	720	JX
1F	ALD1 3 57-10-HEXADECANOIC ACID	30.58	1100	JXN
1F	ALD1 4 UNKNOWN ALIPHATIC	31.13	350	JX
1F	ALD1 5 UNKNOWN OCTADECENOIC ACID	32.87	450	JX
1F	ALD1 6 593-49-HEPTACOSANE	38.72	490	JXN
1F	ALD1 7 UNKNOWN ALIPHATIC ALDEHYDE W	40.12	390	JXZ
1F	ALD1 8 630-03-NONACOSANE	40.62	1200	JXN
1F	ALD1 9 506-52-1-HEXACOSANOL	40.7	990	JXN
1F	ALD110 630-04-HENTRIACONTANE	42.53	980	JXN
1F	ALD111 UNKNOWN ERGOSTENOL	45.15	410	JX
1F	ALD112 83-48-STIGMASTEROL	45.6	450	JXN
1F	ALD113 UNKNOWN SITOSTEROL	46.5	770	JX
1F	ALD114 559-70-BETA-AMYRIN	47.47	290	JXN
1F	ALD115 UNKNOWN POLYTERPENE DERIVATI	49.12	420	JX
1F	ALD116 UNKNOWN POLYTERPENE DERIVATI	49.8	310	JX
1F	ALD117 UNKNOWN POLYTERPENE DERIVATI	50.05	970	JX
1F	ALD118 UNKNOWN POLYTERPENE DERIVATI	50.77	550	JX
1F	ALD119 UNKNOWN POLYTERPENE DERIVATI	52.05	450	JX
1F	ALD120 UNKNOWN POLYTERPENE DERIVATI	52.38	650	JX
1F	ALD121 UNKNOWN POLYTERPENE DERIVATI	53.4	450	JX
		Total:	20690	
		Adj. total:	12390	
	Location ID: SS17-21			
1F	AMH1SS1721 21			
1F	AMD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.58	4000	BJXNA
1F	AMD1 2 UNKNOWN HEXADECENOIC ACID	30.43	830	JX
1F	AMD1 3 57-10-HEXADECANOIC ACID	30.55	1500	JXN
1F	AMD1 4 UNKNOWN OCTADECENOIC ACID	32.78	610	JX
1F	AMD1 5 UNKNOWN OCTADECENOIC ACID	32.83	580	JX
1F	AMD1 6 630-03-NONACOSANE	40.57	1400	JXN
1F	AMD1 7 506-52-1-HEXACOSANOL	40.65	980	JXN
1F	AMD1 8 630-04-HENTRIACONTANE	42.48	1700	JXN
1F	AMD1 9 630-05-TRITRIACONTANE	44.87	530	JXN

1F	AMD110 UNKNOWN ERGOSTENOL	45.08	440	JX
1F	AMD111 83-48-STIGMASTEROL	45.5	420	JXN
1F	AMD112 UNKNOWN SITOSTEROL	46.42	1300	JX
1F	AMD113 559-70-BETA-AMYRIN	47.35	450	JXN
1F	AMD114 UNKNOWN POLYTERPENE DERIVATI	47.73	450	JX
1F	AMD115 UNKNOWN POLYTERPENE DERIVATI	49	600	JX
1F	AMD116 UNKNOWN POLYTERPENE DERIVATI	49.68	580	JX
1F	AMD117 UNKNOWN POLYTERPENE DERIVATI	49.92	1700	JX
1F	AMD118 UNKNOWN POLYTERPENE DERIVATI	50.62	620	JX
1F	AMD119 UNKNOWN POLYTERPENE DERIVATI	51.92	830	JX
1F	AMD120 UNKNOWN POLYTERPENE DERIVATI	52.23	1200	JX
1F	AMD121 UNKNOWN POLYTERPENE DERIVATI	53.23	580	JX
		Total:	21300	
		Adj. total:	17300	
	Location ID: SS17-3			
1F	ANH1SS173 21			
1F	AND1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.53	4600	BJXNA
1F	AND1 2 UNKNOWN TERPENE	11.27	410	JX
1F	AND1 3 UNKNOWN TERPENE	12.77	430	JX
1F	AND1 4 UNKNOWN HEXADECENOIC ACID	30.45	330	JX
1F	AND1 5 57-10-HEXADECANOIC ACID	30.57	900	JXN
1F	AND1 6 60-33-9,12-OCTADECADIENOIC ACID	32.77	340	JXN
1F	AND1 7 UNKNOWN	33.3	1200	JX
1F	AND1 8 661-19-1-DOCOSANOL W/ PENTACOSANE	36.72	730	JXNZ
1F	AND1 9 593-49-HEPTACOSANE	38.72	550	JXN
1F	AND110 506-51-1-TETRACOSANOL	38.75	600	JXN
1F	AND111 UNKNOWN ALIPHATIC ALDEHYDE W	40.1	660	JXZ
1F	AND112 630-03-NONACOSANE	40.6	1600	JXN
1F	AND113 506-52-1-HEXACOSANOL	40.68	410	JXN
1F	AND114 UNKNOWN	41.42	1900	JX
1F	AND115 630-04-HENTRIACONTANE	42.52	1300	JXN
1F	AND116 UNKNOWN POLYTERPENE DERIVATI	43.58	480	JX
1F	AND117 UNKNOWN ERGOSTENOL	45.13	340	JX
1F	AND118 UNKNOWN SITOSTEROL	46.48	710	JX
1F	AND119 1058-61-STIGMAST-4-EN-3-ONE	48.95	290	JXN
1F	AND120 UNKNOWN POLYTERPENE DERIVATI	50.57	310	JX
1F	AND121 UNKNOWN POLYTERPENE DERIVATI	51.15	390	JX
		Total:	18480	
		Adj. total:	13880	
	Location ID: SS17-4			
1F	AOH1SS174 21			
1F	AOD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.53	6100	BJXNA
1F	AOD1 2 UNKNOWN HEXADECENOIC ACID	30.37	250	JX
1F	AOD1 3 UNKNOWN HEXADECENOIC ACID	30.5	1100	JX
1F	AOD1 4 57-10-HEXADECANOIC ACID	30.6	1000	JXN
1F	AOD1 5 UNKNOWN OCTADECENOIC ACID	32.87	440	JX
1F	AOD1 6 629-99-PENTACOSANE	36.73	410	JXN
1F	AOD1 7 593-49-HEPTACOSANE	38.73	780	JXN
1F	AOD1 8 630-02-OCTACOSANE	39.68	390	JXN

1F	AOD1 9 UNKNOWN ALIPHATIC ALDEHYDE	40.13	1300	JX
1F	AOD110 630-03-NONACOSANE	40.63	1200	JXN
1F	AOD111 506-52-1-HEXACOSANOL	40.72	5400	JXN
1F	AOD112 UNKNOWN ALIPHATIC ALDEHYDE	42.05	510	JX
1F	AOD113 630-04-HENTRIACONTANE	42.55	1300	JXN
1F	AOD114 57-88-CHOLESTEROL	43.75	280	JXN
1F	AOD115 UNKNOWN ALIPHATIC ALDEHYDE	44.35	240	JX
1F	AOD116 630-05-TRITRIACONTANE	44.95	250	JXN
1F	AOD117 UNKNOWN ERGOSTENOL	45.18	600	JX
1F	AOD118 83-48-STIGMASTEROL	45.6	360	JXN
1F	AOD119 UNKNOWN SITOSTEROL	46.53	1600	JX
1F	AOD120 UNKNOWN POLYTERPENE DERIVATI	47.48	380	JX
1F	AOD121 1058-61-STIGMAST-4-EN-3-ONE	49.02	940	JXN
		Total:	24830	
		Adj. total:	18730	
	Location ID: SS17-5			
1F	APH1SS175 21			
1F	APD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.53	6900	BJXNA
1F	APD1 2 UNKNOWN HEXADECENOIC ACID	30.5	910	JX
1F	APD1 3 57-10-HEXADECANOIC ACID	30.6	1500	JXN
1F	APD1 4 UNKNOWN OCTADECENOIC ACID	32.85	420	JX
1F	APD1 5 UNKNOWN	33.32	420	JX
1F	APD1 6 661-19-1-DOCOSANOL W/ PENTACOSANE	36.75	600	JXNZ
1F	APD1 7 593-49-HEPTACOSANE	38.75	810	JXN
1F	APD1 8 630-02-OCTACOSANE	39.7	580	JXN
1F	APD1 9 UNKNOWN ALIPHATIC ALDEHYDE	40.13	470	JX
1F	APD110 630-03-NONACOSANE	40.63	2100	JXN
1F	APD111 506-52-1-HEXACOSANOL	40.72	1200	JXN
1F	APD112 630-04-HENTRIACONTANE	42.55	1800	JXN
1F	APD113 630-05-TRITRIACONTANE	44.98	420	JXN
1F	APD114 UNKNOWN ERGOSTENOL	45.18	660	JX
1F	APD115 83-48-STIGMASTEROL	45.63	470	JXN
1F	APD116 UNKNOWN SITOSTEROL	46.55	2100	JX
1F	APD117 UNKNOWN POLYTERPENE DERIVATI	47.22	440	JX
1F	APD118 UNKNOWN POLYTERPENE DERIVATI	48.77	560	JX
1F	APD119 1058-61-STIGMAST-4-EN-3-ONE	49.02	1100	JXN
1F	APD120 UNKNOWN POLYTERPENE DERIVATI	50.37	1200	JX
1F	APD121 UNKNOWN POLYTERPENE DERIVATI	50.63	430	JX
		Total:	25090	
		Adj. total:	18190	
	Location ID: SS17-6			
1F	AQH1SS176 14			
1F	AQD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.33	8200	BJXNA
1F	AQD1 2 74381-40-PROPANOIC ACID, 2-METHYL-, 1	25.68	110	JXN
1F	AQD1 3 629-78-HEPTADECANE	27.03	87	JXN
1F	AQD1 4 593-45-OCTADECANE	28.47	100	JXN
1F	AQD1 5 629-92-NONADECANE	29.82	110	JXN
1F	AQD1 6 UNKNOWN BROMO COMPOUND	30.93	130	JX
1F	AQD1 7 112-95-EICOSANE	31.12	110	JXN

1F	AQD1 8 629-94-HENEICOSANE	32.35	110	JXN
1F	AQD1 9 UNKNOWN HEXANEDIOATE	35.85	160	JX
1F	AQD110 629-99-PENTACOSANE	36.83	140	JXN
1F	AQD111 593-49-HEPTACOSANE	38.83	160	JXN
1F	AQD112 UNKNOWN	40.23	69	JX
1F	AQD113 630-03-NONACOSANE	40.72	270	JXN
1F	AQD114 630-04-HENTRIACONTANE	42.67	190	JXN
		Total:	9946	
		Adj. total:	1746	
	Location ID: SS17-7			
1F	ARH1SS177 21			
1F	ARD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.75	4600	BJXNA
1F	ARD1 2 UNKNOWN HEXADECENOIC ACID	30.38	280	JX
1F	ARD1 3 UNKNOWN HEXADECENOIC ACID	30.5	290	JX
1F	ARD1 4 57-10-HEXADECANOIC ACID	30.6	790	JXN
1F	ARD1 5 UNKNOWN OCTADECENOIC ACID	32.9	250	JX
1F	ARD1 6 629-99-PENTACOSANE W/ 1-DOCOSANOL	36.77	390	JXNZ
1F	ARD1 7 593-49-HEPTACOSANE	38.77	470	JXN
1F	ARD1 8 UNKNOWN ALIPHATIC ALDEHYDE	40.15	360	JX
1F	ARD1 9 630-03-NONACOSANE	40.65	940	JXN
1F	ARD110 506-52-1-HEXACOSANOL	40.73	780	JXN
1F	ARD111 630-04-HENTRIACONTANE	42.57	1100	JXN
1F	ARD112 UNKNOWN ERGOSTENOL	45.2	580	JX
1F	ARD113 83-48-STIGMASTEROL	45.63	310	JXN
1F	ARD114 UNKNOWN SITOSTEROL	46.55	1200	JX
1F	ARD115 UNKNOWN POLYTERPENE DERIVATI	47.08	270	JX
1F	ARD116 UNKNOWN POLYTERPENE DERIVATI	48.07	650	JX
1F	ARD117 1058-61-STIGMAST-4-EN-3-ONE	49	310	JXN
1F	ARD118 UNKNOWN POLYTERPENE DERIVATI	49.8	900	JX
1F	ARD119 UNKNOWN POLYTERPENE DERIVATI	50.65	580	JX
1F	ARD120 UNKNOWN POLYTERPENE DERIVATI	51.03	410	JX
1F	ARD121 UNKNOWN POLYTERPENE DERIVATI	51.23	820	JX
		Total:	16280	
		Adj. total:	11680	
	Location ID: SS17-8			
1F	ASH1SS178 21			
1F	ASD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.53	6900	BJXNA
1F	ASD1 2 UNKNOWN HEXADECENOIC ACID	30.45	1100	JX
1F	ASD1 3 57-10-HEXADECANOIC ACID	30.55	790	JXN
1F	ASD1 4 UNKNOWN OCTADECENOIC ACID	32.83	250	JX
1F	ASD1 5 629-99-PENTACOSANE W/ 1-DOCOSANOL	36.7	170	JXNZ
1F	ASD1 6 593-49-HEPTACOSANE	38.68	220	JXN
1F	ASD1 7 UNKNOWN	40.08	430	JX
1F	ASD1 8 630-03-NONACOSANE	40.57	630	JXN
1F	ASD1 9 506-52-1-HEXACOSANOL	40.67	300	JXN
1F	ASD110 630-04-HENTRIACONTANE	42.48	780	JXN
1F	ASD111 57-88-CHOLESTEROL	43.67	170	JXN
1F	ASD112 UNKNOWN ERGOSTENOL	45.07	220	JX
1F	ASD113 83-48-STIGMASTEROL	45.52	160	JXN

1F	ASD114 UNKNOWN SITOSTEROL	46.4	600	JX
1F	ASD115 559-70-BETA-AMYRIN	47.37	260	JXN
1F	ASD116 UNKNOWN POLYTERPENE DERIVATI	49.62	320	JX
1F	ASD117 UNKNOWN POLYTERPENE DERIVATI	49.87	370	JX
1F	ASD118 UNKNOWN	50.45	150	JX
1F	ASD119 559-74-FRIEDELIN	51	150	JXN
1F	ASD120 UNKNOWN POLYTERPENE DERIVATI	51.88	180	JX
1F	ASD121 UNKNOWN POLYTERPENE DERIVATI	52.18	260	JX
		Total:	14410	
		Adj. total:	7510	
	Location ID: LAB BLANK			
1F	ATH1SBLKN6 2			
1F	ATD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.25	3100	JXNA
1F	ATD1 2 123-28-PROPANOIC ACID, 3,3'-THIOBIS	50.97	90	JXN
		Total:	3190	
	Location ID: LAB BLANK			
1F	AUH1SBLK8U 2			
1F	AUD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.07	12	JXNA
1F	AUD1 2 UNKNOWN	32.95	4	JX
		Total:	16	
	Location ID: LAB BLANK			
1F	AVH1SBLKP2 2			
1F	AVD1 1 123-42-2-PENTANONE, 4-HYDROXY-4-MET	7.53	5300	JXNA
1F	AVD1 2 123-28-PROPANOIC ACID, 3,3'-THIOBIS	51.38	73	JXN
		Total:	5373	

		Location ID: LAB BLANK			
1F	AAH1SBLKN3	1			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.488	19000	NJAB
			Total:	19000	
			Adj. Total:	0	
		Location ID: LAB BLANK			
1F	ABH1SBLKN4	3			
1F	ABD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.728	4800	NJA
1F	ABD1 2	Unknown chlorinated compound	10.383	68	J
1F	ABD1 3	Unknown	32.846	74	J
			Total:	4942	
			Adj. Total:	142	
		Location ID: SS16-1			
1F	ACH1SS161	21			
1F	ACD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.571	8800	NJAB
1F	ACD1 2544-76-3	Hexadecane	24.492	300	NJ
1F	ACD1 3629-78-7	Heptadecane	26.154	380	NJ
1F	ACD1 4593-45-3	Octadecane	27.728	320	NJ
1F	ACD1 5629-97-0	Docosane w/unknown	33.25	440	NJZ
1F	ACD1 6	Unknown sterane derivative	34.36	590	J
1F	ACD1 7	Unknown polycyclic hydrocarb	34.981	580	JZ
1F	ACD1 8646-31-1	Tetracosane w/unknown	35.877	330	NJZ
1F	ACD1 9	Unknown	38.955	410	J
1F	ACD110	Unknown	39.662	390	J
1F	ACD111	Unknown	39.875	630	J
1F	ACD112	Unknown polycyclic hydrocarb	40.76	1800	JZ
1F	ACD113	Unknown	40.918	2100	J
1F	ACD114	Unknown sterane derivative	41.426	1900	J
1F	ACD115	Unknown polycyclic hydrocarb	43.537	1600	JZ
1F	ACD116	Unknown	43.913	1400	J
1F	ACD117	Unknown	44.057	1900	J
1F	ACD118	Unknown sterane derivative	44.392	2600	J
1F	ACD119	Unknown sterane derivative w	45.423	1400	JZ
1F	ACD120	Unknown polycyclic hydrocarb	46.289	2800	J
1F	ACD121	Unknown polycyclic hydrocarb	48.446	1800	J
			Total:	32470	
			Adj. Total:	23670	
		Location ID: SS16-11			
1F	ADH1SS1611	21			
1F	ADD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.671	6300	NJAB
1F	ADD1 2	Unknown aliphatic acid	28.134	240	J
1F	ADD1 3	Unknown aliphatic compound	29.958	140	J
1F	ADD1 4	Unknown aliphatic compound	30.083	550	J
1F	ADD1 557-10-3	Hexadecanoic acid	30.176	610	NJ
1F	ADD1 6	Unknown	30.796	200	J
1F	ADD1 7	Unknown aliphatic compound	32.673	240	J
1F	ADD1 8	Unknown aliphatic compound	32.726	250	J
1F	ADD1 9	Unknown aliphatic compound	35.931	330	J
1F	ADD110593-49-7	Heptacosane	37.824	250	NJ

1F	ADD111	Unknown aliphatic compound	37.944	380	J
1F	ADD112630-03-5	Nonacosane	40.372	1300	NJ
1F	ADD113	Unknown aliphatic compound	40.598	1300	J
1F	ADD114638-68-6	Triacontane	41.975	190	NJ
1F	ADD115630-04-6	Hentriacontane	43.898	1700	NJ
1F	ADD116	Unknown aliphatic compound	44.29	230	J
1F	ADD117	Unknown	45.785	250	J
1F	ADD118	Unknown	46.967	210	J
1F	ADD119630-05-7	Tritriacontane	48.931	510	NJ
1F	ADD120	Unknown	50.996	350	J
1F	ADD121	Unknown	53.021	900	J
			Total:	16430	
			Adj. Total:	10130	
		Location ID: SS16-12			
1F	AEH1SS1612	17			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.703	5500	NJAB
1F	AED1 2	Unknown	16.846	74	J
1F	AED1 3	Unknown terpene	22.031	310	J
1F	AED1 4	Unknown aliphatic compound	25.826	1100	J
1F	AED1 5	Unknown	26.862	160	J
1F	AED1 6	Unknown	27.547	100	J
1F	AED1 7	Unknown aliphatic compound	30.073	580	J
1F	AED1 857-10-3	Hexadecanoic acid	30.159	400	NJ
1F	AED1 9	Unknown octadecenoic acid	32.712	350	J
1F	AED110	Unknown	34.124	76	J
1F	AED111629-99-2	Pentacosane	35.859	80	NJ
1F	AED112593-49-7	Heptacosane	37.796	130	NJ
1F	AED113630-03-5	Nonacosane	40.333	480	NJ
1F	AED114630-04-6	Hentriacontane	43.837	300	NJ
1F	AED115	Unknown	50.372	130	J
1F	AED116	Unknown	51.388	140	J
1F	AED117	Unknown	53.393	400	J
			Total:	10310	
			Adj. Total:	4810	
		Location ID: SS16-13			
1F	AFH1SS1613	18			
1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.617	9800	NJAB
1F	AFD1 21120-21-4	Undecane	14.623	310	NJ
1F	AFD1 3	Unknown terpene	22.029	310	J
1F	AFD1 4	Unknown aliphatic hydrocarbo	25.821	1700	J
1F	AFD1 5	Unknown	26.861	190	J
1F	AFD1 6	Unknown aliphatic compound	30.074	1100	J
1F	AFD1 757-10-3	Hexadecanoic acid	30.153	700	NJ
1F	AFD1 8	Unknown aliphatic compound	32.65	260	J
1F	AFD1 9	Unknown octadecenoic acid	32.703	280	J
1F	AFD110	Unknown aliphatic ester w/un	35.101	250	JZ
1F	AFD111629-99-2	Pentacosane	35.853	150	NJ
1F	AFD112	Unknown	37.139	190	J
1F	AFD113593-49-7	Heptacosane	37.797	330	NJ

1F	AFD114630-03-5	Nonacosane	40.329	1100	NJ
1F	AFD115630-04-6	Hentriacontane	43.845	690	NJ
1F	AFD116	Unknown	50.671	560	J
1F	AFD117	Unknown	51.336	320	J
1F	AFD118	Unknown	53.387	650	J
			Total:	18890	
			Adj. Total:	9090	
		Location ID: SS16-14			
1F	AGH1SS1614	21			
1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.684	5900	NJAB
1F	AGD1 21120-21-4	Undecane	14.625	120	NJ
1F	AGD1 3629-62-9	Pentadecane	22.755	100	NJ
1F	AGD1 4544-76-3	Hexadecane	24.503	140	NJ
1F	AGD1 5629-78-7	Heptadecane	26.167	200	NJ
1F	AGD1 61921-70-6	Pentadecane, 2,6,10,14-tetra	26.259	93	NJ
1F	AGD1 7593-45-3	Octadecane	27.739	170	NJ
1F	AGD1 8629-92-5	Nonadecane	29.228	170	NJ
1F	AGD1 9	Unknown aliphatic compound	30.052	310	J
1F	AGD11057-10-3	Hexadecanoic acid	30.139	190	NJ
1F	AGD111112-95-8	Eicosane	30.654	120	NJ
1F	AGD112629-94-7	Heneicosane	32.012	100	NJ
1F	AGD113	Unknown amide	34.949	100	J
1F	AGD114646-31-1	Tetracosane	35.009	95	NJ
1F	AGD115	Unknown aliphatic acid ester	35.096	140	J
1F	AGD116629-99-2	Pentacosane	35.857	100	NJ
1F	AGD117593-49-7	Heptacosane	37.801	110	NJ
1F	AGD118630-03-5	Nonacosane	40.332	330	NJ
1F	AGD119630-04-6	Hentriacontane	43.841	290	NJ
1F	AGD120	Unknown	46.891	120	J
1F	AGD121	Unknown	53.369	140	J
			Total:	9038	
			Adj. Total:	3018	
		Location ID: SS16-15			
1F	AHH1SS1615	11			
1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.663	5300	NJAB
1F	AHD1 2	Unknown terpene	22.006	290	J
1F	AHD1 3	Unknown alkene	22.603	95	J
1F	AHD1 4	Unknown alkene	25.796	880	J
1F	AHD1 5	Unknown aliphatic compound	30.018	72	J
1F	AHD1 657-10-3	Hexadecanoic acid	30.117	130	NJ
1F	AHD1 7	Unknown aliphatic acid ester	35.081	89	J
1F	AHD1 8629-99-2	Pentacosane	35.838	81	NJ
1F	AHD1 9593-49-7	Heptacosane	37.769	150	NJ
1F	AHD110630-03-5	Nonacosane	40.295	770	NJ
1F	AHD111630-04-6	Hentriacontane	43.788	340	NJ
			Total:	8197	
			Adj. Total:	2897	
		Location ID: S16-16			
1F	AIH1SS1616	21			

1F	AID1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.505	18000	NJAB
1F	AID1 2	Unknown aromatic compound	33.552	810	J
1F	AID1 3	Unknown sterane derivative	34.34	950	J
1F	AID1 4	Unknown polycyclic hydrocarb	34.975	2800	J
1F	AID1 5	Unknown polycyclic hydrocarb	35.426	960	JZ
1F	AID1 6	Unknown polycyclic hydrocarb	36.514	930	JZ
1F	AID1 7	Unknown aromatic compound	38.966	670	J
1F	AID1 8	Unknown aromatic compound	39.902	690	J
1F	AID1 9	Unknown	40.604	3500	J
1F	AID110	Unknowns	41.059	6300	JZ
1F	AID111	Unknown	41.479	2300	J
1F	AID112	Unknown	42.271	3000	J
1F	AID113	Unknown aliphatic compound	42.774	6300	J
1F	AID114	Unknown aliphatic compound	43.607	4800	J
1F	AID115	Unknown	44.02	1800	J
1F	AID116	Unknown	44.509	4600	J
1F	AID117	Unknown	45.581	1700	J
1F	AID118	Unknown polycyclic hydrocarb	46.391	9800	J
1F	AID119	Unknown polycyclic hydrocarb	48.664	6800	J
1F	AID120	Unknown polycyclic hydrocarb	51.615	3600	J
1F	AID121	Unknown polycyclic hydrocarb	52.003	3200	J
			Total:	83510	
			Adj. Total:	65510	
		Location ID: SS16-16			
1F	AJH1SS1616RE	21			
1F	AJD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.486	15000	NJAB
1F	AJD1 2	Unknown	33.539	620	J
1F	AJD1 3	Unknown	34.123	480	J
1F	AJD1 4	Unknown sterane derivative	34.327	820	J
1F	AJD1 5	Unknown	34.545	560	J
1F	AJD1 6	Unknown polycyclic hydrocarb	34.962	2300	J
1F	AJD1 7	Unknown	35.344	530	J
1F	AJD1 8	Unknown polycyclic hydrocarb	35.413	1100	JZ
1F	AJD1 9	Unknown	35.871	470	J
1F	AJD110	Unknown aromatic compound	35.939	480	J
1F	AJD111	Unknown aromatic compound	38.947	800	J
1F	AJD112	Unknown aromatic compound	39.877	1100	J
1F	AJD113	Unknown	40.903	3200	J
1F	AJD114	Unknown	41.048	14000	J
1F	AJD115	Unknown	42.778	9500	J
1F	AJD116	Unknown polycyclic hydrocarb	43.598	6200	J
1F	AJD117	Unknown polycyclic hydrocarb	46.405	12000	J
1F	AJD118	Unknown	46.823	5800	J
1F	AJD119	Unknown polycyclic hydrocarb	48.624	10000	J
1F	AJD120	Unknown polycyclic hydrocarb	51.603	5700	J
1F	AJD121	Unknown polycyclic hydrocarb	52.011	5400	J
			Total:	96060	
			Adj. Total:	81060	
		Location ID: SS16-1			

1F	AKH1SS161DL	21			
1F	AKD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.556	17000	NJAB
1F	AKD1 2544-76-3	Hexadecane	24.511	480	NJ
1F	AKD1 3629-78-7	Heptadecane	26.173	570	NJ
1F	AKD1 4593-49-3	Octadecane	27.749	560	NJ
1F	AKD1 5629-92-5	Nonadecane	29.244	530	NJ
1F	AKD1 6629-97-0	Docosane	33.265	440	NJ
1F	AKD1 7638-67-5	Tricosane	34.215	520	NJ
1F	AKD1 8	Unknown polycyclic hydrocarb	34.999	600	J
1F	AKD1 9	Unknown polycyclic hydrocarb	35.379	410	J
1F	AKD110	Unknown	40.02	2400	J
1F	AKD111	Unknown polycyclic hydrocarb	40.727	2300	JZ
1F	AKD112	Unknown aliphatic compound	41.631	1900	J
1F	AKD113	Unknown	43.499	1900	J
1F	AKD114	Unknown	43.858	2600	J
1F	AKD115	Unknown	43.933	3300	J
1F	AKD116	Unknown sterane derivative	44.319	3400	J
1F	AKD117	Unknown	45.335	2300	J
1F	AKD118	Unknown polycyclic hydrocarb	46.195	3800	J
1F	AKD119	Unknown polycyclic hydrocarb	48.347	3400	J
1F	AKD120	Unknown polycyclic hydrocarb	51.224	1800	J
1F	AKD121	Unknown	53.76	1000	J
			Total:	51210	
			Adj. Total:	34210	
		Location ID: SS16-2			
1F	ALH1SS162	21			
1F	ALD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.698	6200	NJAB
1F	ALD1 21120-21-4	Undecane	14.614	360	NJ
1F	ALD1 390-12-0	Naphthalene, 1-methyl-	19.906	460	NJ
1F	ALD1 4575-41-7	Naphthalene, 1,3-dimethyl-	22.01	340	NJ
1F	ALD1 5	Unknown dimethylnaphthalene	22.076	350	NJZ
1F	ALD1 6	Unknown trimethylnaphthalene	25.167	260	J
1F	ALD1 7	Unknown aliphatic hydrocarbo	25.805	220	J
1F	ALD1 81921-70-6	Pentadecane, 2,6,10,14-tetra	26.258	480	NJ
1F	ALD1 957-10-3	Hexadecanoic acid	30.161	240	NJ
1F	ALD1102531-84-2	Phenanthrene, 2-methyl-	30.382	270	NJ
1F	ALD111112-95-8	Eicosane	30.65	220	NJ
1F	ALD112629-94-7	Heneicosane w/dimethylnaphth	32.006	260	NJZ
1F	ALD113629-97-0	Docosane	33.246	210	NJ
1F	ALD114638-67-5	Tricosane	34.2	300	NJ
1F	ALD115238-84-6	11H-Benzo[a]fluorene	34.43	310	NJ
1F	ALD116646-31-1	Tetracosane w/C17H12 PAH	35.014	420	NJZ
1F	ALD117	Unknown	35.808	230	J
1F	ALD118629-99-2	Pentacosane	35.856	270	NJ
1F	ALD119239-35-0	Benzo[b]naphtho[2,1-d]thioph	36.107	220	NJ
1F	ALD120629-78-7	Heptadecane	37.801	310	NJ
1F	ALD121630-03-5	Nonacosane	40.36	1000	NJ
			Total:	12930	
			Adj. Total:	6730	

		Location ID: SS16-4			
1F	AMH1SS164	21			
1F	AMD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.483	30000	NJAB
1F	AMD1 2	Unknown alkane	33.404	2400	J
1F	AMD1 372-55-9	p,p'-DDE	33.792	3400	NJ
1F	AMD1 4638-67-5	Tricosane w/unknown	34.391	7800	NJZ
1F	AMD1 5	Unknown polycyclic hydrocarb	35.007	3600	JZ
1F	AMD1 6646-31-1	Tetracosane	35.274	3800	NJ
1F	AMD1 7629-99-2	Pentacosane	35.946	4800	NJ
1F	AMD1 8630-01-3	Hexacosane	37.519	5100	NJ
1F	AMD1 9	Unknown polycyclic hydrocarb	37.828	4200	J
1F	AMD110	Unknown	38.495	6400	J
1F	AMD111	Unknown	39.747	2100	J
1F	AMD112	Unknown	42.352	6600	J
1F	AMD113	Unknown	42.823	8900	J
1F	AMD114	Unknown	43.634	5400	J
1F	AMD115	Unknown	44.035	5900	J
1F	AMD116	Unknown	44.511	8200	J
1F	AMD117	Unknown	45.541	4300	J
1F	AMD118	Unknown polycyclic hydrocarb	46.428	13000	J
1F	AMD119	Unknown polycyclic hydrocarb	48.61	8000	J
1F	AMD120	Unknown polycyclic hydrocarb	51.507	3000	J
1F	AMD121	Unknown	51.938	2000	J
			Total:	138900	
			Adj. Total:	108900	
		Location ID: SS16-5			
1F	ANH1SS165	21			
1F	AND1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.657	10000	NJAB
1F	AND1 2	Unknown terpene	11.936	800	J
1F	AND1 3629-59-4	Tetradecane	20.909	440	NJ
1F	AND1 4	Unknown terpene	22.041	420	J
1F	AND1 5629-62-9	Pentadecane	22.771	680	NJ
1F	AND1 6544-76-3	Hexadecane	24.523	850	NJ
1F	AND1 7	Unknown cycloalkene	25.834	2000	J
1F	AND1 8629-78-7	Heptadecane	26.178	1200	NJ
1F	AND1 91921-70-6	Pentadecane, 2,6,10,14-tetra	26.277	440	NJ
1F	AND110593-45-3	Octadecane	27.753	1100	NJ
1F	AND11157-10-3	Hexadecanoic acid	30.156	460	NJ
1F	AND112112-95-8	Eicosane	30.678	760	NJ
1F	AND113629-94-7	Heneicosane	32.033	560	NJ
1F	AND114629-97-0	Docosane	33.266	480	NJ
1F	AND115638-67-5	Tricosane	34.213	480	NJ
1F	AND116593-49-7	Heptacosane	37.83	410	NJ
1F	AND117630-03-5	Nonacosane	40.381	1500	NJ
1F	AND118	Unknown	40.776	1800	J
1F	AND119630-04-6	Hentriacontane	43.902	1100	NJ
1F	AND120	Unknown	47.011	1000	J
1F	AND121	Unknown	53.015	700	J
			Total:	27180	

			Adj. Total:	17180	
		Location ID: SS16-6			
1F	AOH1SS166	21			
1F	AOD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.432	15000	NJAB
1F	AOD1 2	Unknown aliphatic hydrocarbo	15.765	4300	J
1F	AOD1 3	Unknown	16.583	4700	J
1F	AOD1 4	Unknown polycyclic hydrocarb	17.727	5300	JZ
1F	AOD1 5	Unknown aliphatic hydrocarbo	17.926	4200	J
1F	AOD1 6	Unknown alkane	18.336	4500	J
1F	AOD1 7	Unknown	18.562	4500	J
1F	AOD1 8	Unknown aliphatic aldehyde	19.284	6900	J
1F	AOD1 9	Unknown	19.549	6400	J
1F	AOD110	Unknown	20.306	4500	J
1F	AOD111	Unknown	20.425	14000	J
1F	AOD112	Unknown	20.691	6500	J
1F	AOD113	Unknown naphthalene derivati	21.011	14000	J
1F	AOD114	Unknown naphthalene derivati	21.364	5000	J
1F	AOD115	Unknown naphthalene derivati	22.111	37000	J
1F	AOD116	Unknown naphthalene derivati	22.298	7600	J
1F	AOD117	Unknown naphthalene derivati	22.671	11000	J
1F	AOD118	Unknown naphthalene derivati	22.811	26000	J
1F	AOD119	Unknown naphthalene derivati	22.945	6100	JZ
1F	AOD120	Unknown naphthalene derivati	23.045	7300	NJ
1F	AOD121	Unknown	40.872	9200	J
			Total:	204000	
			Adj. Total:	189000	
		Location ID: MS			
1F	APH1SS166MS	32			
1F	APD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.53	22000	NJ
1F	APD1 22958-76-1	Naphthalene, decahydro-2-met	15.813	2700	NJ
1F	APD1 32432-89-5	Decanedioic acid, didecyl es	16.625	3000	NJ
1F	APD1 4702-79-4	Adamantane, 1,3-dimethyl-	17.009	2600	NJ
1F	APD1 5702-79-4	Adamantane, 1,3-dimethyl-	17.776	3900	NJ
1F	APD1 61618-22-0	Naphthalene, decahydro-2,6-d	17.975	2600	NJ
1F	APD1 717312-76-4	Undecane, 6,6-dimethyl-	18.386	2800	NJ
1F	APD1 82568-25-4	1,3-Dioxolane, 4-methyl-2-ph	18.611	3000	NJ
1F	APD1 9112-44-7	Undecanal	19.327	4700	NJ
1F	APD1102236-60-4	4(1H)-Pteridinone, 2-amino-	19.467	2800	NJ
1F	APD11130689-78-2	(R)-(-)-(Z)-14-Methyl-8-hexa	19.593	4600	NJ
1F	APD11285-02-9	Benzo[f]quinoline	19.945	2100	NJ
1F	APD11361228-09-9	3-Heptyne, 5-methyl-	20.35	3500	NJ
1F	APD1142080-89-9	1,4-Hexadiene, 3-ethyl-	20.469	12000	NJ
1F	APD11521898-92-0	Tricyclo[4.3.1.13,8]undecane	20.735	5000	NJ
1F	APD1160-00-0	Decahydro-4,4,8,9,10-pentame	21.056	11000	NJ
1F	APD11732773-42-5	Butane, 1-(methylseleno)-	21.215	2500	NJ
1F	APD1180-00-0	Decahydro-4,4,8,9,10-pentame	21.409	3900	NJ
1F	APD11956554-75-7	7-Heptadecyne, 17-chloro-	21.829	2300	NJ
1F	APD12031230-13-4	1H-Indene, octahydro-2,3a,4-	21.962	3200	NJ
1F	APD12186-29-3	Benzeneacetonitrile, .alpha.	22.156	31000	NJ

1F	APD12286-29-3	Benzeneacetonitrile, .alpha.	22.343	6000	NJ
1F	APD1230-00-0	4,6-Bis(hydroxylamino)-5-nit	22.456	2600	NJ
1F	APD12419780-11-1	2-Dodecen-1-yl(-)succinic an	22.717	8400	NJ
1F	APD1250-00-0	Decahydro-4,4,8,9,10-pentame	22.857	21000	NJ
1F	APD126403-42-9	Ethanone, 1-(4-fluorophenyl)	22.997	4800	NJ
1F	APD1270-00-0	(2,4,6-Trimethylcyclohexyl)	23.091	6100	NJ
1F	APD128483-77-2	Naphthalene, 1,2,3,4-tetrahy	23.84	2300	NJ
1F	APD1290-00-0	Decahydro-4,4,8,9,10-pentame	24.387	3300	NJ
1F	APD130611-64-3	Acridine, 9-methyl-	24.501	2900	NJ
			Total:	188600	
			Adj. Total:	166600	
		Location ID: MS			
1F	AQH1SS166MS	32			
1F	AQD13161142-32-3	Cyclopentene, 1,3-dimethyl-2	24.641	3500	NJ
1F	AQD13287-86-5	Phenol, pentachloro-	28.028	29000	NJ
			Total:	32500	
			Adj. Total:	32500	
		Location ID: MSD			
1F	ARH1SS166MSD	32			
1F	ARD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.524	11000	NJ
1F	ARD1 22958-76-1	Naphthalene, decahydro-2-met	15.809	3700	NJ
1F	ARD1 3630-02-4	Octacosane	16.622	4000	NJ
1F	ARD1 4702-79-4	Adamantane, 1,3-dimethyl-	17.007	3500	NJ
1F	ARD1 5702-79-4	Adamantane, 1,3-dimethyl-	17.768	4500	NJ
1F	ARD1 60-00-0	cis,trans-1,10-Dimethylspiro	17.967	3600	NJ
1F	ARD1 713475-78-0	Heptane, 5-ethyl-2-methyl-	18.378	4400	NJ
1F	ARD1 856324-69-7	1H-Indene, 1-ethylideneoctah	18.611	3800	NJ
1F	ARD1 96624-79-9	1-Dotriacontanol	19.328	6100	NJ
1F	ARD1100-00-0	cis,cis-2,9-Dimethylspiro[5.	19.468	3400	NJ
1F	ARD111707-37-9	3,5-Dimethyl-1-adamantanol	19.594	5500	NJ
1F	ARD1120-00-0	cis,trans-2,9-Dimethylspiro[	20.352	4900	NJ
1F	ARD113546-80-5	Thujone	20.472	15000	NJ
1F	ARD11450704-44-4	1H-Purin-2-amine, 6-methoxy-	20.739	7800	NJ
1F	ARD1150-00-0	Decahydro-4,4,8,9,10-pentame	21.053	14000	NJ
1F	ARD116464-45-9	Bicyclo[2.2.1]heptan-2-ol, 1	21.22	3500	NJ
1F	ARD1170-00-0	Decahydro-4,4,8,9,10-pentame	21.42	5200	NJ
1F	ARD11862337-98-8	Cyclohexane, 1,1-dimethyl-2,	21.821	3400	NJ
1F	ARD1190-00-0	Amorphane-A	21.961	5200	NJ
1F	ARD12054833-48-6	Heptadecane, 2,6,10,15-tetra	22.082	6400	NJ
1F	ARD12157387-76-5	Borinic acid, diethyl-, 3,3,	22.162	39000	NJ
1F	ARD1220-00-0	Decahydro-4,4,8,9,10-pentame	22.342	8900	NJ
1F	ARD12331081-18-2	Nonane, 3-methyl-5-propyl-	22.449	3700	NJ
1F	ARD12419780-11-1	2-Dodecen-1-yl(-)succinic an	22.723	11000	NJ
1F	ARD1250-00-0	Decahydro-4,4,8,9,10-pentame	22.857	26000	NJ
1F	ARD12674764-47-9	Cyclopentane, 1-methyl-1-(2-	22.991	6100	NJ
1F	ARD12774752-97-9	1,3-Hexadiene, 3-ethyl-2-met	23.091	7600	NJ
1F	ARD128483-77-2	Naphthalene, 1,2,3,4-tetrahy	23.835	3000	NJ
1F	ARD129611-64-3	Acridine, 9-methyl-	24.384	4400	NJ
1F	ARD130611-64-3	Acridine, 9-methyl-	24.498	3500	NJ

			Total:	232100	
			Adj. Total:	221100	
		Location ID: MSD			
1F	ASH1SS166MSD	32			
1F	ASD13154764-62-4	1-Butanone, 1-bicyclo[4.1.0]	24.638	3900	NJ
1F	ASD13287-86-5	Phenol, pentachloro-	28.022	27000	NJ
			Total:	30900	
			Adj. Total:	30900	
		Location ID: SS16-7			
1F	ATH1SS167	21			
1F	ATD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.451	22000	NJAB
1F	ATD1 2	Unknown alkane	12.829	38000	J
1F	ATD1 3	Unknown C4-alkylbenzene w/al	15.162	22000	JZ
1F	ATD1 4	Unknown alkane	15.268	22000	J
1F	ATD1 5	Unknown cyclohexane derivati	15.407	21000	J
1F	ATD1 6	Unknown cyclohexane derivati	15.818	25000	J
1F	ATD1 7	Unknown alkane	15.97	23000	J
1F	ATD1 8	Unknown alkane	16.063	26000	J
1F	ATD1 9	Unknown alkane w/alkylbenzen	16.229	28000	JZ
1F	ATD110	Unknown alkane w/unknowns	16.633	23000	NJZ
1F	ATD111	Unknown alkane	17.151	67000	J
1F	ATD112	Unknown cyclohexane derivati	17.96	40000	JZ
1F	ATD113	Unknown alkane	18.393	76000	J
1F	ATD114	Unknown alkane	19.323	30000	J
1F	ATD115	Unknown cyclohexane derivati	20.102	30000	JZ
1F	ATD116	Unknown alkane	20.362	23000	J
1F	ATD117	Unknown alkane	20.482	74000	J
1F	ATD118575-41-7	Naphthalene, 1,3-dimethyl-	22.016	29000	NJ
1F	ATD119629-62-9	Pentadecane	22.083	78000	NJ
1F	ATD120	Unknown naphthalene derivati	22.157	52000	J
1F	ATD121	Unknown naphthalene derivati	22.858	30000	J
			Total:	779000	
			Adj. Total:	757000	
		Location ID: SS16-8			
1F	AUH1SS168	21			
1F	AUD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.543	16000	NJAB
1F	AUD1 2	Unknown benzene derivative	24.002	710	J
1F	AUD1 3638-67-5	Tricosane	34.21	710	NJ
1F	AUD1 4646-31-1	Tetracosane	35.026	810	NJ
1F	AUD1 5629-99-2	Pentacosane	35.878	820	NJ
1F	AUD1 6630-03-5	Nonacosane	40.418	1200	NJ
1F	AUD1 7	Unknown	40.575	1300	J
1F	AUD1 8	Unknown	40.786	1300	J
1F	AUD1 9	Unknown	40.902	2200	J
1F	AUD110	Unknown	41.011	2400	J
1F	AUD111	Unknown	42.005	1200	J
1F	AUD112	Unknown	42.291	1800	J
1F	AUD113	Unknown	42.707	4000	J
1F	AUD114	Unknown	43.51	3000	J

1F	AUD115	Unknown	43.952	2600	J
1F	AUD116	Unknown	44.34	2200	J
1F	AUD117	Unknown	45.189	1200	J
1F	AUD118	Unknown polycyclic hydrocarb	46.228	6600	J
1F	AUD119	Unknown polycyclic hydrocarb	48.371	4700	J
1F	AUD120	Unknown polycyclic hydrocarb	51.262	2900	J
1F	AUD121	Unknown polycyclic hydrocarb	51.633	2200	J
			Total:	59850	
			Adj. Total:	43850	
		Location ID: SS17-13			
1F	AVH1SS1713	11			
1F	AVD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.65	5400	NJAB
1F	AVD1 2	Unknown	24.705	130	J
1F	AVD1 3629-78-7	Heptadecane	26.124	75	NJ
1F	AVD1 4112-95-8	Eicosane w/halogenated compo	30.61	90	NJZ
1F	AVD1 5	Unknown w/fluoranthene	32.786	100	JZ
1F	AVD1 6	Unknown aliphatic acid ester	35.075	150	J
1F	AVD1 7646-31-1	Tetracosane	35.831	76	NJ
1F	AVD1 8	Unknowns	36.621	86	JZ
1F	AVD1 9593-49-7	Heptacosane	37.767	83	NJ
1F	AVD110630-03-5	Nonacosane	40.309	240	NJ
1F	AVD111630-04-6	Hentriacontane	43.808	180	NJ
			Total:	6610	
			Adj. Total:	1210	
		Location ID: SS17-15			
1F	AWH1SS1715	7			
1F	AWD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.677	5400	NJAB
1F	AWD1 2	Unknown halogenated compound	30.598	79	J
1F	AWD1 3	Unknown	32.782	85	J
1F	AWD1 4	Unknown aliphatic acid ester	35.071	120	J
1F	AWD1 5630-03-5	Nonacosane	40.274	180	NJ
1F	AWD1 6	Unknown	41.085	670	J
1F	AWD1 7	Unknown	43.74	240	J
			Total:	6774	
			Adj. Total:	1374	
		Location ID: MS			
1F	AXH1SS1715MS	10			
1F	AXD1 1141-79-7	3-Penten-2-one, 4-methyl-	7.401	140	NJ
1F	AXD1 2123-42-2	2-Pentanone, 4-hydroxy-4-met	8.657	5200	NJ
1F	AXD1 399-55-8	Benzenamine, 2-methyl-5-nitr	25.223	85	NJ
1F	AXD1 487-86-5	Phenol, pentachloro-	27.997	1100	NJ
1F	AXD1 551050-42-1	Pyridine, 3,5-dichloro-4-met	30.608	95	NJ
1F	AXD1 620637-48-3	Butane, 1,2,4-trimethoxy-	32.785	84	NJ
1F	AXD1 7123-79-5	Hexanedioic acid, dioctyl es	35.067	130	NJ
1F	AXD1 8112-95-8	Eicosane	40.265	230	NJ
1F	AXD1 95858-17-3	3,4-Dichlorobenzenethiol	40.862	87	NJ
1F	AXD110112-40-3	Dodecane	43.745	220	NJ
			Total:	7371	
			Adj. Total:	2171	

		Location ID: MSD			
1F	AYH1SS1715MSD	9			
1F	AYD1 1141-79-7	3-Penten-2-one, 4-methyl-	7.401	140	NJ
1F	AYD1 2123-42-2	2-Pentanone, 4-hydroxy-4-met	8.663	5200	NJ
1F	AYD1 399-55-8	Benzenamine, 2-methyl-5-nitr	25.22	78	NJ
1F	AYD1 4133-90-4	Benzoic acid, 3-amino-2,5-di	30.596	79	NJ
1F	AYD1 520637-48-3	Butane, 1,2,4-trimethoxy-	32.778	86	NJ
1F	AYD1 6103-23-1	Hexanedioic acid, bis(2-ethy	35.065	93	NJ
1F	AYD1 7629-92-5	Nonadecane	40.256	200	NJ
1F	AYD1 8629-45-8	Disulfide, dibutyl	40.932	120	NJ
1F	AYD1 9112-40-3	Dodecane	43.734	310	NJ
			Total:	6306	
			Adj. Total:	1106	
		Location ID: SS17-9			
1F	AZH1SS179	21			
1F	AZD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	8.63	5200	NJAB
1F	AZD1 2629-59-4	Tetradecane	20.861	74	NJ
1F	AZD1 3629-62-9	Pentadecane	22.719	99	NJ
1F	AZD1 4544-76-3	Hexadecane	24.473	98	NJ
1F	AZD1 5	Unknown	24.703	75	J
1F	AZD1 6629-78-7	Heptadecane	26.13	130	NJ
1F	AZD1 7593-45-3	Octadecane	27.702	110	NJ
1F	AZD1 8629-92-5	Nonadecane	29.198	110	NJ
1F	AZD1 9112-95-8	Eicosane w/halogenated compo	30.624	120	NJZ
1F	AZD110629-94-7	Heneicosane	31.982	88	NJ
1F	AZD111629-97-0	Docosane	33.22	120	NJ
1F	AZD112	Unknown alkane	33.608	100	J
1F	AZD113638-67-5	Tricosane	34.174	120	NJ
1F	AZD114	Unknown alkane w/unknown	34.478	89	JZ
1F	AZD115646-31-1	Tetracosane	34.993	99	NJ
1F	AZD116	Unknown aliphatic acid ester	35.067	99	JZ
1F	AZD117	Unknown alkane	35.283	88	J
1F	AZD118629-99-2	Pentacosane	35.838	140	NJ
1F	AZD119593-49-7	Heptacosane	37.771	97	NJ
1F	AZD120630-03-5	Nonacosane	40.309	220	NJ
1F	AZD121630-04-6	Hentriacontane	43.785	130	NJ
			Total:	7406	
			Adj. Total:	2206	

	Sample ID: MW17-1			
1F	AGH1MW171 20			
1F	AGD1 1 Unknown phthalate	15.942	12	J
1F	AGD1 2 Unknown phthalate	16.16	11	J
1F	AGD1 3 Unknown phthalate	16.239	21	J
1F	AGD1 4 Unknown phthalate	16.288	27	J
1F	AGD1 5 Unknown phthalate	16.368	24	J
1F	AGD1 6 Unknown phthalate	16.417	33	J
1F	AGD1 7 Unknown phthalate	16.497	14	J
1F	AGD1 8 Unknown phthalate	16.596	18	J
1F	AGD1 9 Unknown phthalate	16.675	16	J
1F	AGD110 Unknown phthalate	17.88	13	J
1F	AGD111 Unknown phthalate	18.009	17	J
1F	AGD112 Unknown phthalate	18.039	23	J
1F	AGD113 Unknown phthalate	18.078	22	J
1F	AGD114 Unknown phthalate	18.207	14	J
1F	AGD115 Unknown phthalate	18.247	16	J
1F	AGD116 Unknown phthalate	18.396	25	J
1F	AGD117 Unknown phthalate	18.485	13	J
1F	AGD118 Unknown phthalate	18.644	13	J
1F	AGD119 Unknown phthalate	18.723	14	J
1F	AGD1201675-54-3 Oxirane, 2,2'-[(1-methylethy	19.08	14	NJ
		Total:	360	
	Sample ID: MW17-4			
1F	AHH1MW174 0			
		Total:	0	

		Sample ID: MW17-3		
1F	AIH1MW173	0		
			Total:	0

		Sample ID: SW16-1			
1F	ALH1SW161	1			
1F	ALD1 1 123-42-	2-PENTANONE, 4-HYDROXY-4-MET	9.13	49	BJXNA
			Total:	49	
			Adj. Total:	0	
		Sample ID: SW16-2			
1F	AMH1SW162	2			
1F	AMD1 1 123-42-	2-PENTANONE, 4-HYDROXY-4-MET	9.18	51	BJXNA
1F	AMD1 2	UNKNOWN PHTHALATE	44.32	2	JX
			Total:	53	
			Adj. Total:	2	

RI SVOCs

		Location ID: FIELD BLANK			
1F	AAH116021	9			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.952	53	NJAB
1F	AAD1 2	Unknown	6.272	3	J
1F	AAD1 3	Unknown halogenated compound	6.4	2	J
1F	AAD1 4	Unknown aliphatic compound	9.319	2	JB
1F	AAD1 5	Unknown aliphatic compound	14.856	2	J
1F	AAD1 6	Unknown aliphatic compound	20.782	3	J
1F	AAD1 7	Unknown aliphatic compound	21.619	2	J
1F	AAD1 8	Unknown aliphatic compound	22.269	2	J
1F	AAD1 9	Unknown aliphatic compound	23.712	4	J
			Total:	73	
			Adj. Total:	20	
		Location ID: FS-50			
1F	ABH116023	21			
1F	ABD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.259	150000	NJAB
1F	ABD1 2	Unknown	6.087	7500	J
1F	ABD1 3143-07-7	Dodecanoic acid	12.766	1800	NJ
1F	ABD1 4	Unknown hexadecenoic acid	15.661	2000	J
1F	ABD1 557-10-3	Hexadecanoic acid	15.821	10000	NJ
1F	ABD1 6112-80-1	Oleic Acid	17.006	8600	NJ
1F	ABD1 757-11-4	Octadecanoic acid	17.125	8400	NJ
1F	ABD1 8593-49-7	Heptacosane	20.07	6100	NJ
1F	ABD1 9630-03-5	Nonacosane	21.076	9600	NJ
1F	ABD110	Unknown aliphatic compound	21.126	3700	J
1F	ABD111	Unknown aliphatic compound	21.75	1800	J
1F	ABD112	Unknown alkane	22.001	8000	J
1F	ABD113	Unknown aliphatic compound	22.062	2600	J
1F	ABD11457-88-5	Cholesterol	22.415	3100	NJ
1F	ABD115	Unknown alkane	22.878	2300	J
1F	ABD11683-47-6	.gamma.-Sitosterol	23.391	2600	NJ
1F	ABD117	Unknown polycyclic hydrocarb	23.522	1800	J
1F	ABD118	Unknown polycyclic hydrocarb	23.683	2500	J
1F	ABD119	Unknown aliphatic compound	23.794	2100	J
1F	ABD120	Unknown polycyclic hydrocarb	23.965	3000	J
1F	ABD121	Unknown aliphatic compound	24.508	3200	J
			Total:	240700	
			Adj. Total:	90700	
		Location ID: BS-10			
1F	ACH116024	5			
1F	ACD1 1	Unknown	15.439	140000	J
1F	ACD1 2629-97-0	Docosane	17.262	81000	JN
1F	ACD1 3638-67-5	Tricosane w/unknown	17.874	250000	JNZ
1F	ACD1 4	Unknown	22.27	200000	J
1F	ACD1 5	Unknown	25.32	250000	J
			Total:	921000	
			Adj. Total:	921000	
		Location ID: FS-50			
1F	ADH116028	21			

1F	ADD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.369	150000	NJAB
1F	ADD1 2	Unknown aliphatic compound	6.149	7100	JB
1F	ADD1 357-10-3	Hexadecanoic acid	15.853	6100	NJ
1F	ADD1 4	Unknown octadecenoic acid	17.021	7700	J
1F	ADD1 557-11-4	Octadecanoic acid	17.152	10000	NJ
1F	ADD1 6629-97-0	Docosane	17.282	2600	NJ
1F	ADD1 7	Unknown	19.55	2300	J
1F	ADD1 8593-49-7	Heptacosane	20.093	4800	NJ
1F	ADD1 9	Unknown aliphatic compound	20.798	7100	J
1F	ADD110630-03-5	Nonacosane	21.09	12000	NJ
1F	ADD111	Unknown aliphatic compound	21.141	3800	J
1F	ADD112	Unknown C31-alkane	22.019	16000	J
1F	ADD113	Unknown alkane	22.434	2400	J
1F	ADD114	Unknown C33-alkane	22.899	3700	J
1F	ADD115	Unknown polycyclic hydrocarb	23.719	4600	J
1F	ADD116	Unknown aliphatic compound	23.83	2600	J
1F	ADD117	Unknown polycyclic hydrocarb	24.002	6000	J
1F	ADD118	Unknown	24.457	3100	J
1F	ADD119	Unknown	24.548	8100	J
1F	ADD120	Unknown aliphatic compound	25.195	2500	J
1F	ADD121	Unknown aliphatic compound	25.296	4400	J
			Total:	266900	
			Adj. Total:	116900	
		Location ID: FS-50			
1F	AEH116028RE	20			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.35	140000	NJAB
1F	AED1 2	Unknown aliphatic compound	6.139	6800	JB
1F	AED1 357-10-3	Hexadecanoic acid	15.864	8100	NJ
1F	AED1 4	Unknown octadecenoic acid	17.033	5800	J
1F	AED1 557-11-4	Octadecanoic acid	17.163	7500	NJ
1F	AED1 6	Unknown aliphatic compound	20.801	12000	J
1F	AED1 7630-03-5	Nonacosane	21.094	19000	NJ
1F	AED1 8	Unknown aliphatic compound	21.145	3900	J
1F	AED1 9	Unknown C31-alkane	22.023	24000	J
1F	AED110	Unknown alkane	22.448	3400	J
1F	AED111	Unknown alkane	22.904	5600	J
1F	AED112	Unknown aliphatic compound	23.43	3800	J
1F	AED113	Unknown polycyclic hydrocarb	23.734	5900	J
1F	AED114	Unknown polycyclic hydrocarb	23.845	5000	J
1F	AED115	Unknown polycyclic hydrocarb	24.017	9500	J
1F	AED116	Unknown benzo[b]naphthofuran	24.26	3900	J
1F	AED117	Unknown aliphatic compound	24.472	4500	J
1F	AED118	Unknown aliphatic ketone	24.564	12000	J
1F	AED119	Unknown aliphatic compound	25.21	4400	J
1F	AED120	Unknown aliphatic compound	25.311	7500	J
			Total:	292600	
			Adj. Total:	152600	
		Location ID: MSB			
1F	AFH1AAMBS	19			

1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.279	19000	NJB
1F	AFD1 2123-42-2	2-Pentanone, 4-hydroxy-4-met	5.358	200	NJB
1F	AFD1 375-91-2	tert-Butyl Hydroperoxide	5.644	140	NJ
1F	AFD1 453951-43-2	1,3-Dioxolane-2-methanol, 2,	6.107	980	NJ
1F	AFD1 5921-14-2	Hydrazine, 1,1-bis(1-methyle	9.354	110	NJ
1F	AFD1 63673-06-1	Cyclohexanamine, N,N'-1,2-et	12.008	67	NJ
1F	AFD1 72051-78-7	Butanoic acid, 2-propenyl es	13.066	92	NJ
1F	AFD1 8112-70-9	1-Tridecanol	13.767	84	NJ
1F	AFD1 936901-84-5	cis,cis-2,7-Nonadiene	14.865	200	NJ
1F	AFD11020054-25-5	1,8-Nonadiene, 2,8-dimethyl-	15.171	76	NJ
1F	AFD111301-02-0	9-Octadecenamide, (Z)-	18.356	910	NJ
1F	AFD112143-22-6	Ethanol, 2-[2-(2-butoxyethox	18.992	180	NJ
1F	AFD113143-22-6	Ethanol, 2-[2-(2-butoxyethox	20.406	180	NJ
1F	AFD114301-02-0	9-Octadecenamide, (Z)-	20.596	620	NJ
1F	AFD115143-22-6	Ethanol, 2-[2-(2-butoxyethox	21.697	160	NJ
1F	AFD11655133-94-3	Butanoic acid, 3-[(trimethyl	22.269	280	NJ
1F	AFD11754376-51-1	5-Fluoro-2-phenylpyrimidine	23.959	240	NJ
1F	AFD118109773-68-	418,18'-Bi-1,4,7,10,13,16-hex	24.411	370	NJ
1F	AFD1196975-98-0	Decane, 2-methyl-	24.814	770	NJ
			Adj. Total:	24659	
		Location ID: LAB BLANK			
1F	AGH1SBLK2V	2			
1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.711	60	NJA
1F	AGD1 2	Unknown aliphatic compound	10.868	3	J
			Total:	63	
		Location ID: LAB BLANK			
1F	AHH1SBLKJ5	16			
1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.327	62000	NJA
1F	AHD1 2354-21-2	Ethane, 1,2,2-trichloro-1,1-	6.016	150	NJ
1F	AHD1 3	Unknown aliphatic compound	6.115	3000	J
1F	AHD1 4	Unknown polyalkoxy alcohol	9.335	120	J
1F	AHD1 5	Unknown aliphatic compound	11.961	100	J
1F	AHD1 6	Unknown aliphatic compound	12.719	170	J
1F	AHD1 7	Unknown aliphatic compound	13.053	93	J
1F	AHD1 8	Unknown aliphatic compound	13.752	130	J
1F	AHD1 9	Unknown	17.116	80	J
1F	AHD110	Unknown amide	18.326	780	J
1F	AHD111	Unknown polyalkoxy alcohol	18.966	98	J
1F	AHD112	Unknown polyalkoxy alcohol	20.392	120	J
1F	AHD113	Unknown amide	20.57	590	J
1F	AHD114	Unknown polyalkoxy alcohol	21.674	120	J
1F	AHD115	Unknown polyalkoxy alcohol	22.888	130	J
1F	AHD116	Unknown	24.784	2200	J
			Total:	69881	
		Location ID: LAB BLANK			
1F	AIH1SBLKJ6	7			
1F	AID1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.057	4700	NJA
1F	AID1 2	Unknown aliphatic compound	18.973	3600	J
1F	AID1 3	Unknown aliphatic compound	20.388	4900	J

1F	AID1 4	Unknown amide	20.575	3200	J
1F	AID1 5	Unknown aliphatic compound	21.677	3700	J
1F	AID1 6	Unknown polyalkoxy alcohol	22.888	2300	J
1F	AID1 7	Unknown	24.781	28000	J
			Total:	50400	
		Location ID:			
1F	AJH1U3MBS	10			
1F	AJD1 175-09-2	Methylene Chloride	2.993	5100	NJ
1F	AJD1 2123-42-2	2-Pentanone, 4-hydroxy-4-met	5.029	9900	NJB
1F	AJD1 32004-69-5	3-Penten-1-yne, (E)-	7.085	5900	NJ
1F	AJD1 4112-73-2	Butane, 1,1'-[oxybis(2,1-eth	18.971	3300	NJ
1F	AJD1 551422-54-9	1-tert-Butoxy-2-ethoxyethane	20.387	4600	NJ
1F	AJD1 6629-54-9	Hexadecanamide	20.565	3400	NJ
1F	AJD1 7108-62-3	Acetaldehyde, tetramer	21.678	4800	NJ
1F	AJD1 8112-36-7	Ethane, 1,1'-oxybis[2-ethoxy	22.883	5000	NJ
1F	AJD1 955044-44-5	Acetic acid, methoxy-, tetra	24.374	3200	NJ
1F	AJD1104676-51-1	Diethyl methylsuccinate	24.769	25000	NJ
			Total:	70200	

		Location ID: FIELD BLANK			
1F	AAH116029	1			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.595	71	NJAB
			Total:	71	
			Adj.Total:	0	
		Location ID: SB16-4			
1F	ABH116030	25			
1F	ABD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.611	44000	NJAB
1F	ABD1 2	Unknown aliphatic compound	6.526	2000	JB
1F	ABD1 3629-62-9	Pentadecane	12.747	460	NJ
1F	ABD1 4143-07-7	Dodecanoic acid	13.357	2900	NJB
1F	ABD1 5544-76-3	Hexadecane	13.61	430	NJ
1F	ABD1 6629-78-7	Heptadecane	14.428	740	NJ
1F	ABD1 71921-70-6	Pentadecane, 2,6,10,14-tetra	14.472	740	NJ
1F	ABD1 8593-45-3	Octadecane	15.195	550	NJ
1F	ABD1 9629-92-5	Nonadecane	15.936	650	NJ
1F	ABD110112-95-8	Eicosane	16.633	490	NJ
1F	ABD111629-97-0	Docosane	17.948	700	NJ
1F	ABD112238-84-6	11H-Benzo[a]fluorene	18.428	1400	NJ
1F	ABD113	Unknown C17H12 PAH	18.602	1000	J
1F	ABD114629-99-2	Pentacosane	19.151	730	NJ
1F	ABD11525732-74-5	3,4-Dihydrocyclopenta(cd)pyr	20.118	1100	NJ
1F	ABD116	Unknown methylchrysene	20.614	1000	J
1F	ABD117	Unknown PAH	21.451	940	J
1F	ABD118	Unknown benzofluoranthene	21.834	1200	J
1F	ABD119192-97-2	Benzo[e]pyrene	22.087	2900	NJ
1F	ABD120198-55-0	Perylene	22.279	1600	NJ
1F	ABD121	Unknown PAH	22.897	650	J
1F	ABD122	Unknown PAH	24.056	1300	J
1F	ABD123	Unknown PAH	24.134	990	J
1F	ABD124	Unknown PAH	24.579	940	J
1F	ABD125	Unknown PAH	25.537	1400	J
			Total:	70810	
			Adj.Total:	26810	
		Location ID: SB16-4			
1F	ACH116031	21			
1F	ACD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.578	54000	NJAB
1F	ACD1 2143-07-7	Dodecanoic acid	13.402	11000	NJB
1F	ACD1 31921-70-6	Pentadecane, 2,6,10,14-tetra	14.5	730	NJ
1F	ACD1 425732-74-5	3,4-Dihydrocyclopenta(cd)pyr	20.137	990	NJ
1F	ACD1 5	Unknown PAH	20.808	4800	J
1F	ACD1 6	Unknown dibenzpyrene	21.2	5400	J
1F	ACD1 7192-97-2	Benzo[e]pyrene	22.097	6800	NJ
1F	ACD1 8198-55-0	Perylene	22.289	3800	NJ
1F	ACD1 9	Unknown	22.794	6700	J
1F	ACD110	Unknown	23.587	1300	J
1F	ACD111	Unknown PAH	23.701	6600	J
1F	ACD112	Unknown PAH	23.744	10000	J
1F	ACD113	Unknown PAH	23.814	15000	J

1F	ACD114	Unknown PAH	24.084	12000	J
1F	ACD115	Unknown PAH	24.162	23000	J
1F	ACD116	Unknown	24.267	6700	J
1F	ACD117	Unknown PAH	24.607	22000	J
1F	ACD118	Unknown	24.99	9100	J
1F	ACD119	Unknown PAH	25.182	12000	J
1F	ACD120	Unknown PAH W/Unknown	25.382	9400	JZ
1F	ACD121	Unknown PAH	25.582	24000	J
			Total:	245320	
			Adj.Total:	191320	
		Location ID: SB16-3			
1F	ADH116032	21			
1F	ADD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.568	49000	NJAB
1F	ADD1 2	Unknown aliphatic compound	6.544	2000	JB
1F	ADD1 32958-76-1	Naphthalene, decahydro-2-met	9.01	1200	NJ
1F	ADD1 4	Unknown methyldecahydronapht	9.202	1700	J
1F	ADD1 5	Unknown	9.777	1600	J
1F	ADD1 617301-23-4	Undecane, 2,6-dimethyl-	10.021	2100	NJ
1F	ADD1 762016-34-6	Octane, 2,3,7-trimethyl-	10.63	2800	NJ
1F	ADD1 8629-50-5	Tridecane	10.909	1400	NJ
1F	ADD1 913287-23-5	Heptadecane, 8-methyl-	11.092	1500	NJ
1F	ADD110	Unknown alkylcyclohexane	11.406	1800	J
1F	ADD111	Unknown	11.484	1700	J
1F	ADD112	Unknown aliphatic compound	11.624	1800	J
1F	ADD11331295-56-4	Dodecane, 2,6,11-trimethyl-	11.659	1600	NJ
1F	ADD114	Unknown naphthalene derivati	11.789	2500	J
1F	ADD115629-59-4	Tetradecane	11.876	2200	NJ
1F	ADD116	Unknown naphthalene derivati	12.312	4600	J
1F	ADD117	Unknown naphthalene derivati	12.408	1800	J
1F	ADD118	Unknown	12.582	1300	J
1F	ADD119	Unknown naphthalene derivati	12.652	3400	J
1F	ADD120629-62-9	Pentadecane	12.782	890	NJ
1F	ADD121143-07-7	Dodecanoic acid	13.357	1700	NJB
			Total:	88590	
			Adj.Total:	39590	
		Location ID: SB16-3			
1F	AEH116033	21			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.558	60000	NJAB
1F	AED1 22958-76-1	Naphthalene, decahydro-2-met	9.209	2800	NJ
1F	AED1 3	Unknown	9.784	2600	J
1F	AED1 417301-23-4	Undecane, 2,6-dimethyl-	10.028	3200	NJ
1F	AED1 5	Unknown aliphatic compound	10.263	2800	J
1F	AED1 662016-34-6	Octane, 2,3,7-trimethyl-	10.638	4000	NJ
1F	AED1 7629-50-5	Tridecane	10.908	2900	NJ
1F	AED1 8	Unknown cycloalkane	10.986	3200	J
1F	AED1 9	Unknown alkane	11.091	2600	J
1F	AED110	Unknown alkylcyclohexane	11.404	3400	J
1F	AED111	Unknown	11.439	3100	J
1F	AED112	Unknown aliphatic compound	11.491	4200	J

1F	AED113	Unknown	11.631	3600	J
1F	AED114	Unknown alkane	11.657	4600	J
1F	AED115629-59-4	Tetradecane	11.875	5100	NJ
1F	AED1160-00-0	Decahydro-4,4,8,9,10-pentame	12.31	9300	NJ
1F	AED117	Unknown indene derivative	12.406	3600	J
1F	AED118	Unknown naphthalene derivati	12.58	2400	J
1F	AED119	Unknown naphthalene derivati	12.65	5900	J
1F	AED120112-95-8	Eicosane	12.79	2700	NJ
1F	AED121143-07-7	Dodecanoic acid	13.365	3300	NJB
			Total:	135300	
			Adj.Total:	75300	
		Location ID: SB16-5			
1F	AFH116034	21			
1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.524	72000	NJAB
1F	AFD1 2	Unknown aliphatic compound	6.517	2300	JB
1F	AFD1 3143-07-7	Dodecanoic acid	13.33	2600	NJB
1F	AFD1 4203-64-5	4H-Cyclopenta[def]phenanthre	16.432	2000	NJ
1F	AFD1 5238-84-6	11H-Benzo[a]fluorene	18.436	3300	NJ
1F	AFD1 6243-17-4	11H-Benzo[b]fluorene	18.54	2700	NJ
1F	AFD1 7	Unknown C17H12 PAH	18.61	1200	J
1F	AFD1 8	Unknown PAH	19.176	1500	J
1F	AFD1 9239-35-0	Benzo[b]naphtho[2,1-d]thioph	19.499	1200	NJ
1F	AFD11025732-74-5	3,4-Dihydrocyclopenta(cd)pyr	20.117	1700	NJ
1F	AFD111	Unknown PAH	20.614	1800	J
1F	AFD112	Unknown PAH	20.675	1200	J
1F	AFD113	Unknown PAH	20.762	1700	J
1F	AFD114	Unknown PAH	20.788	1500	J
1F	AFD1151090-13-7	5,12-Naphthacenedione w/Unkn	21.172	2100	NJZ
1F	AFD116	Unknown benzofluoranthene	21.825	1900	J
1F	AFD117198-55-0	Perylene	22.078	5000	NJ
1F	AFD118198-55-0	Perylene	22.269	3500	NJ
1F	AFD119	Unknown polycyclic hydrocarb	23.445	1600	J
1F	AFD120	Unknown PAH	24.116	1400	J
1F	AFD121	Unknown PAH	24.561	1600	J
			Total:	113800	
			Adj.Total:	41800	
		Location ID: SB16-5			
1F	AGH116035	15			
1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.806	39000	NJAB
1F	AGD1 2	Unknown aliphatic compound	6.172	280	JB
1F	AGD1 3	Unknown aliphatic compound	6.643	1800	JB
1F	AGD1 4110-13-4	2,5-Hexanedione	6.774	79	NJ
1F	AGD1 55798-81-2	2-Butanol, 3-bromo-, acetate	7.514	270	NJ
1F	AGD1 6	Unknown aliphatic compound	7.758	79	J
1F	AGD1 7120-40-1	Dodecanamide, N,N-bis(2-hydr	13.386	1200	NJ
1F	AGD1 8	Unknown aliphatic compound	14.432	93	J
1F	AGD1 9	Unknown PAH	20.94	130	J
1F	AGD110	Unknown PAH	20.984	100	J
1F	AGD111	Unknown PAH	21.123	230	J

1F	AGD112	Unknown	21.158	180	J
1F	AGD113192-97-2	Benzo[e]pyrene	22.134	190	NJ
1F	AGD114	Unknown PAH	24.199	200	J
1F	AGD115	Unknown PAH	24.652	290	J
			Total:	44121	
			Adj.Total:	5121	
		Location ID: SB16-2			
1F	AHH116036	21			
1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.803	41000	NJAB
1F	AHD1 2	Unknown aliphatic compound	6.169	350	JB
1F	AHD1 3	Unknown aliphatic compound	6.639	1900	JB
1F	AHD1 4	Unknown aliphatic compound	7.519	270	JB
1F	AHD1 590-12-0	Naphthalene, 1-methyl-	11.24	160	NJ
1F	AHD1 6629-59-4	Tetradecane	11.876	150	NJ
1F	AHD1 7575-41-7	Naphthalene, 1,3-dimethyl-	12.276	160	NJ
1F	AHD1 8575-43-9	Naphthalene, 1,6-dimethyl-	12.311	140	NJ
1F	AHD1 974645-98-0	Dodecane, 2,7,10-trimethyl-	12.451	190	NJ
1F	AHD110143-07-7	Dodecanoic acid	13.426	2000	NJB
1F	AHD111544-76-3	Hexadecane	13.644	120	NJ
1F	AHD112	Unknown trimethylnaphthalene	13.81	140	J
1F	AHD1131921-70-6	Pentadecane, 2,6,10,14-tetra	14.507	360	NJ
1F	AHD114	Unknown tetramethylnaphthale	15.012	190	J
1F	AHD115593-45-3	Octadecane	15.239	180	NJ
1F	AHD116629-92-5	Nonadecane	15.97	180	NJ
1F	AHD11757-10-3	Hexadecanoic acid	16.441	170	NJ
1F	AHD118112-95-8	Eicosane	16.676	140	NJ
1F	AHD119629-94-7	Heneicosane	17.347	190	NJ
1F	AHD12010544-50-0	Sulfur, mol. (S8)	17.478	460	NJ
1F	AHD121	Unknown aliphatic compound	17.652	190	J
			Total:	48640	
			Adj.Total:	7640	
		Location ID: SB16-1			
1F	AIH116037	10			
1F	AID1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.811	43000	NJAB
1F	AID1 2	Unknown aliphatic compound	6.185	330	JB
1F	AID1 3	Unknown aliphatic compound	6.647	1800	JB
1F	AID1 4110-13-4	2,5-Hexanedione	6.778	91	NJ
1F	AID1 5143-07-7	Dodecanoic acid	13.382	940	NJB
1F	AID1 657-10-3	Hexadecanoic acid	16.44	130	NJ
1F	AID1 7	Unknown	20.823	190	J
1F	AID1 8	Unknown aliphatic compound	21.162	230	JB
1F	AID1 9630-03-5	Nonacosane	21.824	190	NJ
1F	AID110	Unknown C31-alkane	22.765	180	J
			Total:	47081	
			Adj.Total:	4081	
		Location ID: SB16-1			
1F	AJH116038	9			
1F	AJD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.802	35000	NJAB
1F	AJD1 2	Unknown aliphatic compound	6.186	300	JB

1F	AJD1 3	Unknown aliphatic compound	6.639	1400	JB
1F	AJD1 4	Unknown aliphatic compound	6.778	110	J
1F	AJD1 5143-07-7	Dodecanoic acid	13.382	220	NJB
1F	AJD1 6	Unknown aliphatic compound	19.734	96	JB
1F	AJD1 7	Unknown polymethylsiloxane	20.814	160	J
1F	AJD1 8	Unknown aliphatic compound	22.461	150	JB
1F	AJD1 9	Unknown aliphatic compound	23.863	110	J
			Total:	37546	
			Adj.Total:	2546	
		Location ID: FIELD BLANK			
1F	AKH116039	1			
1F	AKD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.419	44	NJAB
			Total:	44	
			Adj.Total:	0	
		Location ID: SS16-17			
1F	ALH116040	21			
1F	ALD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.698	23000	NJAB
1F	ALD1 2	Unknown aliphatic compound	6.551	1800	JB
1F	ALD1 380-56-8	.alpha.-Pinene	6.743	220	NJ
1F	ALD1 42091-29-4	9-Hexadecenoic acid	16.309	270	NJ
1F	ALD1 557-10-3	Hexadecanoic acid	16.37	500	NJ
1F	ALD1 6112-62-9	9-Octadecenoic acid (Z)-, me	17.582	290	NJ
1F	ALD1 7593-49-7	Heptacosane	20.753	240	NJ
1F	ALD1 8506-51-4	1-Tetracosanol	20.875	460	NJ
1F	ALD1 9	Unknown aliphatic aledhyde	21.485	310	J
1F	ALD110630-03-5	Nonacosane	21.746	660	NJ
1F	ALD111506-52-5	1-Hexacosanol	21.912	550	NJ
1F	ALD112	Unknown C31-alkane	22.687	780	J
1F	ALD113	Unknown C33-alkane	23.733	270	J
1F	ALD114	Unknown aliphatic ketone	23.933	290	J
1F	ALD115	Unknown	24.482	620	J
1F	ALD116	Unknown	24.604	280	J
1F	ALD117	Unknown polycyclic hydrocarb	24.874	220	J
1F	ALD118	Unknown	25.292	260	J
1F	ALD1191058-61-3	Stigmast-4-en-3-one	25.405	350	NJ
1F	ALD120	Unknown	25.449	220	J
1F	ALD1210-00-0	Phenanthro[9,10-b]furan	25.815	260	NJ
			Total:	31850	
			Adj.Total:	8850	
		Location ID: SS16-18			
1F	AMH116041	21			
1F	AMD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.751	23000	NJAB
1F	AMD1 2	Unknown aliphatic compound	6.108	280	JB
1F	AMD1 3	Unknown aliphatic compound	6.578	2400	JB
1F	AMD1 4	Unknown hexadecenoic acid	16.31	280	J
1F	AMD1 557-10-3	Hexadecanoic acid	16.371	580	NJ
1F	AMD1 6111-03-5	9-Octadecenoic acid (Z)-, 2,	17.582	460	NJ
1F	AMD1 7661-19-8	1-Docosanol	19.787	220	NJ
1F	AMD1 8630-01-3	Hexacosane	20.754	240	NJ

1F	AMD1 9506-51-4	1-Tetracosanol	20.867	600	NJ
1F	AMD110630-03-5	Nonacosane	21.747	570	NJ
1F	AMD111506-52-5	1-Hexacosanol	21.878	630	NJ
1F	AMD112	Unknown aliphatic compound	22.383	250	JB
1F	AMD113	Unknown aliphatic compound	22.453	280	JB
1F	AMD114	Unknown C31-alkane	22.688	880	J
1F	AMD115	Unknown alcohol	23.063	290	J
1F	AMD116	Unknown C33-alkane	23.733	440	J
1F	AMD117	Unknown aliphatic compound	24.186	270	J
1F	AMD118	Unknown	24.491	840	J
1F	AMD119630-07-9	Pentatriacontane	25.058	220	NJ
1F	AMD1201058-61-3	Stigmast-4-en-3-one	25.406	550	NJ
1F	AMD121	Unknown sterane derivative	25.702	520	J
			Total:	33800	
			Adj.Total:	10800	
		Location ID: SS16-19			
1F	ANH116042	21			
1F	AND1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.471	37000	NJAB
1F	AND1 2	Unknown aliphatic compound	6.456	1700	JB
1F	AND1 3	Unknown aliphatic compound	7.397	180	J
1F	AND1 4629-59-4	Tetradecane	11.823	180	NJ
1F	AND1 5112-95-8	Eicosane	12.389	88	NJ
1F	AND1 6629-62-9	Pentadecane	12.729	260	NJ
1F	AND1 7544-76-3	Hexadecane	13.591	280	NJ
1F	AND1 8	Unknown alkane	13.992	180	J
1F	AND1 9629-78-7	Heptadecane	14.402	430	NJ
1F	AND1101921-70-6	Pentadecane, 2,6,10,14-tetra	14.445	240	NJ
1F	AND111593-45-3	Octadecane	15.177	300	NJ
1F	AND112629-92-5	Nonadecane	15.909	280	NJ
1F	AND113112-95-8	Eicosane	16.615	200	NJ
1F	AND114629-94-7	Heneicosane	17.277	130	NJ
1F	AND115	Unknown	19.56	330	J
1F	AND116593-49-7	Heptacosane	20.753	180	NJ
1F	AND117	Unknown aliphatic compound	21.084	260	JB
1F	AND118630-03-5	Nonacosane	21.755	190	NJ
1F	AND119	Unknown aliphatic compound	22.382	250	JB
1F	AND120	Unknown C31-alkane	22.687	230	J
1F	AND121	Unknown aliphatic compound	25.65	210	JB
			Total:	43098	
			Adj.Total:	6098	
		Location ID: SS16-19			
1F	AOH116042RE	20			
1F	AOD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.368	34000	NJAB
1F	AOD1 2	Unknown aliphatic compound	6.396	1700	JB
1F	AOD1 3	Unknown aliphatic compound	7.354	200	J
1F	AOD1 4629-50-5	Tridecane	10.813	82	NJ
1F	AOD1 5629-59-4	Tetradecane	11.78	160	NJ
1F	AOD1 6629-62-9	Pentadecane	12.686	250	NJ
1F	AOD1 7544-76-3	Hexadecane	13.54	280	NJ

1F	AOD1 8	Unknown alkane	13.941	120	J
1F	AOD1 9629-78-7	Heptadecane	14.35	360	NJ
1F	AOD1101921-70-6	Pentadecane, 2,6,10,14-tetra	14.402	220	NJ
1F	AOD111593-45-3	Octadecane	15.126	280	NJ
1F	AOD112638-36-8	Hexadecane, 2,6,10,14-tetram	15.204	120	NJ
1F	AOD113629-92-5	Nonadecane	15.857	250	NJ
1F	AOD114112-95-8	Eicosane	16.563	180	NJ
1F	AOD115629-94-7	Heneicosane	17.225	130	NJ
1F	AOD116	Unknown aliphatic compound	21.033	330	JB
1F	AOD117	Unknown aliphatic compound	22.331	490	JB
1F	AOD118	Unknown C31-alkane	22.636	140	J
1F	AOD119	Unknown	23.298	280	J
1F	AOD120	Unknown	23.699	440	J
			Total:	40012	
			Adj.Total:	6012	
		Location ID: SS16-20			
1F	APH116043	20			
1F	APD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.437	34000	NJAB
1F	APD1 2	Unknown aliphatic compound	5.907	200	JB
1F	APD1 3	Unknown aliphatic compound	6.413	1800	JB
1F	APD1 4	Unknown aliphatic ketone	6.622	110	J
1F	APD1 5	Unknown aliphatic compound	7.362	190	J
1F	APD1 61921-70-6	Pentadecane, 2,6,10,14-tetra	14.35	86	NJ
1F	APD1 7629-92-5	Nonadecane	15.857	82	NJ
1F	APD1 8	Unknown aliphatic compound	16.258	140	J
1F	APD1 957-10-3	Hexadecanoic acid	16.31	81	NJ
1F	APD110593-49-7	Heptacosane	20.71	170	NJ
1F	APD111	Unknown aliphatic compound	21.032	200	JB
1F	APD112	Unknown aliphatic compound	21.215	170	J
1F	APD113630-03-5	Nonacosane	21.703	270	NJ
1F	APD114	Unknown aliphatic compound	22.331	190	JB
1F	APD115	Unknown C31-alkane	22.635	250	J
1F	APD116	Unknown	23.001	240	J
1F	APD117	Unknown	23.698	280	J
1F	APD118	Unknown aliphatic compound	24.117	320	J
1F	APD119	Unknown	24.378	280	J
1F	APD120	Unknown	25.598	220	J
			Total:	39279	
			Adj.Total:	5279	
		Location ID: SS16-28			
1F	AQH116044	21			
1F	AQD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.596	44000	NJAB
1F	AQD1 2	Unknown aliphatic compound	6.006	200	JB
1F	AQD1 3	Unknown aliphatic compound	6.494	2000	JB
1F	AQD1 487-44-5	Caryophyllene	12.192	130	NJ
1F	AQD1 5	Unknown aliphatic compound	12.741	520	J
1F	AQD1 6	Unknown polymethylsiloxane	14.117	140	J
1F	AQD1 7	Unknown aliphatic compound	14.344	120	J
1F	AQD1 82091-29-4	9-Hexadecenoic acid	16.278	180	NJ

1F	AQD1 957-10-3	Hexadecanoic acid	16.339	190	NJ
1F	AQD110	Unknown aliphatic compound	17.55	220	J
1F	AQD111112-95-8	Eicosane	20.73	170	NJ
1F	AQD112	Unknown aliphatic compound	21.061	190	JB
1F	AQD113630-03-5	Nonacosane	21.723	400	NJ
1F	AQD114	Unknown aliphatic compound	22.359	160	JB
1F	AQD115	Unknown C31-alkane	22.664	340	J
1F	AQD116	Unknown	24.398	720	J
1F	AQD117	Unknown	24.555	170	J
1F	AQD118	Unknown	24.668	590	J
1F	AQD119	Unknown polyterpene derivati	24.895	220	J
1F	AQD120	Unknown polyterpene derivati	25.365	170	J
1F	AQD121	Unknown	25.705	180	J
			Total:	51010	
			Adj.Total:	7010	
		Location ID: SS16-29			
1F	ARH116045	20			
1F	ARD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.654	43000	NJAB
1F	ARD1 2	Unknown aliphatic compound	6.037	210	JB
1F	ARD1 3	Unknown aliphatic compound	6.516	2000	JB
1F	ARD1 4	Unknown aliphatic compound	7.649	100	J
1F	ARD1 5	Unknown aliphatic compound	7.754	81	J
1F	ARD1 60-00-0	Isocaryophyllene	12.188	100	NJ
1F	ARD1 774381-40-1	Propanoic acid, 2-methyl-, 1	13.626	81	NJ
1F	ARD1 8	Unknown polymethylsiloxane	14.114	91	J
1F	ARD1 9	Unknown alkane	16.24	88	J
1F	ARD110	Unknown aliphatic compound	16.274	200	J
1F	ARD11157-10-3	Hexadecanoic acid	16.335	160	NJ
1F	ARD1122091-29-4	9-Hexadecenoic acid	17.573	150	NJ
1F	ARD113	Unknown aliphatic compound	19.629	110	JB
1F	ARD114612-36-2	Benzenamine, 2-nitro-N-(4-ni	20.178	120	NJ
1F	ARD115	Unknown aliphatic compound	20.918	370	J
1F	ARD116	Unknown aliphatic compound	21.058	200	JB
1F	ARD117	Unknown aliphatic compound	22.356	170	JB
1F	ARD118	Unknown alkane	22.661	130	J
1F	ARD119	Unknown aliphatic compound	23.732	200	J
1F	ARD120	Unknown aliphatic compound	25.606	140	JB
			Total:	47701	
			Adj.Total:	4701	
		Location ID: SS16-26			
1F	ASH116046	21			
1F	ASD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.663	840	NJAB
1F	ASD1 2	Unknown aliphatic compound	6.413	2300	JB
1F	ASD1 3	Unknown aliphatic compound	7.345	500	J
1F	ASD1 4143-07-7	Dodecanoic acid	13.278	950	NJ
1F	ASD1 5	Unknown	16.04	1900	J
1F	ASD1 657-10-3	Hexadecanoic acid	16.336	440	NJ
1F	ASD1 7629-97-0	Docosane	17.887	7600	NJ
1F	ASD1 8238-84-6	11H-Benzo[a]fluorene	18.349	510	NJ

1F	ASD1 9	Unknown nitrophenylbenzenami	18.497	700	J
1F	ASD110	Unknown aliphatic compound	19.508	2900	J
1F	ASD111593-49-7	Heptacosane	20.719	650	NJ
1F	ASD112	Unknown	22.479	500	J
1F	ASD113	Unknown	22.557	490	J
1F	ASD114	Unknown	22.775	570	J
1F	ASD115	Unknown polyterpene derivati	22.914	910	J
1F	ASD116544-85-4	Dotriacontane	23.158	570	NJ
1F	ASD117	Unknown polycyclic hydrocarb	23.376	1400	J
1F	ASD118	Unknown polycyclic hydrocarb	23.96	480	J
1F	ASD119	Unknown polyterpene derivati	24.03	730	J
1F	ASD120	Unknown	24.57	1800	J
1F	ASD121	Unknown polychlorohydrocarbo	25.119	510	J
			Total:	27250	
			Adj.Total:	26410	
		Location ID: SS16-27			
1F	ATH116047	3			
1F	ATD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.367	32000	NJAB
1F	ATD1 2836-30-6	Benzenamine, 4-nitro-N-pheny	18.445	2900	NJ
1F	ATD1 3	Unknown	20.144	3900	J
			Total:	38800	
			Adj.Total:	6800	
		Location ID: SS16-30			
1F	AUH116048	21			
1F	AUD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.421	43000	NJAB
1F	AUD1 2	Unknown aliphatic compound	6.423	2000	JB
1F	AUD1 3	Unknown aliphatic compound	7.347	540	J
1F	AUD1 4	Unknown aliphatic compound	14.326	730	J
1F	AUD1 5	Unknown	18.455	5900	J
1F	AUD1 6	Unknown	20.825	2100	J
1F	AUD1 7	Unknown	21.13	2000	J
1F	AUD1 8	Unknown cycloalkane	21.33	2300	J
1F	AUD1 9	Unknown aliphatic compound	21.461	2600	J
1F	AUD110	Unknown polycyclic hydrocarb	21.548	3300	J
1F	AUD111	Unknown furostenol	21.635	5100	J
1F	AUD112	Unknown	21.731	6300	J
1F	AUD113	Unknown	22.176	11000	J
1F	AUD114	Unknown	22.315	6100	J
1F	AUD115	Unknown	22.411	3600	J
1F	AUD116	Unknown	22.498	8700	J
1F	AUD117	Unknown polycyclic hydrocarb	22.611	10000	J
1F	AUD118	Unknown	22.873	8500	J
1F	AUD119	Unknown	23.09	4900	J
1F	AUD120	Unknown	23.43	7800	J
1F	AUD121	Unknown	25.452	790	J
			Total:	137260	
			Adj.Total:	94260	
		Location ID: SS16-22			
1F	AVH116049	21			

1F	AVD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.523	37000	NJAB
1F	AVD1 2	Unknown aliphatic compound	6.456	2000	JB
1F	AVD1 3	Unknown aliphatic compound	7.37	500	J
1F	AVD1 4629-78-7	Heptadecane	14.367	360	NJ
1F	AVD1 52091-29-4	9-Hexadecenoic acid	16.292	610	NJ
1F	AVD1 657-10-3	Hexadecanoic acid	16.353	690	NJ
1F	AVD1 7	Unknown aliphatic compound	17.555	560	J
1F	AVD1 8593-49-7	Heptacosane	20.727	460	NJ
1F	AVD1 9630-02-4	Octacosane	21.232	410	NJ
1F	AVD110630-03-5	Nonacosane	21.729	1200	NJ
1F	AVD111	Unknown C31-alkane	22.67	1700	J
1F	AVD112	Unknown polycyclic hydrocarb	22.914	990	J
1F	AVD113544-85-4	Dotriacontane	23.158	610	NJ
1F	AVD114	Unknown C33-alkane	23.706	720	J
1F	AVD115	Unknown	24.421	1200	J
1F	AVD116	Unknown polyterpene derivati	24.569	500	J
1F	AVD117	Unknown	24.691	740	J
1F	AVD118	Unknown	25.039	570	J
1F	AVD119	Unknown polyterpene derivati	25.127	430	J
1F	AVD120	Unknown polyterpene derivati	25.222	720	J
1F	AVD1211058-61-3	Stigmast-4-en-3-one	25.405	640	NJ
			Total:	52610	
			Adj.Total:	15610	
		Location ID: SS16-25			
1F	AWH116050	14			
1F	AWD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.69	220	NJAB
1F	AWD1 2	Unknown aliphatic compound	6.056	84	JB
1F	AWD1 3	Unknown aliphatic compound	6.536	860	JB
1F	AWD1 4	Unknown aliphatic compound	7.45	84	JB
1F	AWD1 587-44-5	Caryophyllene	12.234	170	NJ
1F	AWD1 6	Unknown aliphatic compound	14.168	72	J
1F	AWD1 7629-78-7	Heptadecane	14.42	79	NJ
1F	AWD1 8	Unknown aliphatic ester	16.328	93	J
1F	AWD1 957-10-3	Hexadecanoic acid	16.381	87	NJ
1F	AWD110	Unknown	21.112	130	J
1F	AWD111	Unknown	21.295	81	J
1F	AWD112630-03-5	Nonacosane	21.774	90	NJ
1F	AWD113	Unknown C31-alkane	22.715	100	J
1F	AWD114	Unknown	24.483	150	J
			Total:	2300	
			Adj.Total:	2080	
		Location ID: LAB BLANK			
1F	AXH1SBLK3V	1			
1F	AXD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.456	29	NJA
			Total:	6709	
		Location ID: LAB BLANK			
1F	AYH1SBLKG2	6			
1F	AYD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.602	110	NJA
1F	AYD1 2	Unknown aliphatic compound	6.595	2	J

1F	AYD1 3	Unknown aliphatic compound	6.874	4	J
1F	AYD1 4	Unknown POLYCHLORINATED C	6.996	3	J
1F	AYD1 53622-84-2	Benzenesulfonamide, N-butyl-	15.325	4	NJ
1F	AYD1 6	Unknown aliphatic compound	18.13	2	J
			Total:	125	
		Location ID: LAB BLANK			
1F	AZH1SBLKK8	4			
1F	AZD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.684	250	NJA
1F	AZD1 2	Unknown aliphatic compound	6.05	71	J
1F	AZD1 3	Unknown aliphatic compound	6.529	730	J
1F	AZD1 4	Unknown aliphatic compound	7.444	79	J
			Total:	8118	
		Location ID: LAB BLANK			
1F	BAH1SBLKQ2	9			
1F	BAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.769	29000	NJA
1F	BAD1 2	Unknown aliphatic compound	6.161	180	J
1F	BAD1 3	Unknown aliphatic compound	6.623	1400	J
1F	BAD1 4	Unknown aliphatic compound	7.511	78	J
1F	BAD1 565-85-0	Benzoic Acid	9.681	420	NJ
1F	BAD1 6143-07-7	Dodecanoic acid	13.427	3200	NJ
1F	BAD1 7	Unknown aliphatic compound	19.709	74	J
1F	BAD1 8	Unknown aliphatic compound	21.147	120	J
1F	BAD1 9	Unknown aliphatic compound	22.445	110	J
			Total:	43955	
		Location ID: LAB BLANK			
1F	BBH1SBLKQ3	13			
1F	BBD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.71	36000	NJA
1F	BBD1 2	Unknown aliphatic compound	6.084	200	J
1F	BBD1 3	Unknown aliphatic compound	6.555	1700	J
1F	BBD1 4123-75-1	Pyrrolidine	7.661	90	NJ
1F	BBD1 5112-73-2	Butane, 1,1'-[oxybis(2,1-eth	18.064	75	NJ
1F	BBD1 6	Unknown polymethylsiloxane	18.386	76	J
1F	BBD1 7	Unknown polymethylsiloxane	19.223	82	J
1F	BBD1 8	Unknown aliphatic compound	19.65	130	J
1F	BBD1 9	Unknown aliphatic compound	21.079	220	J
1F	BBD110	Unknown	21.471	120	J
1F	BBD111	Unknown polymethylsiloxane	22.072	110	J
1F	BBD112	Unknown aliphatic compound	22.377	180	J
1F	BBD113	Unknown aliphatic compound	25.644	110	J
			Total:	86552	

		Location ID: SS16-35			
1F	AAH116066	21			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.917	52000	NJAB
1F	AAD1 2	Unknown aliphatic compound	4.957	830	J
1F	AAD1 3	Unknown aliphatic compound	5.835	2100	JB
1F	AAD1 4629-78-7	Heptadecane	14.21	490	NJ
1F	AAD1 5629-97-0	Docosane	17.999	5300	NJ
1F	AAD1 6	Unknown	19.725	2000	J
1F	AAD1 7	Unknown	20.658	840	J
1F	AAD1 8630-02-4	Octacosane	21.552	720	NJ
1F	AAD1 9	Unknown	21.991	810	J
1F	AAD110	Unknown sterane derivative	22.215	920	J
1F	AAD111192-97-2	Benzo[e]pyrene	22.531	820	NJ
1F	AAD112	Unknown	23.052	1000	J
1F	AAD113	Unknown alkane	23.114	670	J
1F	AAD114	Unknown	23.308	860	J
1F	AAD115	Unknown polycyclic hydrocarb	23.482	2500	J
1F	AAD116	Unknown polycyclic hydrocarb	24.014	1500	J
1F	AAD117	Unknown polycyclic hydrocarb	24.7	1300	J
1F	AAD118	Unknown polycyclic hydrocarb	25.273	940	J
1F	AAD119	Unknown polycyclic hydrocarb	26.071	1400	J
1F	AAD120	Unknown	26.726	910	J
1F	AAD121	Unknown	27.257	2200	JB
			Total:	80110	
			Adj. Total:	28110	
		Location ID: SS16-33			
1F	ABH116067	21			
1F	ABD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.015	57000	NJAB
1F	ABD1 2	Unknown aliphatic compound	5.436	260	JB
1F	ABD1 3	Unknown aliphatic compound	5.929	2200	JB
1F	ABD1 4143-07-7	Dodecanoic acid	13.252	4300	NJB
1F	ABD1 5613-12-7	Anthracene, 2-methyl- w/alip	16.323	240	NJZ
1F	ABD1 6203-64-5	4H-Cyclopenta[def]phenanthre	16.393	640	NJZ
1F	ABD1 7238-84-6	11H-Benzo[a]fluorene	18.576	410	NJ
1F	ABD1 8	Unknown benzanthracenone	19.561	510	J
1F	ABD1 9	Unknown benzo[b]naphthothiop	19.732	480	J
1F	ABD110195-19-7	Benzo[c]phenanthrene	19.782	620	NJ
1F	ABD111	Unknown	19.883	500	J
1F	ABD112	Unknown PAH	20.941	540	J
1F	ABD113	Unknown	21.184	550	J
1F	ABD114	Unknown alkane w/unknown	21.578	430	JZ
1F	ABD115	Unknowns	21.831	630	JZ
1F	ABD116192-97-2	Benzo[e]pyrene	22.54	2000	NJ
1F	ABD117198-55-0	Perylene	22.743	410	NJ
1F	ABD118	Unknown alkane	23.139	560	J
1F	ABD119	Unknown PAH w/unknown	24.557	610	JZ
1F	ABD120	Unknown PAH	24.821	500	J
1F	ABD121	Unknown	27.28	1200	JB
			Total:	74590	

			Adj. Total:	17590	
		Location ID: SS16-38			
1F	ACH116068	18			
1F	ACD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.035	41000	NJAB
1F	ACD1 2	Unknown aliphatic compound	5.465	200	JB
1F	ACD1 3	Unknown aliphatic compound	5.958	1900	JB
1F	ACD1 4	Unknown aliphatic compound	12.313	72	J
1F	ACD1 5143-07-7	Dodecanoic acid	13.184	580	NJB
1F	ACD1 6	Unknown	14.243	84	J
1F	ACD1 7	Unknown amide	19.236	73	J
1F	ACD1 8	Unknown	19.907	140	J
1F	ACD1 9593-49-7	Heptacosane	21.064	77	NJ
1F	ACD110	Unknown aliphatic compound	21.134	91	J
1F	ACD111	Unknown aliphatic compound	21.427	94	J
1F	ACD112	Unknown	21.842	100	J
1F	ACD113630-03-5	Nonacosane	22.126	260	NJ
1F	ACD114	Unknown aliphatic compound	22.826	120	J
1F	ACD115	Unknown alkane	23.161	270	J
1F	ACD116	Unknown aliphatic compound	24.449	130	J
1F	ACD117	Unknown aliphatic compound	26.689	470	J
1F	ACD118	Unknown	27.317	970	JB
			Total:	46631	
			Adj. Total:	5631	
		Location ID: SS17-26			
1F	ADH116069	21			
1F	ADD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.045	42000	NJAB
1F	ADD1 2	Unknown aliphatic compound	5.969	1900	JB
1F	ADD1 3143-07-7	Dodecanoic acid	13.213	1600	NJB
1F	ADD1 4	Unknown	14.242	200	J
1F	ADD1 5	Unknown aliphatic compound	16.361	480	J
1F	ADD1 657-10-3	Hexadecanoic acid	16.421	730	NJ
1F	ADD1 7	Unknown aliphatic compound	19.932	500	J
1F	ADD1 8593-49-7	Heptacosane	21.057	460	NJ
1F	ADD1 9	Unknown aliphatic compound	21.107	500	J
1F	ADD110630-03-5	Nonacosane	22.127	1200	NJ
1F	ADD111	Unknown aliphatic compound	22.187	1600	J
1F	ADD112	Unknown alkane	23.17	1700	J
1F	ADD113	Unknown alkane	24.386	680	J
1F	ADD114	Unknown sterane derivative	24.566	620	J
1F	ADD115	Unknown sterane derivative	25.25	1400	J
1F	ADD116	Unknown	25.371	470	J
1F	ADD117	Unknown	25.713	490	J
1F	ADD118	Unknown aliphatic compound	26.316	670	J
1F	ADD1191058-61-3	Stigmast-4-en-3-one	26.476	1100	NJ
1F	ADD120	Unknown aliphatic compound	27.089	610	J
1F	ADD121	Unknown	27.319	1300	JB
			Total:	60210	
			Adj. Total:	18210	
		Location ID: SS17-30			

1F	AEH116070	21			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.967	43000	NJAB
1F	AED1 2	Unknown aliphatic compound	5.407	280	JB
1F	AED1 3	Unknown aliphatic compound	5.901	2000	JB
1F	AED1 4143-07-7	Dodecanoic acid	13.137	1100	NJB
1F	AED1 557-10-3	Hexadecanoic acid	16.373	600	NJ
1F	AED1 6	Unknown organic acid	17.655	370	J
1F	AED1 7	Unknown aliphatic compound	19.883	450	J
1F	AED1 8	Unknown aliphatic compound	21.051	480	J
1F	AED1 9	Unknown	21.778	390	J
1F	AED110630-03-5	Nonacosane	22.062	410	NJ
1F	AED111	Unknown aliphatic compound	22.133	310	J
1F	AED112	Unknown alkane	23.085	640	J
1F	AED113	Unknown alkane	24.289	210	J
1F	AED114	Unknown	24.754	220	J
1F	AED115	Unknown aliphatic compound	24.815	210	J
1F	AED11683-47-6	.gamma.-Sitosterol	25.149	260	NJ
1F	AED117	Unknown polycyclic hydrocarb	25.26	340	J
1F	AED1181058-61-3	Stigmast-4-en-3-one	26.351	300	NJ
1F	AED119	Unknown aliphatic compound	26.714	480	J
1F	AED120	Unknown	27.178	1300	JB
1F	AED121	Unknown aliphatic compound	27.42	440	J
			Total:	53790	
			Adj. Total:	10790	
		Location ID: SS17-31			
1F	AFH116071	21			
1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.036	39000	NJAB
1F	AFD1 2	Unknown aliphatic compound	5.97	2200	JB
1F	AFD1 3143-07-7	Dodecanoic acid	13.189	1400	NJB
1F	AFD1 4	Unknown aliphatic compound	16.349	720	J
1F	AFD1 557-10-3	Hexadecanoic acid	16.418	990	NJ
1F	AFD1 6	Unknown organic acid	17.69	940	J
1F	AFD1 7	Unknown aliphatic compound	19.912	520	J
1F	AFD1 8	Unknown aliphatic compound	21.083	520	J
1F	AFD1 9	Unknown	21.817	610	J
1F	AFD110630-03-5	Nonacosane	22.098	1100	NJ
1F	AFD111	Unknown aliphatic compound	22.169	1000	J
1F	AFD112	Unknown alkane	23.147	1600	J
1F	AFD113	Unknown alkane	24.357	600	J
1F	AFD114	Unknown sterane derivative	24.529	640	J
1F	AFD115	Unknown sterane derivative	25.215	1200	J
1F	AFD116	Unknown	25.487	470	J
1F	AFD117	Unknown	25.679	510	J
1F	AFD1181058-61-3	Stigmast-4-en-3-one	26.444	910	NJ
1F	AFD119	Unknown sterane derivative	26.827	2200	J
1F	AFD120	Unknown	27.049	560	J
1F	AFD121	Unknown	27.28	1800	JB
			Total:	59490	
			Adj. Total:	20490	

		Location ID: SS17-24			
1F	AGH116072	21			
1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.036	40000	NJAB
1F	AGD1 2	Unknown aliphatic compound	5.979	2400	JB
1F	AGD1 3143-07-7	Dodecanoic acid	13.158	710	NJB
1F	AGD1 4544-63-8	Tetradecanoic acid	16.395	460	NJ
1F	AGD1 5	Unknown organic acid	17.684	350	J
1F	AGD1 6	Unknown aliphatic compound	19.909	400	J
1F	AGD1 7593-49-7	Heptacosane	21.036	310	NJ
1F	AGD1 8	Unknown aliphatic compound	21.086	400	J
1F	AGD1 9	Unknown aliphatic compound	21.826	460	J
1F	AGD110630-03-5	Nonacosane	22.106	820	NJ
1F	AGD111	Unknown aliphatic compound	22.166	980	J
1F	AGD112	Unknown	22.868	340	J
1F	AGD113	Unknown alkane	23.14	1000	J
1F	AGD114	Unknown alkane	24.354	370	J
1F	AGD115	Unknown sterane derivative	24.525	560	J
1F	AGD11683-48-7	Stigmasterol	24.746	380	NJ
1F	AGD11783-47-6	.gamma.-Sitosterol	25.208	840	NJ
1F	AGD118	Unknown polycyclic hydrocarb	25.329	440	J
1F	AGD1191058-61-3	Stigmast-4-en-3-one	26.422	570	NJ
1F	AGD120	Unknown	27.033	420	J
1F	AGD121	Unknown	27.254	1600	JB
			Total:	53810	
			Adj. Total:	13810	
		Location ID: SS17-25			
1F	AHH116073	21			
1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.006	40000	NJAB
1F	AHD1 2	Unknown aliphatic compound	5.959	2500	JB
1F	AHD1 3143-07-7	Dodecanoic acid	13.141	480	NJB
1F	AHD1 457-10-3	Hexadecanoic acid	16.393	520	NJ
1F	AHD1 5	Unknown organic acid	17.68	400	J
1F	AHD1 6	Unknown aliphatic compound	19.913	460	J
1F	AHD1 7	Unknown aliphatic compound	21.078	430	J
1F	AHD1 8	Unknown aliphatic compound	21.826	560	J
1F	AHD1 9630-03-5	Nonacosane	22.105	830	NJ
1F	AHD110	Unknown aliphatic compound	22.165	1400	J
1F	AHD111	Unknown alkane	23.137	1000	J
1F	AHD112	Unknown alkane	24.35	380	J
1F	AHD113	Unknown sterane derivative	24.521	520	J
1F	AHD11483-48-7	Stigmasterol	24.752	410	NJ
1F	AHD11583-47-6	.gamma.-Sitosterol	25.203	820	NJ
1F	AHD116	Unknown polycyclic hydrocarb	25.324	720	J
1F	AHD117	Unknown	25.534	660	J
1F	AHD118	Unknown polycyclic hydrocarb	26.266	520	J
1F	AHD1191058-61-3	Stigmast-4-en-3-one	26.427	560	NJ
1F	AHD120	Unknown sterane derivative	26.797	1000	J
1F	AHD121	Unknown	27.268	1600	JB
			Total:	55770	

			Adj. Total:	15770	
		Location ID: SS16-500-N			
1F	AIH116074	21			
1F	AID1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.171	27000	NJAB
1F	AID1 2	Unknown aliphatic compound	6.015	2800	JB
1F	AID1 3334-48-5	Decanoic acid	11.276	340	NJ
1F	AID1 4143-07-7	Dodecanoic acid	13.144	420	NJB
1F	AID1 557-10-3	Hexadecanoic acid	16.4	460	NJ
1F	AID1 6	Unknown aliphatic compound	17.68	400	J
1F	AID1 757-11-4	Octadecanoic acid	17.819	470	NJ
1F	AID1 8	Unknown aliphatic compound	21.08	260	J
1F	AID1 9	Unknown	21.817	510	J
1F	AID110630-03-5	Nonacosane	22.097	580	NJ
1F	AID111	Unknown aliphatic compound	22.167	570	J
1F	AID112	Unknown alkane	23.138	650	J
1F	AID113	Unknown sterane derivative	24.521	480	J
1F	AID11483-48-7	Stigmasterol	24.752	320	NJ
1F	AID11583-47-6	.gamma.-Sitosterol	25.203	780	NJ
1F	AID116	Unknown polycyclic hydrocarb	25.323	300	J
1F	AID117	Unknown aliphatic compound	25.955	790	J
1F	AID118	Unknown	26.085	290	J
1F	AID1191058-61-3	Stigmast-4-en-3-one	26.416	300	NJ
1F	AID120	Unknown sterane derivative	26.807	1600	J
1F	AID121	Unknown	27.267	1800	JB
			Total:	41120	
			Adj. Total:	14120	
		Location ID: SS17-39			
1F	AJH116075	21			
1F	AJD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.17	48000	NJAB
1F	AJD1 2	Unknown aliphatic compound	5.975	2700	JB
1F	AJD1 3143-07-7	Dodecanoic acid	13.149	550	NJB
1F	AJD1 4	Unknown organic acid	16.343	560	J
1F	AJD1 557-10-3	Hexadecanoic acid	16.413	640	NJ
1F	AJD1 6	Unknown organic acid	17.692	500	J
1F	AJD1 7	Unknown	20.838	640	J
1F	AJD1 8	Unknown	20.908	730	J
1F	AJD1 9593-49-7	Heptacosane	21.039	450	NJ
1F	AJD110	Unknown	21.818	1000	J
1F	AJD111630-03-5	Nonacosane	22.098	1200	NJ
1F	AJD112	Unknown aliphatic compound	22.168	1700	J
1F	AJD113	Unknown alkane	23.14	1100	J
1F	AJD114	Unknown sterane derivative	24.515	650	J
1F	AJD115	Unknown aliphatic compound	24.897	390	J
1F	AJD11683-47-6	.gamma.-Sitosterol	25.208	1300	NJ
1F	AJD117	Unknown polycyclic hydrocarb	25.328	740	J
1F	AJD118	Unknown aliphatic compound	25.83	810	J
1F	AJD119	Unknown sterane derivative	26.061	800	J
1F	AJD1201058-61-3	Stigmast-4-en-3-one	26.422	890	NJ
1F	AJD121	Unknown	27.263	1800	JB

			Total:	67150	
			Adj. Total:	19150	
		Location ID: SS17-38			
1F	AKH116076	21			
1F	AKD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.016	43000	NJAB
1F	AKD1 2	Unknown aliphatic compound	5.949	2000	JB
1F	AKD1 3143-07-7	Dodecanoic acid	13.141	420	NJB
1F	AKD1 4	Unknown organic acid	16.333	320	J
1F	AKD1 557-10-3	Hexadecanoic acid	16.403	560	NJ
1F	AKD1 6	Unknown organic acid	17.68	350	J
1F	AKD1 7	Unknown aliphatic compound	19.914	330	J
1F	AKD1 8	Unknown aliphatic compound	21.08	320	J
1F	AKD1 9	Unknown	21.818	830	J
1F	AKD110630-03-5	Nonacosane	22.097	980	NJ
1F	AKD111	Unknown aliphatic compound	22.167	830	J
1F	AKD112	Unknown	22.868	390	J
1F	AKD113	Unknown alkane	23.139	1200	J
1F	AKD114	Unknown sterane derivative	24.512	440	J
1F	AKD115	Unknown aliphatic compound	24.602	400	J
1F	AKD116	Unknown	24.743	310	J
1F	AKD11783-47-6	.gamma.-Sitosterol	25.204	830	NJ
1F	AKD118	Unknown polycyclic hydrocarb	25.324	400	J
1F	AKD1191058-61-3	Stigmast-4-en-3-one	26.416	570	NJ
1F	AKD120	Unknown sterane derivative	26.797	740	J
1F	AKD121	Unknown	27.268	1600	JB
			Total:	56820	
			Adj. Total:	13820	
		Location ID: SS17-36			
1F	ALH116077	21			
1F	ALD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.996	38000	NJAB
1F	ALD1 2	Unknown aliphatic compound	5.939	1800	JB
1F	ALD1 357-10-3	Hexadecanoic acid	16.406	450	NJ
1F	ALD1 4	Unknown organic acid	17.692	310	J
1F	ALD1 5	Unknown	19.59	1900	J
1F	ALD1 6	Unknown	19.7	600	J
1F	ALD1 7	Unknown aliphatic compound	21.832	500	J
1F	ALD1 8630-03-5	Nonacosane	22.103	650	NJ
1F	ALD1 9	Unknown aliphatic compound	22.173	490	J
1F	ALD110	Unknown alkane	23.136	930	J
1F	ALD111	Unknown alkane	24.349	290	J
1F	ALD112	Unknown sterane derivative	24.53	310	J
1F	ALD11383-48-7	Stigmasterol	24.75	350	NJ
1F	ALD11483-47-6	.gamma.-Sitosterol	25.211	620	NJ
1F	ALD115	Unknown polycyclic hydrocarb	25.322	360	J
1F	ALD116	Unknown	25.472	400	J
1F	ALD117	Unknown	25.673	450	J
1F	ALD118	Unknown polycyclic hydrocarb	26.444	760	J
1F	ALD119	Unknown	26.754	490	J
1F	ALD120	Unknown	26.905	730	J

1F	ALD121	Unknown	27.265	900	JB
			Total:	51290	
			Adj. Total:	13290	
		Location ID: SS17-35			
1F	AMH116078	21			
1F	AMD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.026	44000	NJAB
1F	AMD1 2	Unknown aliphatic compound	5.95	2000	JB
1F	AMD1 3143-07-7	Dodecanoic acid	13.187	1300	NJB
1F	AMD1 4	Unknown organic acid	16.357	570	J
1F	AMD1 557-10-3	Hexadecanoic acid	16.417	770	NJ
1F	AMD1 6	Unknown	21.823	960	J
1F	AMD1 7630-03-5	Nonacosane	22.103	1700	NJ
1F	AMD1 8	Unknown aliphatic compound	22.173	1200	J
1F	AMD1 9	Unknown alkane	23.145	2400	J
1F	AMD110	Unknown alkane	24.359	740	J
1F	AMD111	Unknown sterane derivative	24.52	660	J
1F	AMD11283-46-5	.beta.-Sitosterol	25.223	1900	NJ
1F	AMD113	Unknown polycyclic hydrocarb	25.334	910	J
1F	AMD114	Unknown	25.485	740	J
1F	AMD115	Unknown	25.545	610	J
1F	AMD116	Unknown	25.676	850	J
1F	AMD117	Unknown	25.796	440	J
1F	AMD1181058-61-3	Stigmast-4-en-3-one	26.449	760	NJ
1F	AMD119	Unknown sterane derivative	26.84	3600	J
1F	AMD120	Unknown aliphatic compound	27.051	640	J
1F	AMD121	Unknown	27.272	1400	JB
			Total:	68150	
			Adj. Total:	24150	
		Location ID: SS17-34			
1F	ANH116079	21			
1F	AND1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.016	38000	NJAB
1F	AND1 2	Unknown aliphatic compound	5.959	1900	JB
1F	AND1 3	Unknown aliphatic compound	16.349	370	J
1F	AND1 457-10-3	Hexadecanoic acid	16.409	450	NJ
1F	AND1 5	Unknown aliphatic compound	19.88	300	J
1F	AND1 6	Unknown aliphatic compound	21.412	340	J
1F	AND1 7	Unknown	21.822	690	J
1F	AND1 8630-03-5	Nonacosane	22.103	660	NJ
1F	AND1 9	Unknown aliphatic compound	22.173	920	J
1F	AND110	Unknown alkane	23.135	820	J
1F	AND111	Unknown sterane derivative	24.519	550	J
1F	AND112	Unknown alkane	24.77	530	J
1F	AND11383-47-6	.gamma.-Sitosterol	25.201	890	NJ
1F	AND114	Unknown polycyclic hydrocarb	25.332	360	J
1F	AND115	Unknown	25.673	450	J
1F	AND116	Unknown aliphatic compound	25.844	1100	J
1F	AND117	Unknown sterane derivative	26.074	660	J
1F	AND118	Unknown polycyclic hydrocarb	26.445	760	J
1F	AND119	Unknown sterane derivative	26.806	1200	J

1F	AND120	Unknown	26.896	690	J
1F	AND121	Unknown	27.267	840	JB
			Total:	52480	
			Adj. Total:	14480	
		Location ID: SS17-37			
1F	AOH116080	21			
1F	AOD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.016	38000	NJAB
1F	AOD1 2	Unknown aliphatic compound	5.949	1800	JB
1F	AOD1 3	Unknown aliphatic compound	14.032	580	J
1F	AOD1 4	Unknown organic acid	16.367	710	J
1F	AOD1 5	Unknown	17.418	600	J
1F	AOD1 6	Unknown	19.594	1400	J
1F	AOD1 7	Unknown aliphatic compound	21.839	650	J
1F	AOD1 8630-03-5	Nonacosane	22.111	1600	NJ
1F	AOD1 9	Unknown aliphatic compound	22.182	840	J
1F	AOD110	Unknown alkane	23.151	1700	J
1F	AOD111	Unknown sterane derivative	24.542	830	J
1F	AOD11283-48-7	Stigmasterol	24.774	700	NJ
1F	AOD11383-47-6	.gamma.-Sitosterol	25.248	2100	NJ
1F	AOD114	Unknown	25.48	780	J
1F	AOD115	Unknown	25.712	1700	J
1F	AOD116	Unknown polycyclic hydrocarb	25.903	820	J
1F	AOD117	Unknown	26.115	790	J
1F	AOD118	Unknown sterane derivative	26.236	650	J
1F	AOD1191058-61-3	Stigmast-4-en-3-one	26.467	1300	NJ
1F	AOD120	Unknown sterane derivative	26.85	2500	J
1F	AOD121	Unknown	27.302	1300	JB
			Total:	61350	
			Adj. Total:	23350	
		Location ID: SS17-500-N			
1F	APH116081	21			
1F	APD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.976	53000	NJAB
1F	APD1 2	Unknown aliphatic compound	5.9	2200	JB
1F	APD1 357-10-3	Hexadecanoic acid	16.362	440	NJ
1F	APD1 4	Unknown aliphatic compound	21.793	570	J
1F	APD1 5630-03-5	Nonacosane	22.072	970	NJ
1F	APD1 6	Unknown aliphatic compound	22.132	1200	J
1F	APD1 7	Unknown alkane	23.102	1200	J
1F	APD1 8	Unknown alkane	24.304	340	J
1F	APD1 9	Unknown sterane derivative	24.474	340	J
1F	APD11083-47-6	.gamma.-Sitosterol	25.145	730	NJ
1F	APD111	Unknown polycyclic hydrocarb	25.266	520	J
1F	APD112	Unknown	25.406	340	J
1F	APD113	Unknown	25.476	540	J
1F	APD114	Unknown	25.597	460	J
1F	APD115	Unknown	25.807	420	J
1F	APD116	Unknown polycyclic hydrocarb	26.187	480	J
1F	APD1171058-61-3	Stigmast-4-en-3-one	26.348	690	NJ
1F	APD118	Unknown sterane derivative	26.728	1900	J

1F	APD119	Unknown	26.969	940	J
1F	APD120	Unknown	27.179	1100	JB
1F	APD121	Unknown aliphatic compound	27.409	430	J
			Total:	68810	
			Adj. Total:	15810	
		Location ID: SS17-500-S			
1F	AQH116082	21			
1F	AQD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.987	51000	NJAB
1F	AQD1 2	Unknown aliphatic compound	5.9	1800	JB
1F	AQD1 3	Unknown	19.522	440	J
1F	AQD1 4	Unknown aliphatic compound	19.88	420	J
1F	AQD1 5	Unknown aliphatic compound	21.793	840	J
1F	AQD1 6630-03-5	Nonacosane	22.073	1200	NJ
1F	AQD1 7	Unknown aliphatic compound	22.143	1200	J
1F	AQD1 8	Unknown aliphatic compound	22.844	490	J
1F	AQD1 9	Unknown alkane	23.104	1600	J
1F	AQD110	Unknown alkane	24.306	620	J
1F	AQD111	Unknown sterane derivative	24.477	440	J
1F	AQD11283-48-7	Stigmasterol	24.707	400	NJ
1F	AQD11383-47-6	.gamma.-Sitosterol	25.148	1100	NJ
1F	AQD114	Unknown polycyclic hydrocarb	25.269	650	J
1F	AQD115	Unknown	25.409	400	J
1F	AQD116	Unknown	25.48	430	J
1F	AQD117	Unknown aliphatic compound	26.181	410	J
1F	AQD1181058-61-3	Stigmast-4-en-3-one	26.351	570	NJ
1F	AQD119	Unknown sterane derivative	26.742	2000	J
1F	AQD120	Unknown	26.963	480	J
1F	AQD121	Unknown	27.183	1000	JB
			Total:	67490	
			Adj. Total:	16490	
		Location ID: 1000-N			
1F	ARH116083	21			
1F	ARD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.966	42000	NJAB
1F	ARD1 2	Unknown aliphatic compound	5.89	1500	JB
1F	ARD1 357-10-3	Hexadecanoic acid	16.372	470	NJ
1F	ARD1 4	Unknown organic acid	17.664	390	J
1F	ARD1 5593-49-7	Heptacosane	21.013	370	NJ
1F	ARD1 6	Unknown aliphatic compound	21.802	890	J
1F	ARD1 7630-03-5	Nonacosane	22.072	1400	NJ
1F	ARD1 8	Unknown aliphatic compound	22.132	1500	J
1F	ARD1 9	Unknown aliphatic compound	22.844	660	J
1F	ARD110	Unknown alkane	23.105	1800	J
1F	ARD111	Unknown alkane	24.319	1200	J
1F	ARD112	Unknown sterane derivative	24.469	530	J
1F	ARD11383-48-7	Stigmasterol	24.7	480	NJ
1F	ARD11483-47-6	.gamma.-Sitosterol	25.152	970	NJ
1F	ARD115	Unknown polycyclic hydrocarb	25.272	430	J
1F	ARD116	Unknown	25.614	920	J
1F	ARD117	Unknown sterane derivative	25.804	380	J

1F	ARD118	Unknown	26.025	420	J
1F	ARD1191058-61-3	Stigmast-4-en-3-one	26.356	890	NJ
1F	ARD120	Unknown	26.727	600	J
1F	ARD121	Unknown	27.207	1700	J
			Total:	59500	
			Adj. Total:	17500	
		Location ID: 3500-N			
1F	ASH116084	21			
1F	ASD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.977	33000	NJAB
1F	ASD1 2	Unknown aliphatic compound	5.901	1100	JB
1F	ASD1 3613-12-7	Anthracene, 2-methyl- w/alip	16.207	130	NJZ
1F	ASD1 4203-64-5	4H-Cyclopenta[def]phenanthre	16.407	130	NJZ
1F	ASD1 5	Unknown methylpyrene w/unkno	18.783	220	JZ
1F	ASD1 6629-99-2	Pentacosane w/unknown	19.871	320	NJZ
1F	ASD1 7593-49-7	Heptacosane	21.015	220	NJ
1F	ASD1 8	Unknown	21.198	210	J
1F	ASD1 9630-02-4	Octacosane	21.554	260	NJ
1F	ASD110	Unknown C20H14 PAH	21.889	240	J
1F	ASD111630-03-5	Nonacosane	22.083	520	NJ
1F	ASD112192-97-2	Benzo[e]pyrene	22.572	640	NJ
1F	ASD113198-55-0	Perylene	22.786	320	NJ
1F	ASD114	Unknown alkane	23.113	450	J
1F	ASD115	Unknown alkane	23.685	270	J
1F	ASD116	Unknown polycyclic hydrocarb	24.023	320	J
1F	ASD117	Unknown C22H12 PAH	24.523	280	J
1F	ASD118	Unknown	25.044	510	J
1F	ASD119	Unknown	25.443	650	J
1F	ASD120	Unknown	26.066	1000	J
1F	ASD121	Unknown	27.248	390	JB
			Total:	41180	
			Adj. Total:	8180	
		Location ID: 2000-S			
1F	ATH116085	21			
1F	ATD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.967	35000	NJAB
1F	ATD1 2	Unknown aliphatic compound	5.397	310	JB
1F	ATD1 3	Unknown aliphatic compound	5.891	1200	JB
1F	ATD1 4544-63-8	Tetradecanoic acid	16.38	290	NJ
1F	ATD1 5593-49-7	Heptacosane	21.01	310	NJ
1F	ATD1 6	Unknown aliphatic compound	21.07	210	J
1F	ATD1 7	Unknown aliphatic compound	21.798	440	J
1F	ATD1 8	Unknown aliphatic compound	22.142	420	J
1F	ATD1 9	Unknown aliphatic compound	22.842	370	J
1F	ATD110629-97-0	Docosane	23.105	1600	NJ
1F	ATD111	Unknown aliphatic compound	24.028	270	J
1F	ATD112	Unknown alkane	24.311	470	J
1F	ATD113	Unknown sterane derivative	24.504	220	J
1F	ATD114	Unknown aliphatic compound	24.555	300	J
1F	ATD11583-48-7	Stigmasterol	24.727	250	NJ
1F	ATD116	Unknown sterane derivative	25.182	510	J

1F	ATD117	Unknown polycyclic hydrocarb	25.294	270	J
1F	ATD118	Unknown aliphatic compound	26.195	260	J
1F	ATD1191058-61-3	Stigmast-4-en-3-one	26.397	450	NJ
1F	ATD120	Unknown sterane derivative	26.761	660	J
1F	ATD121	Unknown	27.206	1000	JB
			Total:	44810	
			Adj. Total:	9810	
		Location ID: LAB BLANK			
1F	AUH1SBLKL1	6			
1F	AUD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.985	62000	NJA
1F	AUD1 2	Unknown aliphatic compound	5.396	200	J
1F	AUD1 3	Unknown aliphatic compound	5.898	1900	J
1F	AUD1 4143-07-7	Dodecanoic acid	13.159	700	NJ
1F	AUD1 5	Unknown	22.819	71	J
1F	AUD1 6	Unknown	27.281	790	J
			Total:	65661	

		Location ID: SS16-23			
1F	AAH116051	21			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.439	27000	NJAB
1F	AAD1 2	Unknown aliphatic compound	6.389	1700	JB
1F	AAD1 32091-29-4	9-Hexadecenoic acid	16.217	650	NJ
1F	AAD1 457-10-3	Hexadecanoic acid	16.286	1000	NJ
1F	AAD1 5112-80-1	Oleic Acid	17.489	480	NJ
1F	AAD1 6593-49-7	Heptacosane	20.66	570	NJ
1F	AAD1 7630-02-4	Octacosane	21.165	520	NJ
1F	AAD1 8	Unknown aliphatic aledhyde	21.392	790	J
1F	AAD1 9630-03-5	Nonacosane	21.653	1700	NJ
1F	AAD110506-52-5	1-Hexacosanol	21.723	1200	NJ
1F	AAD111	Unknown aliphatic aledhyde	22.359	610	J
1F	AAD112	Unknown C31-alkane	22.585	2100	J
1F	AAD113	Unknown C33-alkane	23.614	950	J
1F	AAD114	Unknown sitosterol	24.267	2800	J
1F	AAD115	Unknown	24.459	540	J
1F	AAD116	Unknown taraxerol	24.52	1400	J
1F	AAD117	Unknown	24.633	890	J
1F	AAD118	Unknown	24.781	550	J
1F	AAD119	Unknown	25.13	1700	J
1F	AAD1201058-61-3	Stigmast-4-en-3-one	25.251	1800	NJ
1F	AAD121	Unknown	25.548	1200	J
			Total:	50150	
			Adj. Total:	23150	
		Location ID: SS16-32			
1F	ABH116052	21			
1F	ABD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.421	35000	NJAB
1F	ABD1 2	Unknown aliphatic compound	6.353	1800	JB
1F	ABD1 317301-23-4	Undecane, 2,6-dimethyl-	9.847	740	NJ
1F	ABD1 462016-34-6	Octane, 2,3,7-trimethyl-	10.465	2200	NJ
1F	ABD1 5629-50-5	Tridecane	10.736	760	NJ
1F	ABD1 6	Unknown	10.901	1100	J
1F	ABD1 774645-98-0	Dodecane, 2,7,10-trimethyl-	11.493	680	NJ
1F	ABD1 8	Unknown naphthalene derivati	11.615	730	J
1F	ABD1 9629-59-4	Tetradecane	11.711	720	NJ
1F	ABD110	Unknown naphthalene derivati	11.79	730	J
1F	ABD111	Unknown naphthalene derivati	12.138	1600	J
1F	ABD112	Unknown alkane	12.286	1000	J
1F	ABD113	Unknown naphthalene derivati	12.478	1500	J
1F	ABD114629-62-9	Pentadecane	12.617	740	NJ
1F	ABD115629-78-7	Heptadecane	14.282	680	NJ
1F	ABD1161921-70-6	Pentadecane, 2,6,10,14-tetra	14.325	1000	NJ
1F	ABD117112-95-8	Eicosane	16.494	780	NJ
1F	ABD118646-31-1	Tetracosane	19.587	700	NJ
1F	ABD119	Unknown	20.781	1300	J
1F	ABD120	Unknown	22.855	2100	J
1F	ABD121	Unknown polyterpene derivati	23.308	1800	J
			Total:	57660	

			Adj. Total:	22660	
		Location ID: SS16-34			
1F	ACH116053	21			
1F	ACD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.323	48000	NJAB
1F	ACD1 2	Unknown alkane	8.93	3700	J
1F	ACD1 32958-76-1	Naphthalene, decahydro-2-met	9.052	4200	NJ
1F	ACD1 4	Unknown cycloalkane	9.635	4700	J
1F	ACD1 5	Unknown alkane	9.888	8800	J
1F	ACD1 6	Unknown alkane	9.975	3900	J
1F	ACD1 7	Unknown cycloalkane	10.315	6100	J
1F	ACD1 8	Unknown alkane	10.498	14000	J
1F	ACD1 9	Unknown cycloalkane	10.838	5300	J
1F	ACD110	Unknown alkane	10.951	8500	J
1F	ACD111	Unknown alkylcyclohexane	11.265	4700	J
1F	ACD112	Unknown aliphatic compound	11.343	3900	J
1F	ACD113	Unknown aliphatic compound	11.483	4300	J
1F	ACD11474645-98-0	Dodecane, 2,7,10-trimethyl-	11.526	6600	NJ
1F	ACD115	Unknown naphthalene derivati	11.648	5300	J
1F	ACD116	Unknown alkylcyclohexane	11.735	5300	J
1F	ACD117	Unknown	11.848	6100	J
1F	ACD118	Unknown	12.171	7600	J
1F	ACD119	Unknown alkane	12.319	9200	J
1F	ACD120	Unknown aliphatic compound	12.511	6100	J
1F	ACD12154105-67-8	Heptadecane, 2,6-dimethyl-	14.358	4700	NJ
			Total:	171000	
			Adj. Total:	123000	
		Location ID: SS16-37			
1F	ADH116054	21			
1F	ADD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.446	6100	NJAB
1F	ADD1 2	Unknown aliphatic compound	6.378	1500	JB
1F	ADD1 3	Unknown alkylcyclohexane	9.637	890	J
1F	ADD1 4	Unknown alkane	9.889	2100	J
1F	ADD1 5	Unknown cycloalkane	10.316	1200	J
1F	ADD1 6	Unknown alkane	10.412	730	J
1F	ADD1 762016-34-6	Octane, 2,3,7-trimethyl-	10.508	3200	NJ
1F	ADD1 8	Unknown alkylcyclohexane	10.848	1000	J
1F	ADD1 9	Unknown alkane	10.891	730	J
1F	ADD110	Unknown alkane	10.961	1800	J
1F	ADD111	Unknown alkylcyclohexane	11.275	1200	J
1F	ADD112	Unknown aliphatic compound	11.353	790	J
1F	ADD113	Unknown aliphatic compound	11.484	1000	J
1F	ADD11431295-56-4	Dodecane, 2,6,11-trimethyl-	11.545	1600	NJ
1F	ADD115	Unknown naphthalene derivati	11.658	1100	J
1F	ADD116	Unknown alkylcyclohexane	11.745	810	J
1F	ADD117	Unknown naphthalene derivati	12.19	2000	J
1F	ADD118	Unknown alkane	12.329	1900	J
1F	ADD119	Unknown naphthalene derivati	12.521	1500	J
1F	ADD120	Unknown alkane	13.906	1300	J
1F	ADD1211921-70-6	Pentadecane, 2,6,10,14-tetra	14.359	1400	NJ

			Total:	33850	
			Adj. Total:	27750	
		Location ID: 3500-S			
1F	AEH116055	21			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.515	17000	NJAB
1F	AED1 2	Unknown aliphatic compound	5.924	340	J
1F	AED1 3	Unknown aliphatic compound	6.403	2200	JB
1F	AED1 4593-45-3	Octadecane	15.055	140	NJ
1F	AED1 5629-92-5	Nonadecane	15.787	180	NJ
1F	AED1 62531-84-2	Phenanthrene, 2-methyl-	16.135	210	NJ
1F	AED1 72091-29-4	9-Hexadecenoic acid	16.214	770	NJ
1F	AED1 857-10-3	Hexadecanoic acid	16.275	690	NJ
1F	AED1 9593-49-7	Heptacosane	20.64	290	NJ
1F	AED110	Unknown alkane	21.642	460	J
1F	AED111	Unknown aliphatic compound	21.711	440	J
1F	AED112192-97-2	Benzo[e]pyrene	21.947	550	NJ
1F	AED113	Unknown alkane	22.574	410	J
1F	AED114	Unknown	22.94	460	J
1F	AED115	Unknown polycyclic hydrocarb	23.262	300	J
1F	AED116	Unknown	23.907	620	J
1F	AED117	Unknown alkane	24.038	440	J
1F	AED118	Unknown sitosterol	24.273	660	J
1F	AED119	Unknown	24.979	950	J
1F	AED120	Unknown polyterpene derivati	25.257	900	J
1F	AED121	Unknown	25.632	820	J
			Total:	28830	
			Adj. Total:	11830	
		Location ID: 3000-S			
1F	AFH116056	21			
1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.431	36000	NJAB
1F	AFD1 2	Unknown aliphatic compound	6.38	2100	JB
1F	AFD1 3	Unknown aliphatic compound	7.313	310	JB
1F	AFD1 457-10-3	Hexadecanoic acid	16.287	420	NJ
1F	AFD1 5593-49-7	Heptacosane	20.66	280	NJ
1F	AFD1 6630-02-4	Octacosane	21.174	280	NJ
1F	AFD1 7	Unknown aliphatic aledhyde	21.401	810	J
1F	AFD1 8630-03-5	Nonacosane	21.662	940	NJ
1F	AFD1 9506-52-5	1-Hexacosanol	21.732	650	NJ
1F	AFD110	Unknown	22.29	290	J
1F	AFD111	Unknown aliphatic aledhyde	22.359	680	J
1F	AFD112	Unknown C31-alkane	22.595	1200	J
1F	AFD113	Unknown aliphatic aledhyde	23.37	290	J
1F	AFD114	Unknown C33-alkane	23.623	460	J
1F	AFD115	Unknown stigmasterol	23.919	300	J
1F	AFD116	Unknown sitosterol	24.285	390	J
1F	AFD117	Unknown	24.616	510	J
1F	AFD118	Unknown	24.729	380	J
1F	AFD119	Unknown androstene derivativ	25.278	870	J
1F	AFD120	Unknown polyterpene derivati	25.583	1500	J

1F	AFD121	Unknown polycyclic ketone	25.661	410	J
			Total:	49070	
			Adj. Total:	13070	
		Location ID: FIELD BLANK			
1F	AGH116057	15			
1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.367	580	NJAB
1F	AGD1 2	Unknown aliphatic compound	6.36	30	J
1F	AGD1 3	Unknown aliphatic compound	7.301	5	J
1F	AGD1 40-00-0	Isocaryophyllene	12.11	4	NJ
1F	AGD1 5	Unknown aliphatic compound	12.668	3	J
1F	AGD1 6	Unknown alkane	14.306	2	J
1F	AGD1 72091-29-4	9-Hexadecenoic acid	16.214	3	NJ
1F	AGD1 8	Unknown aliphatic compound	20.988	3	J
1F	AGD1 9	Unknown aliphatic compound	21.162	2	J
1F	AGD110630-03-5	Nonacosane	21.65	3	NJ
1F	AGD111	Unknown	21.955	3	J
1F	AGD112	Unknown aliphatic compound	22.286	3	J
1F	AGD113	Unknown C31-alkane	22.583	3	J
1F	AGD114	Unknown	24.29	7	J
1F	AGD115	Unknown	24.56	2	J
			Total:	653	
			Adj. Total:	73	
		Location ID: SS16-21			
1F	AHH116058	10			
1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.245	28000	NJAB
1F	AHD1 2	Unknown aliphatic compound	6.386	740	JB
1F	AHD1 3112-53-8	1-Dodecanol	12.441	2500	NJ
1F	AHD1 4	Unknown aliphatic compound	14.271	1400	J
1F	AHD1 5836-30-6	Benzenamine, 4-nitro-N-pheny	18.436	750	NJ
1F	AHD1 6	Unknown	19.978	1100	J
1F	AHD1 7593-49-7	Heptacosane	20.657	540	NJ
1F	AHD1 8	Unknown aliphatic amide	21.163	670	J
1F	AHD1 9630-03-5	Nonacosane	21.651	550	NJ
1F	AHD110	Unknown	23.628	550	J
			Total:	36800	
			Adj. Total:	8800	
		Location ID: SS16-21			
1F	AIH116059	9			
1F	AID1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.238	53000	NJBA
1F	AID1 2	Unknown aliphatic compound	6.397	1400	JB
1F	AID1 3112-53-8	1-Dodecanol	12.452	2000	NJ
1F	AID1 4	Unknown aliphatic compound	14.273	2000	J
1F	AID1 5836-30-6	Benzenamine, 4-nitro-N-pheny	18.438	1000	NJ
1F	AID1 6	Unknown	19.98	970	J
1F	AID1 7	Unknown	21.165	1100	J
1F	AID1 8593-49-7	Heptacosane	21.653	860	NJ
1F	AID1 9630-03-5	Nonacosane	22.585	790	NJ
			Total:	63120	
			Adj. Total:	10120	

		Location ID: SS16-24			
1F	AJH116060	21			
1F	AJD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.385	33000	NJAB
1F	AJD1 2	Unknown aliphatic compound	6.361	1700	JB
1F	AJD1 32091-29-4	9-Hexadecenoic acid	16.249	450	NJ
1F	AJD1 457-10-3	Hexadecanoic acid	16.31	410	NJ
1F	AJD1 5646-31-1	Tetracosane	19.046	380	NJ
1F	AJD1 6630-01-3	Hexacosane	20.161	420	NJ
1F	AJD1 7593-49-7	Heptacosane	20.693	370	NJ
1F	AJD1 8	Unknown polyterpene derivati	21.276	570	J
1F	AJD1 9	Unknown	21.651	730	J
1F	AJD110630-03-5	Nonacosane	21.703	520	NJ
1F	AJD111192-97-2	Benzo[e]pyrene W/Unknown	22.043	570	NJZ
1F	AJD112	Unknown polycyclic hydrocarb	22.252	490	J
1F	AJD113	Unknown	22.775	440	J
1F	AJD114	Unknown polyterpene derivati	22.906	2200	J
1F	AJD115	Unknown polyterpene derivati	23.367	1900	J
1F	AJD116	Unknown polycyclic hydrocarb	23.942	940	J
1F	AJD117	Unknown polycyclic hydrocarb	24.021	960	J
1F	AJD118	Unknown polycyclic hydrocarb	24.43	850	J
1F	AJD119	Unknown polycyclic hydrocarb	24.552	450	J
1F	AJD120	Unknown polyterpene derivati	25.093	500	J
1F	AJD121	Unknown polyterpene derivati	25.093	500	J
			Total:	48350	
			Adj. Total:	15350	
		Location ID: SS16-36			
1F	AKH116061	21			
1F	AKD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.403	21000	NJAB
1F	AKD1 2	Unknown aliphatic compound	6.387	1000	JB
1F	AKD1 317301-23-4	Undecane, 2,6-dimethyl-	9.898	1800	NJ
1F	AKD1 4	Unknown alkylcyclohexane	10.325	1400	J
1F	AKD1 5	Unknown alkane W/Unknown	10.369	960	JZ
1F	AKD1 662016-34-6	Octane, 2,3,7-trimethyl-	10.508	3100	NJ
1F	AKD1 7	Unknown alkylcyclohexane	10.848	1100	J
1F	AKD1 856292-65-0	Dodecane, 2,5-dimethyl-	10.961	2300	NJ
1F	AKD1 9	Unknown alkylcyclohexane	11.275	1200	J
1F	AKD110	Unknown naphthalene derivati	11.31	940	J
1F	AKD111	Unknown aliphatic compound	11.353	1500	J
1F	AKD112	Unknown aliphatic compound	11.493	1400	J
1F	AKD11374645-98-0	Dodecane, 2,7,10-trimethyl-	11.536	2100	NJ
1F	AKD114	Unknown naphthalene derivati	11.658	1700	J
1F	AKD115	Unknown alkylcyclohexane	11.859	1600	J
1F	AKD116	Unknown naphthalene derivati	12.181	2500	J
1F	AKD117	Unknown alkylcyclohexane	12.268	1200	J
1F	AKD118	Unknown alkane	12.329	1600	J
1F	AKD119	Unknown naphthalene derivati	12.451	980	J
1F	AKD120	Unknown naphthalene derivati	12.521	2300	J
1F	AKD1211921-70-6	Pentadecane, 2,6,10,14-tetra	14.368	1100	NJ
			Total:	52780	

			Adj. Total:	31780	
		Location ID: SS16-31			
1F	ALH116062	21			
1F	ALD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.212	110000	NJAB
1F	ALD1 2132-65-0	Dibenzothiophene	14.996	34000	NJ
1F	ALD1 3832-71-3	Phenanthrene, 3-methyl-	16.059	41000	NJ
1F	ALD1 42531-84-2	Phenanthrene, 2-methyl-	16.103	53000	NJ
1F	ALD1 5203-64-5	4H-Cyclopenta[def]phenanthre	16.251	85000	NJ
1F	ALD1 684-65-1	9,10-Anthracenedione	16.634	42000	NJ
1F	ALD1 7	Unknown PAH	17.532	46000	J
1F	ALD1 81210-12-4	9-Anthracenecarbonitrile	17.941	42000	NJ
1F	ALD1 9205-12-9	7H-Benzo[c]fluorene	18.072	38000	NJ
1F	ALD110238-84-6	11H-Benzo[a]fluorene	18.255	120000	NJ
1F	ALD111243-17-4	11H-Benzo[b]fluorene	18.359	78000	NJ
1F	ALD112	Unknown C17H12 PAH	18.42	52000	J
1F	ALD113195-19-7	Benzo[c]phenanthrene	19.37	49000	NJ
1F	ALD11427208-37-3	Cyclopenta[cd]pyrene	19.396	38000	NJ
1F	ALD11582-05-3	7H-Benz[de]anthracen-7-one	19.501	34000	NJ
1F	ALD11625732-74-5	3,4-Dihydrocyclopenta(cd)pyr	19.928	47000	NJ
1F	ALD117	Unknown methylchrysene	20.424	41000	J
1F	ALD1181090-13-7	5,12-Naphthacenedione W/Unkn	20.973	62000	NJZ
1F	ALD119	Unknown benzofluoranthene	21.627	64000	J
1F	ALD120192-97-2	Benzo[e]pyrene	21.879	190000	NJ
1F	ALD121198-55-0	Perylene	22.071	77000	NJ
			Total:	1343000	
			Adj. Total:	1233000	
		Location ID: SS17-27			
1F	AMH116063	22			
1F	AMD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.543	33000	NJAB
1F	AMD1 2	Unknown aliphatic compound	6.44	2000	JB
1F	AMD1 32091-29-4	9-Hexadecenoic acid	16.242	400	NJ
1F	AMD1 457-10-3	Hexadecanoic acid	16.303	630	NJ
1F	AMD1 5629-99-2	Pentacosane	19.605	320	NJ
1F	AMD1 6593-49-7	Heptacosane	20.677	850	NJ
1F	AMD1 7	Unknown aliphatic compound	20.834	490	J
1F	AMD1 8630-02-4	Octacosane	21.182	650	NJ
1F	AMD1 9	Unknown aliphatic aledhyde	21.409	900	J
1F	AMD110630-03-5	Nonacosane	21.679	2000	NJ
1F	AMD111506-52-5	1-Hexacosanol	21.801	1900	NJ
1F	AMD112	Unknown aliphatic aledhyde	22.376	490	J
1F	AMD113	Unknown C31-alkane	22.611	2300	J
1F	AMD114	Unknown C33-alkane	23.639	960	J
1F	AMD115	Unknown aliphatic ketone	23.839	780	J
1F	AMD116	Unknown aliphatic ketone	24.083	560	J
1F	AMD117	Unknown	24.371	1200	J
1F	AMD118	Unknown	24.502	700	J
1F	AMD119	Unknown	24.606	500	J
1F	AMD120	Unknown polyterpene derivati	24.658	570	J
1F	AMD1211058-61-3	Stigmast-4-en-3-one	25.286	590	NJ

1F	AMD122	Unknown	25.608	3400	J
			Total:	55190	
			Adj. Total:	22190	
		Location ID: SS17-28			
1F	ANH116064	21			
1F	AND1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.568	19000	NJAB
1F	AND1 2	Unknown aliphatic compound	6.448	2100	JB
1F	AND1 3127-91-3	.beta.-Pinene	7.206	110	NJ
1F	AND1 45989-54-8	Cyclohexene, 1-methyl-4-(1-m	7.851	220	NJ
1F	AND1 5	Unknown	14.037	510	J
1F	AND1 6	Unknown aliphatic compound	14.281	150	J
1F	AND1 72091-29-4	9-Hexadecenoic acid	16.232	240	NJ
1F	AND1 857-10-3	Hexadecanoic acid	16.293	390	NJ
1F	AND1 9593-49-7	Heptacosane	20.676	390	NJ
1F	AND110630-02-4	Octacosane	21.181	330	NJ
1F	AND111	Unknown aliphatic aledhyde	21.407	760	J
1F	AND112630-03-5	Nonacosane	21.669	1300	NJ
1F	AND113506-52-5	1-Hexacosanol	21.8	1100	NJ
1F	AND114	Unknown aliphatic aledhyde	22.375	390	J
1F	AND115	Unknown C31-alkane	22.61	1900	J
1F	AND116	Unknown C33-alkane	23.638	840	J
1F	AND117	Unknown aliphatic ketone	23.83	500	J
1F	AND118	Unknown aliphatic compound	24.073	380	J
1F	AND119	Unknown	24.37	770	J
1F	AND1201058-61-3	Stigmast-4-en-3-one	25.276	900	NJ
1F	AND121	Unknown polyterpene derivati	25.589	1500	J
			Total:	33780	
			Adj. Total:	14780	
		Location ID: SS17-29			
1F	AOH116065	21			
1F	AOD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.447	18000	NJAB
1F	AOD1 2	Unknown aliphatic compound	6.397	1100	JB
1F	AOD1 3620-14-4	Benzene, 1-ethyl-3-methyl-	6.989	340	NJ
1F	AOD1 4108-67-8	Benzene, 1,3,5-trimethyl-	7.076	160	NJ
1F	AOD1 595-36-3	1,2,4-Trimethylbenzene	7.407	390	NJ
1F	AOD1 61074-43-7	Benzene, 1-methyl-3-propyl-	8.122	350	NJ
1F	AOD1 71074-17-5	Benzene, 1-methyl-2-propyl-	8.165	230	NJ
1F	AOD1 8	Unknown C4-alkylbenzene	8.2	280	J
1F	AOD1 9	Unknown C4-alkylbenzene	8.531	200	J
1F	AOD1101120-21-4	Undecane	8.627	230	NJ
1F	AOD111527-53-7	Benzene, 1,2,3,5-tetramethyl	8.958	210	NJ
1F	AOD112	Unknown C5-alkylbenzene	9.202	250	J
1F	AOD113	Unknown alkane	9.237	110	J
1F	AOD114	Unknown C5-alkylbenzenes	9.35	200	JZ
1F	AOD115	Unknown C5-alkylbenzene	9.55	120	J
1F	AOD116112-40-3	Dodecane	9.733	490	NJ
1F	AOD117	Unknown alkane	10.491	180	J
1F	AOD118629-50-5	Tridecane	10.77	260	NJ
1F	AOD11990-12-0	Naphthalene, 1-methyl-	11.084	140	NJ

1F	AOD12087-44-5	Caryophyllene	12.121	240	NJ
1F	AOD121	Unknown aliphatic compound	12.678	190	J
			Total:	23670	
			Adj. Total:	5670	
		Location ID: LAB BLANK			
1F	APH1SBLKH3	2			
1F	APD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.249	32	NJA
1F	APD1 274367-33-2	Propanoic acid, 2-methyl-, 2	11.408	2	NJ
			Total:	34	
		Location ID: LAB BLANK			
1F	AQH1SBLKK8	4			
1F	AQD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.449	15000	NJA
1F	AQD1 2	Unknown aliphatic compound	6.398	860	J
1F	AQD1 3	Unknown aliphatic compound	7.331	94	J
1F	AQD1 4	Unknown	21.393	78	J
			Total:	16032	

		Location ID: SS16-500-S			
1F	AAH116086	21			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.55	840	NJA
1F	AAD1 2	Unknown aliphatic ketone	6.387	2000	JB
1F	AAD1 357-10-3	Hexadecanoic acid	16.267	400	NJ
1F	AAD1 4	Unknown alkane	20.64	450	J
1F	AAD1 5	Unknown alkane	21.146	280	J
1F	AAD1 6	Unknown alcohol	21.372	620	J
1F	AAD1 7	Unknown alkane	21.634	1000	J
1F	AAD1 8	Unknown alcohol	21.738	310	J
1F	AAD1 9	Unknown	21.764	400	J
1F	AAD110	Unknown aliphatic aldehyde	22.339	390	J
1F	AAD111	Unknown alkane	22.566	1000	J
1F	AAD112	Unknown	22.932	620	JB
1F	AAD113	Unknown alkane	23.585	400	J
1F	AAD114	Unknown	24.256	350	J
1F	AAD115	Unknown	24.317	400	J
1F	AAD116	Unknown	24.57	600	J
1F	AAD117	Unknown	24.692	430	J
1F	AAD118	Unknown	25.232	1100	J
1F	AAD119	Unknown	25.493	610	JB
1F	AAD120	Unknown	25.607	980	J
1F	AAD121	Unknown	25.903	1200	JB
			Total:	14380	
			Adj. Total:	13540	
		Location ID: 1000-S			
1F	ABH116087	21			
1F	ABD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.557	18000	NJA
1F	ABD1 2	Unknown aliphatic ketone	6.42	2100	JB
1F	ABD1 3	Unknown alkane	20.621	400	J
1F	ABD1 4	Unknown aliphatic compound	20.674	420	J
1F	ABD1 5	Unknown aliphatic aldehyde	21.345	2000	J
1F	ABD1 6	Unknown alkane	21.615	2600	J
1F	ABD1 7	Unknown cycloalkane	21.676	1500	J
1F	ABD1 8	Unknown	22.312	750	JB
1F	ABD1 9	Unknown alkane	22.547	3300	J
1F	ABD110	Unknown alkane	23.026	480	J
1F	ABD111	Unknown alkane	23.558	1200	J
1F	ABD11283-48-7	Stigmasterol	23.836	520	NJ
1F	ABD113	Unknown	24.194	1000	J
1F	ABD114	Unknown	24.272	540	J
1F	ABD115	Unknown	24.551	1200	J
1F	ABD116	Unknown	24.699	540	J
1F	ABD117	Unknown	24.908	780	J
1F	ABD118	Unknown	25.187	1800	J
1F	ABD119	Unknown	25.466	2300	JB
1F	ABD120	Unknown	25.544	1200	J
1F	ABD121	Unknown	25.849	2600	JB
			Total:	45230	

			Adj. Total:	27230	
		Location ID: 3000-N			
1F	ACH116088	21			
1F	ACD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.522	31000	NJA
1F	ACD1 2	Unknown aliphatic ketone	6.402	2000	JB
1F	ACD1 3	Unknown aliphatic acid	16.178	310	J
1F	ACD1 457-10-3	Hexadecanoic acid	16.239	360	NJ
1F	ACD1 5	Unknown	19.088	250	J
1F	ACD1 6	Unknown alkane	20.621	380	J
1F	ACD1 7	Unknown alkane	21.118	410	J
1F	ACD1 8	Unknown aliphatic aldehyde	21.344	1300	J
1F	ACD1 9	Unknown alkane	21.614	1600	J
1F	ACD110	Unknown alkene	21.675	960	J
1F	ACD111	Unknown aliphatic aldehyde	22.311	690	J
1F	ACD112	Unknown alkane	22.547	2100	J
1F	ACD113	Unknown aliphatic compound	22.904	650	J
1F	ACD114	Unknown aliphatic aldehyde	23.304	460	J
1F	ACD115	Unknown alkane	23.548	1100	J
1F	ACD116	Unknown alkene	23.984	740	J
1F	ACD11783-47-6	.gamma.-Sitosterol	24.193	470	NJ
1F	ACD118	Unknown	24.263	480	J
1F	ACD1191058-61-3	Stigmast-4-en-3-one	25.16	940	NJ
1F	ACD120	Unknown	25.456	1400	JB
1F	ACD121	Unknown	25.831	900	J
			Total:	48500	
			Adj. Total:	17500	
		Location ID: 2000-N			
1F	ADH116089	21			
1F	ADD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.56	32000	NJA
1F	ADD1 2	Unknown aliphatic ketone	6.414	1800	JB
1F	ADD1 3	Unknown aliphatic ketone	6.466	400	J
1F	ADD1 4	Unknown	7.39	320	JB
1F	ADD1 5	Unknown alkane	20.615	550	J
1F	ADD1 6	Unknown alkene	20.676	340	J
1F	ADD1 7	Unknown aliphatic aldehyde	21.347	1200	J
1F	ADD1 8	Unknown alkane	21.609	2400	J
1F	ADD1 9	Unknown alcohol	21.678	1300	J
1F	ADD110	Unknown aliphatic ketone	21.731	470	J
1F	ADD111	Unknown aliphatic aldehyde	22.314	1200	J
1F	ADD112	Unknown alkane	22.541	3100	J
1F	ADD113	Unknown	22.637	460	JB
1F	ADD114	Unknown aliphatic ketone	22.68	490	J
1F	ADD115	Unknown alkane	23.552	1400	J
1F	ADD116	Unknown	23.743	520	J
1F	ADD11783-47-6	.gamma.-Sitosterol	24.188	850	NJ
1F	ADD118	Unknown	24.266	640	J
1F	ADD1191058-61-3	Stigmast-4-en-3-one	25.155	700	NJ
1F	ADD120	Unknown	25.451	470	JB
1F	ADD121	Unknown	25.887	470	JB

			Total:	51080	
			Adj. Total:	19080	
		Location ID: 2000-N			
1F	AEH116090	21			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.567	17000	NJ
1F	AED1 2	Unknown aliphatic ketone	6.421	1800	JB
1F	AED1 3	Unknown aliphatic ketone	6.465	450	J
1F	AED1 4	Unknown alkane	19.551	330	J
1F	AED1 5	Unknown alkane	20.614	470	J
1F	AED1 6	Unknown alkene	20.684	260	J
1F	AED1 7	Unknown aliphatic aldehyde	21.346	750	J
1F	AED1 8	Unknown alkane	21.607	2100	J
1F	AED1 9	Unknown alcohol	21.677	750	J
1F	AED110	Unknown aliphatic ketone	21.729	460	J
1F	AED111	Unknown	22.243	390	JB
1F	AED112	Unknown aliphatic aldehyde	22.313	790	J
1F	AED113	Unknown alkane	22.54	2600	J
1F	AED114	Unknown alkane	23.027	660	J
1F	AED115	Unknown alkane	23.55	1100	J
1F	AED116	Unknown aliphatic ketone	23.742	430	J
1F	AED117	Unknown alkane	23.977	350	J
1F	AED11883-47-6	.gamma.-Sitosterol	24.186	570	NJ
1F	AED119	Unknown	24.265	390	J
1F	AED1201058-61-3	Stigmast-4-en-3-one	25.153	730	NJ
1F	AED121	Unknown	25.885	430	JB
			Total:	32810	
			Adj. Total:	15810	
		Location ID: FIELD BLANK			
1F	AFH116091	5			
1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.255	44	NJAB
1F	AFD1 2	Unknown	6.623	10	JB
1F	AFD1 3	Unknown	6.745	9	JB
1F	AFD1 4	Unknown	22.88	3	JB
1F	AFD1 5	Unknown	24.022	2	J
			Total:	68	
			Adj. Total:	24	
		Location ID: SB16-1			
1F	AGH116093	21			
1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.549	30000	NJA
1F	AGD1 2	Unknown	5.941	180	J
1F	AGD1 3	Unknown	6.333	140	J
1F	AGD1 4	Unknown aliphatic ketone	6.412	1900	JB
1F	AGD1 5	Unknown alkane	7.536	110	J
1F	AGD1 6	Unknown aliphatic compound	11.361	82	J
1F	AGD1 7	Unknown aliphatic compound	13.504	120	J
1F	AGD1 8	Unknown alkane	14.262	97	J
1F	AGD1 9	Unknown aliphatic acid	16.179	150	J
1F	AGD11057-10-3	Hexadecanoic acid	16.231	100	NJ
1F	AGD111	Unknown polyalkoxy alcohol	20.944	280	JB

1F	AGD112	Unknown alkane	21.607	390	J
1F	AGD113	Unknown polyalkoxy alcohol	22.234	280	J
1F	AGD114	Unknown alkane	22.539	630	J
1F	AGD115	Unknown	22.791	270	J
1F	AGD116	Unknown	22.879	240	JB
1F	AGD117	Unknown polyalkoxy alcohol	23.576	380	J
1F	AGD118	Unknown	23.976	240	J
1F	AGD119	Unknown	24.804	250	J
1F	AGD120	Unknown	25.153	280	J
1F	AGD121	Unknown	25.884	530	JB
			Total:	36649	
			Adj. Total:	6649	
		Location ID: LAB BLANK			
1F	AHH1SBLKH5	6			
1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.252	16	NJA
1F	AHD1 2	Unknown	6.628	13	J
1F	AHD1 3	Unknown	6.75	11	J
1F	AHD1 4	Unknown aliphatic compound	11.385	2	J
1F	AHD1 5	Unknown	22.877	3	J
1F	AHD1 6	Unknown	25.883	2	J
			Total:	47	
		Location ID: LAB BLANK			
1F	AIH1SBLKL2	21			
1F	AID1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.411	28000	NJ
1F	AID1 2	Unknown aliphatic ketone	6.361	1600	J
1F	AID1 3	Unknown	6.535	94	J
1F	AID1 4	Unknown	7.302	260	J
1F	AID1 5	Unknown	17.957	90	J
1F	AID1 6	Unknown	18.715	340	J
1F	AID1 7	Unknown	19.543	150	J
1F	AID1 8	Unknown siloxane derivative	20.615	160	J
1F	AID1 9	Unknown polyalkoxy alcohol	20.972	290	J
1F	AID110	Unknown amide	21.155	89	J
1F	AID111	Unknown	21.355	87	J
1F	AID112	Unknown	21.504	170	J
1F	AID113	Unknown siloxane derivative	21.939	200	J
1F	AID114	Unknown	22.27	300	J
1F	AID115	Unknown	22.453	210	J
1F	AID116	Unknown	22.566	240	J
1F	AID117	Unknown	22.924	140	J
1F	AID118	Unknown	23.22	230	J
1F	AID119	Unknown	23.612	440	J
1F	AID120	Unknown	25.442	120	J
1F	AID121	Unknown	25.938	340	J
			Total:	33550	

		Location ID: FIELD BLANK			
1F	AAH116116	1			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.07	31	NJAB
			Total:	31	
			Adj. Total:	0	
		Location ID: SW/SD16-4			
1F	ABH116119	4			
1F	ABD1 1	Unknown	5.584	4	J
1F	ABD1 2123-42-2	2-Pentanone, 4-hydroxy-4-met	5.958	160	NJAB
1F	ABD1 3	Unknown	7.048	5	JB
1F	ABD1 4	Unknown polychlorinated comp	7.47	2	JB
			Total:	171	
			Adj. Total:	11	
		Location ID: SW/SD17-1			
1F	ACH116120	3			
1F	ACD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.056	21	NJAB
1F	ACD1 2	Unknown aliphatic acid	16.079	2	J
1F	ACD1 3	Unknown amide	20.968	2	J
			Total:	25	
			Adj. Total:	4	
		Location ID: SW/SD17-6			
1F	ADH116121	3			
1F	ADD1 1	Unknown	5.595	3	J
1F	ADD1 2123-42-2	2-Pentanone, 4-hydroxy-4-met	5.958	130	NJAB
1F	ADD1 33744-02-3	4-Penten-2-one, 4-methyl-	7.039	4	NJA
			Total:	137	
			Adj. Total:	7	
		Location ID: SW/SD17-9			
1F	AEH116122	2			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.052	28	NJAB
1F	AED1 2	Unknown aliphatic acid	11.222	2	J
			Total:	30	
			Adj. Total:	2	
		Location ID: SW/SD17-10			
1F	AFH116123	1			
1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.027	23	NJAB
			Total:	23	
			Adj. Total:	0	
		Location ID: SW/SD17-8			
1F	AGH116124	1			
1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.073	37	NJAB
			Total:	37	
			Adj. Total:	0	
		Location ID: SW/SD16-4			
1F	AHH116125	2			
1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.968	150	NJAB
1F	AHD1 2	Unknown aldol condensate	7.039	5	JA
			Total:	155	
			Adj. Total:	5	

		Location ID: SW/SD16-6			
1F	AIH116126	7			
1F	AID1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.928	75	NJAB
1F	AID1 2	Unknown	7.039	2	JB
1F	AID1 3	Unknown	18.481	3	J
1F	AID1 4	Unknown	20.058	5	J
1F	AID1 5	Unknown	21.468	6	J
1F	AID1 6	Unknown	22.772	5	J
1F	AID1 7	Unknown	24.262	4	J
			Total:	100	
			Adj. Total:	25	
		Location ID: SW/SD16-7			
1F	AJH116127	4			
1F	AJD1 1	Unknown aliphatic ketone	5.398	23	J
1F	AJD1 2	Unknown	5.535	11	J
1F	AJD1 3123-42-2	2-Pentanone, 4-hydroxy-4-met	5.918	120	NJAB
1F	AJD1 4	Unknown aliphatic ketone	7.029	3	J
			Total:	157	
			Adj. Total:	37	
		Location ID: SW/SD16-9			
1F	AKH116128	14			
1F	AKD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.27	220	NJAB
1F	AKD1 2	Unknown	6.359	6	JB
1F	AKD1 3	Unknown	9.697	2	J
1F	AKD1 4	Unknown aliphatic compound	11.91	3	J
1F	AKD1 5	Unknown	12.538	2	J
1F	AKD1 6	Unknown aliphatic compound	13.052	14	J
1F	AKD1 7	Unknown aliphatic compound	13.183	8	J
1F	AKD1 8	Unknown alcohol	13.244	3	J
1F	AKD1 9	Unknown alkane	13.296	2	J
1F	AKD110	Unknown	13.732	3	J
1F	AKD111	Unknown aliphatic acid	14.76	3	J
1F	AKD112	Unknown aliphatic acid	16.102	3	J
1F	AKD11357-10-3	Hexadecanoic acid	16.233	7	NJB
1F	AKD114	Unknown	21.33	9	JB
			Total:	285	
			Adj. Total:	65	
		Location ID: SW/SD16-10			
1F	ALH116129	11			
1F	ALD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.314	180	NJAB
1F	ALD1 2	Unknown	6.377	5	JB
1F	ALD1 3	Unknown polychlorinated comp	6.752	3	JB
1F	ALD1 4	Unknown	10.865	2	J
1F	ALD1 557-10-3	Hexadecanoic acid	16.224	3	NJB
1F	ALD1 6	Unknown amide	21.139	6	J
1F	ALD1 7	Unknown	22.263	3	JB
1F	ALD1 8	Unknown alkane	22.551	3	J
1F	ALD1 9	Unknown	23.806	2	JB
1F	ALD110	Unknown	26.15	3	J

1F	ALD111	Unknown	26.673	3	J
			Total:	213	
			Adj. Total:	33	
		Location ID: SW/SD17-2			
1F	AMH116130	5			
1F	AMD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.256	180	NJAB
1F	AMD1 2	Unknown aldol condensate	6.354	4	JA
1F	AMD1 3	Unknown	6.607	2	JB
1F	AMD1 4	Unknown polychlorinated comp	6.729	4	JB
1F	AMD1 5544-63-8	Tetradecanoic acid	16.219	3	NJ
			Total:	193	
			Adj. Total:	13	
		Location ID: SW/SD17-3			
1F	ANH116131	10			
1F	AND1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.288	220	NJAB
1F	AND1 2	Unknown aldol condensate	6.368	6	JA
1F	AND1 3	Unknown	6.621	3	JB
1F	AND1 4	Unknown polychlorinated comp	6.752	4	JB
1F	AND1 557-10-3	Hexadecanoic acid	16.224	3	NJB
1F	AND1 6	Unknown amide	21.13	3	J
1F	AND1 7	Unknown alkane	21.609	2	J
1F	AND1 8	Unknown alkane	22.551	4	J
1F	AND1 9	UnknownS	23.03	2	JZ
1F	AND110	Unknown	25.278	2	J
			Total:	249	
			Adj. Total:	29	
		Location ID: SW/SD17-7			
1F	AOH116132	3			
1F	AOD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.255	180	NJAB
1F	AOD1 2	Unknown aldol condensate	6.37	3	JA
1F	AOD1 3	Unknown polychlorinated comp	6.736	2	JB
			Total:	185	
			Adj. Total:	5	
		Location ID: SW/SD16-3			
1F	APH116133	4			
1F	APD1 175-85-4	Amylene Hydrate	5.615	3	NJ
1F	APD1 2123-42-2	2-Pentanone, 4-hydroxy-4-met	5.978	120	NJB
1F	APD1 33744-02-3	4-Penten-2-one, 4-methyl-	7.06	4	NJ
1F	APD1 457-10-3	Hexadecanoic acid	16.8	3	NJ
			Total:	130	
			Adj. Total:	10	
		Location ID: SW/SD16-8			
1F	AQH116134	5			
1F	AQD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.938	140	NJAB
1F	AQD1 2	Unknown	7.029	4	JB
1F	AQD1 3	Unknown	7.333	2	JB
1F	AQD1 4	Unknown	7.461	2	J
1F	AQD1 557-10-3	Hexadecanoic acid	16.793	2	NJ
			Total:	150	

			Adj. Total:	10	
		Location ID: SW/SD16-2			
1F	ARH116135	3			
1F	ARD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.998	120	NJAB
1F	ARD1 2	Unknown	7.069	4	JB
1F	ARD1 3	Unknown polychlorinated comp	7.482	2	JB
			Total:	126	
			Adj. Total:	6	
		Location ID: SW/SD16-2			
1F	ASH116135RE	3			
1F	ASD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	6.038	110	NJA
1F	ASD1 2	Unknown aldol condensate	7.09	4	JA
1F	ASD1 3	Unknown polychlorinated comp	7.503	2	JB
			Total:	116	
			Adj. Total:	6	
		Location ID: SW/SD17-4			
1F	ATH116136	5			
1F	ATD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.998	120	NJAB
1F	ATD1 2	Unknown	7.07	4	JB
1F	ATD1 3	Unknown	7.355	5	JB
1F	ATD1 4	Unknown polychlorinated comp	7.483	5	JB
1F	ATD1 557-10-3	Hexadecanoic acid	16.797	2	NJ
			Total:	136	
			Adj. Total:	16	
		Location ID: SW/SD17-5			
1F	AUH116137	4			
1F	AUD1 1	Unknown	5.624	3	J
1F	AUD1 2123-42-2	2-Pentanone, 4-hydroxy-4-met	5.988	120	NJAB
1F	AUD1 33744-02-3	4-Penten-2-one, 4-methyl-	7.059	4	NJA
1F	AUD1 457-10-3	Hexadecanoic acid	16.802	2	NJ
			Total:	129	
			Adj. Total:	9	
		Location ID: SW/SD16-5			
1F	AVH116142	11			
1F	AVD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.326	190	NJB
1F	AVD1 2	Unknown aldol condensate	6.38	6	JA
1F	AVD1 3	Unknown	6.624	2	JB
1F	AVD1 4	Unknown polychlorinated comp	6.755	4	JB
1F	AVD1 5105-60-2	Caprolactam	10.493	2	NJ
1F	AVD1 657-10-3	Hexadecanoic acid	16.227	4	NJB
1F	AVD1 7	Unknown	20.053	3	J
1F	AVD1 8	Unknown alkane	21.613	4	J
1F	AVD1 9	Unknown	22.475	3	JB
1F	AVD110	Unknown alkane	22.554	4	J
1F	AVD111	Unknown	22.972	6	J
			Total:	228	
			Adj. Total:	38	
		Location ID: SW/SD16-1			
1F	AWH116143	3			

1F	AWD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.219	150	NJAB
1F	AWD1 2	Unknown aldol condensate	6.343	4	JA
1F	AWD1 3	Unknown	23.562	4	J
			Total:	158	
			Adj. Total:	8	
		Location ID: LAB BLANK			
1F	AXH1SBLK6L	20			
1F	AXD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.255	210	NJA
1F	AXD1 2	Unknown	6.345	6	J
1F	AXD1 3	Unknown	6.606	3	J
1F	AXD1 4	Unknown polychlorinated comp	6.737	5	J
1F	AXD1 53622-84-2	Benzenesulfonamide, N-butyl-	15.137	17	NJ
1F	AXD1 657-10-3	Hexadecanoic acid	16.235	2	NJ
1F	AXD1 7	Unknown	20.453	3	J
1F	AXD1 8	Unknown	20.958	3	J
1F	AXD1 9	Unknown	21.377	2	J
1F	AXD110	Unknown	21.664	5	J
1F	AXD111	Unknown	21.743	3	J
1F	AXD112	Unknown	21.899	3	J
1F	AXD113	Unknown	22.082	4	J
1F	AXD114	Unknown	22.143	3	J
1F	AXD115	Unknown	22.196	3	J
1F	AXD116	Unknown	22.265	6	J
1F	AXD117	Unknown	22.448	4	J
1F	AXD118	Unknown	22.597	3	J
1F	AXD119	Unknown	23.851	8	J
1F	AXD120	Unknown	26.832	5	J
			Total:	298	
		Location ID: LAB BLANK			
1F	AYH1SBLKL2	1			
1F	AYD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.03	33	NJA
			Total:	33	
		Location ID: LAB BLANK			
1F	AZH1SBLKL6	5			
1F	AZD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.937	150	NJA
1F	AZD1 2	Unknown	7.037	5	J
1F	AZD1 3	Unknown	7.342	2	J
1F	AZD1 4	Unknown polychlorinated comp	7.47	4	J
1F	AZD1 53622-84-2	Benzenesulfonamide, N-butyl-	15.766	17	NJ
			Total:	178	

		Location ID: FIELD BLANK			
1F	AAH116100	3			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.983	26	NJAB
1F	AAD1 2	Unknown aliphatic compound	6.284	4	JB
1F	AAD1 3	Unknown halogenated compound	6.422	5	JB
			Total:	35	
			Adj. Total:	9	
		Location ID: FIELD BLANK			
1F	ABH116100RE	3			
1F	ABD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.819	90	NJAB
1F	ABD1 2	Unknown aliphatic compound	5.835	4	J
1F	ABD1 3109-21-7	Butanoic acid, butyl ester	11.363	5	NJ
			Total:	99	
			Adj. Total:	9	
		Location ID: MW16-1			
1F	ACH116101	12			
1F	ACD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.953	7	NJAB
1F	ACD1 257-10-3	Hexadecanoic acid	16.538	5	NJ
1F	ACD1 3	Unknown polyalkoxy alcohol	17.672	3	J
1F	ACD1 4	Unknown polyalkoxy alcohol	17.969	10	J
1F	ACD1 5	Unknown polyalkoxy alcohol	19.411	18	J
1F	ACD1 6	Unknown polyalkoxy alcohol	19.747	42	J
1F	ACD1 7	Unknown polyalkoxy alcohol	20.963	19	J
1F	ACD1 8	Unknown polyalkoxy alcohol	21.3	20	J
1F	ACD1 9	Unknown	22.002	48	J
1F	ACD110	Unknown polyalkoxy alcohol	22.398	17	J
1F	ACD111	Unknown polyalkoxy alcohol	23.923	4	J
1F	ACD112	Unknown	26.761	2	J
			Total:	195	
			Adj. Total:	188	
		Location ID: MW16-1			
1F	ADH116101RE	2			
1F	ADD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.728	53	NJAB
1F	ADD1 2	Unknown aliphatic compound	5.98	10	J
			Total:	63	
			Adj. Total:	10	
		Location ID: MW16-2			
1F	AEH116102	2			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.003	26	NJAB
1F	AED1 257-10-3	Hexadecanoic acid	16.526	2	NJ
			Total:	28	
			Adj. Total:	2	
		Location ID: MW16-2			
1F	AFH116102RE	1			
1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.768	84	NJAB
			Total:	84	
			Adj. Total:	0	
		Location ID: FIELD BLANK			
1F	AGH116103	1			

1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.747	23	NJAB
			Total:	23	
			Adj. Total:	0	
		Location ID: MW16-7			
1F	AHH116104	1			
1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.767	26	NJAB
			Total:	26	
			Adj. Total:	0	
		Location ID: MW16-4			
1F	AIH116105	1			
1F	AID1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.757	30	NJAB
			Total:	30	
			Adj. Total:	0	
		Location ID: MW17-5			
1F	AJH116106	1			
1F	AJD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.174	64	NJAB
			Total:	64	
			Adj. Total:	0	
		Location ID: FIELD BLANK			
1F	AKH116107	1			
1F	AKD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.008	46	NJAB
			Total:	46	
			Adj. Total:	0	
		Location ID: MW17-1			
1F	ALH116108	1			
1F	ALD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.029	34	NJAB
			Total:	34	
			Adj. Total:	0	
		Location ID: MW17-1			
1F	AMH116109	1			
1F	AMD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.055	38	NJAB
			Total:	38	
			Adj. Total:	0	
		Location ID: MW16-3			
1F	ANH116110	1			
1F	AND1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.06	50	NJAB
			Total:	50	
			Adj. Total:	0	
		Location ID: MW16-6			
1F	AOH116111	5			
1F	AOD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.799	95	NJAB
1F	AOD1 2	Unknown	5.164	15	J
1F	AOD1 3	Unknown	16.646	4	J
1F	AOD1 457-11-4	Octadecanoic acid	17.742	4	NJ
1F	AOD1 5	Unknown aliphatic compound	21.287	5	J
			Total:	123	
			Adj. Total:	28	
		Location ID: FIELD BLANK			
1F	APH116112	3			

1F	APD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.688	82	NJAB
1F	APD1 2	Unknown aliphatic compound	5.811	4	J
1F	APD1 3	Unknown halogenated compound	6.146	8	JB
			Total:	94	
			Adj. Total:	12	
		Location ID: FIELD BLANK			
1F	AQH116114	2			
1F	AQD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.855	140	NJAB
1F	AQD1 2	Unknown aliphatic compound	5.879	4	JB
			Total:	144	
			Adj. Total:	144	
		Location ID: MW16-3			
1F	ARH116115	4			
1F	ARD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.864	140	NJAB
1F	ARD1 2	Unknown aliphatic compound	5.889	4	JB
1F	ARD1 3872-50-4	2-Pyrrolidinone, 1-methyl-	7.604	4	NJ
1F	ARD1 4105-60-2	Caprolactam	10.174	2	NJ
			Total:	150	
			Adj. Total:	10	
		Location ID: LAB BLANK			
1F	ASH1SBLK4I	5			
1F	ASD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.209	34	NJA
1F	ASD1 2	Unknown aliphatic compound	11.308	4	J
1F	ASD1 3109-21-7	Butanoic acid, butyl ester	11.473	9	NJ
1F	ASD1 4	Unknown	22.756	5	J
1F	ASD1 5	Unknown	25.683	6	J
			Total:	20	
		Location ID: LAB BLANK			
1F	ATH1SBLKH5	3			
1F	ATD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.944	12	NJA
1F	ATD1 2	Unknown aliphatic compound	6.284	9	J
1F	ATD1 3	Unknown halogenated compound	6.412	9	J
			Total:	30	
		Location ID: LAB BLANK			
1F	AUH1SBLKI4	1			
1F	AUD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.747	23	NJA
			Total:	23	
		Location ID: LAB BLANK			
1F	AVH1SBLKJ5	2			
1F	AVD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.719	84	NJA
1F	AVD1 2	Unknown halogenated compound	6.149	8	J
			Total:	92	
		Location ID: LAB BLANK			
1F	AWH1SBLKK6	4			
1F	AWD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	4.894	160	NJA
1F	AWD1 2	Unknown aliphatic compound	5.888	4	J
1F	AWD1 3	Unknown aliphatic compound	6.105	2	J
1F	AWD1 43622-84-2	Benzenesulfonamide, N-butyl-	15.32	61	NJ
			Total:	227	

		Location ID: SW/SD16-4			
1F	AAH116119A	21			
1F	AAD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.256	7700	NJAB
1F	AAD1 2	Unknown aliphatic compound	6.189	3300	JB
1F	AAD1 3127-91-3	.beta.-Pinene	6.955	290	NJ
1F	AAD1 4	Unknown aliphatic compound	7.112	450	J
1F	AAD1 557-10-3	Hexadecanoic acid	16.044	220	NJ
1F	AAD1 6	Unknown	20.759	240	JB
1F	AAD1 7	Unknown aliphatic compound	21.151	240	J
1F	AAD1 8	Unknown	21.212	220	JB
1F	AAD1 9	Unknown	21.404	440	JB
1F	AAD110	Unknown	22.057	220	JB
1F	AAD111	Unknown aliphatic aledhyde	22.118	400	J
1F	AAD112	Unknown C31-alkane	22.345	520	J
1F	AAD113	Unknown aliphatic aledhyde	23.077	290	J
1F	AAD114	Unknown C33-alkane	23.312	330	J
1F	AAD115	Unknown	23.355	380	JB
1F	AAD116	Unknown sitosterol	23.887	550	J
1F	AAD117	Unknown aliphatic aledhyde	24.236	260	J
1F	AAD118	Unknown	25.063	400	JB
1F	AAD119	Unknown	25.412	410	J
1F	AAD120123-28-4	Propanoic acid, 3,3'-thiobis	25.525	1200	NJB
1F	AAD121	Unknown	26.371	400	J
			Total:	18460	
			Adj. Total:	10760	
		Location ID: SW/SD17-1			
1F	ABH116120A	21			
1F	ABD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.309	51000	NJAB
1F	ABD1 2	Unknown aliphatic compound	5.771	420	J
1F	ABD1 3	Unknown aliphatic compound	6.259	4000	JB
1F	ABD1 4	Unknown	7.156	520	JB
1F	ABD1 52091-29-4	9-Hexadecenoic acid	16.045	800	NJ
1F	ABD1 657-10-3	Hexadecanoic acid	16.097	450	NJ
1F	ABD1 7506-51-4	1-Tetracosanol	20.498	220	NJ
1F	ABD1 8	Unknown aliphatic aledhyde	21.195	280	J
1F	ABD1 9	Unknown	21.256	320	J
1F	ABD110	Unknown	21.447	520	J
1F	ABD111506-52-5	1-Hexacosanol	21.517	400	NJ
1F	ABD112	Unknown C31-alkane	22.389	350	J
1F	ABD113	Unknown	22.746	490	J
1F	ABD1144651-51-8	Ergost-5-en-3-ol, (3.beta.)-	23.408	340	NJ
1F	ABD115	Unknown	23.792	350	J
1F	ABD116	Unknown sitosterol	23.94	530	J
1F	ABD117	Unknown polyterpene derivati	24.28	140	J
1F	ABD118	Unknown	25.142	430	JB
1F	ABD119	Unknown	25.473	740	J
1F	ABD120123-28-4	Propanoic acid, 3,3'-thiobis	25.63	1900	NJB
1F	ABD121	Unknown	25.665	800	J
			Total:	65000	

			Adj. Total:	14000	
		Location ID: SW/SD17-6			
1F	ACH116121A	21			
1F	ACD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.185	75000	NJAB
1F	ACD1 2	Unknown aliphatic compound	6.153	4700	JB
1F	ACD1 3	Unknown	7.094	600	JB
1F	ACD1 457-10-3	Hexadecanoic acid	16.043	370	NJ
1F	ACD1 5112-80-1	Oleic Acid	17.255	260	NJ
1F	ACD1 6	Unknown	19.329	280	JB
1F	ACD1 7	Unknown	20.758	280	JB
1F	ACD1 8	Unknown aliphatic compound	20.932	230	J
1F	ACD1 9	Unknown	21.15	330	JB
1F	ACD110630-03-5	Nonacosane	21.42	640	NJ
1F	ACD111506-52-5	1-Hexacosanol	21.49	400	NJ
1F	ACD112	Unknown	22.056	340	JB
1F	ACD113	Unknown C31-alkane	22.344	710	J
1F	ACD114	Unknown C33-alkane	23.311	240	J
1F	ACD115	Unknown	23.355	410	JB
1F	ACD116	Unknown sitosterol	23.877	880	J
1F	ACD117	Unknown	24.723	620	J
1F	ACD1181058-61-3	Stigmast-4-en-3-one	24.775	380	NJ
1F	ACD119	Unknown	25.063	330	JB
1F	ACD120	Unknown	25.394	700	J
1F	ACD121123-28-4	Propanoic acid, 3,3'-thiobis	25.524	800	NJB
			Total:	88500	
			Adj. Total:	13500	
		Location ID: SW/SD17-9			
1F	ADH116122A	21			
1F	ADD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.278	45000	NJAB
1F	ADD1 2	Unknown aliphatic compound	6.246	3800	JB
1F	ADD1 3	Unknown	7.152	540	JB
1F	ADD1 42091-29-4	9-Hexadecenoic acid	16.058	1500	NJ
1F	ADD1 557-10-3	Hexadecanoic acid	16.11	950	NJ
1F	ADD1 6	Unknown aliphatic compound	17.278	500	J
1F	ADD1 7112-80-1	Oleic Acid	17.304	1200	NJ
1F	ADD1 857-11-4	Octadecanoic acid	17.426	250	NJ
1F	ADD1 9	Unknown	18.236	300	J
1F	ADD110	Unknown	19.709	670	J
1F	ADD111506-52-5	1-Hexacosanol	21.522	320	NJ
1F	ADD112	Unknown C31-alkane	22.393	440	J
1F	ADD113	Unknown	22.742	340	J
1F	ADD1144651-51-8	Ergost-5-en-3-ol, (3.beta.)-	23.413	470	NJ
1F	ADD115	Unknown aliphatic compound	23.787	310	J
1F	ADD116	Unknown sitosterol	23.944	1100	J
1F	ADD1171058-61-3	Stigmast-4-en-3-one	24.859	400	NJ
1F	ADD118	Unknown	25.147	460	JB
1F	ADD119	Unknown	25.478	840	J
1F	ADD120123-28-4	Propanoic acid, 3,3'-thiobis	25.617	1200	NJB
1F	ADD121	Unknown polyterpene derivati	25.661	1000	J

			Total:	61590	
			Adj. Total:	16590	
		Location ID: SW/SD17-10			
1F	AEH116123A	21			
1F	AED1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.297	46000	NJAB
1F	AED1 2	Unknown	5.768	390	J
1F	AED1 3	Unknown aliphatic compound	6.256	3600	JB
1F	AED1 4	Unknown	7.154	570	JB
1F	AED1 5	Unknown acid	16.051	1100	J
1F	AED1 657-10-3	Hexadecanoic acid	16.103	800	NJ
1F	AED1 7112-80-1	Oleic Acid	17.297	510	NJ
1F	AED1 8	Unknown	17.323	310	J
1F	AED1 9661-19-8	1-Docosanol	19.397	690	NJ
1F	AED110506-51-4	1-Tetracosanol	20.495	1300	NJ
1F	AED111	Unknown acid	20.87	290	J
1F	AED112630-03-5	Nonacosane	21.462	310	NJ
1F	AED113506-52-5	1-Hexacosanol	21.523	650	NJ
1F	AED114	Unknown C31-alkane	22.395	400	J
1F	AED115	Unknown	23.414	350	JB
1F	AED116	Unknown	23.789	400	J
1F	AED117	Unknown sitosterol	23.946	500	J
1F	AED1181058-61-3	Stigmast-4-en-3-one	24.861	250	NJ
1F	AED119	Unknown	25.026	320	J
1F	AED120	Unknown	25.148	460	JB
1F	AED121123-28-4	Propanoic acid, 3,3'-thiobis	25.619	1300	NJB
			Total:	60500	
			Adj. Total:	14500	
		Location ID: SW/SD17-8			
1F	AFH116124A	21			
1F	AFD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.291	54000	NJAB
1F	AFD1 2	Unknown aliphatic compound	6.258	4200	JB
1F	AFD1 3	Unknown	7.156	570	JB
1F	AFD1 42091-29-4	9-Hexadecenoic acid	16.044	880	NJ
1F	AFD1 557-10-3	Hexadecanoic acid	16.097	740	NJ
1F	AFD1 6629-99-2	Pentacosane	19.399	730	NJ
1F	AFD1 7593-49-7	Heptacosane	20.471	510	NJ
1F	AFD1 8506-51-4	1-Tetracosanol	20.506	590	NJ
1F	AFD1 9	Unknown carboxylic acid	20.872	370	J
1F	AFD110630-03-5	Nonacosane	21.464	870	NJ
1F	AFD111506-52-5	1-Hexacosanol	21.525	1200	NJ
1F	AFD112	Unknown C31-alkane	22.397	1400	J
1F	AFD113	Unknown	22.745	460	J
1F	AFD114	Unknown C33-alkane	23.373	600	J
1F	AFD115	Unknown	23.416	690	JB
1F	AFD116	Unknown	23.8	610	J
1F	AFD117	Unknown sitosterol	23.948	1400	J
1F	AFD118	Unknown	24.288	230	J
1F	AFD1191058-61-3	Stigmast-4-en-3-one	24.863	450	NJ
1F	AFD120	Unknown	25.142	510	JB

1F	AFD121123-28-4	Propanoic acid, 3,3'-thiobis	25.621	1400	NJB
			Total:	72410	
			Adj. Total:	18410	
		Location ID: SW/SD16-4			
1F	AGH116125A	21			
1F	AGD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.195	25000	NJAB
1F	AGD1 2	Unknown aliphatic compound	6.162	8600	JB
1F	AGD1 3	Unknown	7.094	1000	JB
1F	AGD1 4112-40-3	Dodecane	14.083	1200	NJ
1F	AGD1 52091-29-4	9-Hexadecenoic acid	15.939	800	NJ
1F	AGD1 62091-29-4	9-Hexadecenoic acid	15.991	1000	NJ
1F	AGD1 757-10-3	Hexadecanoic acid	16.052	1400	NJ
1F	AGD1 87704-34-9	Sulfur	16.994	1400	NJ
1F	AGD1 9	Unknown	17.281	820	J
1F	AGD110	Unknown aliphatic aledhyde	17.787	2100	J
1F	AGD111	Unknown aliphatic aledhyde	18.998	1900	J
1F	AGD112506-52-5	1-Hexacosanol	19.373	840	NJ
1F	AGD113630-03-5	Nonacosane	21.412	840	NJ
1F	AGD114	Unknown	22.266	2000	J
1F	AGD115	Unknown C31-alkane	22.344	810	J
1F	AGD116	Unknown	23.355	1100	JB
1F	AGD117	Unknown sitosterol	23.878	4000	J
1F	AGD1181058-61-3	Stigmast-4-en-3-one	24.784	880	NJ
1F	AGD119	Unknown	25.063	780	JB
1F	AGD120	Unknown	25.403	1000	J
1F	AGD121123-28-4	Propanoic acid, 3,3'-thiobis	25.525	3000	NJB
			Total:	60470	
			Adj. Total:	35470	
		Location ID: SW/SD16-6			
1F	AHH116126A	21			
1F	AHD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.114	66000	NJAB
1F	AHD1 2	Unknown aliphatic compound	6.16	4200	JB
1F	AHD1 3629-92-5	Nonadecane	15.571	720	NJ
1F	AHD1 42091-29-4	9-Hexadecenoic acid	15.989	1200	NJ
1F	AHD1 557-10-3	Hexadecanoic acid	16.042	1000	NJ
1F	AHD1 6112-95-8	Eicosane	16.268	790	NJ
1F	AHD1 7629-94-7	Heneicosane	16.939	710	NJ
1F	AHD1 8629-97-0	Docosane	17.575	880	NJ
1F	AHD1 9638-67-5	Tricosane	18.194	860	NJ
1F	AHD110646-31-1	Tetracosane	18.778	920	NJ
1F	AHD111629-99-2	Pentacosane	19.344	1400	NJ
1F	AHD112630-01-3	Hexacosane	19.893	770	NJ
1F	AHD113593-49-7	Heptacosane	20.416	1200	NJ
1F	AHD114630-03-5	Nonacosane	21.418	1100	NJ
1F	AHD115506-52-5	1-Hexacosanol	21.471	1000	NJ
1F	AHD116638-68-6	Triacontane	21.889	690	NJ
1F	AHD117	Unknown C31-alkane	22.351	1400	J
1F	AHD118	Unknown	23.876	1300	J
1F	AHD119	Unknown	25.07	800	JB

1F	AHD120	Unknown	25.41	940	J
1F	AHD121123-28-4	Propanoic acid, 3,3'-thiobis	25.532	1900	NJB
			Total:	89780	
			Adj. Total:	23780	
		Location ID: SW/SD16-7			
1F	AIH116127A	22			
1F	AID1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.096	82000	NJAB
1F	AID1 2	Unknown aliphatic compound	6.16	4600	JB
1F	AID1 3	Unknown	7.083	640	JB
1F	AID1 457-10-3	Hexadecanoic acid	16.033	620	NJ
1F	AID1 5	Unknown aliphatic compound	18.185	810	J
1F	AID1 6	Unknown aliphatic aledhyde	18.987	870	J
1F	AID1 7	Unknown alcohol	19.344	990	J
1F	AID1 8	Unknown	21.47	670	JB
1F	AID1 9	Unknown alkane	22.342	710	J
1F	AID110	Unknown polycyclic hydrocarb	22.525	860	J
1F	AID111	Unknown alkane	22.804	470	J
1F	AID112	Unknown polycyclic hydrocarb	22.952	1300	J
1F	AID113	Unknown polycyclic hydrocarb	23.483	660	J
1F	AID114	Unknown polycyclic hydrocarb	23.553	710	J
1F	AID115	Unknown	23.876	1200	J
1F	AID116	Unknown polycyclic hydrocarb	23.937	730	J
1F	AID117	Unknown polyterpene derivati	24.782	680	J
1F	AID118	Unknown	25.409	980	J
1F	AID119123-28-4	Propanoic acid, 3,3'-thiobis	25.523	1500	NJB
1F	AID120	Unknown	25.566	1000	J
1F	AID121	Unknown polycyclic hydrocarb	26.124	840	J
1F	AID122	Unknown polycyclic hydrocarb	26.377	700	J
			Total:	103540	
			Adj. Total:	21540	
		Location ID: SW/SD16-9			
1F	AJH116128A	21			
1F	AJD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.132	72000	NJAB
1F	AJD1 2	Unknown aliphatic compound	6.125	3400	JB
1F	AJD1 3	Unknown	7.075	500	JB
1F	AJD1 42091-29-4	9-Hexadecenoic acid	15.981	720	NJ
1F	AJD1 557-10-3	Hexadecanoic acid	16.042	750	NJ
1F	AJD1 6	Unknown aliphatic compound	17.262	610	J
1F	AJD1 7593-49-7	Heptacosane	20.408	380	NJ
1F	AJD1 8630-03-5	Nonacosane	21.41	480	NJ
1F	AJD1 9192-97-2	Benzo[e]pyrene	21.619	340	J
1F	AJD110	Unknown C31-alkane	22.342	700	J
1F	AJD111	Unknown polycyclic hydrocarb	22.525	430	J
1F	AJD11257-88-5	Cholesterol	22.778	420	NJ
1F	AJD113	Unknown stigmasterol	23.527	900	J
1F	AJD114	Unknown sitosterol	23.867	2000	J
1F	AJD115	Unknown polyterpene derivati	24.207	600	J
1F	AJD1161058-61-3	Stigmast-4-en-3-one	24.782	1100	NJ
1F	AJD117	Unknown	25.052	580	JB

1F	AJD118	Unknown	25.392	670	J
1F	AJD119123-28-4	Propanoic acid, 3,3'-thiobis	25.514	630	NJB
1F	AJD120	Unknown	25.558	670	J
1F	AJD121	Unknown	26.107	470	J
			Total:	88350	
			Adj. Total:	16350	
		Location ID: SW/SD16-10			
1F	AKH116129A	21			
1F	AKD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.151	84000	NJAB
1F	AKD1 2	Unknown aliphatic compound	6.136	4200	JB
1F	AKD1 3629-78-7	Heptadecane	14.083	970	NJ
1F	AKD1 4593-45-3	Octadecane	14.85	1000	NJ
1F	AKD1 5629-92-5	Nonadecane	15.591	1000	NJ
1F	AKD1 6593-49-7	Heptacosane	20.436	940	NJ
1F	AKD1 7630-03-5	Nonacosane	21.438	1300	NJ
1F	AKD1 8506-52-5	1-Hexacosanol	21.49	2000	NJ
1F	AKD1 9	Unknown C31-alkane	22.37	2400	J
1F	AKD110	Unknown polycyclic hydrocarb	22.553	1600	J
1F	AKD111	Unknown polycyclic hydrocarb	22.98	880	J
1F	AKD112	Unknown C33-alkane	23.338	980	J
1F	AKD113	Unknown polycyclic hydrocarb	23.582	1100	J
1F	AKD114	Unknown polyterpene derivati	23.904	2600	J
1F	AKD115	Unknown	24.104	1600	J
1F	AKD1161058-61-3	Stigmast-4-en-3-one	24.828	1100	NJ
1F	AKD117	Unknown polyterpene derivati	25.115	2800	J
1F	AKD118	Unknown polyterpene derivati	25.438	3500	J
1F	AKD119123-28-4	Propanoic acid, 3,3'-thiobis	25.577	1600	NJB
1F	AKD120	Unknown	25.629	3100	J
1F	AKD121	Unknown ergostenol	25.83	990	J
			Total:	119660	
			Adj. Total:	35660	
		Location ID: SW/SD17-2			
1F	ALH116130A	21			
1F	ALD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.168	81000	NJAB
1F	ALD1 2	Unknown aliphatic compound	6.144	4300	JB
1F	ALD1 3	Unknown	7.085	610	JB
1F	ALD1 4112-85-6	Docosanoic acid	19.765	540	NJ
1F	ALD1 5	Unknown carboxylic acid	20.828	280	J
1F	ALD1 6506-52-5	1-Hexacosanol	21.49	320	NJ
1F	ALD1 7	Unknown	22.065	430	JB
1F	ALD1 8	Unknown C31-alkane	22.353	380	J
1F	ALD1 9	Unknown	22.701	400	J
1F	ALD110	Unknown	23.364	380	JB
1F	ALD111	Unknown stigmasterol	23.555	350	J
1F	ALD112	Unknown sitosterol	23.886	1000	J
1F	ALD113	Unknown	24.096	390	J
1F	ALD114	Unknown polyterpene derivati	24.322	920	J
1F	ALD115	Unknown	24.488	420	JB
1F	ALD116	Unknown polyterpene derivati	24.723	1000	J

1F	ALD1171058-61-3	Stigmast-4-en-3-one	24.801	810	NJ
1F	ALD118	Unknown	25.08	580	JB
1F	ALD119	Unknown polyterpene derivati	25.403	870	J
1F	ALD120123-28-4	Propanoic acid, 3,3'-thiobis	25.542	1200	NJB
1F	ALD121	Unknown	25.586	900	J
			Total:	97080	
			Adj. Total:	16080	
		Location ID: SW/SD17-3			
1F	AMH116131A	21			
1F	AMD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.331	3800	NJAB
1F	AMD1 2	Unknown aliphatic compound	5.732	330	J
1F	AMD1 3	Unknown aliphatic compound	6.22	3400	JB
1F	AMD1 4	Unknown	7.126	510	JB
1F	AMD1 557-10-3	Hexadecanoic acid	16.049	190	NJ
1F	AMD1 6	Unknown	20.764	220	JB
1F	AMD1 7	Unknown aliphatic compound	20.938	240	J
1F	AMD1 8630-03-5	Nonacosane	21.417	290	NJ
1F	AMD1 9506-52-5	1-Hexacosanol	21.478	280	NJ
1F	AMD110	Unknown	22.062	340	JB
1F	AMD111	Unknown C31-alkane	22.35	430	J
1F	AMD112	Unknown	23.361	470	JB
1F	AMD113	Unknown alcohol	23.735	280	J
1F	AMD114	Unknown sitosterol	23.883	700	J
1F	AMD115	Unknown	24.441	300	J
1F	AMD116	Unknown	24.659	220	J
1F	AMD1171058-61-3	Stigmast-4-en-3-one	24.79	260	NJ
1F	AMD118	Unknown	25.069	640	JB
1F	AMD119	Unknown	25.4	350	J
1F	AMD120123-28-4	Propanoic acid, 3,3'-thiobis	25.539	1000	NJB
1F	AMD121	Unknown	25.574	540	J
			Total:	14790	
			Adj. Total:	10990	
		Location ID: SW/SD17-7			
1F	ANH116132A	21			
1F	AND1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.222	66000	NJAB
1F	AND1 2	Unknown aliphatic compound	6.206	4500	JB
1F	AND1 3	Unknown aliphatic compound	7.113	860	J
1F	AND1 4	Unknown aliphatic acid	16.001	360	J
1F	AND1 557-10-3	Hexadecanoic acid	16.053	410	NJ
1F	AND1 6506-51-4	1-Tetracosanol	20.463	420	NJ
1F	AND1 7	Unknown	22.084	230	JB
1F	AND1 8	Unknown C31-alkane	22.345	230	J
1F	AND1 9	Unknown	23.356	450	JB
1F	AND110	Unknown	23.739	220	J
1F	AND111	Unknown polyterpene derivati	23.888	670	J
1F	AND112	Unknown polyterpene derivati	24.044	610	J
1F	AND113	Unknown polyterpene derivati	24.227	240	J
1F	AND114	Unknown	24.288	240	J
1F	AND115	Unknown	24.367	3200	J

1F	AND116	Unknown polyterpene derivati	24.524	830	J
1F	AND1171058-61-3	Stigmast-4-en-3-one	24.785	250	NJ
1F	AND118	Unknown	25.081	880	JB
1F	AND119	Unknown	25.395	640	J
1F	AND120123-28-4	Propanoic acid, 3,3'-thiobis	25.535	990	NJB
1F	AND121	Unknown	25.587	820	J
			Total:	83050	
			Adj. Total:	17050	
		Location ID: SW/SD16-3			
1F	AOH116133A	21			
1F	AOD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.244	55000	NJAB
1F	AOD1 2	Unknown aliphatic compound	6.176	3400	JB
1F	AOD1 3	Unknown	7.1	450	JB
1F	AOD1 4544-76-3	Hexadecane	13.261	330	NJ
1F	AOD1 5629-78-7	Heptadecane	14.08	700	J
1F	AOD1 61921-70-6	Pentadecane, 2,6,10,14-tetra	14.123	440	NJ
1F	AOD1 7593-45-3	Octadecane	14.847	630	NJ
1F	AOD1 8638-36-8	Hexadecane, 2,6,10,14-tetram	14.925	300	NJ
1F	AOD1 9629-92-5	Nonadecane	15.587	650	NJ
1F	AOD11057-10-3	Hexadecanoic acid	16.049	340	NJ
1F	AOD111112-95-8	Eicosane	16.284	570	NJ
1F	AOD112629-94-7	Heneicosane	16.955	380	NJ
1F	AOD113629-99-2	Pentacosane	19.361	340	NJ
1F	AOD114	Unknown C31-alkane	22.358	280	J
1F	AOD11557-88-5	Cholesterol	22.794	310	NJ
1F	AOD116	Unknown ergostenol	23.369	500	J
1F	AOD117	Unknown sitosterol	23.892	1300	J
1F	AOD1181058-61-3	Stigmast-4-en-3-one	24.807	490	NJ
1F	AOD119	Unknown	25.086	340	JB
1F	AOD120123-28-4	Propanoic acid, 3,3'-thiobis	25.548	530	NJB
1F	AOD121	Unknown polyterpene derivati	26.149	360	J
			Total:	67640	
			Adj. Total:	12640	
		Location ID: SW/SD16-8			
1F	APH116134A	22			
1F	APD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.244	59000	NJAB
1F	APD1 2	Unknown aliphatic compound	6.176	3600	JB
1F	APD1 3	Unknown	7.1	470	JB
1F	APD1 4	Unknown aliphatic acid	15.988	400	J
1F	APD1 557-10-3	Hexadecanoic acid	16.049	310	NJ
1F	APD1 6	Unknown aliphatic compound	17.252	240	J
1F	APD1 7629-99-2	Pentacosane	19.361	200	NJ
1F	APD1 8	Unknown aliphatic compound	20.459	190	J
1F	APD1 9630-02-4	Octacosane W/Unknown	20.929	200	NJZ
1F	APD110630-03-5	Nonacosane	21.426	350	NJ
1F	APD111506-52-5	1-Hexacosanol	21.478	260	NJ
1F	APD112	Unknown	22.062	240	JB
1F	APD113	Unknown C31-alkane	22.35	470	J
1F	APD114	Unknown	22.698	250	J

1F	APD115	Unknown	23.361	370	JB
1F	APD116	Unknown aliphatic compound	23.735	360	J
1F	APD117	Unknown sitosterol	23.883	440	J
1F	APD1181058-61-3	Stigmast-4-en-3-one	24.798	220	NJ
1F	APD119	Unknown	25.077	330	JB
1F	APD120	Unknown polyterpene derivati	25.4	410	J
1F	APD121123-28-4	Propanoic acid, 3,3'-thiobis	25.539	1500	NJB
1F	APD122	Unknown	26.14	200	J
			Total:	70010	
			Adj. Total:	11010	
		Location ID: SW/SD16-2			
1F	AQH116135A	21			
1F	AQD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.248	86000	NJAB
1F	AQD1 2	Unknown aliphatic compound	6.18	5400	JB
1F	AQD1 32091-29-4	9-Hexadecenoic acid	15.94	680	NJ
1F	AQD1 457-10-3	Hexadecanoic acid	16.054	990	NJ
1F	AQD1 5	Unknown aliphatic compound	16.838	690	J
1F	AQD1 6661-19-8	1-Docosanol	19.365	940	NJ
1F	AQD1 7506-51-4	1-Tetracosanol	20.463	800	NJ
1F	AQD1 8630-03-5	Nonacosane	21.43	960	NJ
1F	AQD1 9506-52-5	1-Hexacosanol	21.482	1200	NJ
1F	AQD110	Unknown C31-alkane	22.354	940	J
1F	AQD1114651-51-8	Ergost-5-en-3-ol, (3.beta.)-	23.365	660	NJ
1F	AQD11283-48-7	Stigmasterol	23.548	670	NJ
1F	AQD113	Unknown sitosterol	23.905	2800	J
1F	AQD114	Unknown	23.966	670	J
1F	AQD115	Unknown polyterpene derivati	24.236	810	J
1F	AQD116	Unknown polyterpene derivati	24.567	760	J
1F	AQD11787-44-5	Caryophyllene	24.75	680	NJ
1F	AQD1181058-61-3	Stigmast-4-en-3-one	24.82	1400	NJ
1F	AQD119	Unknown	25.421	2000	J
1F	AQD120123-28-4	Propanoic acid, 3,3'-thiobis	25.552	1100	NJB
1F	AQD121	Unknown polyterpene derivati	25.604	1400	J
			Total:	111550	
			Adj. Total:	25550	
		Location ID: SW/SD17-4			
1F	ARH116136A	21			
1F	ARD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.237	69000	NJAB
1F	ARD1 2	Unknown aliphatic compound	6.178	4400	JB
1F	ARD1 3	Unknown	7.102	830	JB
1F	ARD1 4	Unknown aliphatic compound	15.947	410	J
1F	ARD1 52091-29-4	9-Hexadecenoic acid	15.999	470	NJ
1F	ARD1 657-10-3	Hexadecanoic acid	16.06	860	NJ
1F	ARD1 7629-99-2	Pentacosane	19.363	480	NJ
1F	ARD1 8629-97-0	Docosane	20.426	390	NJ
1F	ARD1 9630-03-5	Nonacosane	21.42	740	NJ
1F	ARD110506-52-5	1-Hexacosanol	21.481	1200	NJ
1F	ARD111	Unknown	22.317	1300	J
1F	ARD112	Unknown C31-alkane	22.352	1200	J

1F	ARD113	Unknown	22.544	420	J
1F	ARD114	Unknown	22.701	590	J
1F	ARD115	Unknown polyterpene derivati	23.363	500	J
1F	ARD116	Unknown sitosterol	23.886	1600	J
1F	ARD117	Unknown	23.955	400	J
1F	ARD1181058-61-3	Stigmast-4-en-3-one	24.801	660	NJ
1F	ARD119	Unknown	25.411	1600	J
1F	ARD120123-28-4	Propanoic acid, 3,3'-thiobis	25.533	670	NJB
1F	ARD121	Unknown	25.594	2200	J
			Total:	89920	
			Adj. Total:	20920	
		Location ID: SW/SD17-5			
1F	ASH116137A	21			
1F	ASD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.253	57000	NJAB
1F	ASD1 2	Unknown aliphatic compound	6.186	3500	JB
1F	ASD1 3	Unknown	7.11	590	JB
1F	ASD1 42091-29-4	9-Hexadecenoic acid	15.937	440	NJ
1F	ASD1 52091-29-4	9-Hexadecenoic acid	15.998	860	NJ
1F	ASD1 657-10-3	Hexadecanoic acid	16.059	890	NJ
1F	ASD1 7593-49-7	Heptacosane	20.425	420	NJ
1F	ASD1 8630-03-5	Nonacosane	21.427	1000	NJ
1F	ASD1 9506-52-5	1-Hexacosanol	21.479	670	NJ
1F	ASD110	Unknown C31-alkane	22.359	3500	J
1F	ASD111	Unknown	22.447	7000	J
1F	ASD112	Unknown	22.699	640	J
1F	ASD1134651-51-8	Ergost-5-en-3-ol, (3.beta.)-	23.362	680	NJ
1F	ASD114	Unknown	23.736	510	J
1F	ASD115	Unknown sitosterol	23.893	1700	J
1F	ASD116	Unknown	24.721	500	J
1F	ASD1171058-61-3	Stigmast-4-en-3-one	24.808	880	NJ
1F	ASD118	Unknown	25.113	700	JB
1F	ASD119	Unknown	25.401	1100	J
1F	ASD120123-28-4	Propanoic acid, 3,3'-thiobis	25.54	860	NJB
1F	ASD121	Unknown polyterpene derivati	25.592	1400	J
			Total:	84840	
			Adj. Total:	27840	
		Location ID: SW/SD16-5			
1F	ATH116142A	19			
1F	ATD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.184	10000	NJAB
1F	ATD1 2	Unknown aliphatic compound	6.152	3500	JB
1F	ATD1 3	Unknown	7.084	620	JB
1F	ATD1 4	Unknown aliphatic compound	7.337	140	J
1F	ATD1 557-10-3	Hexadecanoic acid	16.042	140	NJ
1F	ATD1 6629-96-9	1-Eicosanol	18.186	200	NJ
1F	ATD1 7	Unknown aliphatic aledhyde	19.005	230	J
1F	ATD1 8506-51-4	1-Tetracosanol	20.469	160	NJ
1F	ATD1 9	Unknown	20.765	180	JB
1F	ATD110301-02-0	9-Octadecenamide, (Z)-	20.931	160	NJ
1F	ATD111	Unknown	22.064	210	JB

1F	ATD112	Unknown C31-alkane	22.351	140	J
1F	ATD113	Unknown	23.353	290	JB
1F	ATD114	Unknown polyterpene derivati	23.885	260	J
1F	ATD115	Unknown	25.07	290	JB
1F	ATD116	Unknown	25.419	160	J
1F	ATD117123-28-4	Propanoic acid, 3,3'-thiobis	25.532	1100	NJB
1F	ATD118	Unknown	26.177	300	J
1F	ATD119	Unknown	26.386	170	J
			Total:	18250	
			Adj. Total:	8250	
		Location ID: SW/SD16-1			
1F	AUH116143A	21			
1F	AUD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.401	50000	NJAB
1F	AUD1 2	Unknown aliphatic compound	6.386	5600	J
1F	AUD1 357-10-3	Hexadecanoic acid	16.259	1200	NJ
1F	AUD1 4836-30-6	Benzenamine, 4-nitro-N-pheny	18.403	750	NJZ
1F	AUD1 5	Unknown	21.645	2100	JB
1F	AUD1 6	Unknown	21.74	2300	J
1F	AUD1 7192-97-2	Benzo[e]pyrene	21.95	2100	NJ
1F	AUD1 8	Unknown polycyclic hydrocarb	21.993	3000	J
1F	AUD1 9	Unknown polycyclic hydrocarb	22.211	2500	J
1F	AUD110	Unknown	22.385	2500	J
1F	AUD111	Unknown	22.499	5000	J
1F	AUD112	Unknown C31-alkane	22.621	3500	J
1F	AUD113	Unknown polyterpene derivati	22.856	8800	J
1F	AUD114	Unknown polyterpene derivati	23.309	7900	J
1F	AUD115	Unknown polycyclic hydrocarb	23.875	3900	J
1F	AUD116	Unknown polycyclic hydrocarb	23.954	3200	J
1F	AUD117	Unknown polycyclic hydrocarb	24.363	3100	J
1F	AUD118	Unknown polycyclic hydrocarb	24.485	2700	J
1F	AUD119	Unknown polycyclic hydrocarb	25.026	2800	J
1F	AUD1201058-61-3	Stigmast-4-en-3-one	25.313	1700	NJ
1F	AUD121	Unknown polyterpene derivati	26.176	2100	J
			Total:	116750	
			Adj. Total:	66750	
		Location ID:			
1F	AVH1SBLKQ5	11			
1F	AVD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.323	33000	NJA
1F	AVD1 2	Unknown aliphatic compound	6.264	2800	J
1F	AVD1 3	Unknown	7.162	340	J
1F	AVD1 4	Unknown aliphatic compound	7.406	140	J
1F	AVD1 5	Unknown aliphatic compound	7.493	91	J
1F	AVD1 6	Unknown	19.37	69	J
1F	AVD1 7	Unknown	20.8	90	J
1F	AVD1 8	Unknown	22.098	100	J
1F	AVD1 9	Unknown	23.405	110	J
1F	AVD110	Unknown	25.139	90	J
1F	AVD111123-28-4	Propanoic acid, 3,3'-thiobis	25.619	800	NJ
			Total:	37630	

		Location ID:			
1F	AWH1SBLKQ6	15			
1F	AWD1 1123-42-2	2-Pentanone, 4-hydroxy-4-met	5.212	40000	NJA
1F	AWD1 2	Unknown aliphatic compound	6.17	2700	J
1F	AWD1 3	Unknown	7.103	360	J
1F	AWD1 4	Unknown	7.347	120	J
1F	AWD1 5	Unknown	7.443	68	J
1F	AWD1 6	Unknown	19.329	120	J
1F	AWD1 7	Unknown	20.758	180	J
1F	AWD1 8	Unknown	21.211	180	J
1F	AWD1 9	Unknown	21.403	230	J
1F	AWD110	Unknown	21.595	120	J
1F	AWD111	Unknown	22.056	170	J
1F	AWD112	Unknown	23.355	170	J
1F	AWD113	Unknown	24.549	67	J
1F	AWD114	Unknown	25.071	170	J
1F	AWD115123-28-4	Propanoic acid, 3,3'-thiobis	25.533	700	NJ
			Total:	45355	

APPENDIX H

VLEACH and SUMMERS Modeling Data/Results

- VLEACH Input Parameters for all Scenarios
- Example of VLEACH Model Output Files
- Example of SUMMERS Model Output File

VLEACH Input Parameters for all Scenarios

VLEACH Input Parameters
for the Simulated Transport of Lead

Parameter	Model Name	Units	Simulation Scenarios				
			Pb-1	Pb-2	Pb-3	Pb-4	Pb-5
			Base	Kd low	Kd high	Q low	Q high
Simulation Data:							
Number of Polygons	NPLOY	dimensionless	1	1	1	1	1
Timestep	DELT	years days	0.02 7	0.02 7	0.02 7	0.02 7	0.02 7
Simulation Time	STIME	years	3000	3000	3000	3000	3000
Output Time Interval	PTIME	years	10	10	10	10	10
Profile Time Interval	PRTIME	years	10	10	10	10	10
Organic Carbon Distrubution Coefficient (K_{oc})[1]	KOC	ml/g	4950	900	27450	4950	4950
Soil Water Partitioning Coefficient (K_d) [1]	(clac by model)	ml/g	99	18	549	99	99
Henry's Constant (K_H)	KH	dimensionless	0	0	0	0	0
Water Solubility	CMAX	mg/L	23	23	23	23	23
Free Air Diffusion Coefficient	DAIR	m^2/day	0	0	0	0	0
Polygon Data:							
Area at SEAD-16	AREA	ft^2	25,550	25,550	25,550	25,550	25,550
Area at SEAD-17	AREA	ft^2	36,935	36,935	36,935	36,935	36,935
Vertical Cell Dimension (cell thickness)	DELZ	ft.	0.1	0.1	0.1	0.1	0.1
Recharge Rate	Q	ft./year in./year	0.59 7.10	0.59 7.10	0.59 7.10	0.29 3.50	0.88 10.60
Dry Bulk Density	RHOB	g/cc	1.65	1.65	1.65	1.65	1.65
Effective Porosity	POR	dimensionless	0.2	0.2	0.2	0.2	0.2
Volumetric Water Content	THETA	dimensionless	0.13	0.13	0.13	0.13	0.13

VLEACH Input Parameters
for the Simulated Transport of Lead

Parameter	Model Name	Units	Simulation Scenarios				
			Pb-1	Pb-2	Pb-3	Pb-4	Pb-5
			Base	Kd low	Kd high	Q low	Q high
Soil Organic Carbon Content (f_{oc})	FOC	dimensionless	0.02	0.02	0.02	0.02	0.02
Concentration of Recharge Water	CINF	mg/L	0	0	0	0	0
Upper Boundary Condition for Vapor	CATM	mg/L	0	0	0	0	0
Lower Boundary Condition for Vapor	CGW	mg/L	0	0	0	0	0
Cell Number (number of cells in polygon)	NCELL	unitless	30	30	30	30	30
Plot Variable	PLT	unitless	y	y	y	y	y
Plot Time	PLTIME	years	100	100	100	100	100
Initial Contaminant Concentration	XCON	ug/Kg	Table 5-	Table 5-	Table 5-	Table 5-	Table 5-

Notes:

(1) K_d is internally calculated by VLEACH [$K_d = k_{oc} * f_{oc}$]. While foc and the soil bulk density were fixed, Koc was varied in the simulations to yield a range of K_d values.

VLEACH Input Parameters
for the Simulated Transport of Copper

Parameter	Model Name	Units	Simulation Scenarios				
			Cu-1	Cu-2	Cu-3	Cu-4	Cu-5
			Base	Kd low	Kd high	Q low	Q high
Simulation Data:							
Number of Polygons	NPLOY	dimensionless	1	1	1	1	1
Timestep	DELT	years days	0.02 7	0.02 7	0.02 7	0.02 7	0.02 7
Simulation Time	STIME	years	1000	1000	1000	1000	1000
Output Time Interval	PTIME	years	10	10	10	10	10
Profile Time Interval	PRTIME	years	10	10	10	10	10
Organic Carbon Distrubution Coefficient (K_{oc})[1]	KOC	ml/g	1110	370	3335	1110	1110
Soil Water Partitioning Coefficient (K_d)[1]	(clac by model)	ml/g	22.2	7.4	66.7	22.2	22.2
Henry's Constant (K_H)	KH	dimensionless	0	0	0	0	0
Water Solubility	CMAX	mg/L	6.4	6.4	6.4	6.4	6.4
Free Air Diffusion Coefficient	DAIR	m^2/day	0	0	0	0	0
Polygon Data:							
Area at SEAD-16	AREA	ft^2	25,550	25,550	25,550	25,550	25,550
Area at SEAD-17	AREA	ft^2	26,818	26,818	26,818	26,818	26,818
Vertical Cell Dimension (cell thickness)	DELZ	ft.	0.1	0.1	0.1	0.1	0.1
Recharge Rate	Q	ft./year in./year	0.59 7.10	0.59 7.10	0.59 7.10	0.29 3.50	0.88 10.60
Dry Bulk Density	RHOB	g/cc	1.65	1.65	1.65	1.65	1.65
Effective Porosity	POR	dimensionless	0.2	0.2	0.2	0.2	0.2
Volumetric Water Content	THETA	dimensionless	0.13	0.13	0.13	0.13	0.13

VLEACH Input Parameters
for the Simulated Transport of Copper

Parameter	Model Name	Units	Simulation Scenarios				
			Cu-1	Cu-2	Cu-3	Cu-4	Cu-5
			Base	Kd low	Kd high	Q low	Q high
Soil Organic Carbon Content (f_{oc})	FOC	dimensionless	0.02	0.02	0.02	0.02	0.02
Concentration of Recharge Water	CINF	mg/L	0	0	0	0	0
Upper Boundary Condition for Vapor	CATM	mg/L	0	0	0	0	0
Lower Boundary Condition for Vapor	CGW	mg/L	0	0	0	0	0
Cell Number (number of cells in polygon)	NCELL	unitless	30	30	30	30	30
Plot Variable	PLT	unitless	y	y	y	y	y
Plot Time	PLTIME	years	100	100	100	100	100
Initial Contaminant Concentration	XCON	ug/Kg	Table 5-	Table 5-	Table 5-	Table 5-	Table 5-

Notes:

(1) K_d is internally calculated by VLEACH [$K_d = k_{oc} * f_{oc}$]. While foc and the soil bulk density were fixed, Koc was varied in the simulations to yield a range of K_d values.

VLEACH Input Parameters
for the Simulated Transport of Mercury

Parameter	Model Name	Units	Simulation Scenarios				
			Hg-1	Hg-2	Hg-3	Hg-4	Hg-5
			Base	Kd low	Kd high	Q low	Q high
Simulation Data:							
Number of Polygons	NPLOY	dimensionless	1	1	1	1	1
Timestep	DELT	years days	0.02 7	0.02 7	0.02 7	0.02 7	0.02 7
Simulation Time	STIME	years	1000	1000	1000	1000	1000
Output Time Interval	PTIME	years	10	10	10	10	10
Profile Time Interval	PRTIME	years	10	10	10	10	10
Organic Carbon Distrubution Coefficient (K_{oc})[1]	KOC	ml/g	500000	#######	#######	500000	500000
Soil Water Partitioning Coefficient (K_d)[1]	(clac by model)	ml/g	10000	NA	NA	10000	10000
Henry's Constant (K_H)	KH	dimensionless	0	0	0	0	0
Water Solubility	CMAX	mg/L	53	53	53	53	53
Free Air Diffusion Coefficient	DAIR	m^2/day	0	0	0	0	0
Polygon Data:							
Area at SEAD-16	AREA	ft^2	7,188	7,188	7,188	7,188	7,188
Vertical Cell Dimension (cell thickness)	DELZ	ft.	0.1	0.1	0.1	0.1	0.1
Recharge Rate	Q	ft./year in./year	0.59 7.10	0.59 7.10	0.59 7.10	0.29 3.50	0.88 10.60
Dry Bulk Density	RHOB	g/cc	1.65	1.65	1.65	1.65	1.65
Effective Porosity	POR	dimensionless	0.2	0.2	0.2	0.2	0.2
Volumetric Water Content	THETA	dimensionless	0.13	0.13	0.13	0.13	0.13
Soil Organic Carbon Content (f_{oc})	FOC	dimensionless	0.02	0.02	0.02	0.02	0.02

VLEACH Input Parameters
for the Simulated Transport of Mercury

Parameter	Model Name	Units	Simulation Scenarios				
			Hg-1	Hg-2	Hg-3	Hg-4	Hg-5
			Base	Kd low	Kd high	Q low	Q high
Concentration of Recharge Water	CINF	mg/L	0	0	0	0	0
Upper Boundary Condition for Vapor	CATM	mg/L	0	0	0	0	0
Lower Boundary Condition for Vapor	CGW	mg/L	0	0	0	0	0
Cell Number (number of cells in polygon)	NCELL	unitless	30	30	30	30	30
Plot Variable	PLT	unitless	y	y	y	y	y
Plot Time	PLTIME	years	100	100	100	100	100
Initial Contaminant Concentration	XCON	ug/Kg	Table 5-	Table 5-	Table 5-	Table 5-	Table 5-

Notes:

(1) K_d is internally calculated by VLEACH [$K_d = k_{oc} * f_{oc}$]. While foc and the soil bulk density were fixed, Koc was varied in the simulations to yield a range of K_d values.

VLEACH Input Parameters
for the Simulated Transport of Antimony

Parameter	Model Name	Units	Simulation Scenarios				
			Sb-1	Sb-2	Sb-3	Sb-4	Sb-5
			Base	Kd low	Kd high	Q low	Q high
Simulation Data:							
Number of Polygons	NPLOY	dimensionless	1	1	1	1	1
Timestep	DELT	years days	0.02 7	0.02 7	0.02 7	0.02 7	0.02 7
Simulation Time	STIME	years	1000	1000	1000	1000	1000
Output Time Interval	PTIME	years	10	10	10	10	10
Profile Time Interval	PRTIME	years	10	10	10	10	10
Organic Carbon Distrubution Coefficient (K_{oc})[1]	KOC	ml/g	199050	#######	#######	199050	199050
Soil Water Partitioning Coefficient (K_d) [1]	(clac by model)	ml/g	3981	NA	NA	3981	3981
Henry's Constant (K_H)	KH	dimensionless	0	0	0	0	0
Water Solubility	CMAX	mg/L	12.2	12.2	12.2	12.2	12.2
Free Air Diffusion Coefficient	DAIR	m^2/day	0	0	0	0	0
Polygon Data:							
Area at SEAD-16	AREA	ft^2	22,250	22,250	22,250	22,250	22,250
Area at SEAD-17	AREA	ft^2	39,435	39,435	39,435	39,435	39,435
Vertical Cell Dimension (cell thickness)	DELZ	ft.	0.1	0.1	0.1	0.1	0.1
Recharge Rate	Q	ft./year in./year	0.59 7.10	0.59 7.10	0.59 7.10	0.29 3.50	0.88 10.60
Dry Bulk Density	RHOB	g/cc	1.65	1.65	1.65	1.65	1.65
Effective Porosity	POR	dimensionless	0.2	0.2	0.2	0.2	0.2
Volumetric Water Content	THETA	dimensionless	0.13	0.13	0.13	0.13	0.13

VLEACH Input Parameters
for the Simulated Transport of Antimony

Parameter	Model Name	Units	Simulation Scenarios				
			Sb-1	Sb-2	Sb-3	Sb-4	Sb-5
			Base	Kd low	Kd high	Q low	Q high
Soil Organic Carbon Content (f_{oc})	FOC	dimensionless	0.02	0.02	0.02	0.02	0.02
Concentration of Recharge Water	CINF	mg/L	0	0	0	0	0
Upper Boundary Condition for Vapor	CATM	mg/L	0	0	0	0	0
Lower Boundary Condition for Vapor	CGW	mg/L	0	0	0	0	0
Cell Number (number of cells in polygon)	NCELL	unitless	30	30	30	30	30
Plot Variable	PLT	unitless	y	y	y	y	y
Plot Time	PLTIME	years	100	100	100	100	100
Initial Contaminant Concentration	XCON	ug/Kg	Table 5-	Table 5-	Table 5-	Table 5-	Table 5-

Notes:

(1) K_d is internally calculated by VLEACH [$K_d = k_{oc} * f_{oc}$]. While foc and the soil bulk density were fixed, Koc was varied in the simulations to yield a range of K_d values.

VLEACH Input Parameters
for the Simulated Transport of Arsenic

Parameter	Model Name	Units	Simulation Scenarios				
			As-1	As-2	As-3	As-4	As-5
			Base	Kd low	Kd high	Q low	Q high
Simulation Data:							
Number of Polygons	NPLOY	dimensionless	1	1	1	1	1
Timestep	DELT	years days	0.02 7	0.02 7	0.02 7	0.02 7	0.02 7
Simulation Time	STIME	years	1000	1000	1000	1000	1000
Output Time Interval	PTIME	years	10	10	10	10	10
Profile Time Interval	PRTIME	years	10	10	10	10	10
Organic Carbon Distrubution Coefficient (K_{oc})[1]	KOC	ml/g	165	90	300	165	165
Soil Water Partitioning Coefficient (K_d) [1]	(clac.by model)	ml/g	3.3	1.8	6	3.3	3.3
Henry's Constant (K_H)	KH	dimensionless	0	0	0	0	0
Water Solubility	CMAX	mg/L	12000	12000	12000	12000	12000
Free Air Diffusion Coefficient	DAIR	m^2/day	0	0	0	0	0
Polygon Data:							
Area at SEAD-16	AREA	ft^2	3,437	3,437	3,437	3,437	3,437
Vertical Cell Dimension (cell thickness)	DELZ	ft.	0.1	0.1	0.1	0.1	0.1
Recharge Rate	Q	ft./year in./year	0.59 7.10	0.59 7.10	0.59 7.10	0.29 3.50	0.88 10.60
Dry Bulk Density	RHOB	g/cc	1.65	1.65	1.65	1.65	1.65
Effective Porosity	POR	dimensionless	0.2	0.2	0.2	0.2	0.2
Volumetric Water Content	THETA	dimensionless	0.13	0.13	0.13	0.13	0.13
Soil Organic Carbon Content (f_{oc})	FOC	dimensionless	0.02	0.02	0.02	0.02	0.02

VLEACH Input Parameters
for the Simulated Transport of Arsenic

Parameter	Model Name	Units	Simulation Scenarios				
			As-1	As-2	As-3	As-4	As-5
			Base	Kd low	Kd high	Q low	Q high
Concentration of Recharge Water	CINF	mg/L	0	0	0	0	0
Upper Boundary Condition for Vapor	CATM	mg/L	0	0	0	0	0
Lower Boundary Condition for Vapor	CGW	mg/L	0	0	0	0	0
Cell Number (number of cells in polygon)	NCELL	unitless	30	30	30	30	30
Plot Variable	PLT	unitless	y	y	y	y	y
Plot Time	PLTIME	years	100	100	100	100	100
Initial Contaminant Concentration	XCON	ug/Kg	Table 5-	Table 5-	Table 5-	Table 5-	Table 5-

Notes:

(1) K_d is internally calculated by VLEACH [$K_d = k_{oc} * f_{oc}$]. While foc and the soil bulk density were fixed, Koc was varied in the simulations to yield a range of K_d values.

VLEACH Input Parameters
for the Simulated Transport of Zinc

Parameter	Model Name	Units	Simulation Scenarios				
			Zn-1	Zn-2	Zn-3	Zn-4	Zn-5
			Base	Kd low	Kd high	Q low	Q high
Simulation Data:							
Number of Polygons	NPLOY	dimensionless	1	1	1	1	1
Timestep	DELT	years days	0.02 7	0.02 7	0.02 7	0.02 7	0.02 7
Simulation Time	STIME	years	1000	1000	1000	1000	1000
Output Time Interval	PTIME	years	10	10	10	10	10
Profile Time Interval	PRTIME	years	10	10	10	10	10
Organic Carbon Distrubution Coefficient (K_{oc})[1]	KOC	ml/g	820	125	5495	820	820
Soil Water Partitioning Coefficient (K_d) [1]	(clac by model)	ml/g	16.4	2.5	109.9	16.4	16.4
Henry's Constant (K_H)	KH	dimensionless	0	0	0	0	0
Water Solubility	CMAX	mg/L	1.6	1.6	1.6	1.6	1.6
Free Air Diffusion Coefficient	DAIR	m^2/day	0	0	0	0	0
Polygon Data:							
Area at SEAD-16	AREA	ft^2	26,350	26,350	26,350	26,350	26,350
Area at SEAD-17	AREA	ft^2	36,780	36,780	36,780	36,780	36,780
Vertical Cell Dimension (cell thickness)	DELZ	ft.	0.1	0.1	0.1	0.1	0.1
Recharge Rate	Q	ft./year in./year	0.59 7.10	0.59 7.10	0.59 7.10	0.29 3.50	0.88 10.60
Dry Bulk Density	RHOB	g/cc	1.65	1.65	1.65	1.65	1.65
Effective Porosity	POR	dimensionless	0.2	0.2	0.2	0.2	0.2
Volumetric Water Content	THETA	dimensionless	0.13	0.13	0.13	0.13	0.13

VLEACH Input Parameters
for the Simulated Transport of Zinc

Parameter	Model Name	Units	Simulation Scenarios				
			Zn-1	Zn-2	Zn-3	Zn-4	Zn-5
			Base	Kd low	Kd high	Q low	Q high
Soil Organic Carbon Content (f_{oc})	FOC	dimensionless	0.02	0.02	0.02	0.02	0.02
Concentration of Recharge Water	CINF	mg/L	0	0	0	0	0
Upper Boundary Condition for Vapor	CATM	mg/L	0	0	0	0	0
Lower Boundary Condition for Vapor	CGW	mg/L	0	0	0	0	0
Cell Number (number of cells in polygon)	NCELL	unitless	30	30	30	30	30
Plot Variable	PLT	unitless	y	y	y	y	y
Plot Time	PLTIME	years	100	100	100	100	100
Initial Contaminant Concentration	XCON	ug/Kg	Table 5-	Table 5-	Table 5-	Table 5-	Table 5-

Notes:

(1) K_d is internally calculated by VLEACH [$K_d = k_{oc} * f_{oc}$]. While foc and the soil bulk density were fixed, Koc was varied in the simulations to yield a range of K_d values.

VLEACH Input Parameters
for the Simulated Transport of Cadmium

Parameter	Model Name	Units	Simulation Scenarios				
			Cd-1	Cd-2	Cd-3	Cd-4	Cd-5
			Base	Kd low	Kd high	Q low	Q high
Simulation Data:							
Number of Polygons	NPLOY	dimensionless	1	1	1	1	1
Timestep	DELT	years days	0.02 7	0.02 7	0.02 7	0.02 7	0.02 7
Simulation Time	STIME	years	1000	1000	1000	1000	1000
Output Time Interval	PTIME	years	10	10	10	10	10
Profile Time Interval	PRTIME	years	10	10	10	10	10
Organic Carbon Distrubution Coefficient (K_{oc})[1]	KOC	ml/g	335	135	820	335	335
Soil Water Partitioning Coefficient (K_d) [1]	(clac.by model)	ml/g	6.7	2.7	16.4	6.7	6.7
Henry's Constant (K_H)	KH	dimensionless	0	0	0	0	0
Water Solubility	CMAX	mg/L	10000	10000	10000	10000	10000
Free Air Diffusion Coefficient	DAIR	m^2/day	0	0	0	0	0
Polygon Data:							
Area at SEAD-16	AREA	ft^2	1,750	1,750	1,750	1,750	1,750
Area at SEAD-17	AREA	ft^2	27,411	27,411	27,411	27,411	27,411
Vertical Cell Dimension (cell thickness)	DELZ	ft.	0.1	0.1	0.1	0.1	0.1
Recharge Rate	Q	ft./year in./year	0.59 7.10	0.59 7.10	0.59 7.10	0.29 3.50	0.88 10.60
Dry Bulk Density	RHOB	g/cc	1.65	1.65	1.65	1.65	1.65
Effective Porosity	POR	dimensionless	0.2	0.2	0.2	0.2	0.2
Volumetric Water Content	THETA	dimensionless	0.13	0.13	0.13	0.13	0.13

VLEACH Input Parameters
for the Simulated Transport of Cadmium

Parameter	Model Name	Units	Simulation Scenarios				
			Cd-1	Cd-2	Cd-3	Cd-4	Cd-5
			Base	Kd low	Kd high	Q low	Q high
Soil Organic Carbon Content (f_{oc})	FOC	dimensionless	0.02	0.02	0.02	0.02	0.02
Concentration of Recharge Water	CINF	mg/L	0	0	0	0	0
Upper Boundary Condition for Vapor	CATM	mg/L	0	0	0	0	0
Lower Boundary Condition for Vapor	CGW	mg/L	0	0	0	0	0
Cell Number (number of cells in polygon)	NCELL	unitless	30	30	30	30	30
Plot Variable	PLT	unitless	y	y	y	y	y
Plot Time	PLTIME	years	100	100	100	100	100
Initial Contaminant Concentration	XCON	ug/Kg	Table 5-	Table 5-	Table 5-	Table 5-	Table 5-

Notes:
(1) K_d is internally calculated by VLEACH [$K_d = k_{oc} * f_{oc}$]. While foc and the soil bulk density were fixed, Koc was varied in the simulations to yield a range of K_d values.

VLEACH Input Parameters
for the Simulated Transport of Silver

Parameter	Model Name	Units	Simulation Scenarios				
			Ag-1	Ag-2	Ag-3	Ag-4	Ag-5
			Base	Kd low	Kd high	Q low	Q high
Simulation Data:							
Number of Polygons	NPLOY	dimensionless	1	1	1	1	1
Timestep	DELT	years days	0.02 7	0.02 7	0.02 7	0.02 7	0.02 7
Simulation Time	STIME	years	1000	1000	1000	1000	1000
Output Time Interval	PTIME	years	10	10	10	10	10
Profile Time Interval	PRTIME	years	10	10	10	10	10
Organic Carbon Distrubution Coefficient (K_{oc})[1]	KOC	ml/g	5500	1500	20150	5500	5500
Soil Water Partitioning Coefficient (K_d) [1]	(clac.by model)	ml/g	110	30	403	110	110
Henry's Constant (K_H)	KH	dimensionless	0	0	0	0	0
Water Solubility	CMAX	mg/L	13	13	13	13	13
Free Air Diffusion Coefficient	DAIR	m^2/day	0	0	0	0	0
Polygon Data:							
Area at SEAD-17	AREA	sq. ft.	27,775	27,775	27,775	27,775	27,775
Vertical Cell Dimension (cell thickness)	DELZ	ft.	0.1	0.1	0.1	0.1	0.1
Recharge Rate	Q	ft./year in./year	0.59 7.10	0.59 7.10	0.59 7.10	0.29 3.50	0.88 10.60
Dry Bulk Density	RHOB	g/cc	1.65	1.65	1.65	1.65	1.65
Effective Porosity	POR	dimensionless	0.2	0.2	0.2	0.2	0.2
Volumetric Water Content	THETA	dimensionless	0.13	0.13	0.13	0.13	0.13
Soil Organic Carbon Content (f_{oc})	FOC	dimensionless	0.02	0.02	0.02	0.02	0.02

VLEACH Input Parameters
for the Simulated Transport of Silver

Parameter	Model Name	Units	Simulation Scenarios				
			Ag-1	Ag-2	Ag-3	Ag-4	Ag-5
			Base	Kd low	Kd high	Q low	Q high
Concentration of Recharge Water	CINF	mg/L	0	0	0	0	0
Upper Boundary Condition for Vapor	CATM	mg/L	0	0	0	0	0
Lower Boundary Condition for Vapor	CGW	mg/L	0	0	0	0	0
Cell Number (number of cells in polygon)	NCELL	unitless	30	30	30	30	30
Plot Variable	PLT	unitless	y	y	y	y	y
Plot Time	PLTIME	years	100	100	100	100	100
Initial Contaminant Concentration	XCON	ug/Kg	Table 5-	Table 5-	Table 5-	Table 5-	Table 5-

Notes:

(1) K_d is internally calculated by VLEACH [$K_d = k_{oc} * f_{oc}$]. While foc and the soil bulk density were fixed, Koc was varied in the simulations to yield a range of K_d values.

Example of VLEACH Model Output Files

16Cu1.PRM

```
|-------------------------------------------------------------|
|                VLEACH (Version 2.2a, 1996)                  |
|                                                             |
|                          By:                                |
|        Varadhan Ravi and Jeffrey A. Johnson                 |
|                  (USEPA Contractors)                        |
|        Center for Subsurface Modeling Support               |
|        Robert S. Kerr Environmental Research Laboratory     |
|        U.S. Environmental Protection Agency                 |
|        P.O. Box 1198                                        |
|        Ada, OK 74820                                        |
|                                                             |
|        Based on the original VLEACH (version 1.0)           |
|        developed by CH2M Hill, Redding, California          |
|        for USEPA Region IX                                  |
|-------------------------------------------------------------|

Copper Transport in Soil at SEAD-16.
  1 polygons.
Timestep =   0.02 years.  Simulation length = 1000.00 years.
Printout every  10.00 years.  Vertical profile stored every  10.00 years.
Koc =      1110.0    ml/g,      0.39199E-01cu.ft./g
Kh =     0.00000     (dimensionless).
Aqueous solubility =     6.4000     mg/l,     0.18123     g/cu.ft
Free air diffusion coefficient = .00000     sq. m/day,  .00000     sq.ft./yr


Polygon   1
Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Polygon area =      25550.    sq. ft.
 30 cells, each cell  0.100 ft. thick.
Soil Properties:
 Bulk density =     1.6500    g/ml,       46723.    g/cu.ft.
 Porosity = 0.2000 Volumetric water content = 0.1300
 Organic carbon content = 0.02000000
Recharge Rate = 0.58999997 ft/yr
Conc. in recharge water =     0.00000    mg/l,      0.00000    g/cu.ft
Atmospheric concentration =     0.00000    mg/l,      0.00000    g/cu.ft
Water table has a fixed concentration of     0.00000    mg/l,      0.00000    g/cu.ft.
   with respect to gas diffusion.
```

16CU1.INP

```
Copper Transport in Soil at SEAD-16.
  1
       .02      1000.        10.        10.
     1110.        0.0        6.4        0.0
Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
    25550.        0.1       0.59       1.65       0.20        .13        .02
        0.         0.         0.
   30y      100.0
    1     2 13399000.
    3    30   23500.0
```

16CU1.OUT

```
|-----------------------------------------------------------|
|                VLEACH (Version 2.2a, 1996)                |
|                                                           |
|                          By:                              |
|        Varadhan Ravi and Jeffrey A. Johnson               |
|                  (USEPA Contractors)                      |
|        Center for Subsurface Modeling Support             |
|        Robert S. Kerr Environmental Research Laboratory   |
|        U.S. Environmental Protection Agency               |
|        P.O. Box 1198                                      |
|        Ada, OK 74820                                      |
|                                                           |
|        Based on the original VLEACH (version 1.0)         |
|        developed by CH2M Hill, Redding, California        |
|        for USEPA Region IX                                |
|-----------------------------------------------------------|

Copper Transport in Soil at SEAD-16.
WARNING!!!  At time =       0.00, aqueous solubility was exceeded in   2 cells.
WARNING!!!  At time =       0.00, aqueous solubility was exceeded in   2 cells.


Polygon   1
At time =       0.00, total mass in vadose zone =     128.28    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.45365    g/sq.ft.
Mass sorbed           =       127.82    g/sq.ft.
WARNING!!!  At time =       0.02, aqueous solubility was exceeded in   2 cells.
WARNING!!!  At time =      10.00, aqueous solubility was exceeded in   9 cells.


Polygon   1
At time =      10.00, total mass in vadose zone =     128.10    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.45303    g/sq.ft.
Mass sorbed           =       127.65    g/sq.ft.

Since last printout at time =       0.00
               Change in Total Mass =    -0.17558    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.17622    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.17622    g/sq.ft.
               Mass discrepancy =     0.63878E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =    -0.17558    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.17622    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.17622    g/sq.ft.
               Mass discrepancy =     0.63878E-03g/sq.ft.
WARNING!!!  At time =      10.02, aqueous solubility was exceeded in   9 cells.
WARNING!!!  At time =      20.00, aqueous solubility was exceeded in  12 cells.


Polygon   1
At time =      20.00, total mass in vadose zone =     127.93    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.45241    g/sq.ft.
Mass sorbed           =       127.47    g/sq.ft.

Since last printout at time =      10.00
               Change in Total Mass =    -0.17554    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.17622    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.17622    g/sq.ft.
               Mass discrepancy =     0.68775E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =    -0.35112    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.35244    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.35244    g/sq.ft.
               Mass discrepancy =     0.13247E-02g/sq.ft.
WARNING!!!  At time =      20.02, aqueous solubility was exceeded in  12 cells.
WARNING!!!  At time =      30.00, aqueous solubility was exceeded in  15 cells.
```

```
Polygon   1
At time =      30.00, total mass in vadose zone =     127.75    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.45179    g/sq.ft.
Mass sorbed           =       127.30    g/sq.ft.

Since last printout at time =      20.00
               Change in Total Mass =    -0.17561    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.17630    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.17630    g/sq.ft.
               Mass discrepancy =     0.69296E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =    -0.52673    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.52874    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.52874    g/sq.ft.
               Mass discrepancy =     0.20174E-02g/sq.ft.
WARNING!!!  At time =      30.02, aqueous solubility was exceeded in  15 cells.
WARNING!!!  At time =      40.00, aqueous solubility was exceeded in  18 cells.


Polygon   1
At time =      40.00, total mass in vadose zone =     127.58    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.45116    g/sq.ft.
Mass sorbed           =       127.12    g/sq.ft.

Since last printout at time =      30.00
               Change in Total Mass =    -0.17642    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.17712    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.17712    g/sq.ft.
               Mass discrepancy =     0.69769E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =    -0.70315    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.70586    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.70586    g/sq.ft.
               Mass discrepancy =     0.27152E-02g/sq.ft.
WARNING!!!  At time =      40.02, aqueous solubility was exceeded in  18 cells.
WARNING!!!  At time =      50.00, aqueous solubility was exceeded in  19 cells.


Polygon   1
At time =      50.00, total mass in vadose zone =     127.39    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.45052    g/sq.ft.
Mass sorbed           =       126.94    g/sq.ft.

Since last printout at time =      40.00
               Change in Total Mass =    -0.18172    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.18232    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.18232    g/sq.ft.
               Mass discrepancy =     0.60430E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =    -0.88486    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.88818    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.88818    g/sq.ft.
               Mass discrepancy =     0.33190E-02g/sq.ft.
WARNING!!!  At time =      50.02, aqueous solubility was exceeded in  19 cells.
WARNING!!!  At time =      60.00, aqueous solubility was exceeded in  20 cells.


Polygon   1
At time =      60.00, total mass in vadose zone =     127.19    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.44980    g/sq.ft.
```

```
Mass sorbed            =       126.74    g/sq.ft.

Since last printout at time =      50.00
               Change in Total Mass =    -0.20377    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.20446    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.20446    g/sq.ft.
               Mass discrepancy =     0.69878E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -1.0886    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -1.0926    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -1.0926    g/sq.ft.
               Mass discrepancy =     0.40187E-02g/sq.ft.
WARNING!!!  At time =      60.02, aqueous solubility was exceeded in  20 cells.
WARNING!!!  At time =      70.00, aqueous solubility was exceeded in  22 cells.


Polygon   1
At time =      70.00, total mass in vadose zone =     126.92    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.44883    g/sq.ft.
Mass sorbed           =       126.47    g/sq.ft.

Since last printout at time =      60.00
               Change in Total Mass =    -0.27371    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.27438    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.27438    g/sq.ft.
               Mass discrepancy =     0.66379E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -1.3623    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -1.3670    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -1.3670    g/sq.ft.
               Mass discrepancy =     0.46837E-02g/sq.ft.
WARNING!!!  At time =      70.02, aqueous solubility was exceeded in  22 cells.
WARNING!!!  At time =      80.00, aqueous solubility was exceeded in  23 cells.


Polygon   1
At time =      80.00, total mass in vadose zone =     126.47    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.44725    g/sq.ft.
Mass sorbed           =       126.02    g/sq.ft.

Since last printout at time =      70.00
               Change in Total Mass =    -0.44818    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.44884    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.44884    g/sq.ft.
               Mass discrepancy =     0.65872E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -1.8105    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -1.8159    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -1.8159    g/sq.ft.
               Mass discrepancy =     0.53430E-02g/sq.ft.
WARNING!!!  At time =      80.02, aqueous solubility was exceeded in  23 cells.
WARNING!!!  At time =      90.00, aqueous solubility was exceeded in  24 cells.


Polygon   1
At time =      90.00, total mass in vadose zone =     125.66    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.44439    g/sq.ft.
Mass sorbed           =       125.22    g/sq.ft.

Since last printout at time =      80.00
               Change in Total Mass =    -0.80750    g/sq.ft.
```

```
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.80817    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.80817    g/sq.ft.
               Mass discrepancy =     0.67276E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -2.6180    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -2.6240    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -2.6240    g/sq.ft.
               Mass discrepancy =     0.60155E-02g/sq.ft.
WARNING!!!  At time =      90.02, aqueous solubility was exceeded in  24 cells.
WARNING!!!  At time =     100.00, aqueous solubility was exceeded in  24 cells.


Polygon   1
At time =     100.00, total mass in vadose zone =     124.22    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.43931    g/sq.ft.
Mass sorbed           =       123.78    g/sq.ft.

Since last printout at time =      90.00
               Change in Total Mass =     -1.4371    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -1.4377    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -1.4377    g/sq.ft.
               Mass discrepancy =     0.67699E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -4.0551    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -4.0618    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -4.0618    g/sq.ft.
               Mass discrepancy =     0.66943E-02g/sq.ft.
WARNING!!!  At time =     100.02, aqueous solubility was exceeded in  24 cells.
WARNING!!!  At time =     110.00, aqueous solubility was exceeded in  23 cells.


Polygon   1
At time =     110.00, total mass in vadose zone =     121.83    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.43084    g/sq.ft.
Mass sorbed           =       121.40    g/sq.ft.

Since last printout at time =     100.00
               Change in Total Mass =     -2.3958    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -2.3964    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -2.3964    g/sq.ft.
               Mass discrepancy =     0.64635E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -6.4509    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -6.4582    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -6.4582    g/sq.ft.
               Mass discrepancy =     0.73414E-02g/sq.ft.
WARNING!!!  At time =     110.02, aqueous solubility was exceeded in  23 cells.
WARNING!!!  At time =     120.00, aqueous solubility was exceeded in  22 cells.


Polygon   1
At time =     120.00, total mass in vadose zone =     118.14    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.41781    g/sq.ft.
Mass sorbed           =       117.73    g/sq.ft.

Since last printout at time =     110.00
               Change in Total Mass =     -3.6834    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -3.6840    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
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                Total inflow at boundaries =     -3.6840    g/sq.ft.
                Mass discrepancy =     0.65851E-03g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -10.134    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -10.142    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -10.142    g/sq.ft.
                Mass discrepancy =     0.79927E-02g/sq.ft.
WARNING!!!  At time =     120.02, aqueous solubility was exceeded in  22 cells.
WARNING!!!  At time =     130.00, aqueous solubility was exceeded in  21 cells.


Polygon   1
At time =     130.00, total mass in vadose zone =     112.92    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.39934    g/sq.ft.
Mass sorbed           =       112.52    g/sq.ft.

Since last printout at time =     120.00
                Change in Total Mass =     -5.2224    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -5.2230    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -5.2230    g/sq.ft.
                Mass discrepancy =     0.61703E-03g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -15.357    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -15.365    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -15.365    g/sq.ft.
                Mass discrepancy =     0.86126E-02g/sq.ft.
WARNING!!!  At time =     130.02, aqueous solubility was exceeded in  21 cells.
WARNING!!!  At time =     140.00, aqueous solubility was exceeded in  20 cells.


Polygon   1
At time =     140.00, total mass in vadose zone =     106.06    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.37507    g/sq.ft.
Mass sorbed           =       105.68    g/sq.ft.

Since last printout at time =     130.00
                Change in Total Mass =     -6.8641    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -6.8646    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -6.8646    g/sq.ft.
                Mass discrepancy =     0.55027E-03g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -22.221    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -22.230    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -22.230    g/sq.ft.
                Mass discrepancy =     0.91610E-02g/sq.ft.
WARNING!!!  At time =     140.02, aqueous solubility was exceeded in  20 cells.
WARNING!!!  At time =     150.00, aqueous solubility was exceeded in  19 cells.


Polygon   1
At time =     150.00, total mass in vadose zone =     97.640    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.34530    g/sq.ft.
Mass sorbed           =       97.295    g/sq.ft.

Since last printout at time =     140.00
                Change in Total Mass =     -8.4177    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -8.4182    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -8.4182    g/sq.ft.
                Mass discrepancy =     0.56553E-03g/sq.ft.

Since beginning of run at time = 0.0
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                Change in Total Mass =     -30.638    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -30.648    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -30.648    g/sq.ft.
                Mass discrepancy =     0.97408E-02g/sq.ft.
WARNING!!!  At time =     150.02, aqueous solubility was exceeded in  19 cells.
WARNING!!!  At time =     160.00, aqueous solubility was exceeded in  18 cells.


Polygon   1
At time =     160.00, total mass in vadose zone =     87.947    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.31102    g/sq.ft.
Mass sorbed           =       87.636    g/sq.ft.

Since last printout at time =     150.00
                Change in Total Mass =     -9.6933    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -9.6938    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -9.6938    g/sq.ft.
                Mass discrepancy =     0.47970E-03g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -40.332    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -40.342    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -40.342    g/sq.ft.
                Mass discrepancy =     0.10258E-01g/sq.ft.
WARNING!!!  At time =     160.02, aqueous solubility was exceeded in  18 cells.
WARNING!!!  At time =     170.00, aqueous solubility was exceeded in  16 cells.


Polygon   1
At time =     170.00, total mass in vadose zone =     77.405    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.27374    g/sq.ft.
Mass sorbed           =       77.131    g/sq.ft.

Since last printout at time =     160.00
                Change in Total Mass =     -10.542    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -10.543    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -10.543    g/sq.ft.
                Mass discrepancy =     0.46349E-03g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -50.874    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -50.884    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -50.884    g/sq.ft.
                Mass discrepancy =     0.10719E-01g/sq.ft.
WARNING!!!  At time =     170.02, aqueous solubility was exceeded in  16 cells.
WARNING!!!  At time =     180.00, aqueous solubility was exceeded in  15 cells.


Polygon   1
At time =     180.00, total mass in vadose zone =     66.520    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.23525    g/sq.ft.
Mass sorbed           =       66.285    g/sq.ft.

Since last printout at time =     170.00
                Change in Total Mass =     -10.884    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -10.885    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -10.885    g/sq.ft.
                Mass discrepancy =     0.36240E-03g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -61.758    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -61.769    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
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                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -61.769    g/sq.ft.
               Mass discrepancy =     0.11047E-01g/sq.ft.
WARNING!!!  At time =     180.02, aqueous solubility was exceeded in  15 cells.
WARNING!!!  At time =     190.00, aqueous solubility was exceeded in  14 cells.


Polygon   1
At time =     190.00, total mass in vadose zone =     55.803    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.19735    g/sq.ft.
Mass sorbed           =       55.606    g/sq.ft.

Since last printout at time =     180.00
               Change in Total Mass =     -10.717    g/sq.ft.
                    Advection in from atmosphere =     0.00000    g/sq.ft.
                    Advection in from water table =    -10.717    g/sq.ft.
                    Diffusion in from atmosphere =     0.00000    g/sq.ft.
                    Diffusion in from water table =    0.00000    g/sq.ft.
               Total inflow at boundaries =     -10.717    g/sq.ft.
               Mass discrepancy =     0.33665E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -72.475    g/sq.ft.
                    Advection in from atmosphere =     0.00000    g/sq.ft.
                    Advection in from water table =    -72.487    g/sq.ft.
                    Diffusion in from atmosphere =     0.00000    g/sq.ft.
                    Diffusion in from water table =    0.00000    g/sq.ft.
               Total inflow at boundaries =     -72.487    g/sq.ft.
               Mass discrepancy =     0.11414E-01g/sq.ft.
WARNING!!!  At time =     190.02, aqueous solubility was exceeded in  14 cells.
WARNING!!!  At time =     200.00, aqueous solubility was exceeded in  13 cells.


Polygon   1
At time =     200.00, total mass in vadose zone =     45.700    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.16162    g/sq.ft.
Mass sorbed           =       45.539    g/sq.ft.

Since last printout at time =     190.00
               Change in Total Mass =     -10.103    g/sq.ft.
                    Advection in from atmosphere =     0.00000    g/sq.ft.
                    Advection in from water table =    -10.103    g/sq.ft.
                    Diffusion in from atmosphere =     0.00000    g/sq.ft.
                    Diffusion in from water table =    0.00000    g/sq.ft.
               Total inflow at boundaries =     -10.103    g/sq.ft.
               Mass discrepancy =     0.23365E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -82.578    g/sq.ft.
                    Advection in from atmosphere =     0.00000    g/sq.ft.
                    Advection in from water table =    -82.590    g/sq.ft.
                    Diffusion in from atmosphere =     0.00000    g/sq.ft.
                    Diffusion in from water table =    0.00000    g/sq.ft.
               Total inflow at boundaries =     -82.590    g/sq.ft.
               Mass discrepancy =     0.11711E-01g/sq.ft.
WARNING!!!  At time =     200.02, aqueous solubility was exceeded in  13 cells.
WARNING!!!  At time =     210.00, aqueous solubility was exceeded in  12 cells.


Polygon   1
At time =     210.00, total mass in vadose zone =     36.549    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.12925    g/sq.ft.
Mass sorbed           =       36.420    g/sq.ft.

Since last printout at time =     200.00
               Change in Total Mass =     -9.1510    g/sq.ft.
                    Advection in from atmosphere =     0.00000    g/sq.ft.
                    Advection in from water table =    -9.1512    g/sq.ft.
                    Diffusion in from atmosphere =     0.00000    g/sq.ft.
                    Diffusion in from water table =    0.00000    g/sq.ft.
               Total inflow at boundaries =     -9.1512    g/sq.ft.
               Mass discrepancy =     0.20981E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -91.729    g/sq.ft.
                    Advection in from atmosphere =     0.00000    g/sq.ft.
                    Advection in from water table =    -91.741    g/sq.ft.
                    Diffusion in from atmosphere =     0.00000    g/sq.ft.
                    Diffusion in from water table =    0.00000    g/sq.ft.
               Total inflow at boundaries =     -91.741    g/sq.ft.
               Mass discrepancy =     0.11940E-01g/sq.ft.
WARNING!!!  At time =     210.02, aqueous solubility was exceeded in  12 cells.
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WARNING!!!  At time =     220.00, aqueous solubility was exceeded in  10 cells.


Polygon   1
At time =     220.00, total mass in vadose zone =     28.561    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.10100    g/sq.ft.
Mass sorbed           =       28.460    g/sq.ft.

Since last printout at time =     210.00
               Change in Total Mass =     -7.9886    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -7.9887    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -7.9887    g/sq.ft.
               Mass discrepancy =     0.16117E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -99.718    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -99.730    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -99.730    g/sq.ft.
               Mass discrepancy =     0.12093E-01g/sq.ft.
WARNING!!!  At time =     220.02, aqueous solubility was exceeded in  10 cells.
WARNING!!!  At time =     230.00, aqueous solubility was exceeded in   9 cells.


Polygon   1
At time =     230.00, total mass in vadose zone =     21.821    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.77169E-01g/sq.ft.
Mass sorbed           =       21.744    g/sq.ft.

Since last printout at time =     220.00
               Change in Total Mass =     -6.7397    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -6.7399    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -6.7399    g/sq.ft.
               Mass discrepancy =     0.13018E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -106.46    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -106.47    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -106.47    g/sq.ft.
               Mass discrepancy =     0.12230E-01g/sq.ft.
WARNING!!!  At time =     230.02, aqueous solubility was exceeded in   9 cells.
WARNING!!!  At time =     240.00, aqueous solubility was exceeded in   8 cells.


Polygon   1
At time =     240.00, total mass in vadose zone =     16.312    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.57687E-01g/sq.ft.
Mass sorbed           =       16.255    g/sq.ft.

Since last printout at time =     230.00
               Change in Total Mass =     -5.5087    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -5.5088    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -5.5088    g/sq.ft.
               Mass discrepancy =     0.10777E-03g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -111.97    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -111.98    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -111.98    g/sq.ft.
               Mass discrepancy =     0.12344E-01g/sq.ft.
WARNING!!!  At time =     240.02, aqueous solubility was exceeded in   8 cells.
WARNING!!!  At time =     250.00, aqueous solubility was exceeded in   6 cells.


Polygon   1
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At time =     250.00, total mass in vadose zone =     11.941    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.42227E-01g/sq.ft.
Mass sorbed           =       11.898    g/sq.ft.

Since last printout at time =     240.00
               Change in Total Mass =     -4.3716    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -4.3717    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -4.3717    g/sq.ft.
               Mass discrepancy =     0.71049E-04g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -116.34    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -116.35    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -116.35    g/sq.ft.
               Mass discrepancy =     0.12398E-01g/sq.ft.
WARNING!!!  At time =     250.02, aqueous solubility was exceeded in   6 cells.
WARNING!!!  At time =     260.00, aqueous solubility was exceeded in   5 cells.


Polygon   1
At time =     260.00, total mass in vadose zone =     8.5657    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.30292E-01g/sq.ft.
Mass sorbed           =       8.5354    g/sq.ft.

Since last printout at time =     250.00
               Change in Total Mass =     -3.3749    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -3.3750    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -3.3750    g/sq.ft.
               Mass discrepancy =     0.56505E-04g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -119.71    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -119.73    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -119.73    g/sq.ft.
               Mass discrepancy =     0.12459E-01g/sq.ft.
WARNING!!!  At time =     260.02, aqueous solubility was exceeded in   5 cells.
WARNING!!!  At time =     270.00, aqueous solubility was exceeded in   4 cells.


Polygon   1
At time =     270.00, total mass in vadose zone =     6.0266    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.21313E-01g/sq.ft.
Mass sorbed           =       6.0053    g/sq.ft.

Since last printout at time =     260.00
               Change in Total Mass =     -2.5391    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -2.5392    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -2.5392    g/sq.ft.
               Mass discrepancy =     0.40770E-04g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -122.25    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -122.26    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -122.26    g/sq.ft.
               Mass discrepancy =     0.12489E-01g/sq.ft.
WARNING!!!  At time =     270.02, aqueous solubility was exceeded in   4 cells.
WARNING!!!  At time =     280.00, aqueous solubility was exceeded in   2 cells.


Polygon   1
At time =     280.00, total mass in vadose zone =     4.1620    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.14719E-01g/sq.ft.
Mass sorbed           =       4.1472    g/sq.ft.
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Since last printout at time =     270.00
               Change in Total Mass =     -1.8647    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -1.8647    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -1.8647    g/sq.ft.
               Mass discrepancy =     0.27418E-04g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -124.12    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -124.13    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -124.13    g/sq.ft.
               Mass discrepancy =     0.12527E-01g/sq.ft.
WARNING!!!  At time =     280.02, aqueous solubility was exceeded in   2 cells.
WARNING!!!  At time =     290.00, aqueous solubility was exceeded in   1 cells.


Polygon   1
At time =     290.00, total mass in vadose zone =     2.8234    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.99849E-02g/sq.ft.
Mass sorbed           =      2.8134    g/sq.ft.

Since last printout at time =     280.00
               Change in Total Mass =     -1.3386    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -1.3386    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -1.3386    g/sq.ft.
               Mass discrepancy =     0.19073E-04g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -125.46    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -125.47    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -125.47    g/sq.ft.
               Mass discrepancy =     0.12535E-01g/sq.ft.
WARNING!!!  At time =     290.02, aqueous solubility was exceeded in   1 cells.
WARNING!!!  At time =     294.24, aqueous solubility was exceeded in   1 cells.


Polygon   1
At time =     300.00, total mass in vadose zone =     1.8829    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.66588E-02g/sq.ft.
Mass sorbed           =      1.8762    g/sq.ft.

Since last printout at time =     290.00
               Change in Total Mass =    -0.94052    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.94053    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.94053    g/sq.ft.
               Mass discrepancy =     0.12934E-04g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -126.40    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -126.41    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -126.41    g/sq.ft.
               Mass discrepancy =     0.12550E-01g/sq.ft.


Polygon   1
At time =     310.00, total mass in vadose zone =     1.2353    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.43685E-02g/sq.ft.
Mass sorbed           =      1.2309    g/sq.ft.

Since last printout at time =     300.00
               Change in Total Mass =    -0.64762    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.64763    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
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                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =    -0.64763    g/sq.ft.
            Mass discrepancy =     0.72718E-05g/sq.ft.

Since beginning of run at time = 0.0
            Change in Total Mass =     -127.04    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =     -127.06    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =     -127.06    g/sq.ft.
            Mass discrepancy =     0.12573E-01g/sq.ft.


Polygon   1
At time =     320.00, total mass in vadose zone =    0.79778    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.28213E-02g/sq.ft.
Mass sorbed           =      0.79496    g/sq.ft.

Since last printout at time =     310.00
            Change in Total Mass =    -0.43749    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =    -0.43749    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =    -0.43749    g/sq.ft.
            Mass discrepancy =     0.55432E-05g/sq.ft.

Since beginning of run at time = 0.0
            Change in Total Mass =     -127.48    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =     -127.49    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =     -127.49    g/sq.ft.
            Mass discrepancy =     0.12581E-01g/sq.ft.


Polygon   1
At time =     330.00, total mass in vadose zone =    0.50755    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.17949E-02g/sq.ft.
Mass sorbed           =      0.50575    g/sq.ft.

Since last printout at time =     320.00
            Change in Total Mass =    -0.29024    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =    -0.29024    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =    -0.29024    g/sq.ft.
            Mass discrepancy =     0.39041E-05g/sq.ft.

Since beginning of run at time = 0.0
            Change in Total Mass =     -127.77    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =     -127.78    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =     -127.78    g/sq.ft.
            Mass discrepancy =     0.12589E-01g/sq.ft.


Polygon   1
At time =     340.00, total mass in vadose zone =    0.31828    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.11256E-02g/sq.ft.
Mass sorbed           =      0.31715    g/sq.ft.

Since last printout at time =     330.00
            Change in Total Mass =    -0.18927    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =    -0.18927    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =    -0.18927    g/sq.ft.
            Mass discrepancy =     0.20266E-05g/sq.ft.

Since beginning of run at time = 0.0
            Change in Total Mass =     -127.96    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =     -127.97    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
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                Total inflow at boundaries =     -127.97    g/sq.ft.
                Mass discrepancy =     0.12627E-01g/sq.ft.


Polygon   1
At time =     350.00, total mass in vadose zone =    0.19685    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.69614E-03g/sq.ft.
Mass sorbed           =      0.19615    g/sq.ft.

Since last printout at time =     340.00
                Change in Total Mass =    -0.12143    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.12143    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.12143    g/sq.ft.
                Mass discrepancy =     0.14156E-05g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.08    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.09    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.09    g/sq.ft.
                Mass discrepancy =     0.12711E-01g/sq.ft.


Polygon   1
At time =     360.00, total mass in vadose zone =    0.12014    g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.42487E-03g/sq.ft.
Mass sorbed           =      0.11972    g/sq.ft.

Since last printout at time =     350.00
                Change in Total Mass =    -0.76706E-01g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.76707E-01g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.76707E-01g/sq.ft.
                Mass discrepancy =     0.78976E-06g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.16    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.17    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.17    g/sq.ft.
                Mass discrepancy =     0.12558E-01g/sq.ft.


Polygon   1
At time =     370.00, total mass in vadose zone =    0.72397E-01g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.25603E-03g/sq.ft.
Mass sorbed           =      0.72141E-01g/sq.ft.

Since last printout at time =     360.00
                Change in Total Mass =    -0.47744E-01g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.47744E-01g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.47744E-01g/sq.ft.
                Mass discrepancy =     0.45821E-06g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.21    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.22    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.22    g/sq.ft.
                Mass discrepancy =     0.12527E-01g/sq.ft.


Polygon   1
At time =     380.00, total mass in vadose zone =    0.43096E-01g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.15241E-03g/sq.ft.
Mass sorbed           =      0.42944E-01g/sq.ft.
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Since last printout at time =     370.00
               Change in Total Mass =    -0.29301E-01g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.29301E-01g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.29301E-01g/sq.ft.
               Mass discrepancy =     0.27381E-06g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.24    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.25    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.25    g/sq.ft.
               Mass discrepancy =     0.12421E-01g/sq.ft.


Polygon   1
At time =     390.00, total mass in vadose zone =    0.25354E-01g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.89664E-04g/sq.ft.
Mass sorbed           =      0.25264E-01g/sq.ft.

Since last printout at time =     380.00
               Change in Total Mass =    -0.17742E-01g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.17742E-01g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.17742E-01g/sq.ft.
               Mass discrepancy =     0.16205E-06g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.25    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.27    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.27    g/sq.ft.
               Mass discrepancy =     0.12527E-01g/sq.ft.


Polygon   1
At time =     400.00, total mass in vadose zone =    0.14749E-01g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.52158E-04g/sq.ft.
Mass sorbed           =      0.14696E-01g/sq.ft.

Since last printout at time =     390.00
               Change in Total Mass =    -0.10606E-01g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.10606E-01g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.10606E-01g/sq.ft.
               Mass discrepancy =     0.10151E-06g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.26    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.28    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.28    g/sq.ft.
               Mass discrepancy =     0.12100E-01g/sq.ft.


Polygon   1
At time =     410.00, total mass in vadose zone =    0.84865E-02g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.30012E-04g/sq.ft.
Mass sorbed           =      0.84565E-02g/sq.ft.

Since last printout at time =     400.00
               Change in Total Mass =    -0.62621E-02g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.62622E-02g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.62622E-02g/sq.ft.
               Mass discrepancy =     0.63796E-07g/sq.ft.

Since beginning of run at time = 0.0
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                Change in Total Mass =     -128.27    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.28    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.28    g/sq.ft.
                Mass discrepancy =     0.13458E-01g/sq.ft.


Polygon   1
At time =     420.00, total mass in vadose zone =    0.48323E-02g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.17089E-04g/sq.ft.
Mass sorbed           =      0.48153E-02g/sq.ft.

Since last printout at time =     410.00
                Change in Total Mass =    -0.36541E-02g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.36542E-02g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.36542E-02g/sq.ft.
                Mass discrepancy =     0.37020E-07g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.27    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.12863E-01g/sq.ft.


Polygon   1
At time =     430.00, total mass in vadose zone =    0.27240E-02g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.96333E-05g/sq.ft.
Mass sorbed           =      0.27144E-02g/sq.ft.

Since last printout at time =     420.00
                Change in Total Mass =    -0.21084E-02g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.21084E-02g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.21084E-02g/sq.ft.
                Mass discrepancy =     0.20955E-07g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.10757E-01g/sq.ft.


Polygon   1
At time =     440.00, total mass in vadose zone =    0.15207E-02g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.53777E-05g/sq.ft.
Mass sorbed           =      0.15153E-02g/sq.ft.

Since last printout at time =     430.00
                Change in Total Mass =    -0.12033E-02g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.12033E-02g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.12033E-02g/sq.ft.
                Mass discrepancy =     0.12806E-07g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.95520E-02g/sq.ft.


Polygon   1
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At time =     450.00, total mass in vadose zone =    0.84098E-03g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.29741E-05g/sq.ft.
Mass sorbed           =      0.83801E-03g/sq.ft.

Since last printout at time =     440.00
               Change in Total Mass =    -0.67968E-03g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.67969E-03g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.67969E-03g/sq.ft.
               Mass discrepancy =     0.75088E-08g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.88654E-02g/sq.ft.


Polygon   1
At time =     460.00, total mass in vadose zone =    0.46090E-03g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.16300E-05g/sq.ft.
Mass sorbed           =      0.45927E-03g/sq.ft.

Since last printout at time =     450.00
               Change in Total Mass =    -0.38008E-03g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.38008E-03g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.38008E-03g/sq.ft.
               Mass discrepancy =     0.33469E-08g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.84839E-02g/sq.ft.


Polygon   1
At time =     470.00, total mass in vadose zone =    0.25040E-03g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.88553E-06g/sq.ft.
Mass sorbed           =      0.24952E-03g/sq.ft.

Since last printout at time =     460.00
               Change in Total Mass =    -0.21050E-03g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.21050E-03g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.21050E-03g/sq.ft.
               Mass discrepancy =     0.17026E-08g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.82703E-02g/sq.ft.


Polygon   1
At time =     480.00, total mass in vadose zone =    0.13490E-03g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.47705E-06g/sq.ft.
Mass sorbed           =      0.13442E-03g/sq.ft.

Since last printout at time =     470.00
               Change in Total Mass =    -0.11551E-03g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.11551E-03g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
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                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.11551E-03g/sq.ft.
               Mass discrepancy =     0.95315E-09g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.81635E-02g/sq.ft.


Polygon   1
At time =     490.00, total mass in vadose zone =    0.72081E-04g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.25491E-06g/sq.ft.
Mass sorbed           =      0.71826E-04g/sq.ft.

Since last printout at time =     480.00
               Change in Total Mass =    -0.62815E-04g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.62816E-04g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.62816E-04g/sq.ft.
               Mass discrepancy =     0.56752E-09g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.81024E-02g/sq.ft.


Polygon   1
At time =     500.00, total mass in vadose zone =    0.38213E-04g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.13514E-06g/sq.ft.
Mass sorbed           =      0.38078E-04g/sq.ft.

Since last printout at time =     490.00
               Change in Total Mass =    -0.33868E-04g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.33868E-04g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.33868E-04g/sq.ft.
               Mass discrepancy =     0.29831E-09g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80719E-02g/sq.ft.


Polygon   1
At time =     510.00, total mass in vadose zone =    0.20105E-04g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.71099E-07g/sq.ft.
Mass sorbed           =      0.20033E-04g/sq.ft.

Since last printout at time =     500.00
               Change in Total Mass =    -0.18109E-04g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.18109E-04g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.18109E-04g/sq.ft.
               Mass discrepancy =     0.14552E-09g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
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                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80414E-02g/sq.ft.


Polygon   1
At time =     520.00, total mass in vadose zone =    0.10499E-04g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.37130E-07g/sq.ft.
Mass sorbed           =      0.10462E-04g/sq.ft.

Since last printout at time =     510.00
                Change in Total Mass =    -0.96051E-05g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.96052E-05g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.96052E-05g/sq.ft.
                Mass discrepancy =     0.73669E-10g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80414E-02g/sq.ft.


Polygon   1
At time =     530.00, total mass in vadose zone =    0.54441E-05g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.19253E-07g/sq.ft.
Mass sorbed           =      0.54248E-05g/sq.ft.

Since last printout at time =     520.00
                Change in Total Mass =    -0.50553E-05g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.50553E-05g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.50553E-05g/sq.ft.
                Mass discrepancy =     0.35016E-10g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     540.00, total mass in vadose zone =    0.28033E-05g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.99138E-08g/sq.ft.
Mass sorbed           =      0.27934E-05g/sq.ft.

Since last printout at time =     530.00
                Change in Total Mass =    -0.26407E-05g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.26408E-05g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.26408E-05g/sq.ft.
                Mass discrepancy =     0.21146E-10g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     550.00, total mass in vadose zone =    0.14338E-05g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.50707E-08g/sq.ft.
Mass sorbed           =      0.14288E-05g/sq.ft.
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Since last printout at time =     540.00
               Change in Total Mass =    -0.13695E-05g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.13695E-05g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.13695E-05g/sq.ft.
               Mass discrepancy =     0.96634E-11g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     560.00, total mass in vadose zone =    0.72862E-06g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.25767E-08g/sq.ft.
Mass sorbed           =      0.72604E-06g/sq.ft.

Since last printout at time =     550.00
               Change in Total Mass =    -0.70523E-06g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.70523E-06g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.70523E-06g/sq.ft.
               Mass discrepancy =     0.40927E-11g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     570.00, total mass in vadose zone =    0.36792E-06g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.13011E-08g/sq.ft.
Mass sorbed           =      0.36662E-06g/sq.ft.

Since last printout at time =     560.00
               Change in Total Mass =    -0.36070E-06g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.36070E-06g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.36070E-06g/sq.ft.
               Mass discrepancy =     0.29559E-11g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     580.00, total mass in vadose zone =    0.18464E-06g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.65298E-09g/sq.ft.
Mass sorbed           =      0.18399E-06g/sq.ft.

Since last printout at time =     570.00
               Change in Total Mass =    -0.18327E-06g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.18328E-06g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.18328E-06g/sq.ft.
               Mass discrepancy =     0.15206E-11g/sq.ft.

Since beginning of run at time = 0.0
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                Change in Total Mass =      -128.28    g/sq.ft.
                     Advection in from atmosphere =       0.00000    g/sq.ft.
                     Advection in from water table =      -128.29    g/sq.ft.
                     Diffusion in from atmosphere =       0.00000    g/sq.ft.
                     Diffusion in from water table =      0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =     590.00, total mass in vadose zone =    0.92113E-07g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.32575E-09g/sq.ft.
Mass sorbed           =      0.91788E-07g/sq.ft.

Since last printout at time =     580.00
                Change in Total Mass =    -0.92529E-07g/sq.ft.
                     Advection in from atmosphere =       0.00000    g/sq.ft.
                     Advection in from water table =    -0.92530E-07g/sq.ft.
                     Diffusion in from atmosphere =       0.00000    g/sq.ft.
                     Diffusion in from water table =      0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.92530E-07g/sq.ft.
                Mass discrepancy =      0.73896E-12g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =      -128.28    g/sq.ft.
                     Advection in from atmosphere =       0.00000    g/sq.ft.
                     Advection in from water table =      -128.29    g/sq.ft.
                     Diffusion in from atmosphere =       0.00000    g/sq.ft.
                     Diffusion in from water table =      0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =     600.00, total mass in vadose zone =    0.45687E-07g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.16157E-09g/sq.ft.
Mass sorbed           =      0.45526E-07g/sq.ft.

Since last printout at time =     590.00
                Change in Total Mass =    -0.46426E-07g/sq.ft.
                     Advection in from atmosphere =       0.00000    g/sq.ft.
                     Advection in from water table =    -0.46426E-07g/sq.ft.
                     Diffusion in from atmosphere =       0.00000    g/sq.ft.
                     Diffusion in from water table =      0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.46426E-07g/sq.ft.
                Mass discrepancy =      0.36593E-12g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =      -128.28    g/sq.ft.
                     Advection in from atmosphere =       0.00000    g/sq.ft.
                     Advection in from water table =      -128.29    g/sq.ft.
                     Diffusion in from atmosphere =       0.00000    g/sq.ft.
                     Diffusion in from water table =      0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =     610.00, total mass in vadose zone =    0.22533E-07g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.79688E-10g/sq.ft.
Mass sorbed           =      0.22454E-07g/sq.ft.

Since last printout at time =     600.00
                Change in Total Mass =    -0.23154E-07g/sq.ft.
                     Advection in from atmosphere =       0.00000    g/sq.ft.
                     Advection in from water table =    -0.23154E-07g/sq.ft.
                     Diffusion in from atmosphere =       0.00000    g/sq.ft.
                     Diffusion in from water table =      0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.23154E-07g/sq.ft.
                Mass discrepancy =      0.13678E-12g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =      -128.28    g/sq.ft.
                     Advection in from atmosphere =       0.00000    g/sq.ft.
                     Advection in from water table =      -128.29    g/sq.ft.
                     Diffusion in from atmosphere =       0.00000    g/sq.ft.
                     Diffusion in from water table =      0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
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At time =     620.00, total mass in vadose zone =    0.11053E-07g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.39088E-10g/sq.ft.
Mass sorbed           =      0.11014E-07g/sq.ft.

Since last printout at time =     610.00
               Change in Total Mass =    -0.11480E-07g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.11481E-07g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.11481E-07g/sq.ft.
               Mass discrepancy =     0.96811E-13g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     630.00, total mass in vadose zone =    0.53927E-08g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.19071E-10g/sq.ft.
Mass sorbed           =      0.53737E-08g/sq.ft.

Since last printout at time =     620.00
               Change in Total Mass =    -0.56601E-08g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.56601E-08g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.56601E-08g/sq.ft.
               Mass discrepancy =     0.43077E-13g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     640.00, total mass in vadose zone =    0.26175E-08g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.92568E-11g/sq.ft.
Mass sorbed           =      0.26083E-08g/sq.ft.

Since last printout at time =     630.00
               Change in Total Mass =    -0.27752E-08g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.27752E-08g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.27752E-08g/sq.ft.
               Mass discrepancy =     0.19984E-13g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     650.00, total mass in vadose zone =    0.12641E-08g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.44704E-11g/sq.ft.
Mass sorbed           =      0.12596E-08g/sq.ft.

Since last printout at time =     640.00
               Change in Total Mass =    -0.13534E-08g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.13534E-08g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
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                Diffusion in from water table =      0.00000    g/sq.ft.
            Total inflow at boundaries =    -0.13534E-08g/sq.ft.
            Mass discrepancy =      0.11102E-13g/sq.ft.

Since beginning of run at time = 0.0
            Change in Total Mass =      -128.28    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =     -128.29    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =     -128.29    g/sq.ft.
            Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =     660.00, total mass in vadose zone =    0.60749E-09g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.21484E-11g/sq.ft.
Mass sorbed           =      0.60534E-09g/sq.ft.

Since last printout at time =     650.00
            Change in Total Mass =    -0.65661E-09g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =    -0.65662E-09g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =    -0.65662E-09g/sq.ft.
            Mass discrepancy =      0.41633E-14g/sq.ft.

Since beginning of run at time = 0.0
            Change in Total Mass =      -128.28    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =     -128.29    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =     -128.29    g/sq.ft.
            Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =     670.00, total mass in vadose zone =    0.29055E-09g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.10275E-11g/sq.ft.
Mass sorbed           =      0.28952E-09g/sq.ft.

Since last printout at time =     660.00
            Change in Total Mass =    -0.31694E-09g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =    -0.31695E-09g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =    -0.31695E-09g/sq.ft.
            Mass discrepancy =      0.23592E-14g/sq.ft.

Since beginning of run at time = 0.0
            Change in Total Mass =      -128.28    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =     -128.29    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =     -128.29    g/sq.ft.
            Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =     680.00, total mass in vadose zone =    0.13831E-09g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.48914E-12g/sq.ft.
Mass sorbed           =      0.13783E-09g/sq.ft.

Since last printout at time =     670.00
            Change in Total Mass =    -0.15223E-09g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =    -0.15223E-09g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
            Total inflow at boundaries =    -0.15223E-09g/sq.ft.
            Mass discrepancy =      0.11935E-14g/sq.ft.

Since beginning of run at time = 0.0
            Change in Total Mass =      -128.28    g/sq.ft.
                Advection in from atmosphere =      0.00000    g/sq.ft.
                Advection in from water table =     -128.29    g/sq.ft.
                Diffusion in from atmosphere =      0.00000    g/sq.ft.
                Diffusion in from water table =     0.00000    g/sq.ft.
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                Total inflow at boundaries =      -128.29     g/sq.ft.
                Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =      690.00, total mass in vadose zone =     0.65546E-10g/sq.ft.
Mass in gas phase      =      0.00000    g/sq.ft.
Mass in liquid phase   =      0.23180E-12g/sq.ft.
Mass sorbed            =      0.65314E-10g/sq.ft.

Since last printout at time =      680.00
                Change in Total Mass =     -0.72769E-10g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.72769E-10g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.72769E-10g/sq.ft.
                Mass discrepancy =      0.60368E-15g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =      -128.28     g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =      -128.29     g/sq.ft.
                Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =      700.00, total mass in vadose zone =     0.30924E-10g/sq.ft.
Mass in gas phase      =      0.00000    g/sq.ft.
Mass in liquid phase   =      0.10936E-12g/sq.ft.
Mass sorbed            =      0.30815E-10g/sq.ft.

Since last printout at time =      690.00
                Change in Total Mass =     -0.34622E-10g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.34622E-10g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.34622E-10g/sq.ft.
                Mass discrepancy =      0.25327E-15g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =      -128.28     g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =      -128.29     g/sq.ft.
                Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =      710.00, total mass in vadose zone =     0.14527E-10g/sq.ft.
Mass in gas phase      =      0.00000    g/sq.ft.
Mass in liquid phase   =      0.51373E-13g/sq.ft.
Mass sorbed            =      0.14475E-10g/sq.ft.

Since last printout at time =      700.00
                Change in Total Mass =     -0.16397E-10g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.16397E-10g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.16397E-10g/sq.ft.
                Mass discrepancy =      0.11623E-15g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =      -128.28     g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =      -128.29     g/sq.ft.
                Mass discrepancy =      0.80261E-02g/sq.ft.


Polygon   1
At time =      720.00, total mass in vadose zone =     0.67953E-11g/sq.ft.
Mass in gas phase      =      0.00000    g/sq.ft.
Mass in liquid phase   =      0.24031E-13g/sq.ft.
Mass sorbed            =      0.67713E-11g/sq.ft.
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```
Since last printout at time =     710.00
               Change in Total Mass =    -0.77315E-11g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.77315E-11g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.77315E-11g/sq.ft.
               Mass discrepancy =     0.50307E-16g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     730.00, total mass in vadose zone =    0.31656E-11g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.11195E-13g/sq.ft.
Mass sorbed           =      0.31544E-11g/sq.ft.

Since last printout at time =     720.00
               Change in Total Mass =    -0.36297E-11g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.36297E-11g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.36297E-11g/sq.ft.
               Mass discrepancy =     0.27539E-16g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     740.00, total mass in vadose zone =    0.14688E-11g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.51944E-14g/sq.ft.
Mass sorbed           =      0.14636E-11g/sq.ft.

Since last printout at time =     730.00
               Change in Total Mass =    -0.16968E-11g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.16968E-11g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.16968E-11g/sq.ft.
               Mass discrepancy =     0.13010E-16g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     750.00, total mass in vadose zone =    0.67884E-12g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.24007E-14g/sq.ft.
Mass sorbed           =      0.67644E-12g/sq.ft.

Since last printout at time =     740.00
               Change in Total Mass =    -0.78997E-12g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.78998E-12g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.78998E-12g/sq.ft.
               Mass discrepancy =     0.52042E-17g/sq.ft.

Since beginning of run at time = 0.0
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                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     760.00, total mass in vadose zone =    0.31254E-12g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.11053E-14g/sq.ft.
Mass sorbed           =      0.31143E-12g/sq.ft.

Since last printout at time =     750.00
                Change in Total Mass =    -0.36630E-12g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.36630E-12g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.36630E-12g/sq.ft.
                Mass discrepancy =     0.27918E-17g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     770.00, total mass in vadose zone =    0.14335E-12g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.50696E-15g/sq.ft.
Mass sorbed           =      0.14285E-12g/sq.ft.

Since last printout at time =     760.00
                Change in Total Mass =    -0.16918E-12g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.16918E-12g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.16918E-12g/sq.ft.
                Mass discrepancy =     0.11655E-17g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     780.00, total mass in vadose zone =    0.65513E-13g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.23168E-15g/sq.ft.
Mass sorbed           =      0.65281E-13g/sq.ft.

Since last printout at time =     770.00
                Change in Total Mass =    -0.77841E-13g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.77841E-13g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.77841E-13g/sq.ft.
                Mass discrepancy =     0.50144E-18g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
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At time =     790.00, total mass in vadose zone =    0.29832E-13g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.10550E-15g/sq.ft.
Mass sorbed           =      0.29727E-13g/sq.ft.

Since last printout at time =     780.00
               Change in Total Mass =    -0.35680E-13g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.35681E-13g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.35681E-13g/sq.ft.
               Mass discrepancy =     0.19990E-18g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     800.00, total mass in vadose zone =    0.13537E-13g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.47873E-16g/sq.ft.
Mass sorbed           =      0.13489E-13g/sq.ft.

Since last printout at time =     790.00
               Change in Total Mass =    -0.16295E-13g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.16295E-13g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.16295E-13g/sq.ft.
               Mass discrepancy =     0.11181E-18g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     810.00, total mass in vadose zone =    0.61218E-14g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.21649E-16g/sq.ft.
Mass sorbed           =      0.61001E-14g/sq.ft.

Since last printout at time =     800.00
               Change in Total Mass =    -0.74153E-14g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.74154E-14g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.74154E-14g/sq.ft.
               Mass discrepancy =     0.50822E-19g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     820.00, total mass in vadose zone =    0.27592E-14g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.97576E-17g/sq.ft.
Mass sorbed           =      0.27494E-14g/sq.ft.

Since last printout at time =     810.00
               Change in Total Mass =    -0.33626E-14g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.33627E-14g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
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                    Diffusion in from water table =      0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.33627E-14g/sq.ft.
               Mass discrepancy =     0.21599E-19g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     830.00, total mass in vadose zone =    0.12395E-14g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.43835E-17g/sq.ft.
Mass sorbed           =      0.12351E-14g/sq.ft.

Since last printout at time =     820.00
               Change in Total Mass =    -0.15196E-14g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.15197E-14g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.15197E-14g/sq.ft.
               Mass discrepancy =     0.91056E-20g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     840.00, total mass in vadose zone =    0.55505E-15g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.19629E-17g/sq.ft.
Mass sorbed           =      0.55309E-15g/sq.ft.

Since last printout at time =     830.00
               Change in Total Mass =    -0.68446E-15g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.68447E-15g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.68447E-15g/sq.ft.
               Mass discrepancy =     0.44469E-20g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     850.00, total mass in vadose zone =    0.24777E-15g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.87622E-18g/sq.ft.
Mass sorbed           =      0.24689E-15g/sq.ft.

Since last printout at time =     840.00
               Change in Total Mass =    -0.30728E-15g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.30728E-15g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.30728E-15g/sq.ft.
               Mass discrepancy =     0.21176E-20g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
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                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     860.00, total mass in vadose zone =    0.11026E-15g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.38994E-18g/sq.ft.
Mass sorbed           =      0.10987E-15g/sq.ft.

Since last printout at time =     850.00
                Change in Total Mass =    -0.13751E-15g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.13751E-15g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.13751E-15g/sq.ft.
                Mass discrepancy =     0.10720E-20g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     870.00, total mass in vadose zone =    0.48921E-16g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.17301E-18g/sq.ft.
Mass sorbed           =      0.48748E-16g/sq.ft.

Since last printout at time =     860.00
                Change in Total Mass =    -0.61341E-16g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.61341E-16g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.61341E-16g/sq.ft.
                Mass discrepancy =     0.41690E-21g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     880.00, total mass in vadose zone =    0.21641E-16g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.76534E-19g/sq.ft.
Mass sorbed           =      0.21565E-16g/sq.ft.

Since last printout at time =     870.00
                Change in Total Mass =    -0.27280E-16g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.27280E-16g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.27280E-16g/sq.ft.
                Mass discrepancy =     0.17867E-21g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     890.00, total mass in vadose zone =    0.95459E-17g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.33759E-19g/sq.ft.
Mass sorbed           =      0.95122E-17g/sq.ft.
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Since last printout at time =     880.00
               Change in Total Mass =    -0.12096E-16g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.12096E-16g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.12096E-16g/sq.ft.
               Mass discrepancy =     0.81064E-22g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     900.00, total mass in vadose zone =    0.41987E-17g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.14849E-19g/sq.ft.
Mass sorbed           =      0.41839E-17g/sq.ft.

Since last printout at time =     890.00
               Change in Total Mass =    -0.53472E-17g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.53472E-17g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.53472E-17g/sq.ft.
               Mass discrepancy =     0.31433E-22g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     910.00, total mass in vadose zone =    0.18417E-17g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.65130E-20g/sq.ft.
Mass sorbed           =      0.18352E-17g/sq.ft.

Since last printout at time =     900.00
               Change in Total Mass =    -0.23571E-17g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.23571E-17g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.23571E-17g/sq.ft.
               Mass discrepancy =     0.14889E-22g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     920.00, total mass in vadose zone =    0.80561E-18g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.28490E-20g/sq.ft.
Mass sorbed           =      0.80276E-18g/sq.ft.

Since last printout at time =     910.00
               Change in Total Mass =    -0.10361E-17g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.10361E-17g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.10361E-17g/sq.ft.
               Mass discrepancy =     0.69276E-23g/sq.ft.

Since beginning of run at time = 0.0
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                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     930.00, total mass in vadose zone =    0.35146E-18g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.12429E-20g/sq.ft.
Mass sorbed           =      0.35022E-18g/sq.ft.

Since last printout at time =     920.00
                Change in Total Mass =    -0.45415E-18g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.45415E-18g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.45415E-18g/sq.ft.
                Mass discrepancy =     0.33604E-23g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     940.00, total mass in vadose zone =    0.15293E-18g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.54082E-21g/sq.ft.
Mass sorbed           =      0.15239E-18g/sq.ft.

Since last printout at time =     930.00
                Change in Total Mass =    -0.19853E-18g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.19853E-18g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.19853E-18g/sq.ft.
                Mass discrepancy =     0.12020E-23g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     950.00, total mass in vadose zone =    0.66371E-19g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.23472E-21g/sq.ft.
Mass sorbed           =      0.66137E-19g/sq.ft.

Since last printout at time =     940.00
                Change in Total Mass =    -0.86556E-19g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =    -0.86557E-19g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =    -0.86557E-19g/sq.ft.
                Mass discrepancy =     0.63331E-24g/sq.ft.

Since beginning of run at time = 0.0
                Change in Total Mass =     -128.28    g/sq.ft.
                     Advection in from atmosphere =      0.00000    g/sq.ft.
                     Advection in from water table =     -128.29    g/sq.ft.
                     Diffusion in from atmosphere =      0.00000    g/sq.ft.
                     Diffusion in from water table =     0.00000    g/sq.ft.
                Total inflow at boundaries =     -128.29    g/sq.ft.
                Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
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At time =     960.00, total mass in vadose zone =    0.28733E-19g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.10161E-21g/sq.ft.
Mass sorbed           =      0.28631E-19g/sq.ft.

Since last printout at time =     950.00
               Change in Total Mass =    -0.37638E-19g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.37639E-19g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.37639E-19g/sq.ft.
               Mass discrepancy =     0.22618E-24g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     970.00, total mass in vadose zone =    0.12408E-19g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.43880E-22g/sq.ft.
Mass sorbed           =      0.12364E-19g/sq.ft.

Since last printout at time =     960.00
               Change in Total Mass =    -0.16325E-19g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.16325E-19g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.16325E-19g/sq.ft.
               Mass discrepancy =     0.95320E-25g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     980.00, total mass in vadose zone =    0.53453E-20g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.18903E-22g/sq.ft.
Mass sorbed           =      0.53264E-20g/sq.ft.

Since last printout at time =     970.00
               Change in Total Mass =    -0.70627E-20g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.70628E-20g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.70628E-20g/sq.ft.
               Mass discrepancy =     0.46852E-25g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =     990.00, total mass in vadose zone =    0.22972E-20g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.81240E-23g/sq.ft.
Mass sorbed           =      0.22891E-20g/sq.ft.

Since last printout at time =     980.00
               Change in Total Mass =    -0.30481E-20g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.30481E-20g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
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                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.30481E-20g/sq.ft.
               Mass discrepancy =     0.16156E-25g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


Polygon   1
At time =    1000.00, total mass in vadose zone =    0.98495E-21g/sq.ft.
Mass in gas phase     =      0.00000    g/sq.ft.
Mass in liquid phase  =      0.34832E-23g/sq.ft.
Mass sorbed           =      0.98147E-21g/sq.ft.

Since last printout at time =     990.00
               Change in Total Mass =    -0.13123E-20g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =    -0.13123E-20g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =    -0.13123E-20g/sq.ft.
               Mass discrepancy =     0.74721E-26g/sq.ft.

Since beginning of run at time = 0.0
               Change in Total Mass =     -128.28    g/sq.ft.
                    Advection in from atmosphere =      0.00000    g/sq.ft.
                    Advection in from water table =     -128.29    g/sq.ft.
                    Diffusion in from atmosphere =      0.00000    g/sq.ft.
                    Diffusion in from water table =     0.00000    g/sq.ft.
               Total inflow at boundaries =     -128.29    g/sq.ft.
               Mass discrepancy =     0.80261E-02g/sq.ft.


GROUNDWATER IMPACT OF POLYGON   1
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Time	Mass flux (g/yr/sq.ft.)	Total Mass(g/yr)
10.00	0.17622E-01	450.25
20.00	0.17623E-01	450.27
30.00	0.17645E-01	450.83
40.00	0.17838E-01	455.76
50.00	0.18876E-01	482.28
60.00	0.22759E-01	581.49
70.00	0.33792E-01	863.39
80.00	0.58993E-01	1507.3
90.00	0.10709	2736.2
100.00	0.18589	4749.4
110.00	0.29879	7634.1
120.00	0.44204	11294.
130.00	0.60402	15433.
140.00	0.76711	19600.
150.00	0.91154	23290.
160.00	1.0198	26055.
170.00	1.0801	27595.
180.00	1.0883	27806.
190.00	1.0477	26770.
200.00	0.96742	24717.
210.00	0.85955	21961.
220.00	0.73704	18831.
230.00	0.61153	15625.
240.00	0.49209	12573.
250.00	0.38484	9832.7
260.00	0.29305	7487.4
270.00	0.21764	5560.8
280.00	0.15790	4034.2
290.00	0.11205	2862.9
300.00	0.77877E-01	1989.8
310.00	0.53073E-01	1356.0
320.00	0.35503E-01	907.11
330.00	0.23335E-01	596.21
340.00	0.15083E-01	385.37
350.00	0.95953E-02	245.16
360.00	0.60125E-02	153.62
370.00	0.37136E-02	94.883
380.00	0.22624E-02	57.803
390.00	0.13602E-02	34.754
400.00	0.80763E-03	20.635
410.00	0.47378E-03	12.105
420.00	0.27475E-03	7.0199
430.00	0.15758E-03	4.0261

440.00	0.89421E-04	2.2847
450.00	0.50229E-04	1.2833
460.00	0.27938E-04	0.71382
470.00	0.15394E-04	0.39331
480.00	0.84050E-05	0.21475
490.00	0.45490E-05	0.11623
500.00	0.24413E-05	0.62376E-01
510.00	0.12995E-05	0.33203E-01
520.00	0.68631E-06	0.17535E-01
530.00	0.35970E-06	0.91904E-02
540.00	0.18714E-06	0.47814E-02
550.00	0.96669E-07	0.24699E-02
560.00	0.49591E-07	0.12671E-02
570.00	0.25271E-07	0.64567E-03
580.00	0.12794E-07	0.32690E-03
590.00	0.64370E-08	0.16447E-03
600.00	0.32188E-08	0.82242E-04
610.00	0.16001E-08	0.40882E-04
620.00	0.79084E-09	0.20206E-04
630.00	0.38869E-09	0.99311E-05
640.00	0.19000E-09	0.48546E-05
650.00	0.92391E-10	0.23606E-05
660.00	0.44695E-10	0.11420E-05
670.00	0.21514E-10	0.54969E-06
680.00	0.10306E-10	0.26331E-06
690.00	0.49132E-11	0.12553E-06
700.00	0.23316E-11	0.59572E-07
710.00	0.11015E-11	0.28143E-07
720.00	0.51809E-12	0.13237E-07
730.00	0.24264E-12	0.61996E-08
740.00	0.11317E-12	0.28914E-08
750.00	0.52566E-13	0.13431E-08
760.00	0.24320E-13	0.62138E-09
770.00	0.11208E-13	0.28637E-09
780.00	0.51460E-14	0.13148E-09
790.00	0.23539E-14	0.60142E-10
800.00	0.10728E-14	0.27411E-10
810.00	0.48723E-15	0.12449E-10
820.00	0.22052E-15	0.56342E-11
830.00	0.99467E-16	0.25414E-11
840.00	0.44717E-16	0.11425E-11
850.00	0.20039E-16	0.51199E-12
860.00	0.89512E-17	0.22870E-12
870.00	0.39861E-17	0.10185E-12
880.00	0.17697E-17	0.45215E-13
890.00	0.78334E-18	0.20014E-13
900.00	0.34573E-18	0.88334E-14
910.00	0.15215E-18	0.38875E-14
920.00	0.66774E-19	0.17061E-14
930.00	0.29224E-19	0.74668E-15
940.00	0.12756E-19	0.32592E-15
950.00	0.55531E-20	0.14188E-15
960.00	0.24112E-20	0.61606E-16
970.00	0.10443E-20	0.26682E-16
980.00	0.45116E-21	0.11527E-16
990.00	0.19444E-21	0.49679E-17
1000.00	0.83597E-22	0.21359E-17

****

****

TOTAL GROUNDWATER IMPACT

Time (yr)	Mass (g/yr)	Cumulative Mass (g)
10.00	450.25	4502.5
20.00	450.27	9005.0
30.00	450.83	13509.
40.00	455.76	18035.
50.00	482.28	22693.
60.00	581.49	27917.
70.00	863.39	34928.
80.00	1507.3	46395.
90.00	2736.2	67044.
100.00	4749.4	0.10378E+06
110.00	7634.1	0.16501E+06
120.00	11294.	0.25913E+06
130.00	15433.	0.39258E+06
140.00	19600.	0.56797E+06
150.00	23290.	0.78306E+06
160.00	26055.	0.10307E+07
170.00	27595.	0.13001E+07
180.00	27806.	0.15782E+07
190.00	26770.	0.18520E+07
200.00	24717.	0.21102E+07
210.00	21961.	0.23440E+07
220.00	18831.	0.25481E+07

230.00	15625.	0.27203E+07
240.00	12573.	0.28610E+07
250.00	9832.7	0.29727E+07
260.00	7487.4	0.30590E+07
270.00	5560.8	0.31239E+07
280.00	4034.2	0.31715E+07
290.00	2862.9	0.32057E+07
300.00	1989.8	0.32297E+07
310.00	1356.0	0.32463E+07
320.00	907.11	0.32574E+07
330.00	596.21	0.32649E+07
340.00	385.37	0.32697E+07
350.00	245.16	0.32728E+07
360.00	153.62	0.32748E+07
370.00	94.883	0.32760E+07
380.00	57.803	0.32767E+07
390.00	34.754	0.32772E+07
400.00	20.635	0.32775E+07
410.00	12.105	0.32776E+07
420.00	7.0199	0.32777E+07
430.00	4.0261	0.32778E+07
440.00	2.2847	0.32778E+07
450.00	1.2833	0.32778E+07
460.00	0.71382	0.32778E+07
470.00	0.39331	0.32778E+07
480.00	0.21475	0.32778E+07
490.00	0.11623	0.32778E+07
500.00	0.62376E-01	0.32778E+07
510.00	0.33203E-01	0.32778E+07
520.00	0.17535E-01	0.32778E+07
530.00	0.91904E-02	0.32778E+07
540.00	0.47814E-02	0.32778E+07
550.00	0.24699E-02	0.32778E+07
560.00	0.12671E-02	0.32778E+07
570.00	0.64567E-03	0.32778E+07
580.00	0.32690E-03	0.32778E+07
590.00	0.16447E-03	0.32778E+07
600.00	0.82242E-04	0.32778E+07
610.00	0.40882E-04	0.32778E+07
620.00	0.20206E-04	0.32778E+07
630.00	0.99311E-05	0.32778E+07
640.00	0.48546E-05	0.32778E+07
650.00	0.23606E-05	0.32778E+07
660.00	0.11420E-05	0.32778E+07
670.00	0.54969E-06	0.32778E+07
680.00	0.26331E-06	0.32778E+07
690.00	0.12553E-06	0.32778E+07
700.00	0.59572E-07	0.32778E+07
710.00	0.28143E-07	0.32778E+07
720.00	0.13237E-07	0.32778E+07
730.00	0.61996E-08	0.32778E+07
740.00	0.28914E-08	0.32778E+07
750.00	0.13431E-08	0.32778E+07
760.00	0.62138E-09	0.32778E+07
770.00	0.28637E-09	0.32778E+07
780.00	0.13148E-09	0.32778E+07
790.00	0.60142E-10	0.32778E+07
800.00	0.27411E-10	0.32778E+07
810.00	0.12449E-10	0.32778E+07
820.00	0.56342E-11	0.32778E+07
830.00	0.25414E-11	0.32778E+07
840.00	0.11425E-11	0.32778E+07
850.00	0.51199E-12	0.32778E+07
860.00	0.22870E-12	0.32778E+07
870.00	0.10185E-12	0.32778E+07
880.00	0.45215E-13	0.32778E+07
890.00	0.20014E-13	0.32778E+07
900.00	0.88334E-14	0.32778E+07
910.00	0.38875E-14	0.32778E+07
920.00	0.17061E-14	0.32778E+07
930.00	0.74668E-15	0.32778E+07
940.00	0.32592E-15	0.32778E+07
950.00	0.14188E-15	0.32778E+07
960.00	0.61606E-16	0.32778E+07
970.00	0.26682E-16	0.32778E+07
980.00	0.11527E-16	0.32778E+07
990.00	0.49679E-17	0.32778E+07
1000.00	0.21359E-17	0.32778E+07

16CC16W.TXT

.02	450.248
5	450.248
10	450.248
15	450.25
20	450.275
25	450.392
30	450.826
35	452.17
40	455.755
45	464.223
50	482.276
55	517.557
60	581.493
65	689.939
70	863.387
75	1126.56
80	1507.27
85	2034.56
90	2736.17
95	3635.65
100	4749.41
105	6084
110	7634.1
115	9381.33
120	11294.2
125	13329.2
130	15432.8
135	17544.3
140	19599.8
145	21535
150	23289.9
155	24811.1
160	26055
165	26989.6
170	27595.4
175	27865.6
180	27805.6
185	27431.7
190	26769.6
195	25852.2
200	24717.5
205	23406.5
210	21961.4
215	20423.3
220	18831.5
225	17221.4
230	15624.5
235	14067.7
240	12572.9
245	11157.1
250	9832.7
255	8607.99
260	7487.39
265	6472.14
270	5560.82
275	4749.9
280	4034.24
285	3407.55
290	2862.85
295	2392.75
300	1989.76
305	1646.54
310	1356.02
315	1111.59
320	907.11
325	736.989
330	596.21
335	480.311
340	385.368
345	307.966
350	245.159
355	194.424
360	153.621
365	120.944
370	94.883
375	74.1822
380	57.8032
385	44.8928
390	34.7541
395	26.8208
400	20.6349
405	15.828
410	12.1052
415	9.23134
420	7.01992

425	5.32352
430	4.02614
435	3.03686
440	2.28471
445	1.71447
450	1.28334
455	.958273
460	.713823
465	.530476
470	.39331
475	.290948
480	.214747
485	.158156
490	.116228
495	.0852345
500	.062376
505	.0455548
510	.0332031
515	.0241527
520	.0175353
525	.0127066
530	9.19042E-03
535	6.63497E-03
540	.0047814
545	3.43951E-03
550	2.46988E-03
555	1.77054E-03
560	1.26706E-03
565	9.05236E-04
570	6.45672E-04
575	4.59788E-04
580	3.26896E-04
585	2.32049E-04
590	1.64466E-04
595	1.16388E-04
600	8.22415E-05
605	5.80269E-05
610	4.08821E-05
615	2.87617E-05
620	2.02059E-05
625	1.41754E-05
630	9.93107E-06
635	6.94811E-06
640	4.85461E-06
645	3.38743E-06
650	2.36059E-06
655	1.6429E-06
660	1.14197E-06
665	7.92779E-07
670	5.49687E-07
675	3.80671E-07
680	2.63308E-07
685	1.81913E-07
690	1.25532E-07
695	8.65255E-08
700	5.95716E-08
705	4.0968E-08
710	2.81429E-08
715	1.93115E-08
720	1.32371E-08
725	9.06372E-09
730	6.19955E-09
735	4.23605E-09
740	2.89144E-09
745	1.97163E-09
750	1.34307E-09
755	9.13992E-10
760	6.21383E-10
765	4.2204E-10
770	2.86373E-10
775	1.94133E-10
780	1.3148E-10
785	8.89642E-11
790	6.01416E-11
795	4.06202E-11
800	2.74107E-11
805	1.84805E-11
810	1.24488E-11
815	8.37852E-12
820	5.63423E-12
825	3.78559E-12
830	2.54138E-12
835	1.7047E-12
840	1.14253E-12
845	7.65134E-13

850	5.11988E-13
855	3.42324E-13
860	2.28704E-13
865	1.52677E-13
870	1.01845E-13
875	6.78854E-14
880	4.52154E-14
885	3.00935E-14
890	2.00143E-14
895	1.33012E-14
900	8.83336E-15
905	5.86209E-15
910	3.88751E-15
915	2.57624E-15
920	1.70608E-15
925	1.12906E-15
930	7.46685E-16
935	4.93475E-16
940	3.25915E-16
945	2.15108E-16
950	1.41882E-16
955	9.35219E-17
960	6.16059E-17
965	4.0556E-17
970	2.66818E-17
975	1.7543E-17
980	1.15273E-17
985	7.56975E-18
990	4.96791E-18
995	3.25841E-18
1000	2.13589E-18

16CU1.PRF

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|-------------------------------------------------------------|
|                VLEACH (Version 2.2a, 1996)                  |
|                                                             |
|                          By:                                |
|        Varadhan Ravi and Jeffrey A. Johnson                 |
|                (USEPA Contractors)                          |
|        Center for Subsurface Modeling Support               |
|        Robert S. Kerr Environmental Research Laboratory     |
|        U.S. Environmental Protection Agency                 |
|        P.O. Box 1198                                        |
|        Ada, OK 74820                                        |
|                                                             |
|        Based on the original VLEACH (version 1.0)           |
|        developed by CH2M Hill, Redding, California          |
|        for USEPA Region IX                                  |
|-------------------------------------------------------------|
```

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 0.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	17.030	0.13351E-01
2	0.00000	17.030	0.13351E-01
3	0.00000	0.29868E-01	0.23416E-04
4	0.00000	0.29868E-01	0.23416E-04
5	0.00000	0.29868E-01	0.23416E-04
6	0.00000	0.29868E-01	0.23416E-04
7	0.00000	0.29868E-01	0.23416E-04
8	0.00000	0.29868E-01	0.23416E-04
9	0.00000	0.29868E-01	0.23416E-04
10	0.00000	0.29868E-01	0.23416E-04
11	0.00000	0.29868E-01	0.23416E-04
12	0.00000	0.29868E-01	0.23416E-04
13	0.00000	0.29868E-01	0.23416E-04
14	0.00000	0.29868E-01	0.23416E-04
15	0.00000	0.29868E-01	0.23416E-04
16	0.00000	0.29868E-01	0.23416E-04
17	0.00000	0.29868E-01	0.23416E-04
18	0.00000	0.29868E-01	0.23416E-04
19	0.00000	0.29868E-01	0.23416E-04
20	0.00000	0.29868E-01	0.23416E-04
21	0.00000	0.29868E-01	0.23416E-04
22	0.00000	0.29868E-01	0.23416E-04
23	0.00000	0.29868E-01	0.23416E-04
24	0.00000	0.29868E-01	0.23416E-04
25	0.00000	0.29868E-01	0.23416E-04
26	0.00000	0.29868E-01	0.23416E-04
27	0.00000	0.29868E-01	0.23416E-04
28	0.00000	0.29868E-01	0.23416E-04
29	0.00000	0.29868E-01	0.23416E-04
30	0.00000	0.29868E-01	0.23416E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 10.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	5.6395	0.44212E-02
2	0.00000	9.9312	0.77859E-02
3	0.00000	7.2712	0.57005E-02
4	0.00000	4.8346	0.37902E-02
5	0.00000	2.9407	0.23055E-02
6	0.00000	1.6853	0.13212E-02
7	0.00000	0.92769	0.72729E-03
8	0.00000	0.49899	0.39120E-03
9	0.00000	0.26765	0.20983E-03
10	0.00000	0.14738	0.11554E-03
11	0.00000	0.86695E-01	0.67967E-04
12	0.00000	0.56840E-01	0.44561E-04
13	0.00000	0.42461E-01	0.33288E-04
14	0.00000	0.35662E-01	0.27959E-04
15	0.00000	0.32500E-01	0.25479E-04
16	0.00000	0.31049E-01	0.24342E-04
17	0.00000	0.30393E-01	0.23827E-04
18	0.00000	0.30099E-01	0.23597E-04
19	0.00000	0.29969E-01	0.23495E-04
20	0.00000	0.29912E-01	0.23450E-04
21	0.00000	0.29887E-01	0.23431E-04
22	0.00000	0.29876E-01	0.23422E-04
23	0.00000	0.29872E-01	0.23419E-04
24	0.00000	0.29870E-01	0.23417E-04
25	0.00000	0.29869E-01	0.23417E-04
26	0.00000	0.29868E-01	0.23416E-04
27	0.00000	0.29868E-01	0.23416E-04
28	0.00000	0.29868E-01	0.23416E-04
29	0.00000	0.29868E-01	0.23416E-04
30	0.00000	0.29868E-01	0.23416E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 20.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	1.8675	0.14641E-02
2	0.00000	4.7099	0.36925E-02
3	0.00000	5.8940	0.46208E-02
4	0.00000	5.7770	0.45290E-02
5	0.00000	4.8920	0.38353E-02
6	0.00000	3.7503	0.29402E-02
7	0.00000	2.6727	0.20953E-02
8	0.00000	1.8014	0.14122E-02
9	0.00000	1.1629	0.91166E-03
10	0.00000	0.72675	0.56976E-03
11	0.00000	0.44454	0.34851E-03
12	0.00000	0.26965	0.21140E-03
13	0.00000	0.16510	0.12943E-03
14	0.00000	0.10446	0.81897E-04
15	0.00000	0.70210E-01	0.55043E-04
16	0.00000	0.51301E-01	0.40219E-04
17	0.00000	0.41072E-01	0.32200E-04
18	0.00000	0.35640E-01	0.27941E-04
19	0.00000	0.32801E-01	0.25716E-04
20	0.00000	0.31341E-01	0.24570E-04
21	0.00000	0.30599E-01	0.23989E-04
22	0.00000	0.30227E-01	0.23697E-04
23	0.00000	0.30043E-01	0.23553E-04
24	0.00000	0.29952E-01	0.23482E-04
25	0.00000	0.29908E-01	0.23448E-04
26	0.00000	0.29887E-01	0.23431E-04
27	0.00000	0.29877E-01	0.23423E-04
28	0.00000	0.29872E-01	0.23419E-04
29	0.00000	0.29870E-01	0.23418E-04
30	0.00000	0.29869E-01	0.23417E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 30.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.61842	0.48483E-03
2	0.00000	2.0303	0.15917E-02
3	0.00000	3.4644	0.27160E-02
4	0.00000	4.4223	0.34670E-02
5	0.00000	4.7320	0.37098E-02
6	0.00000	4.4822	0.35140E-02
7	0.00000	3.8775	0.30399E-02
8	0.00000	3.1252	0.24501E-02
9	0.00000	2.3796	0.18656E-02
10	0.00000	1.7294	0.13558E-02
11	0.00000	1.2097	0.94837E-03
12	0.00000	0.82033	0.64312E-03
13	0.00000	0.54327	0.42591E-03
14	0.00000	0.35427	0.27774E-03
15	0.00000	0.22988	0.18022E-03
16	0.00000	0.15048	0.11798E-03
17	0.00000	0.10116	0.79307E-04
18	0.00000	0.71241E-01	0.55852E-04
19	0.00000	0.53479E-01	0.41926E-04
20	0.00000	0.43135E-01	0.33817E-04
21	0.00000	0.37217E-01	0.29177E-04
22	0.00000	0.33885E-01	0.26565E-04
23	0.00000	0.32037E-01	0.25116E-04
24	0.00000	0.31025E-01	0.24323E-04
25	0.00000	0.30479E-01	0.23895E-04
26	0.00000	0.30188E-01	0.23666E-04
27	0.00000	0.30034E-01	0.23546E-04
28	0.00000	0.29953E-01	0.23483E-04
29	0.00000	0.29911E-01	0.23450E-04
30	0.00000	0.29890E-01	0.23433E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 40.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.20479	0.16055E-03
2	0.00000	0.82819	0.64929E-03
3	0.00000	1.7667	0.13851E-02
4	0.00000	2.7586	0.21627E-02
5	0.00000	3.5447	0.27790E-02
6	0.00000	3.9728	0.31146E-02
7	0.00000	4.0178	0.31499E-02
8	0.00000	3.7477	0.29381E-02
9	0.00000	3.2735	0.25664E-02
10	0.00000	2.7074	0.21225E-02
11	0.00000	2.1383	0.16764E-02
12	0.00000	1.6238	0.12730E-02
13	0.00000	1.1925	0.93490E-03

14	0.00000	0.85146	0.66753E-03
15	0.00000	0.59424	0.46587E-03
16	0.00000	0.40777	0.31969E-03
17	0.00000	0.27712	0.21725E-03
18	0.00000	0.18824	0.14758E-03
19	0.00000	0.12937	0.10142E-03
20	0.00000	0.91266E-01	0.71551E-04
21	0.00000	0.67133E-01	0.52631E-04
22	0.00000	0.52139E-01	0.40876E-04
23	0.00000	0.42989E-01	0.33702E-04
24	0.00000	0.37494E-01	0.29395E-04
25	0.00000	0.34245E-01	0.26848E-04
26	0.00000	0.32351E-01	0.25363E-04
27	0.00000	0.31261E-01	0.24508E-04
28	0.00000	0.30641E-01	0.24022E-04
29	0.00000	0.30293E-01	0.23749E-04
30	0.00000	0.30100E-01	0.23598E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 50.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.67816E-01	0.53166E-04
2	0.00000	0.32586	0.25547E-03
3	0.00000	0.82948	0.65030E-03
4	0.00000	1.5254	0.11959E-02
5	0.00000	2.2798	0.17873E-02
6	0.00000	2.9408	0.23055E-02
7	0.00000	3.3925	0.26597E-02
8	0.00000	3.5824	0.28086E-02
9	0.00000	3.5193	0.27590E-02
10	0.00000	3.2544	0.25514E-02
11	0.00000	2.8586	0.22411E-02
12	0.00000	2.4019	0.18830E-02
13	0.00000	1.9417	0.15222E-02
14	0.00000	1.5176	0.11898E-02
15	0.00000	1.1517	0.90294E-03
16	0.00000	0.85219	0.66810E-03
17	0.00000	0.61729	0.48394E-03
18	0.00000	0.43972	0.34474E-03
19	0.00000	0.30972	0.24281E-03
20	0.00000	0.21718	0.17026E-03
21	0.00000	0.15294	0.11990E-03
22	0.00000	0.10936	0.85734E-04
23	0.00000	0.80391E-01	0.63025E-04
24	0.00000	0.61501E-01	0.48216E-04
25	0.00000	0.49398E-01	0.38727E-04
26	0.00000	0.41766E-01	0.32744E-04
27	0.00000	0.37027E-01	0.29028E-04
28	0.00000	0.34125E-01	0.26753E-04
29	0.00000	0.32371E-01	0.25378E-04
30	0.00000	0.31324E-01	0.24558E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 60.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.22457E-01	0.17606E-04
2	0.00000	0.12500	0.97998E-04
3	0.00000	0.36863	0.28900E-03
4	0.00000	0.77835	0.61021E-03
5	0.00000	1.3236	0.10377E-02
6	0.00000	1.9272	0.15109E-02
7	0.00000	2.4922	0.19538E-02
8	0.00000	2.9326	0.22991E-02
9	0.00000	3.1934	0.25036E-02
10	0.00000	3.2583	0.25545E-02
11	0.00000	3.1446	0.24653E-02
12	0.00000	2.8919	0.22672E-02
13	0.00000	2.5495	0.19988E-02
14	0.00000	2.1652	0.16975E-02
15	0.00000	1.7789	0.13946E-02
16	0.00000	1.4190	0.11125E-02
17	0.00000	1.1028	0.86455E-03
18	0.00000	0.83757	0.65664E-03
19	0.00000	0.62380	0.48905E-03
20	0.00000	0.45723	0.35846E-03
21	0.00000	0.33125	0.25969E-03
22	0.00000	0.23847	0.18695E-03
23	0.00000	0.17175	0.13464E-03
24	0.00000	0.12480	0.97840E-04
25	0.00000	0.92419E-01	0.72455E-04
26	0.00000	0.70492E-01	0.55264E-04
27	0.00000	0.55894E-01	0.43820E-04
28	0.00000	0.46328E-01	0.36320E-04
29	0.00000	0.40151E-01	0.31478E-04
30	0.00000	0.36218E-01	0.28395E-04

14	0.00000	2.6209	0.20547E-02
15	0.00000	2.6376	0.20678E-02
16	0.00000	2.5603	0.20072E-02
17	0.00000	2.4052	0.18856E-02
18	0.00000	2.1927	0.17190E-02
19	0.00000	1.9449	0.15248E-02
20	0.00000	1.6822	0.13188E-02
21	0.00000	1.4216	0.11145E-02
22	0.00000	1.1762	0.92216E-03
23	0.00000	0.95458	0.74837E-03
24	0.00000	0.76129	0.59683E-03
25	0.00000	0.59783	0.46869E-03
26	0.00000	0.46331	0.36323E-03
27	0.00000	0.35527	0.27853E-03
28	0.00000	0.27040	0.21199E-03
29	0.00000	0.20506	0.16077E-03
30	0.00000	0.15570	0.12207E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 100.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.27005E-03	0.21172E-06
2	0.00000	0.23252E-02	0.18229E-05
3	0.00000	0.10516E-01	0.82442E-05
4	0.00000	0.33372E-01	0.26163E-04
5	0.00000	0.83540E-01	0.65494E-04
6	0.00000	0.17564	0.13770E-03
7	0.00000	0.32241	0.25276E-03
8	0.00000	0.53030	0.41575E-03
9	0.00000	0.79622	0.62422E-03
10	0.00000	1.1064	0.86743E-03
11	0.00000	1.4382	0.11275E-02
12	0.00000	1.7633	0.13824E-02
13	0.00000	2.0530	0.16095E-02
14	0.00000	2.2826	0.17895E-02
15	0.00000	2.4346	0.19087E-02
16	0.00000	2.5009	0.19607E-02
17	0.00000	2.4826	0.19463E-02
18	0.00000	2.3882	0.18723E-02
19	0.00000	2.2322	0.17500E-02
20	0.00000	2.0317	0.15928E-02
21	0.00000	1.8043	0.14146E-02
22	0.00000	1.5664	0.12281E-02
23	0.00000	1.3317	0.10440E-02
24	0.00000	1.1104	0.87051E-03
25	0.00000	0.90958	0.71309E-03
26	0.00000	0.73320	0.57482E-03
27	0.00000	0.58262	0.45676E-03
28	0.00000	0.45727	0.35849E-03
29	0.00000	0.35529	0.27854E-03
30	0.00000	0.27404	0.21484E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 110.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.89427E-04	0.70109E-07
2	0.00000	0.83805E-03	0.65701E-06
3	0.00000	0.41154E-02	0.32264E-05
4	0.00000	0.14136E-01	0.11082E-04
5	0.00000	0.38177E-01	0.29930E-04
6	0.00000	0.86333E-01	0.67683E-04
7	0.00000	0.16996	0.13325E-03
8	0.00000	0.29906	0.23446E-03
9	0.00000	0.47921	0.37569E-03
10	0.00000	0.70915	0.55596E-03
11	0.00000	0.97969	0.76806E-03
12	0.00000	1.2743	0.99904E-03
13	0.00000	1.5714	0.12320E-02
14	0.00000	1.8476	0.14485E-02
15	0.00000	2.0809	0.16314E-02
16	0.00000	2.2541	0.17672E-02
17	0.00000	2.3565	0.18475E-02
18	0.00000	2.3846	0.18695E-02
19	0.00000	2.3417	0.18358E-02
20	0.00000	2.2366	0.17535E-02
21	0.00000	2.0821	0.16323E-02
22	0.00000	1.8926	0.14837E-02
23	0.00000	1.6825	0.13191E-02
24	0.00000	1.4652	0.11487E-02
25	0.00000	1.2517	0.98132E-03
26	0.00000	1.0505	0.82357E-03
27	0.00000	0.86731	0.67995E-03
28	0.00000	0.70547	0.55307E-03
29	0.00000	0.56622	0.44391E-03
30	0.00000	0.44923	0.35218E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 120.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.29614E-04	0.23217E-07
2	0.00000	0.30006E-03	0.23524E-06
3	0.00000	0.15896E-02	0.12462E-05
4	0.00000	0.58741E-02	0.46052E-05
5	0.00000	0.17019E-01	0.13343E-04
6	0.00000	0.41177E-01	0.32282E-04
7	0.00000	0.86520E-01	0.67830E-04
8	0.00000	0.16211	0.12709E-03
9	0.00000	0.27603	0.21640E-03
10	0.00000	0.43324	0.33965E-03
11	0.00000	0.63366	0.49678E-03
12	0.00000	0.87122	0.68302E-03
13	0.00000	1.1339	0.88894E-03
14	0.00000	1.4050	0.11015E-02
15	0.00000	1.6657	0.13058E-02
16	0.00000	1.8968	0.14871E-02
17	0.00000	2.0822	0.16324E-02
18	0.00000	2.2101	0.17327E-02
19	0.00000	2.2740	0.17828E-02
20	0.00000	2.2736	0.17824E-02
21	0.00000	2.2133	0.17352E-02
22	0.00000	2.1018	0.16477E-02
23	0.00000	1.9501	0.15289E-02
24	0.00000	1.7707	0.13882E-02
25	0.00000	1.5756	0.12352E-02
26	0.00000	1.3757	0.10785E-02
27	0.00000	1.1801	0.92517E-03
28	0.00000	0.99584	0.78072E-03
29	0.00000	0.82770	0.64890E-03
30	0.00000	0.67848	0.53192E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 130.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.98066E-05	0.76882E-08
2	0.00000	0.10683E-03	0.83750E-07
3	0.00000	0.60717E-03	0.47601E-06
4	0.00000	0.24013E-02	0.18826E-05
5	0.00000	0.74278E-02	0.58232E-05
6	0.00000	0.19141E-01	0.15007E-04
7	0.00000	0.42744E-01	0.33511E-04
8	0.00000	0.84943E-01	0.66594E-04
9	0.00000	0.15312	0.12004E-03
10	0.00000	0.25398	0.19912E-03
11	0.00000	0.39197	0.30730E-03
12	0.00000	0.56781	0.44515E-03
13	0.00000	0.77755	0.60959E-03
14	0.00000	1.0125	0.79376E-03
15	0.00000	1.2598	0.98765E-03
16	0.00000	1.5041	0.11792E-02
17	0.00000	1.7292	0.13557E-02
18	0.00000	1.9203	0.15055E-02
19	0.00000	2.0654	0.16192E-02
20	0.00000	2.1565	0.16907E-02
21	0.00000	2.1905	0.17173E-02
22	0.00000	2.1686	0.17001E-02
23	0.00000	2.0960	0.16432E-02
24	0.00000	1.9808	0.15529E-02
25	0.00000	1.8329	0.14370E-02
26	0.00000	1.6628	0.13036E-02
27	0.00000	1.4807	0.11608E-02
28	0.00000	1.2957	0.10158E-02
29	0.00000	1.1154	0.87449E-03
30	0.00000	0.94575	0.74145E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 140.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.32474E-05	0.25459E-08
2	0.00000	0.37847E-04	0.29671E-07
3	0.00000	0.22970E-03	0.18008E-06
4	0.00000	0.96791E-03	0.75882E-06
5	0.00000	0.31829E-02	0.24954E-05
6	0.00000	0.87022E-02	0.68224E-05
7	0.00000	0.20576E-01	0.16131E-04
8	0.00000	0.43218E-01	0.33882E-04
9	0.00000	0.82204E-01	0.64447E-04
10	0.00000	0.14365	0.11262E-03
11	0.00000	0.23323	0.18285E-03
12	0.00000	0.35496	0.27828E-03
13	0.00000	0.51005	0.39987E-03

14	0.00000	0.69609	0.54572E-03
15	0.00000	0.90679	0.71090E-03
16	0.00000	1.1323	0.88770E-03
17	0.00000	1.3602	0.10664E-02
18	0.00000	1.5769	0.12362E-02
19	0.00000	1.7689	0.13868E-02
20	0.00000	1.9249	0.15090E-02
21	0.00000	2.0360	0.15962E-02
22	0.00000	2.0974	0.16443E-02
23	0.00000	2.1078	0.16525E-02
24	0.00000	2.0697	0.16226E-02
25	0.00000	1.9884	0.15589E-02
26	0.00000	1.8716	0.14673E-02
27	0.00000	1.7278	0.13546E-02
28	0.00000	1.5663	0.12279E-02
29	0.00000	1.3957	0.10942E-02
30	0.00000	1.2237	0.95936E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 150.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.10754E-05	0.84308E-09
2	0.00000	0.13351E-04	0.10467E-07
3	0.00000	0.86168E-04	0.67554E-07
4	0.00000	0.38536E-03	0.30211E-06
5	0.00000	0.13423E-02	0.10524E-05
6	0.00000	0.38801E-02	0.30419E-05
7	0.00000	0.96827E-02	0.75911E-05
8	0.00000	0.21429E-01	0.16800E-04
9	0.00000	0.42884E-01	0.33620E-04
10	0.00000	0.78733E-01	0.61725E-04
11	0.00000	0.13412	0.10515E-03
12	0.00000	0.21391	0.16770E-03
13	0.00000	0.32175	0.25224E-03
14	0.00000	0.45915	0.35997E-03
15	0.00000	0.62481	0.48984E-03
16	0.00000	0.81423	0.63834E-03
17	0.00000	1.0199	0.79956E-03
18	0.00000	1.2318	0.96567E-03
19	0.00000	1.4384	0.11277E-02
20	0.00000	1.6281	0.12764E-02
21	0.00000	1.7901	0.14034E-02
22	0.00000	1.9155	0.15017E-02
23	0.00000	1.9982	0.15665E-02
24	0.00000	2.0353	0.15956E-02
25	0.00000	2.0271	0.15892E-02
26	0.00000	1.9767	0.15497E-02
27	0.00000	1.8895	0.14813E-02
28	0.00000	1.7723	0.13894E-02
29	0.00000	1.6329	0.12802E-02
30	0.00000	1.4794	0.11598E-02

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 160.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.35611E-06	0.27918E-09
2	0.00000	0.46923E-05	0.36787E-08
3	0.00000	0.32087E-04	0.25155E-07
4	0.00000	0.15177E-03	0.11899E-06
5	0.00000	0.55816E-03	0.43759E-06
6	0.00000	0.17006E-02	0.13332E-05
7	0.00000	0.44660E-02	0.35013E-05
8	0.00000	0.10386E-01	0.81426E-05
9	0.00000	0.21810E-01	0.17099E-04
10	0.00000	0.41965E-01	0.32900E-04
11	0.00000	0.74831E-01	0.58666E-04
12	0.00000	0.12479	0.97830E-04
13	0.00000	0.19604	0.15369E-03
14	0.00000	0.29192	0.22886E-03
15	0.00000	0.41412	0.32466E-03
16	0.00000	0.56211	0.44068E-03
17	0.00000	0.73276	0.57447E-03
18	0.00000	0.92032	0.72152E-03
19	0.00000	1.1168	0.87556E-03
20	0.00000	1.3127	0.10291E-02
21	0.00000	1.4977	0.11742E-02
22	0.00000	1.6620	0.13030E-02
23	0.00000	1.7969	0.14087E-02
24	0.00000	1.8958	0.14863E-02
25	0.00000	1.9547	0.15324E-02
26	0.00000	1.9720	0.15460E-02
27	0.00000	1.9491	0.15281E-02
28	0.00000	1.8894	0.14812E-02
29	0.00000	1.7981	0.14097E-02
30	0.00000	1.6816	0.13183E-02

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 170.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.11793E-06	0.92452E-10
2	0.00000	0.16436E-05	0.12885E-08
3	0.00000	0.11870E-04	0.93059E-08
4	0.00000	0.59202E-04	0.46413E-07
5	0.00000	0.22921E-03	0.17970E-06
6	0.00000	0.73406E-03	0.57549E-06
7	0.00000	0.20235E-02	0.15864E-05
8	0.00000	0.49327E-02	0.38671E-05
9	0.00000	0.10844E-01	0.85016E-05
10	0.00000	0.21818E-01	0.17105E-04
11	0.00000	0.40637E-01	0.31859E-04
12	0.00000	0.70709E-01	0.55435E-04
13	0.00000	0.11580	0.90784E-04
14	0.00000	0.17958	0.14079E-03
15	0.00000	0.26510	0.20783E-03
16	0.00000	0.37414	0.29332E-03
17	0.00000	0.50672	0.39726E-03
18	0.00000	0.66074	0.51801E-03
19	0.00000	0.83187	0.65217E-03
20	0.00000	1.0138	0.79476E-03
21	0.00000	1.1985	0.93957E-03
22	0.00000	1.3772	0.10797E-02
23	0.00000	1.5410	0.12081E-02
24	0.00000	1.6817	0.13184E-02
25	0.00000	1.7926	0.14053E-02
26	0.00000	1.8687	0.14650E-02
27	0.00000	1.9075	0.14954E-02
28	0.00000	1.9086	0.14963E-02
29	0.00000	1.8740	0.14692E-02
30	0.00000	1.8073	0.14169E-02

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 180.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.39051E-07	0.30615E-10
2	0.00000	0.57399E-06	0.45000E-09
3	0.00000	0.43655E-05	0.34225E-08
4	0.00000	0.22896E-04	0.17950E-07
5	0.00000	0.93078E-04	0.72971E-07
6	0.00000	0.31257E-03	0.24505E-06
7	0.00000	0.90226E-03	0.70735E-06
8	0.00000	0.23004E-02	0.18035E-05
9	0.00000	0.52833E-02	0.41420E-05
10	0.00000	0.11093E-01	0.86965E-05
11	0.00000	0.21539E-01	0.16886E-04
12	0.00000	0.39033E-01	0.30601E-04
13	0.00000	0.66517E-01	0.52148E-04
14	0.00000	0.10725	0.84082E-04
15	0.00000	0.16447	0.12894E-03
16	0.00000	0.24096	0.18891E-03
17	0.00000	0.33853	0.26540E-03
18	0.00000	0.45760	0.35875E-03
19	0.00000	0.59684	0.46791E-03
20	0.00000	0.75303	0.59036E-03
21	0.00000	0.92115	0.72217E-03
22	0.00000	1.0947	0.85820E-03
23	0.00000	1.2660	0.99255E-03
24	0.00000	1.4273	0.11190E-02
25	0.00000	1.5709	0.12316E-02
26	0.00000	1.6901	0.13250E-02
27	0.00000	1.7797	0.13952E-02
28	0.00000	1.8361	0.14395E-02
29	0.00000	1.8581	0.14567E-02
30	0.00000	1.8460	0.14472E-02

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 190.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.12932E-07	0.10138E-10
2	0.00000	0.19992E-06	0.15673E-09
3	0.00000	0.15971E-05	0.12521E-08
4	0.00000	0.87863E-05	0.68883E-08
5	0.00000	0.37419E-04	0.29335E-07
6	0.00000	0.13147E-03	0.10307E-06
7	0.00000	0.39656E-03	0.31090E-06
8	0.00000	0.10554E-02	0.82739E-06
9	0.00000	0.25273E-02	0.19813E-05
10	0.00000	0.55272E-02	0.43332E-05
11	0.00000	0.11168E-01	0.87558E-05
12	0.00000	0.21044E-01	0.16498E-04
13	0.00000	0.37255E-01	0.29207E-04

14	0.00000	0.62354E-01	0.48884E-04
15	0.00000	0.99187E-01	0.77761E-04
16	0.00000	0.15062	0.11809E-03
17	0.00000	0.21920	0.17185E-03
18	0.00000	0.30673	0.24047E-03
19	0.00000	0.41390	0.32449E-03
20	0.00000	0.53996	0.42332E-03
21	0.00000	0.68258	0.53513E-03
22	0.00000	0.83782	0.65683E-03
23	0.00000	1.0003	0.78423E-03
24	0.00000	1.1637	0.91231E-03
25	0.00000	1.3209	0.10356E-02
26	0.00000	1.4651	0.11486E-02
27	0.00000	1.5897	0.12463E-02
28	0.00000	1.6894	0.13244E-02
29	0.00000	1.7602	0.13799E-02
30	0.00000	1.7997	0.14109E-02

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 200.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.42823E-08	0.33573E-11
2	0.00000	0.69462E-07	0.54457E-10
3	0.00000	0.58152E-06	0.45590E-09
4	0.00000	0.33483E-05	0.26250E-08
5	0.00000	0.14906E-04	0.11686E-07
6	0.00000	0.54683E-04	0.42871E-07
7	0.00000	0.17204E-03	0.13487E-06
8	0.00000	0.47702E-03	0.37397E-06
9	0.00000	0.11890E-02	0.93213E-06
10	0.00000	0.27040E-02	0.21199E-05
11	0.00000	0.56767E-02	0.44504E-05
12	0.00000	0.11104E-01	0.87054E-05
13	0.00000	0.20391E-01	0.15986E-04
14	0.00000	0.35377E-01	0.27735E-04
15	0.00000	0.58291E-01	0.45699E-04
16	0.00000	0.91630E-01	0.71836E-04
17	0.00000	0.13795	0.10815E-03
18	0.00000	0.19957	0.15646E-03
19	0.00000	0.27826	0.21815E-03
20	0.00000	0.37490	0.29391E-03
21	0.00000	0.48918	0.38351E-03
22	0.00000	0.61946	0.48565E-03
23	0.00000	0.76269	0.59794E-03
24	0.00000	0.91451	0.71696E-03
25	0.00000	1.0695	0.83849E-03
26	0.00000	1.2216	0.95775E-03
27	0.00000	1.3646	0.10698E-02
28	0.00000	1.4922	0.11699E-02
29	0.00000	1.5992	0.12538E-02
30	0.00000	1.6813	0.13181E-02

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 210.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.14181E-08	0.11118E-11
2	0.00000	0.24081E-07	0.18879E-10
3	0.00000	0.21082E-06	0.16528E-09
4	0.00000	0.12679E-05	0.99403E-09
5	0.00000	0.58893E-05	0.46171E-08
6	0.00000	0.22516E-04	0.17652E-07
7	0.00000	0.73753E-04	0.57821E-07
8	0.00000	0.21270E-03	0.16676E-06
9	0.00000	0.55093E-03	0.43192E-06
10	0.00000	0.13009E-02	0.10199E-05
11	0.00000	0.28334E-02	0.22213E-05
12	0.00000	0.57453E-02	0.45042E-05
13	0.00000	0.10929E-01	0.85682E-05
14	0.00000	0.19628E-01	0.15388E-04
15	0.00000	0.33456E-01	0.26229E-04
16	0.00000	0.54372E-01	0.42626E-04
17	0.00000	0.84578E-01	0.66307E-04
18	0.00000	0.12636	0.99060E-04
19	0.00000	0.18183	0.14255E-03
20	0.00000	0.25272	0.19813E-03
21	0.00000	0.34001	0.26656E-03
22	0.00000	0.44374	0.34788E-03
23	0.00000	0.56280	0.44122E-03
24	0.00000	0.69487	0.54477E-03
25	0.00000	0.83644	0.65575E-03
26	0.00000	0.98298	0.77064E-03
27	0.00000	1.1292	0.88529E-03
28	0.00000	1.2695	0.99528E-03
29	0.00000	1.3983	0.10962E-02
30	0.00000	1.5102	0.11840E-02

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 220.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.46960E-09	0.36816E-12
2	0.00000	0.83319E-08	0.65320E-11
3	0.00000	0.76129E-07	0.59684E-10
4	0.00000	0.47735E-06	0.37424E-09
5	0.00000	0.23092E-05	0.18104E-08
6	0.00000	0.91860E-05	0.72016E-08
7	0.00000	0.31276E-04	0.24520E-07
8	0.00000	0.93676E-04	0.73440E-07
9	0.00000	0.25177E-03	0.19738E-06
10	0.00000	0.61638E-03	0.48323E-06
11	0.00000	0.13908E-02	0.10904E-05
12	0.00000	0.29196E-02	0.22889E-05
13	0.00000	0.57458E-02	0.45046E-05
14	0.00000	0.10669E-01	0.83641E-05
15	0.00000	0.18790E-01	0.14731E-04
16	0.00000	0.31534E-01	0.24722E-04
17	0.00000	0.50626E-01	0.39690E-04
18	0.00000	0.78018E-01	0.61165E-04
19	0.00000	0.11576	0.90751E-04
20	0.00000	0.16579	0.12998E-03
21	0.00000	0.22976	0.18012E-03
22	0.00000	0.30872	0.24203E-03
23	0.00000	0.40297	0.31592E-03
24	0.00000	0.51183	0.40127E-03
25	0.00000	0.63356	0.49670E-03
26	0.00000	0.76536	0.60003E-03
27	0.00000	0.90346	0.70829E-03
28	0.00000	1.0433	0.81795E-03
29	0.00000	1.1800	0.92509E-03
30	0.00000	1.3083	0.10257E-02

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 230.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.15551E-09	0.12192E-12
2	0.00000	0.28774E-08	0.22559E-11
3	0.00000	0.27392E-07	0.21475E-10
4	0.00000	0.17876E-06	0.14015E-09
5	0.00000	0.89920E-06	0.70496E-09
6	0.00000	0.37159E-05	0.29132E-08
7	0.00000	0.13132E-04	0.10295E-07
8	0.00000	0.40788E-04	0.31977E-07
9	0.00000	0.11359E-03	0.89055E-07
10	0.00000	0.28796E-03	0.22575E-06
11	0.00000	0.67229E-03	0.52706E-06
12	0.00000	0.14593E-02	0.11440E-05
13	0.00000	0.29676E-02	0.23266E-05
14	0.00000	0.56904E-02	0.44612E-05
15	0.00000	0.10344E-01	0.81095E-05
16	0.00000	0.17907E-01	0.14039E-04
17	0.00000	0.29640E-01	0.23238E-04
18	0.00000	0.47071E-01	0.36902E-04
19	0.00000	0.71934E-01	0.56395E-04
20	0.00000	0.10607	0.83156E-04
21	0.00000	0.15126	0.11859E-03
22	0.00000	0.20908	0.16391E-03
23	0.00000	0.28061	0.21999E-03
24	0.00000	0.36633	0.28720E-03
25	0.00000	0.46590	0.36526E-03
26	0.00000	0.57807	0.45319E-03
27	0.00000	0.70061	0.54926E-03
28	0.00000	0.83042	0.65104E-03
29	0.00000	0.96365	0.75549E-03
30	0.00000	1.0959	0.85917E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 240.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.51496E-10	0.40372E-13
2	0.00000	0.99205E-09	0.77775E-12
3	0.00000	0.98230E-08	0.77010E-11
4	0.00000	0.66619E-07	0.52228E-10
5	0.00000	0.34792E-06	0.27276E-09
6	0.00000	0.14915E-05	0.11693E-08
7	0.00000	0.54630E-05	0.42829E-08
8	0.00000	0.17574E-04	0.13778E-07
9	0.00000	0.50651E-04	0.39710E-07
10	0.00000	0.13279E-03	0.10410E-06
11	0.00000	0.32040E-03	0.25119E-06
12	0.00000	0.71829E-03	0.56313E-06
13	0.00000	0.15078E-02	0.11821E-05

14	0.00000	0.29826E-02	0.23383E-05
15	0.00000	0.55900E-02	0.43825E-05
16	0.00000	0.99725E-02	0.78183E-05
17	0.00000	0.17002E-01	0.13329E-04
18	0.00000	0.27797E-01	0.21792E-04
19	0.00000	0.43713E-01	0.34270E-04
20	0.00000	0.66300E-01	0.51978E-04
21	0.00000	0.97214E-01	0.76214E-04
22	0.00000	0.13810	0.10827E-03
23	0.00000	0.19042	0.14929E-03
24	0.00000	0.25530	0.20015E-03
25	0.00000	0.33334	0.26133E-03
26	0.00000	0.42446	0.33277E-03
27	0.00000	0.52778	0.41377E-03
28	0.00000	0.64159	0.50300E-03
29	0.00000	0.76336	0.59846E-03
30	0.00000	0.88982	0.69760E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 250.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.17053E-10	0.13369E-13
2	0.00000	0.34149E-09	0.26773E-12
3	0.00000	0.35118E-08	0.27532E-11
4	0.00000	0.24715E-07	0.19376E-10
5	0.00000	0.13383E-06	0.10492E-09
6	0.00000	0.59432E-06	0.46594E-09
7	0.00000	0.22535E-05	0.17667E-08
8	0.00000	0.74987E-05	0.58788E-08
9	0.00000	0.22341E-04	0.17515E-07
10	0.00000	0.60502E-04	0.47432E-07
11	0.00000	0.15071E-03	0.11815E-06
12	0.00000	0.34858E-03	0.27328E-06
13	0.00000	0.75450E-03	0.59151E-06
14	0.00000	0.15381E-02	0.12059E-05
15	0.00000	0.29695E-02	0.23280E-05
16	0.00000	0.54540E-02	0.42759E-05
17	0.00000	0.95687E-02	0.75017E-05
18	0.00000	0.16092E-01	0.12615E-04
19	0.00000	0.26018E-01	0.20398E-04
20	0.00000	0.40556E-01	0.31795E-04
21	0.00000	0.61092E-01	0.47895E-04
22	0.00000	0.89122E-01	0.69870E-04
23	0.00000	0.12615	0.98901E-04
24	0.00000	0.17357	0.13607E-03
25	0.00000	0.23248	0.18226E-03
26	0.00000	0.30359	0.23801E-03
27	0.00000	0.38700	0.30340E-03
28	0.00000	0.48216	0.37801E-03
29	0.00000	0.58778	0.46081E-03
30	0.00000	0.70179	0.55019E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 260.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.56470E-11	0.44272E-14
2	0.00000	0.11738E-09	0.92026E-13
3	0.00000	0.12520E-08	0.98153E-12
4	0.00000	0.91308E-08	0.71584E-11
5	0.00000	0.51195E-07	0.40136E-10
6	0.00000	0.23525E-06	0.18443E-09
7	0.00000	0.92226E-06	0.72304E-09
8	0.00000	0.31709E-05	0.24859E-08
9	0.00000	0.97547E-05	0.76475E-08
10	0.00000	0.27260E-04	0.21371E-07
11	0.00000	0.70027E-04	0.54900E-07
12	0.00000	0.16695E-03	0.13088E-06
13	0.00000	0.37225E-03	0.29184E-06
14	0.00000	0.78137E-03	0.61258E-06
15	0.00000	0.15524E-02	0.12171E-05
16	0.00000	0.29330E-02	0.22994E-05
17	0.00000	0.52907E-02	0.41478E-05
18	0.00000	0.91442E-02	0.71689E-05
19	0.00000	0.15189E-01	0.11908E-04
20	0.00000	0.24314E-01	0.19061E-04
21	0.00000	0.37597E-01	0.29475E-04
22	0.00000	0.56282E-01	0.44124E-04
23	0.00000	0.81724E-01	0.64070E-04
24	0.00000	0.11530	0.90396E-04
25	0.00000	0.15832	0.12412E-03
26	0.00000	0.21188	0.16611E-03
27	0.00000	0.27671	0.21693E-03
28	0.00000	0.35310	0.27682E-03
29	0.00000	0.44074	0.34553E-03
30	0.00000	0.53867	0.42231E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 270.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.18700E-11	0.14661E-14
2	0.00000	0.40294E-10	0.31590E-13
3	0.00000	0.44516E-09	0.34900E-12
4	0.00000	0.33602E-08	0.26344E-11
5	0.00000	0.19486E-07	0.15276E-10
6	0.00000	0.92540E-07	0.72549E-10
7	0.00000	0.37469E-06	0.29375E-09
8	0.00000	0.13297E-05	0.10424E-08
9	0.00000	0.42193E-05	0.33078E-08
10	0.00000	0.12155E-04	0.95293E-08
11	0.00000	0.32171E-04	0.25222E-07
12	0.00000	0.78980E-04	0.61919E-07
13	0.00000	0.18125E-03	0.14210E-06
14	0.00000	0.39139E-03	0.30684E-06
15	0.00000	0.79957E-03	0.62685E-06
16	0.00000	0.15526E-02	0.12172E-05
17	0.00000	0.28774E-02	0.22558E-05
18	0.00000	0.51071E-02	0.40039E-05
19	0.00000	0.87084E-02	0.68273E-05
20	0.00000	0.14305E-01	0.11215E-04
21	0.00000	0.22690E-01	0.17789E-04
22	0.00000	0.34831E-01	0.27307E-04
23	0.00000	0.51845E-01	0.40645E-04
24	0.00000	0.74959E-01	0.58767E-04
25	0.00000	0.10544	0.82666E-04
26	0.00000	0.14452	0.11330E-03
27	0.00000	0.19324	0.15150E-03
28	0.00000	0.25240	0.19788E-03
29	0.00000	0.32238	0.25274E-03
30	0.00000	0.40309	0.31602E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 280.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.61925E-12	0.48548E-15
2	0.00000	0.13815E-10	0.10830E-13
3	0.00000	0.15789E-09	0.12379E-12
4	0.00000	0.12322E-08	0.96599E-12
5	0.00000	0.73816E-08	0.57870E-11
6	0.00000	0.36192E-07	0.28374E-10
7	0.00000	0.15119E-06	0.11853E-09
8	0.00000	0.55322E-06	0.43372E-09
9	0.00000	0.18090E-05	0.14182E-08
10	0.00000	0.53675E-05	0.42080E-08
11	0.00000	0.14624E-04	0.11465E-07
12	0.00000	0.36937E-04	0.28958E-07
13	0.00000	0.87174E-04	0.68343E-07
14	0.00000	0.19349E-03	0.15169E-06
15	0.00000	0.40612E-03	0.31839E-06
16	0.00000	0.80991E-03	0.63496E-06
17	0.00000	0.15409E-02	0.12080E-05
18	0.00000	0.28065E-02	0.22003E-05
19	0.00000	0.49091E-02	0.38486E-05
20	0.00000	0.82689E-02	0.64826E-05
21	0.00000	0.13445E-01	0.10541E-04
22	0.00000	0.21150E-01	0.16581E-04
23	0.00000	0.32250E-01	0.25284E-04
24	0.00000	0.47754E-01	0.37438E-04
25	0.00000	0.68773E-01	0.53917E-04
26	0.00000	0.96474E-01	0.75634E-04
27	0.00000	0.13200	0.10348E-03
28	0.00000	0.17637	0.13827E-03
29	0.00000	0.23038	0.18062E-03
30	0.00000	0.29452	0.23090E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 290.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.20506E-12	0.16077E-15
2	0.00000	0.47308E-11	0.37089E-14
3	0.00000	0.55876E-10	0.43806E-13
4	0.00000	0.45029E-09	0.35302E-12
5	0.00000	0.27840E-08	0.21826E-11
6	0.00000	0.14078E-07	0.11037E-10
7	0.00000	0.60619E-07	0.47524E-10
8	0.00000	0.22850E-06	0.17914E-09
9	0.00000	0.76928E-06	0.60310E-09
10	0.00000	0.23488E-05	0.18414E-08
11	0.00000	0.65817E-05	0.51599E-08
12	0.00000	0.17090E-04	0.13398E-07
13	0.00000	0.41445E-04	0.32492E-07

14	0.00000	0.94481E-04	0.74071E-07
15	0.00000	0.20360E-03	0.15962E-06
16	0.00000	0.41669E-03	0.32668E-06
17	0.00000	0.81326E-03	0.63758E-06
18	0.00000	0.15190E-02	0.11909E-05
19	0.00000	0.27237E-02	0.21353E-05
20	0.00000	0.47014E-02	0.36858E-05
21	0.00000	0.78313E-02	0.61396E-05
22	0.00000	0.12616E-01	0.98908E-05
23	0.00000	0.19695E-01	0.15441E-04
24	0.00000	0.29848E-01	0.23400E-04
25	0.00000	0.43983E-01	0.34482E-04
26	0.00000	0.63114E-01	0.49480E-04
27	0.00000	0.88310E-01	0.69233E-04
28	0.00000	0.12064	0.94576E-04
29	0.00000	0.16107	0.12628E-03
30	0.00000	0.21042	0.16497E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 300.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.67907E-13	0.53238E-16
2	0.00000	0.16183E-11	0.12687E-14
3	0.00000	0.19731E-10	0.15469E-13
4	0.00000	0.16404E-09	0.12861E-12
5	0.00000	0.10457E-08	0.81978E-12
6	0.00000	0.54484E-08	0.42715E-11
7	0.00000	0.24160E-07	0.18941E-10
8	0.00000	0.93730E-07	0.73483E-10
9	0.00000	0.32462E-06	0.25449E-09
10	0.00000	0.10191E-05	0.79893E-09
11	0.00000	0.29347E-05	0.23008E-08
12	0.00000	0.78278E-05	0.61369E-08
13	0.00000	0.19491E-04	0.15281E-07
14	0.00000	0.45605E-04	0.35753E-07
15	0.00000	0.10082E-03	0.79045E-07
16	0.00000	0.21162E-03	0.16591E-06
17	0.00000	0.42342E-03	0.33195E-06
18	0.00000	0.81048E-03	0.63540E-06
19	0.00000	0.14888E-02	0.11672E-05
20	0.00000	0.26318E-02	0.20633E-05
21	0.00000	0.44883E-02	0.35187E-05
22	0.00000	0.74004E-02	0.58018E-05
23	0.00000	0.11821E-01	0.92673E-05
24	0.00000	0.18325E-01	0.14366E-04
25	0.00000	0.27614E-01	0.21649E-04
26	0.00000	0.40511E-01	0.31760E-04
27	0.00000	0.57936E-01	0.45420E-04
28	0.00000	0.80872E-01	0.63402E-04
29	0.00000	0.11031	0.86482E-04
30	0.00000	0.14719	0.11539E-03

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 310.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.22487E-13	0.17630E-16
2	0.00000	0.55300E-12	0.43354E-15
3	0.00000	0.69537E-11	0.54515E-14
4	0.00000	0.59585E-10	0.46713E-13
5	0.00000	0.39123E-09	0.30672E-12
6	0.00000	0.20986E-08	0.16453E-11
7	0.00000	0.95750E-08	0.75066E-11
8	0.00000	0.38202E-07	0.29950E-10
9	0.00000	0.13599E-06	0.10662E-09
10	0.00000	0.43862E-06	0.34387E-09
11	0.00000	0.12971E-05	0.10169E-08
12	0.00000	0.35515E-05	0.27843E-08
13	0.00000	0.90737E-05	0.71136E-08
14	0.00000	0.21775E-04	0.17071E-07
15	0.00000	0.49356E-04	0.38694E-07
16	0.00000	0.10617E-03	0.83235E-07
17	0.00000	0.21763E-03	0.17062E-06
18	0.00000	0.42665E-03	0.33449E-06
19	0.00000	0.80242E-03	0.62908E-06
20	0.00000	0.14518E-02	0.11382E-05
21	0.00000	0.25334E-02	0.19861E-05
22	0.00000	0.42728E-02	0.33498E-05
23	0.00000	0.69795E-02	0.54718E-05
24	0.00000	0.11062E-01	0.86720E-05
25	0.00000	0.17037E-01	0.13357E-04
26	0.00000	0.25539E-01	0.20022E-04
27	0.00000	0.37313E-01	0.29252E-04
28	0.00000	0.53195E-01	0.41704E-04
29	0.00000	0.74091E-01	0.58086E-04
30	0.00000	0.10092	0.79123E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 320.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.74467E-14	0.58380E-17
2	0.00000	0.18879E-12	0.14801E-15
3	0.00000	0.24460E-11	0.19176E-14
4	0.00000	0.21583E-10	0.16920E-13
5	0.00000	0.14585E-09	0.11434E-12
6	0.00000	0.80473E-09	0.63089E-12
7	0.00000	0.37748E-08	0.29593E-11
8	0.00000	0.15476E-07	0.12133E-10
9	0.00000	0.56586E-07	0.44362E-10
10	0.00000	0.18737E-06	0.14689E-09
11	0.00000	0.56863E-06	0.44579E-09
12	0.00000	0.15970E-05	0.12520E-08
13	0.00000	0.41836E-05	0.32799E-08
14	0.00000	0.10290E-04	0.80675E-08
15	0.00000	0.23899E-04	0.18736E-07
16	0.00000	0.52655E-04	0.41281E-07
17	0.00000	0.11052E-03	0.86643E-07
18	0.00000	0.22176E-03	0.17386E-06
19	0.00000	0.42677E-03	0.33458E-06
20	0.00000	0.78988E-03	0.61925E-06
21	0.00000	0.14095E-02	0.11050E-05
22	0.00000	0.24305E-02	0.19054E-05
23	0.00000	0.40578E-02	0.31812E-05
24	0.00000	0.65713E-02	0.51518E-05
25	0.00000	0.10339E-01	0.81059E-05
26	0.00000	0.15830E-01	0.12410E-04
27	0.00000	0.23614E-01	0.18513E-04
28	0.00000	0.34368E-01	0.26944E-04
29	0.00000	0.48855E-01	0.38302E-04
30	0.00000	0.67906E-01	0.53237E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 330.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.24660E-14	0.19333E-17
2	0.00000	0.64395E-13	0.50485E-16
3	0.00000	0.85886E-12	0.67333E-15
4	0.00000	0.77972E-11	0.61129E-14
5	0.00000	0.54183E-10	0.42479E-13
6	0.00000	0.30728E-09	0.24090E-12
7	0.00000	0.14807E-08	0.11609E-11
8	0.00000	0.62337E-08	0.48871E-11
9	0.00000	0.23394E-07	0.18340E-10
10	0.00000	0.79471E-07	0.62304E-10
11	0.00000	0.24733E-06	0.19390E-09
12	0.00000	0.71207E-06	0.55825E-09
13	0.00000	0.19115E-05	0.14986E-08
14	0.00000	0.48162E-05	0.37758E-08
15	0.00000	0.11454E-04	0.89794E-08
16	0.00000	0.25832E-04	0.20252E-07
17	0.00000	0.55481E-04	0.43496E-07
18	0.00000	0.11389E-03	0.89287E-07
19	0.00000	0.22415E-03	0.17573E-06
20	0.00000	0.42415E-03	0.33253E-06
21	0.00000	0.77362E-03	0.60651E-06
22	0.00000	0.13631E-02	0.10687E-05
23	0.00000	0.23249E-02	0.18227E-05
24	0.00000	0.38452E-02	0.30146E-05
25	0.00000	0.61777E-02	0.48432E-05
26	0.00000	0.96551E-02	0.75694E-05
27	0.00000	0.14700E-01	0.11524E-04
28	0.00000	0.21830E-01	0.17114E-04
29	0.00000	0.31658E-01	0.24819E-04
30	0.00000	0.44880E-01	0.35185E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 340.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.81660E-15	0.64020E-18
2	0.00000	0.21946E-13	0.17205E-16
3	0.00000	0.30107E-12	0.23603E-15
4	0.00000	0.28100E-11	0.22030E-14
5	0.00000	0.20065E-10	0.15730E-13
6	0.00000	0.11687E-09	0.91622E-13
7	0.00000	0.57814E-09	0.45325E-12
8	0.00000	0.24974E-08	0.19579E-11
9	0.00000	0.96131E-08	0.75365E-11
10	0.00000	0.33481E-07	0.26249E-10
11	0.00000	0.10679E-06	0.83723E-10
12	0.00000	0.31498E-06	0.24694E-09
13	0.00000	0.86591E-06	0.67886E-09

14	0.00000	0.22335E-05	0.17511E-08
15	0.00000	0.54359E-05	0.42617E-08
16	0.00000	0.12543E-04	0.98334E-08
17	0.00000	0.27552E-04	0.21601E-07
18	0.00000	0.57828E-04	0.45336E-07
19	0.00000	0.11633E-03	0.91204E-07
20	0.00000	0.22495E-03	0.17636E-06
21	0.00000	0.41916E-03	0.32862E-06
22	0.00000	0.75432E-03	0.59137E-06
23	0.00000	0.13137E-02	0.10299E-05
24	0.00000	0.22180E-02	0.17389E-05
25	0.00000	0.36368E-02	0.28512E-05
26	0.00000	0.57998E-02	0.45469E-05
27	0.00000	0.90082E-02	0.70623E-05
28	0.00000	0.13644E-01	0.10697E-04
29	0.00000	0.20177E-01	0.15818E-04
30	0.00000	0.29163E-01	0.22863E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 350.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.27042E-15	0.21200E-18
2	0.00000	0.74732E-14	0.58588E-17
3	0.00000	0.10537E-12	0.82610E-16
4	0.00000	0.10103E-11	0.79207E-15
5	0.00000	0.74075E-11	0.58073E-14
6	0.00000	0.44281E-10	0.34716E-13
7	0.00000	0.22472E-09	0.17618E-12
8	0.00000	0.99546E-09	0.78043E-12
9	0.00000	0.39276E-08	0.30792E-11
10	0.00000	0.14016E-07	0.10988E-10
11	0.00000	0.45790E-07	0.35898E-10
12	0.00000	0.13828E-06	0.10841E-09
13	0.00000	0.38908E-06	0.30503E-09
14	0.00000	0.10269E-05	0.80503E-09
15	0.00000	0.25562E-05	0.20040E-08
16	0.00000	0.60311E-05	0.47283E-08
17	0.00000	0.13543E-04	0.10617E-07
18	0.00000	0.29047E-04	0.22773E-07
19	0.00000	0.59701E-04	0.46804E-07
20	0.00000	0.11791E-03	0.92440E-07
21	0.00000	0.22435E-03	0.17588E-06
22	0.00000	0.41215E-03	0.32312E-06
23	0.00000	0.73258E-03	0.57433E-06
24	0.00000	0.12621E-02	0.98948E-06
25	0.00000	0.21112E-02	0.16551E-05
26	0.00000	0.34339E-02	0.26921E-05
27	0.00000	0.54386E-02	0.42638E-05
28	0.00000	0.83983E-02	0.65841E-05
29	0.00000	0.12659E-01	0.99245E-05
30	0.00000	0.18646E-01	0.14618E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 360.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.89548E-16	0.70204E-19
2	0.00000	0.25429E-14	0.19936E-17
3	0.00000	0.36824E-13	0.28870E-16
4	0.00000	0.36245E-12	0.28416E-15
5	0.00000	0.27268E-11	0.21378E-14
6	0.00000	0.16719E-10	0.13107E-13
7	0.00000	0.86985E-10	0.68195E-13
8	0.00000	0.39487E-09	0.30957E-12
9	0.00000	0.15960E-08	0.12512E-11
10	0.00000	0.58323E-08	0.45724E-11
11	0.00000	0.19504E-07	0.15291E-10
12	0.00000	0.60272E-07	0.47252E-10
13	0.00000	0.17348E-06	0.13601E-09
14	0.00000	0.46821E-06	0.36707E-09
15	0.00000	0.11916E-05	0.93416E-09
16	0.00000	0.28732E-05	0.22526E-08
17	0.00000	0.65920E-05	0.51680E-08
18	0.00000	0.14442E-04	0.11322E-07
19	0.00000	0.30311E-04	0.23763E-07
20	0.00000	0.61116E-04	0.47914E-07
21	0.00000	0.11869E-03	0.93048E-07
22	0.00000	0.22249E-03	0.17443E-06
23	0.00000	0.40345E-03	0.31630E-06
24	0.00000	0.70894E-03	0.55580E-06
25	0.00000	0.12093E-02	0.94804E-06
26	0.00000	0.20053E-02	0.15721E-05
27	0.00000	0.32373E-02	0.25380E-05
28	0.00000	0.50945E-02	0.39940E-05
29	0.00000	0.78244E-02	0.61342E-05
30	0.00000	0.11741E-01	0.92046E-05

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 370.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.29654E-16	0.23248E-19
2	0.00000	0.86464E-15	0.67786E-18
3	0.00000	0.12851E-13	0.10075E-16
4	0.00000	0.12976E-12	0.10173E-15
5	0.00000	0.10010E-11	0.78478E-15
6	0.00000	0.62909E-11	0.49319E-14
7	0.00000	0.33535E-10	0.26291E-13
8	0.00000	0.15592E-09	0.12224E-12
9	0.00000	0.64519E-09	0.50581E-12
10	0.00000	0.24130E-08	0.18917E-11
11	0.00000	0.82558E-08	0.64724E-11
12	0.00000	0.26093E-07	0.20456E-10
13	0.00000	0.76787E-07	0.60200E-10
14	0.00000	0.21182E-06	0.16607E-09
15	0.00000	0.55083E-06	0.43184E-09
16	0.00000	0.13568E-05	0.10637E-08
17	0.00000	0.31790E-05	0.24923E-08
18	0.00000	0.71107E-05	0.55747E-08
19	0.00000	0.15233E-04	0.11942E-07
20	0.00000	0.31343E-04	0.24572E-07
21	0.00000	0.62098E-04	0.48684E-07
22	0.00000	0.11874E-03	0.93088E-07
23	0.00000	0.21956E-03	0.17213E-06
24	0.00000	0.39335E-03	0.30838E-06
25	0.00000	0.68390E-03	0.53616E-06
26	0.00000	0.11558E-02	0.90610E-06
27	0.00000	0.19011E-02	0.14905E-05
28	0.00000	0.30478E-02	0.23894E-05
29	0.00000	0.47677E-02	0.37378E-05
30	0.00000	0.72853E-02	0.57116E-05

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 380.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.98198E-17	0.76985E-20
2	0.00000	0.29380E-15	0.23033E-18
3	0.00000	0.44786E-14	0.35111E-17
4	0.00000	0.46362E-13	0.36347E-16
5	0.00000	0.36652E-12	0.28735E-15
6	0.00000	0.23596E-11	0.18499E-14
7	0.00000	0.12880E-10	0.10098E-13
8	0.00000	0.61298E-10	0.48056E-13
9	0.00000	0.25954E-09	0.20348E-12
10	0.00000	0.99292E-09	0.77843E-12
11	0.00000	0.34738E-08	0.27234E-11
12	0.00000	0.11223E-07	0.87986E-11
13	0.00000	0.33752E-07	0.26461E-10
14	0.00000	0.95119E-07	0.74572E-10
15	0.00000	0.25263E-06	0.19805E-09
16	0.00000	0.63537E-06	0.49812E-09
17	0.00000	0.15196E-05	0.11913E-08
18	0.00000	0.34688E-05	0.27194E-08
19	0.00000	0.75816E-05	0.59438E-08
20	0.00000	0.15912E-04	0.12475E-07
21	0.00000	0.32150E-04	0.25205E-07
22	0.00000	0.62675E-04	0.49136E-07
23	0.00000	0.11814E-03	0.92616E-07
24	0.00000	0.21569E-03	0.16910E-06
25	0.00000	0.38212E-03	0.29957E-06
26	0.00000	0.65786E-03	0.51575E-06
27	0.00000	0.11022E-02	0.86409E-06
28	0.00000	0.17994E-02	0.14107E-05
29	0.00000	0.28659E-02	0.22468E-05
30	0.00000	0.44580E-02	0.34950E-05

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 390.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.32518E-17	0.25494E-20
2	0.00000	0.99765E-16	0.78214E-19
3	0.00000	0.15588E-14	0.12221E-17
4	0.00000	0.16534E-13	0.12962E-16
5	0.00000	0.13387E-12	0.10495E-15
6	0.00000	0.88233E-12	0.69173E-15
7	0.00000	0.49291E-11	0.38643E-14
8	0.00000	0.23999E-10	0.18815E-13
9	0.00000	0.10392E-09	0.81473E-13
10	0.00000	0.40646E-09	0.31866E-12
11	0.00000	0.14534E-08	0.11394E-11
12	0.00000	0.47975E-08	0.37612E-11
13	0.00000	0.14737E-07	0.11554E-10

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 70.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.74366E-02	0.58302E-05
2	0.00000	0.47053E-01	0.36889E-04
3	0.00000	0.15749	0.12347E-03
4	0.00000	0.37488	0.29390E-03
5	0.00000	0.71373	0.55955E-03
6	0.00000	1.1561	0.90637E-03
7	0.00000	1.6541	0.12968E-02
8	0.00000	2.1430	0.16801E-02
9	0.00000	2.5583	0.20057E-02
10	0.00000	2.8507	0.22349E-02
11	0.00000	2.9942	0.23474E-02
12	0.00000	2.9875	0.23421E-02
13	0.00000	2.8490	0.22335E-02
14	0.00000	2.6101	0.20463E-02
15	0.00000	2.3070	0.18087E-02
16	0.00000	1.9745	0.15480E-02
17	0.00000	1.6416	0.12870E-02
18	0.00000	1.3296	0.10424E-02
19	0.00000	1.0520	0.82474E-03
20	0.00000	0.81519	0.63909E-03
21	0.00000	0.62037	0.48636E-03
22	0.00000	0.46506	0.36460E-03
23	0.00000	0.34465	0.27020E-03
24	0.00000	0.25358	0.19881E-03
25	0.00000	0.18627	0.14603E-03
26	0.00000	0.13752	0.10781E-03
27	0.00000	0.10289	0.80661E-04
28	0.00000	0.78714E-01	0.61711E-04
29	0.00000	0.62117E-01	0.48699E-04
30	0.00000	0.50896E-01	0.39901E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 80.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.24626E-02	0.19307E-05
2	0.00000	0.17456E-01	0.13685E-04
3	0.00000	0.65307E-01	0.51199E-04
4	0.00000	0.17284	0.13551E-03
5	0.00000	0.36386	0.28526E-03
6	0.00000	0.64838	0.50832E-03
7	0.00000	1.0159	0.79645E-03
8	0.00000	1.4355	0.11254E-02
9	0.00000	1.8623	0.14600E-02
10	0.00000	2.2478	0.17622E-02
11	0.00000	2.5499	0.19991E-02
12	0.00000	2.7404	0.21484E-02
13	0.00000	2.8080	0.22014E-02
14	0.00000	2.7578	0.21621E-02
15	0.00000	2.6075	0.20442E-02
16	0.00000	2.3822	0.18676E-02
17	0.00000	2.1097	0.16540E-02
18	0.00000	1.8163	0.14240E-02
19	0.00000	1.5239	0.11947E-02
20	0.00000	1.2490	0.97920E-03
21	0.00000	1.0022	0.78571E-03
22	0.00000	0.78903	0.61858E-03
23	0.00000	0.61092	0.47895E-03
24	0.00000	0.46639	0.36564E-03
25	0.00000	0.35212	0.27605E-03
26	0.00000	0.26387	0.20687E-03
27	0.00000	0.19716	0.15457E-03
28	0.00000	0.14772	0.11581E-03
29	0.00000	0.11174	0.87600E-04
30	0.00000	0.85992E-01	0.67416E-04

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 90.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.81550E-03	0.63934E-06
2	0.00000	0.64010E-02	0.50183E-05
3	0.00000	0.26455E-01	0.20740E-04
4	0.00000	0.77006E-01	0.60371E-04
5	0.00000	0.17749	0.13915E-03
6	0.00000	0.34482	0.27033E-03
7	0.00000	0.58677	0.46002E-03
8	0.00000	0.89738	0.70353E-03
9	0.00000	1.2562	0.98481E-03
10	0.00000	1.6314	0.12790E-02
11	0.00000	1.9862	0.15572E-02
12	0.00000	2.2857	0.17919E-02
13	0.00000	2.5025	0.19619E-02

14	0.00000	0.42411E-07	0.33249E-10
15	0.00000	0.11499E-06	0.90149E-10
16	0.00000	0.29516E-06	0.23140E-09
17	0.00000	0.72029E-06	0.56469E-09
18	0.00000	0.16772E-05	0.13149E-08
19	0.00000	0.37386E-05	0.29310E-08
20	0.00000	0.80004E-05	0.62722E-08
21	0.00000	0.16478E-04	0.12918E-07
22	0.00000	0.32739E-04	0.25667E-07
23	0.00000	0.62879E-04	0.49296E-07
24	0.00000	0.11696E-03	0.91694E-07
25	0.00000	0.21105E-03	0.16546E-06
26	0.00000	0.37001E-03	0.29008E-06
27	0.00000	0.63118E-03	0.49483E-06
28	0.00000	0.10490E-02	0.82238E-06
29	0.00000	0.17005E-02	0.13331E-05
30	0.00000	0.26918E-02	0.21104E-05

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 400.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.10768E-17	0.84422E-21
2	0.00000	0.33857E-16	0.26543E-19
3	0.00000	0.54191E-15	0.42485E-18
4	0.00000	0.58857E-14	0.46143E-17
5	0.00000	0.48781E-13	0.38243E-16
6	0.00000	0.32898E-12	0.25791E-15
7	0.00000	0.18799E-11	0.14738E-14
8	0.00000	0.93589E-11	0.73372E-14
9	0.00000	0.41426E-10	0.32477E-13
10	0.00000	0.16557E-09	0.12980E-12
11	0.00000	0.60478E-09	0.47414E-12
12	0.00000	0.20388E-08	0.15984E-11
13	0.00000	0.63943E-08	0.50130E-11
14	0.00000	0.18782E-07	0.14725E-10
15	0.00000	0.51964E-07	0.40739E-10
16	0.00000	0.13608E-06	0.10668E-09
17	0.00000	0.33868E-06	0.26552E-09
18	0.00000	0.80415E-06	0.63044E-09
19	0.00000	0.18274E-05	0.14326E-08
20	0.00000	0.39856E-05	0.31246E-08
21	0.00000	0.83648E-05	0.65578E-08
22	0.00000	0.16932E-04	0.13274E-07
23	0.00000	0.33124E-04	0.25969E-07
24	0.00000	0.62745E-04	0.49191E-07
25	0.00000	0.11528E-03	0.90377E-07
26	0.00000	0.20575E-03	0.16130E-06
27	0.00000	0.35723E-03	0.28006E-06
28	0.00000	0.60418E-03	0.47366E-06
29	0.00000	0.99654E-03	0.78127E-06
30	0.00000	0.16048E-02	0.12581E-05

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 410.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.35659E-18	0.27956E-21
2	0.00000	0.11483E-16	0.90024E-20
3	0.00000	0.18817E-15	0.14753E-18
4	0.00000	0.20916E-14	0.16398E-17
5	0.00000	0.17735E-13	0.13904E-16
6	0.00000	0.12232E-12	0.95897E-16
7	0.00000	0.71460E-12	0.56023E-15
8	0.00000	0.36360E-11	0.28505E-14
9	0.00000	0.16444E-10	0.12891E-13
10	0.00000	0.67126E-10	0.52626E-13
11	0.00000	0.25037E-09	0.19628E-12
12	0.00000	0.86159E-09	0.67547E-12
13	0.00000	0.27576E-08	0.21619E-11
14	0.00000	0.82643E-08	0.64791E-11
15	0.00000	0.23322E-07	0.18284E-10
16	0.00000	0.62278E-07	0.48825E-10
17	0.00000	0.15803E-06	0.12389E-09
18	0.00000	0.38246E-06	0.29984E-09
19	0.00000	0.88566E-06	0.69434E-09
20	0.00000	0.19681E-05	0.15429E-08
21	0.00000	0.42074E-05	0.32986E-08
22	0.00000	0.86736E-05	0.67999E-08
23	0.00000	0.17277E-04	0.13545E-07
24	0.00000	0.33318E-04	0.26121E-07
25	0.00000	0.62307E-04	0.48847E-07
26	0.00000	0.11317E-03	0.88722E-07
27	0.00000	0.19993E-03	0.15674E-06
28	0.00000	0.34398E-03	0.26968E-06
29	0.00000	0.57711E-03	0.45244E-06
30	0.00000	0.94516E-03	0.74099E-06

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 420.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.11809E-18	0.92577E-22
2	0.00000	0.38924E-17	0.30516E-20
3	0.00000	0.65270E-16	0.51170E-19
4	0.00000	0.74211E-15	0.58180E-18
5	0.00000	0.64342E-14	0.50443E-17
6	0.00000	0.45362E-13	0.35563E-16
7	0.00000	0.27080E-12	0.21230E-15
8	0.00000	0.14075E-11	0.11035E-14
9	0.00000	0.65006E-11	0.50964E-14
10	0.00000	0.27093E-10	0.21240E-13
11	0.00000	0.10314E-09	0.80857E-13
12	0.00000	0.36215E-09	0.28392E-12
13	0.00000	0.11824E-08	0.92701E-12
14	0.00000	0.36139E-08	0.28333E-11
15	0.00000	0.10399E-07	0.81523E-11
16	0.00000	0.28305E-07	0.22191E-10
17	0.00000	0.73198E-07	0.57386E-10
18	0.00000	0.18050E-06	0.14151E-09
19	0.00000	0.42579E-06	0.33381E-09
20	0.00000	0.96366E-06	0.75549E-09
21	0.00000	0.20978E-05	0.16446E-08
22	0.00000	0.44028E-05	0.34517E-08
23	0.00000	0.89269E-05	0.69985E-08
24	0.00000	0.17519E-04	0.13735E-07
25	0.00000	0.33336E-04	0.26135E-07
26	0.00000	0.61599E-04	0.48293E-07
27	0.00000	0.11069E-03	0.86780E-07
28	0.00000	0.19369E-03	0.15185E-06
29	0.00000	0.33043E-03	0.25905E-06
30	0.00000	0.55019E-03	0.43134E-06

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 430.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.39104E-19	0.30657E-22
2	0.00000	0.13187E-17	0.10339E-20
3	0.00000	0.22616E-16	0.17730E-19
4	0.00000	0.26289E-15	0.20610E-18
5	0.00000	0.23295E-14	0.18263E-17
6	0.00000	0.16780E-13	0.13155E-16
7	0.00000	0.10231E-12	0.80211E-16
8	0.00000	0.54300E-12	0.42571E-15
9	0.00000	0.25600E-11	0.20070E-14
10	0.00000	0.10888E-10	0.85359E-14
11	0.00000	0.42286E-10	0.33152E-13
12	0.00000	0.15145E-09	0.11873E-12
13	0.00000	0.50422E-09	0.39530E-12
14	0.00000	0.15710E-08	0.12317E-11
15	0.00000	0.46073E-08	0.36120E-11
16	0.00000	0.12779E-07	0.10019E-10
17	0.00000	0.33667E-07	0.26394E-10
18	0.00000	0.84559E-07	0.66292E-10
19	0.00000	0.20313E-06	0.15925E-09
20	0.00000	0.46805E-06	0.36695E-09
21	0.00000	0.10372E-05	0.81313E-09
22	0.00000	0.22154E-05	0.17368E-08
23	0.00000	0.45707E-05	0.35834E-08
24	0.00000	0.91260E-05	0.71546E-08
25	0.00000	0.17664E-04	0.13848E-07
26	0.00000	0.33195E-04	0.26024E-07
27	0.00000	0.60656E-04	0.47553E-07
28	0.00000	0.10791E-03	0.84599E-07
29	0.00000	0.18714E-03	0.14671E-06
30	0.00000	0.31670E-03	0.24829E-06

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 440.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.12949E-19	0.10152E-22
2	0.00000	0.44655E-18	0.35009E-21
3	0.00000	0.78283E-17	0.61372E-20
4	0.00000	0.92989E-16	0.72902E-19
5	0.00000	0.84176E-15	0.65992E-18
6	0.00000	0.61921E-14	0.48545E-17
7	0.00000	0.38546E-13	0.30219E-16
8	0.00000	0.20880E-12	0.16369E-15
9	0.00000	0.10044E-11	0.78742E-15
10	0.00000	0.43576E-11	0.34163E-14
11	0.00000	0.17259E-10	0.13531E-13
12	0.00000	0.63023E-10	0.49408E-13
13	0.00000	0.21387E-09	0.16767E-12

14	0.00000	0.67910E-09	0.53240E-12
15	0.00000	0.20291E-08	0.15907E-11
16	0.00000	0.57328E-08	0.44944E-11
17	0.00000	0.15381E-07	0.12058E-10
18	0.00000	0.39334E-07	0.30837E-10
19	0.00000	0.96187E-07	0.75409E-10
20	0.00000	0.22558E-06	0.17685E-09
21	0.00000	0.50867E-06	0.39879E-09
22	0.00000	0.11054E-05	0.86663E-09
23	0.00000	0.23200E-05	0.18188E-08
24	0.00000	0.47111E-05	0.36934E-08
25	0.00000	0.92726E-05	0.72696E-08
26	0.00000	0.17717E-04	0.13890E-07
27	0.00000	0.32910E-04	0.25801E-07
28	0.00000	0.59509E-04	0.46654E-07
29	0.00000	0.10488E-03	0.82223E-07
30	0.00000	0.18035E-03	0.14139E-06

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 450.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.42881E-20	0.33618E-23
2	0.00000	0.15114E-18	0.11849E-21
3	0.00000	0.27071E-17	0.21223E-20
4	0.00000	0.32845E-16	0.25750E-19
5	0.00000	0.30359E-15	0.23801E-18
6	0.00000	0.22797E-14	0.17873E-17
7	0.00000	0.14482E-13	0.11354E-16
8	0.00000	0.80033E-13	0.62745E-16
9	0.00000	0.39267E-12	0.30785E-15
10	0.00000	0.17371E-11	0.13619E-14
11	0.00000	0.70140E-11	0.54989E-14
12	0.00000	0.26103E-10	0.20464E-13
13	0.00000	0.90260E-10	0.70762E-13
14	0.00000	0.29196E-09	0.22889E-12
15	0.00000	0.88845E-09	0.69653E-12
16	0.00000	0.25560E-08	0.20039E-11
17	0.00000	0.69816E-08	0.54735E-11
18	0.00000	0.18173E-07	0.14247E-10
19	0.00000	0.45225E-07	0.35455E-10
20	0.00000	0.10791E-06	0.84602E-10
21	0.00000	0.24754E-06	0.19407E-09
22	0.00000	0.54715E-06	0.42896E-09
23	0.00000	0.11678E-05	0.91550E-09
24	0.00000	0.24111E-05	0.18903E-08
25	0.00000	0.48243E-05	0.37822E-08
26	0.00000	0.93694E-05	0.73454E-08
27	0.00000	0.17687E-04	0.13866E-07
28	0.00000	0.32498E-04	0.25478E-07
29	0.00000	0.58190E-04	0.45620E-07
30	0.00000	0.10165E-03	0.79692E-07

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 460.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.14200E-20	0.11133E-23
2	0.00000	0.51130E-19	0.40085E-22
3	0.00000	0.93530E-18	0.73326E-21
4	0.00000	0.11586E-16	0.90830E-20
5	0.00000	0.10930E-15	0.85690E-19
6	0.00000	0.83747E-15	0.65656E-18
7	0.00000	0.54270E-14	0.42546E-17
8	0.00000	0.30585E-13	0.23978E-16
9	0.00000	0.15300E-12	0.11995E-15
10	0.00000	0.68989E-12	0.54086E-15
11	0.00000	0.28386E-11	0.22254E-14
12	0.00000	0.10763E-10	0.84377E-14
13	0.00000	0.37907E-10	0.29718E-13
14	0.00000	0.12486E-09	0.97891E-13
15	0.00000	0.38686E-09	0.30329E-12
16	0.00000	0.11329E-08	0.88821E-12
17	0.00000	0.31494E-08	0.24691E-11
18	0.00000	0.83414E-08	0.65395E-11
19	0.00000	0.21118E-07	0.16556E-10
20	0.00000	0.51257E-07	0.40184E-10
21	0.00000	0.11957E-06	0.93744E-10
22	0.00000	0.26874E-06	0.21069E-09
23	0.00000	0.58309E-06	0.45713E-09
24	0.00000	0.12237E-05	0.95939E-09
25	0.00000	0.24885E-05	0.19510E-08
26	0.00000	0.49110E-05	0.38502E-08
27	0.00000	0.94192E-05	0.73845E-08
28	0.00000	0.17581E-04	0.13783E-07
29	0.00000	0.31975E-04	0.25068E-07
30	0.00000	0.56726E-04	0.44472E-07

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 470.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.47023E-21	0.36865E-24
2	0.00000	0.17290E-19	0.13555E-22
3	0.00000	0.32286E-18	0.25311E-21
4	0.00000	0.40814E-17	0.31997E-20
5	0.00000	0.39284E-16	0.30798E-19
6	0.00000	0.30700E-15	0.24068E-18
7	0.00000	0.20286E-14	0.15904E-17
8	0.00000	0.11655E-13	0.91370E-17
9	0.00000	0.59417E-13	0.46581E-16
10	0.00000	0.27299E-12	0.21402E-15
11	0.00000	0.11442E-11	0.89706E-15
12	0.00000	0.44184E-11	0.34640E-14
13	0.00000	0.15846E-10	0.12423E-13
14	0.00000	0.53136E-10	0.41657E-13
15	0.00000	0.16756E-09	0.13136E-12
16	0.00000	0.49934E-09	0.39147E-12
17	0.00000	0.14123E-08	0.11072E-11
18	0.00000	0.38049E-08	0.29829E-11
19	0.00000	0.97970E-08	0.76807E-11
20	0.00000	0.24179E-07	0.18956E-10
21	0.00000	0.57347E-07	0.44959E-10
22	0.00000	0.13101E-06	0.10271E-09
23	0.00000	0.28891E-06	0.22650E-09
24	0.00000	0.61616E-06	0.48306E-09
25	0.00000	0.12731E-05	0.99806E-09
26	0.00000	0.25523E-05	0.20009E-08
27	0.00000	0.49722E-05	0.38981E-08
28	0.00000	0.94255E-05	0.73894E-08
29	0.00000	0.17407E-04	0.13647E-07
30	0.00000	0.31354E-04	0.24581E-07

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 480.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.15572E-21	0.12208E-24
2	0.00000	0.58439E-20	0.45815E-23
3	0.00000	0.11135E-18	0.87298E-22
4	0.00000	0.14360E-17	0.11258E-20
5	0.00000	0.14095E-16	0.11051E-19
6	0.00000	0.11231E-15	0.88048E-19
7	0.00000	0.75644E-15	0.59303E-18
8	0.00000	0.44287E-14	0.34720E-17
9	0.00000	0.23003E-13	0.18034E-16
10	0.00000	0.10765E-12	0.84394E-16
11	0.00000	0.45947E-12	0.36022E-15
12	0.00000	0.18064E-11	0.14162E-14
13	0.00000	0.65941E-11	0.51697E-14
14	0.00000	0.22503E-10	0.17642E-13
15	0.00000	0.72203E-10	0.56606E-13
16	0.00000	0.21889E-09	0.17161E-12
17	0.00000	0.62967E-09	0.49365E-12
18	0.00000	0.17251E-08	0.13525E-11
19	0.00000	0.45163E-08	0.35407E-11
20	0.00000	0.11331E-07	0.88832E-11
21	0.00000	0.27315E-07	0.21414E-10
22	0.00000	0.63415E-07	0.49716E-10
23	0.00000	0.14209E-06	0.11140E-09
24	0.00000	0.30786E-06	0.24136E-09
25	0.00000	0.64611E-06	0.50654E-09
26	0.00000	0.13156E-05	0.10314E-08
27	0.00000	0.26026E-05	0.20404E-08
28	0.00000	0.50093E-05	0.39272E-08
29	0.00000	0.93917E-05	0.73630E-08
30	0.00000	0.17172E-04	0.13463E-07

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 490.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.51566E-22	0.40426E-25
2	0.00000	0.19744E-20	0.15479E-23
3	0.00000	0.38374E-19	0.30085E-22
4	0.00000	0.50462E-18	0.39561E-21
5	0.00000	0.50496E-17	0.39588E-20
6	0.00000	0.41006E-16	0.32148E-19
7	0.00000	0.28142E-15	0.22063E-18
8	0.00000	0.16784E-14	0.13158E-17
9	0.00000	0.88784E-14	0.69605E-17
10	0.00000	0.42306E-13	0.33167E-16
11	0.00000	0.18383E-12	0.14412E-15
12	0.00000	0.73555E-12	0.57665E-15
13	0.00000	0.27323E-11	0.21421E-14

14	0.00000	0.94862E-11	0.74370E-14
15	0.00000	0.30960E-10	0.24272E-13
16	0.00000	0.95453E-10	0.74833E-13
17	0.00000	0.27919E-09	0.21888E-12
18	0.00000	0.77764E-09	0.60965E-12
19	0.00000	0.20693E-08	0.16223E-11
20	0.00000	0.52762E-08	0.41365E-11
21	0.00000	0.12924E-07	0.10132E-10
22	0.00000	0.30484E-07	0.23899E-10
23	0.00000	0.69385E-07	0.54396E-10
24	0.00000	0.15269E-06	0.11970E-09
25	0.00000	0.32541E-06	0.25512E-09
26	0.00000	0.67277E-06	0.52744E-09
27	0.00000	0.13512E-05	0.10593E-08
28	0.00000	0.26400E-05	0.20697E-08
29	0.00000	0.50236E-05	0.39384E-08
30	0.00000	0.93215E-05	0.73079E-08

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 500.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.17076E-22	0.13387E-25
2	0.00000	0.66683E-21	0.52278E-24
3	0.00000	0.13214E-19	0.10360E-22
4	0.00000	0.17712E-18	0.13886E-21
5	0.00000	0.18063E-17	0.14161E-20
6	0.00000	0.14944E-16	0.11716E-19
7	0.00000	0.10446E-15	0.81897E-19
8	0.00000	0.63445E-15	0.49740E-18
9	0.00000	0.34169E-14	0.26788E-17
10	0.00000	0.16573E-13	0.12993E-16
11	0.00000	0.73285E-13	0.57454E-16
12	0.00000	0.29836E-12	0.23391E-15
13	0.00000	0.11274E-11	0.88388E-15
14	0.00000	0.39811E-11	0.31211E-14
15	0.00000	0.13212E-10	0.10358E-13
16	0.00000	0.41415E-10	0.32469E-13
17	0.00000	0.12314E-09	0.96539E-13
18	0.00000	0.34858E-09	0.27328E-12
19	0.00000	0.94260E-09	0.73898E-12
20	0.00000	0.24419E-08	0.19144E-11
21	0.00000	0.60762E-08	0.47636E-11
22	0.00000	0.14557E-07	0.11412E-10
23	0.00000	0.33648E-07	0.26380E-10
24	0.00000	0.75186E-07	0.58944E-10
25	0.00000	0.16269E-06	0.12754E-09
26	0.00000	0.34143E-06	0.26768E-09
27	0.00000	0.69602E-06	0.54567E-09
28	0.00000	0.13801E-05	0.10819E-08
29	0.00000	0.26648E-05	0.20892E-08
30	0.00000	0.50169E-05	0.39332E-08

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 510.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.56547E-23	0.44332E-26
2	0.00000	0.22512E-21	0.17649E-24
3	0.00000	0.45469E-20	0.35647E-23
4	0.00000	0.62103E-19	0.48687E-22
5	0.00000	0.64516E-18	0.50579E-21
6	0.00000	0.54363E-17	0.42619E-20
7	0.00000	0.38694E-16	0.30335E-19
8	0.00000	0.23924E-15	0.18756E-18
9	0.00000	0.13113E-14	0.10281E-17
10	0.00000	0.64723E-14	0.50741E-17
11	0.00000	0.29117E-13	0.22827E-16
12	0.00000	0.12057E-12	0.94528E-16
13	0.00000	0.46335E-12	0.36326E-15
14	0.00000	0.16636E-11	0.13042E-14
15	0.00000	0.56128E-11	0.44003E-14
16	0.00000	0.17883E-10	0.14020E-13
17	0.00000	0.54033E-10	0.42361E-13
18	0.00000	0.15542E-09	0.12184E-12
19	0.00000	0.42694E-09	0.33472E-12
20	0.00000	0.11235E-08	0.88077E-12
21	0.00000	0.28392E-08	0.22258E-11
22	0.00000	0.69070E-08	0.54149E-11
23	0.00000	0.16210E-07	0.12708E-10
24	0.00000	0.36769E-07	0.28826E-10
25	0.00000	0.80756E-07	0.63311E-10
26	0.00000	0.17201E-06	0.13485E-09
27	0.00000	0.35581E-06	0.27895E-09
28	0.00000	0.71583E-06	0.56119E-09
29	0.00000	0.14023E-05	0.10994E-08
30	0.00000	0.26779E-05	0.20995E-08

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 520.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.18725E-23	0.14680E-26
2	0.00000	0.75974E-22	0.59563E-25
3	0.00000	0.15634E-20	0.12257E-23
4	0.00000	0.21751E-19	0.17052E-22
5	0.00000	0.23011E-18	0.18040E-21
6	0.00000	0.19741E-17	0.15477E-20
7	0.00000	0.14303E-16	0.11213E-19
8	0.00000	0.89997E-16	0.70556E-19
9	0.00000	0.50192E-15	0.39350E-18
10	0.00000	0.25200E-14	0.19757E-17
11	0.00000	0.11530E-13	0.90395E-17
12	0.00000	0.48553E-13	0.38065E-16
13	0.00000	0.18970E-12	0.14872E-15
14	0.00000	0.69232E-12	0.54276E-15
15	0.00000	0.23739E-11	0.18611E-14
16	0.00000	0.76853E-11	0.60252E-14
17	0.00000	0.23593E-10	0.18496E-13
18	0.00000	0.68933E-10	0.54042E-13
19	0.00000	0.19233E-09	0.15078E-12
20	0.00000	0.51394E-09	0.40292E-12
21	0.00000	0.13188E-08	0.10339E-11
22	0.00000	0.32570E-08	0.25534E-11
23	0.00000	0.77588E-08	0.60828E-11
24	0.00000	0.17862E-07	0.14004E-10
25	0.00000	0.39811E-07	0.31211E-10
26	0.00000	0.86039E-07	0.67453E-10
27	0.00000	0.18057E-06	0.14156E-09
28	0.00000	0.36850E-06	0.28890E-09
29	0.00000	0.73219E-06	0.57402E-09
30	0.00000	0.14181E-05	0.11117E-08

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 530.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.62009E-24	0.48614E-27
2	0.00000	0.25631E-22	0.20094E-25
3	0.00000	0.53719E-21	0.42115E-24
4	0.00000	0.76103E-20	0.59663E-23
5	0.00000	0.81964E-19	0.64258E-22
6	0.00000	0.71569E-18	0.56109E-21
7	0.00000	0.52765E-17	0.41367E-20
8	0.00000	0.33777E-16	0.26481E-19
9	0.00000	0.19161E-15	0.15022E-18
10	0.00000	0.97837E-15	0.76703E-18
11	0.00000	0.45516E-14	0.35684E-17
12	0.00000	0.19484E-13	0.15275E-16
13	0.00000	0.77372E-13	0.60658E-16
14	0.00000	0.28696E-12	0.22497E-15
15	0.00000	0.99975E-12	0.78378E-15
16	0.00000	0.32880E-11	0.25778E-14
17	0.00000	0.10252E-10	0.80377E-14
18	0.00000	0.30422E-10	0.23850E-13
19	0.00000	0.86187E-10	0.67569E-13
20	0.00000	0.23382E-09	0.18331E-12
21	0.00000	0.60904E-09	0.47748E-12
22	0.00000	0.15267E-08	0.11969E-11
23	0.00000	0.36908E-08	0.28935E-11
24	0.00000	0.86219E-08	0.67594E-11
25	0.00000	0.19496E-07	0.15285E-10
26	0.00000	0.42743E-07	0.33510E-10
27	0.00000	0.90988E-07	0.71333E-10
28	0.00000	0.18832E-06	0.14764E-09
29	0.00000	0.37945E-06	0.29748E-09
30	0.00000	0.74516E-06	0.58420E-09

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 540.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.20534E-24	0.16098E-27
2	0.00000	0.86439E-23	0.67766E-26
3	0.00000	0.18446E-21	0.14461E-24
4	0.00000	0.26601E-20	0.20854E-23
5	0.00000	0.29157E-19	0.22858E-22
6	0.00000	0.25904E-18	0.20308E-21
7	0.00000	0.19428E-17	0.15231E-20
8	0.00000	0.12649E-16	0.99168E-20
9	0.00000	0.72968E-16	0.57206E-19
10	0.00000	0.37879E-15	0.29696E-18
11	0.00000	0.17912E-14	0.14043E-17
12	0.00000	0.77929E-14	0.61095E-17
13	0.00000	0.31445E-13	0.24652E-16

14	0.00000	0.11849E-12	0.92891E-16
15	0.00000	0.41931E-12	0.32873E-15
16	0.00000	0.14006E-11	0.10981E-14
17	0.00000	0.44348E-11	0.34768E-14
18	0.00000	0.13361E-10	0.10475E-13
19	0.00000	0.38426E-10	0.30125E-13
20	0.00000	0.10581E-09	0.82956E-13
21	0.00000	0.27972E-09	0.21929E-12
22	0.00000	0.71151E-09	0.55781E-12
23	0.00000	0.17452E-08	0.13682E-11
24	0.00000	0.41359E-08	0.32425E-11
25	0.00000	0.94865E-08	0.74372E-11
26	0.00000	0.21094E-07	0.16537E-10
27	0.00000	0.45536E-07	0.35699E-10
28	0.00000	0.95565E-07	0.74922E-10
29	0.00000	0.19523E-06	0.15305E-09
30	0.00000	0.38866E-06	0.30470E-09

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 550.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.67999E-25	0.53310E-28
2	0.00000	0.29142E-23	0.22846E-26
3	0.00000	0.63298E-22	0.49624E-25
4	0.00000	0.92889E-21	0.72823E-24
5	0.00000	0.10359E-19	0.81210E-23
6	0.00000	0.93614E-19	0.73392E-22
7	0.00000	0.71403E-18	0.55979E-21
8	0.00000	0.47269E-17	0.37058E-20
9	0.00000	0.27720E-16	0.21732E-19
10	0.00000	0.14626E-15	0.11466E-18
11	0.00000	0.70286E-15	0.55103E-18
12	0.00000	0.31069E-14	0.24357E-17
13	0.00000	0.12735E-13	0.99844E-17
14	0.00000	0.48741E-13	0.38212E-16
15	0.00000	0.17517E-12	0.13733E-15
16	0.00000	0.59412E-12	0.46578E-15
17	0.00000	0.19098E-11	0.14972E-14
18	0.00000	0.58404E-11	0.45788E-14
19	0.00000	0.17048E-10	0.13366E-13
20	0.00000	0.47640E-10	0.37349E-13
21	0.00000	0.12778E-09	0.10018E-12
22	0.00000	0.32975E-09	0.25852E-12
23	0.00000	0.82047E-09	0.64323E-12
24	0.00000	0.19721E-08	0.15461E-11
25	0.00000	0.45873E-08	0.35964E-11
26	0.00000	0.10343E-07	0.81088E-11
27	0.00000	0.22639E-07	0.17748E-10
28	0.00000	0.48166E-07	0.37761E-10
29	0.00000	0.99741E-07	0.78195E-10
30	0.00000	0.20126E-06	0.15778E-09

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 560.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.22518E-25	0.17653E-28
2	0.00000	0.98216E-24	0.76999E-27
3	0.00000	0.21707E-22	0.17018E-25
4	0.00000	0.32407E-21	0.25406E-24
5	0.00000	0.36757E-20	0.28817E-23
6	0.00000	0.33780E-19	0.26483E-22
7	0.00000	0.26195E-18	0.20537E-21
8	0.00000	0.17628E-17	0.13820E-20
9	0.00000	0.10506E-16	0.82365E-20
10	0.00000	0.56327E-16	0.44159E-19
11	0.00000	0.27500E-15	0.21560E-18
12	0.00000	0.12348E-14	0.96806E-18
13	0.00000	0.51407E-14	0.40302E-17
14	0.00000	0.19978E-13	0.15663E-16
15	0.00000	0.72898E-13	0.57151E-16
16	0.00000	0.25099E-12	0.19677E-15
17	0.00000	0.81891E-12	0.64201E-15
18	0.00000	0.25415E-11	0.19925E-14
19	0.00000	0.75278E-11	0.59017E-14
20	0.00000	0.21342E-10	0.16732E-13
21	0.00000	0.58071E-10	0.45527E-13
22	0.00000	0.15200E-09	0.11917E-12
23	0.00000	0.38356E-09	0.30071E-12
24	0.00000	0.93490E-09	0.73295E-12
25	0.00000	0.22050E-08	0.17287E-11
26	0.00000	0.50403E-08	0.39515E-11
27	0.00000	0.11183E-07	0.87673E-11
28	0.00000	0.24116E-07	0.18907E-10
29	0.00000	0.50612E-07	0.39679E-10
30	0.00000	0.10349E-06	0.81135E-10

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 570.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.74567E-26	0.58459E-29
2	0.00000	0.33091E-24	0.25943E-27
3	0.00000	0.74398E-23	0.58326E-26
4	0.00000	0.11296E-21	0.88558E-25
5	0.00000	0.13028E-20	0.10213E-23
6	0.00000	0.12171E-19	0.95421E-23
7	0.00000	0.95936E-19	0.75212E-22
8	0.00000	0.65606E-18	0.51434E-21
9	0.00000	0.39729E-17	0.31147E-20
10	0.00000	0.21638E-16	0.16964E-19
11	0.00000	0.10730E-15	0.84124E-19
12	0.00000	0.48929E-15	0.38359E-18
13	0.00000	0.20683E-14	0.16215E-17
14	0.00000	0.81604E-14	0.63976E-17
15	0.00000	0.30225E-13	0.23696E-16
16	0.00000	0.10562E-12	0.82801E-16
17	0.00000	0.34968E-12	0.27415E-15
18	0.00000	0.11011E-11	0.86327E-15
19	0.00000	0.33087E-11	0.25940E-14
20	0.00000	0.95153E-11	0.74599E-14
21	0.00000	0.26259E-10	0.20586E-13
22	0.00000	0.69702E-10	0.54645E-13
23	0.00000	0.17834E-09	0.13982E-12
24	0.00000	0.44072E-09	0.34551E-12
25	0.00000	0.10537E-08	0.82609E-12
26	0.00000	0.24414E-08	0.19140E-11
27	0.00000	0.54901E-08	0.43041E-11
28	0.00000	0.11998E-07	0.94062E-11
29	0.00000	0.25514E-07	0.20003E-10
30	0.00000	0.52859E-07	0.41441E-10

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 580.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.24693E-26	0.19359E-29
2	0.00000	0.11146E-24	0.87384E-28
3	0.00000	0.25484E-23	0.19979E-26
4	0.00000	0.39340E-22	0.30842E-25
5	0.00000	0.46121E-21	0.36158E-24
6	0.00000	0.43794E-20	0.34333E-23
7	0.00000	0.35076E-19	0.27499E-22
8	0.00000	0.24370E-18	0.19106E-21
9	0.00000	0.14991E-17	0.11753E-20
10	0.00000	0.82924E-17	0.65011E-20
11	0.00000	0.41757E-16	0.32737E-19
12	0.00000	0.19332E-15	0.15156E-18
13	0.00000	0.82956E-15	0.65036E-18
14	0.00000	0.33220E-14	0.26044E-17
15	0.00000	0.12487E-13	0.97894E-17
16	0.00000	0.44274E-13	0.34710E-16
17	0.00000	0.14872E-12	0.11659E-15
18	0.00000	0.47505E-12	0.37243E-15
19	0.00000	0.14478E-11	0.11351E-14
20	0.00000	0.42226E-11	0.33105E-14
21	0.00000	0.11816E-10	0.92637E-14
22	0.00000	0.31801E-10	0.24931E-13
23	0.00000	0.82489E-10	0.64670E-13
24	0.00000	0.20663E-09	0.16199E-12
25	0.00000	0.50072E-09	0.39255E-12
26	0.00000	0.11757E-08	0.92175E-12
27	0.00000	0.26791E-08	0.21003E-11
28	0.00000	0.59322E-08	0.46507E-11
29	0.00000	0.12780E-07	0.10020E-10
30	0.00000	0.26822E-07	0.21028E-10

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 590.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.81770E-27	0.64106E-30
2	0.00000	0.37533E-25	0.29425E-28
3	0.00000	0.87241E-24	0.68395E-27
4	0.00000	0.13689E-22	0.10732E-25
5	0.00000	0.16310E-21	0.12787E-24
6	0.00000	0.15736E-20	0.12337E-23
7	0.00000	0.12804E-19	0.10038E-22
8	0.00000	0.90358E-19	0.70839E-22
9	0.00000	0.56446E-18	0.44253E-21
10	0.00000	0.31704E-17	0.24855E-20
11	0.00000	0.16208E-16	0.12707E-19
12	0.00000	0.76166E-16	0.59713E-19
13	0.00000	0.33171E-15	0.26005E-18

14	0.00000	0.13480E-14	0.10568E-17
15	0.00000	0.51407E-14	0.40302E-17
16	0.00000	0.18491E-13	0.14497E-16
17	0.00000	0.63003E-13	0.49393E-16
18	0.00000	0.20411E-12	0.16002E-15
19	0.00000	0.63082E-12	0.49455E-15
20	0.00000	0.18655E-11	0.14625E-14
21	0.00000	0.52922E-11	0.41490E-14
22	0.00000	0.14438E-10	0.11319E-13
23	0.00000	0.37960E-10	0.29760E-13
24	0.00000	0.96366E-10	0.75549E-13
25	0.00000	0.23664E-09	0.18552E-12
26	0.00000	0.56301E-09	0.44139E-12
27	0.00000	0.12997E-08	0.10190E-11
28	0.00000	0.29155E-08	0.22857E-11
29	0.00000	0.63624E-08	0.49880E-11
30	0.00000	0.13524E-07	0.10602E-10

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 600.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.27078E-27	0.21229E-30
2	0.00000	0.12635E-25	0.99056E-29
3	0.00000	0.29850E-24	0.23402E-27
4	0.00000	0.47597E-23	0.37315E-26
5	0.00000	0.57617E-22	0.45170E-25
6	0.00000	0.56468E-21	0.44270E-24
7	0.00000	0.46666E-20	0.36585E-23
8	0.00000	0.33442E-19	0.26218E-22
9	0.00000	0.21211E-18	0.16629E-21
10	0.00000	0.12094E-17	0.94812E-21
11	0.00000	0.62753E-17	0.49197E-20
12	0.00000	0.29927E-16	0.23462E-19
13	0.00000	0.13225E-15	0.10368E-18
14	0.00000	0.54523E-15	0.42745E-18
15	0.00000	0.21093E-14	0.16536E-17
16	0.00000	0.76953E-14	0.60330E-17
17	0.00000	0.26590E-13	0.20846E-16
18	0.00000	0.87348E-13	0.68479E-16
19	0.00000	0.27370E-12	0.21458E-15
20	0.00000	0.82051E-12	0.64327E-15
21	0.00000	0.23595E-11	0.18498E-14
22	0.00000	0.65240E-11	0.51147E-14
23	0.00000	0.17382E-10	0.13627E-13
24	0.00000	0.44713E-10	0.35054E-13
25	0.00000	0.11124E-09	0.87214E-13
26	0.00000	0.26813E-09	0.21021E-12
27	0.00000	0.62702E-09	0.49157E-12
28	0.00000	0.14246E-08	0.11168E-11
29	0.00000	0.31484E-08	0.24683E-11
30	0.00000	0.67770E-08	0.53130E-11

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 610.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.89669E-28	0.70299E-31
2	0.00000	0.42523E-26	0.33337E-29
3	0.00000	0.10208E-24	0.80028E-28
4	0.00000	0.16536E-23	0.12964E-26
5	0.00000	0.20333E-22	0.15940E-25
6	0.00000	0.20238E-21	0.15866E-24
7	0.00000	0.16982E-20	0.13314E-23
8	0.00000	0.12355E-19	0.96863E-23
9	0.00000	0.79545E-19	0.62362E-22
10	0.00000	0.46031E-18	0.36088E-21
11	0.00000	0.24238E-17	0.19002E-20
12	0.00000	0.11728E-16	0.91945E-20
13	0.00000	0.52576E-16	0.41219E-19
14	0.00000	0.21986E-15	0.17237E-18
15	0.00000	0.86264E-15	0.67630E-18
16	0.00000	0.31914E-14	0.25020E-17
17	0.00000	0.11181E-13	0.87657E-17
18	0.00000	0.37236E-13	0.29193E-16
19	0.00000	0.11827E-12	0.92725E-16
20	0.00000	0.35937E-12	0.28174E-15
21	0.00000	0.10473E-11	0.82107E-15
22	0.00000	0.29344E-11	0.23005E-14
23	0.00000	0.79214E-11	0.62103E-14
24	0.00000	0.20644E-10	0.16184E-13
25	0.00000	0.52028E-10	0.40789E-13
26	0.00000	0.12702E-09	0.99580E-13
27	0.00000	0.30083E-09	0.23584E-12
28	0.00000	0.69214E-09	0.54262E-12
29	0.00000	0.15490E-08	0.12144E-11
30	0.00000	0.33758E-08	0.26466E-11

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 620.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.29694E-28	0.23279E-31
2	0.00000	0.14307E-26	0.11217E-29
3	0.00000	0.34891E-25	0.27354E-28
4	0.00000	0.57407E-24	0.45006E-27
5	0.00000	0.71681E-23	0.56197E-26
6	0.00000	0.72441E-22	0.56792E-25
7	0.00000	0.61710E-21	0.48379E-24
8	0.00000	0.45570E-20	0.35726E-23
9	0.00000	0.29775E-19	0.23343E-22
10	0.00000	0.17483E-18	0.13706E-21
11	0.00000	0.93395E-18	0.73220E-21
12	0.00000	0.45842E-17	0.35940E-20
13	0.00000	0.20844E-16	0.16341E-19
14	0.00000	0.88397E-16	0.69302E-19
15	0.00000	0.35168E-15	0.27571E-18
16	0.00000	0.13191E-14	0.10341E-17
17	0.00000	0.46849E-14	0.36729E-17
18	0.00000	0.15814E-13	0.12398E-16
19	0.00000	0.50909E-13	0.39912E-16
20	0.00000	0.15675E-12	0.12289E-15
21	0.00000	0.46287E-12	0.36289E-15
22	0.00000	0.13139E-11	0.10301E-14
23	0.00000	0.35932E-11	0.28170E-14
24	0.00000	0.94852E-11	0.74362E-14
25	0.00000	0.24212E-10	0.18982E-13
26	0.00000	0.59861E-10	0.46930E-13
27	0.00000	0.14356E-09	0.11255E-12
28	0.00000	0.33444E-09	0.26220E-12
29	0.00000	0.75776E-09	0.59407E-12
30	0.00000	0.16718E-08	0.13107E-11

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 630.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.98331E-29	0.77089E-32
2	0.00000	0.48127E-27	0.37731E-30
3	0.00000	0.11920E-25	0.93449E-29
4	0.00000	0.19915E-24	0.15613E-27
5	0.00000	0.25246E-23	0.19793E-26
6	0.00000	0.25899E-22	0.20305E-25
7	0.00000	0.22392E-21	0.17555E-24
8	0.00000	0.16780E-20	0.13155E-23
9	0.00000	0.11124E-19	0.87211E-23
10	0.00000	0.66265E-19	0.51950E-22
11	0.00000	0.35906E-18	0.28150E-21
12	0.00000	0.17875E-17	0.14013E-20
13	0.00000	0.82417E-17	0.64613E-20
14	0.00000	0.35438E-16	0.27783E-19
15	0.00000	0.14293E-15	0.11206E-18
16	0.00000	0.54345E-15	0.42605E-18
17	0.00000	0.19562E-14	0.15336E-17
18	0.00000	0.66921E-14	0.52465E-17
19	0.00000	0.21830E-13	0.17114E-16
20	0.00000	0.68101E-13	0.53390E-16
21	0.00000	0.20372E-12	0.15972E-15
22	0.00000	0.58580E-12	0.45926E-15
23	0.00000	0.16226E-11	0.12721E-14
24	0.00000	0.43378E-11	0.34008E-14
25	0.00000	0.11213E-10	0.87907E-14
26	0.00000	0.28071E-10	0.22007E-13
27	0.00000	0.68159E-10	0.53436E-13
28	0.00000	0.16074E-09	0.12602E-12
29	0.00000	0.36868E-09	0.28903E-12
30	0.00000	0.82330E-09	0.64545E-12

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 640.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.32562E-29	0.25528E-32
2	0.00000	0.16185E-27	0.12689E-30
3	0.00000	0.40702E-26	0.31910E-29
4	0.00000	0.69037E-25	0.54123E-28
5	0.00000	0.88835E-24	0.69645E-27
6	0.00000	0.92488E-23	0.72509E-26
7	0.00000	0.81141E-22	0.63613E-25
8	0.00000	0.61691E-21	0.48364E-24
9	0.00000	0.41487E-20	0.32525E-23
10	0.00000	0.25066E-19	0.19651E-22
11	0.00000	0.13774E-18	0.10799E-21
12	0.00000	0.69528E-18	0.54509E-21
13	0.00000	0.32502E-17	0.25481E-20

14	0.00000	0.14168E-16	0.11107E-19
15	0.00000	0.57919E-16	0.45408E-19
16	0.00000	0.22318E-15	0.17497E-18
17	0.00000	0.81411E-15	0.63825E-18
18	0.00000	0.28219E-14	0.22123E-17
19	0.00000	0.93258E-14	0.73113E-17
20	0.00000	0.29472E-13	0.23106E-16
21	0.00000	0.89303E-13	0.70012E-16
22	0.00000	0.26007E-12	0.20389E-15
23	0.00000	0.72951E-12	0.57192E-15
24	0.00000	0.19748E-11	0.15482E-14
25	0.00000	0.51685E-11	0.40520E-14
26	0.00000	0.13099E-10	0.10269E-13
27	0.00000	0.32198E-10	0.25242E-13
28	0.00000	0.76860E-10	0.60257E-13
29	0.00000	0.17842E-09	0.13988E-12
30	0.00000	0.40322E-09	0.31612E-12

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 650.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.10783E-29	0.84536E-33
2	0.00000	0.54417E-28	0.42662E-31
3	0.00000	0.13892E-26	0.10891E-29
4	0.00000	0.23916E-25	0.18749E-28
5	0.00000	0.31230E-24	0.24484E-27
6	0.00000	0.32991E-23	0.25864E-26
7	0.00000	0.29363E-22	0.23020E-25
8	0.00000	0.22645E-21	0.17753E-24
9	0.00000	0.15445E-20	0.12109E-23
10	0.00000	0.94629E-20	0.74188E-23
11	0.00000	0.52725E-19	0.41336E-22
12	0.00000	0.26982E-18	0.21153E-21
13	0.00000	0.12786E-17	0.10024E-20
14	0.00000	0.56486E-17	0.44284E-20
15	0.00000	0.23402E-16	0.18347E-19
16	0.00000	0.91375E-16	0.71636E-19
17	0.00000	0.33771E-15	0.26475E-18
18	0.00000	0.11859E-14	0.92969E-18
19	0.00000	0.39698E-14	0.31122E-17
20	0.00000	0.12707E-13	0.99617E-17
21	0.00000	0.38992E-13	0.30569E-16
22	0.00000	0.11499E-12	0.90149E-16
23	0.00000	0.32659E-12	0.25604E-15
24	0.00000	0.89508E-12	0.70172E-15
25	0.00000	0.23715E-11	0.18592E-14
26	0.00000	0.60839E-11	0.47696E-14
27	0.00000	0.15136E-10	0.11866E-13
28	0.00000	0.36566E-10	0.28667E-13
29	0.00000	0.85898E-10	0.67342E-13
30	0.00000	0.19643E-09	0.15400E-12

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 660.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.35708E-30	0.27994E-33
2	0.00000	0.18292E-28	0.14341E-31
3	0.00000	0.47394E-27	0.37156E-30
4	0.00000	0.82794E-26	0.64909E-29
5	0.00000	0.10969E-24	0.85998E-28
6	0.00000	0.11755E-23	0.92158E-27
7	0.00000	0.10612E-22	0.83198E-26
8	0.00000	0.82999E-22	0.65070E-25
9	0.00000	0.57403E-21	0.45003E-24
10	0.00000	0.35658E-20	0.27955E-23
11	0.00000	0.20141E-19	0.15790E-22
12	0.00000	0.10447E-18	0.81902E-22
13	0.00000	0.50171E-18	0.39334E-21
14	0.00000	0.22462E-17	0.17609E-20
15	0.00000	0.94290E-17	0.73922E-20
16	0.00000	0.37299E-16	0.29242E-19
17	0.00000	0.13964E-15	0.10948E-18
18	0.00000	0.49668E-15	0.38939E-18
19	0.00000	0.16839E-14	0.13202E-17
20	0.00000	0.54583E-14	0.42792E-17
21	0.00000	0.16960E-13	0.13297E-16
22	0.00000	0.50640E-13	0.39701E-16
23	0.00000	0.14560E-12	0.11415E-15
24	0.00000	0.40395E-12	0.31669E-15
25	0.00000	0.10833E-11	0.84927E-15
26	0.00000	0.28127E-11	0.22051E-14
27	0.00000	0.70813E-11	0.55516E-14
28	0.00000	0.17312E-10	0.13572E-13
29	0.00000	0.41147E-10	0.32258E-13
30	0.00000	0.95198E-10	0.74633E-13

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 670.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.11825E-30	0.92702E-34
2	0.00000	0.61473E-29	0.48194E-32
3	0.00000	0.16162E-27	0.12670E-30
4	0.00000	0.28644E-26	0.22456E-29
5	0.00000	0.38496E-25	0.30180E-28
6	0.00000	0.41841E-24	0.32803E-27
7	0.00000	0.38305E-23	0.30031E-26
8	0.00000	0.30377E-22	0.23815E-25
9	0.00000	0.21299E-21	0.16698E-24
10	0.00000	0.13412E-20	0.10514E-23
11	0.00000	0.76779E-20	0.60194E-23
12	0.00000	0.40360E-19	0.31642E-22
13	0.00000	0.19641E-18	0.15398E-21
14	0.00000	0.89090E-18	0.69845E-21
15	0.00000	0.37887E-17	0.29703E-20
16	0.00000	0.15181E-16	0.11902E-19
17	0.00000	0.57566E-16	0.45130E-19
18	0.00000	0.20735E-15	0.16256E-18
19	0.00000	0.71188E-15	0.55810E-18
20	0.00000	0.23364E-14	0.18317E-17
21	0.00000	0.73497E-14	0.57620E-17
22	0.00000	0.22215E-13	0.17416E-16
23	0.00000	0.64654E-13	0.50687E-16
24	0.00000	0.18154E-12	0.14233E-15
25	0.00000	0.49270E-12	0.38627E-15
26	0.00000	0.12945E-11	0.10149E-14
27	0.00000	0.32978E-11	0.25854E-14
28	0.00000	0.81568E-11	0.63948E-14
29	0.00000	0.19614E-10	0.15377E-13
30	0.00000	0.45904E-10	0.35988E-13

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 680.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.39157E-31	0.30698E-34
2	0.00000	0.20655E-29	0.16193E-32
3	0.00000	0.55089E-28	0.43188E-31
4	0.00000	0.99035E-27	0.77641E-30
5	0.00000	0.13499E-25	0.10583E-28
6	0.00000	0.14878E-24	0.11664E-27
7	0.00000	0.13809E-23	0.10826E-26
8	0.00000	0.11102E-22	0.87037E-26
9	0.00000	0.78903E-22	0.61858E-25
10	0.00000	0.50354E-21	0.39477E-24
11	0.00000	0.29212E-20	0.22902E-23
12	0.00000	0.15559E-19	0.12198E-22
13	0.00000	0.76710E-19	0.60140E-22
14	0.00000	0.35248E-18	0.27634E-21
15	0.00000	0.15183E-17	0.11903E-20
16	0.00000	0.61615E-17	0.48305E-20
17	0.00000	0.23660E-16	0.18549E-19
18	0.00000	0.86294E-16	0.67653E-19
19	0.00000	0.29995E-15	0.23516E-18
20	0.00000	0.99659E-15	0.78131E-18
21	0.00000	0.31735E-14	0.24880E-17
22	0.00000	0.97086E-14	0.76113E-17
23	0.00000	0.28597E-13	0.22419E-16
24	0.00000	0.81259E-13	0.63705E-16
25	0.00000	0.22315E-12	0.17495E-15
26	0.00000	0.59322E-12	0.46508E-15
27	0.00000	0.15289E-11	0.11986E-14
28	0.00000	0.38255E-11	0.29991E-14
29	0.00000	0.93048E-11	0.72948E-14
30	0.00000	0.22027E-10	0.17268E-13

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 690.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.12967E-31	0.10166E-34
2	0.00000	0.69385E-30	0.54397E-33
3	0.00000	0.18770E-28	0.14715E-31
4	0.00000	0.34220E-27	0.26828E-30
5	0.00000	0.47295E-26	0.37078E-29
6	0.00000	0.52847E-25	0.41431E-28
7	0.00000	0.49726E-24	0.38984E-27
8	0.00000	0.40519E-23	0.31766E-26
9	0.00000	0.29184E-22	0.22880E-25
10	0.00000	0.18873E-21	0.14796E-24
11	0.00000	0.11093E-20	0.86968E-24
12	0.00000	0.59857E-20	0.46927E-23
13	0.00000	0.29893E-19	0.23436E-22

14	0.00000	0.13912E-18	0.10907E-21
15	0.00000	0.60688E-18	0.47578E-21
16	0.00000	0.24939E-17	0.19552E-20
17	0.00000	0.96962E-17	0.76016E-20
18	0.00000	0.35803E-16	0.28069E-19
19	0.00000	0.12598E-15	0.98765E-19
20	0.00000	0.42367E-15	0.33215E-18
21	0.00000	0.13654E-14	0.10705E-17
22	0.00000	0.42274E-14	0.33142E-17
23	0.00000	0.12600E-13	0.98784E-17
24	0.00000	0.36228E-13	0.28402E-16
25	0.00000	0.10065E-12	0.78911E-16
26	0.00000	0.27070E-12	0.21222E-15
27	0.00000	0.70573E-12	0.55328E-15
28	0.00000	0.17861E-11	0.14003E-14
29	0.00000	0.43938E-11	0.34447E-14
30	0.00000	0.10519E-10	0.82465E-14

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 700.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.42939E-32	0.33663E-35
2	0.00000	0.23304E-30	0.18270E-33
3	0.00000	0.63928E-29	0.50118E-32
4	0.00000	0.11817E-27	0.92644E-31
5	0.00000	0.16558E-26	0.12981E-29
6	0.00000	0.18754E-25	0.14703E-28
7	0.00000	0.17885E-24	0.14021E-27
8	0.00000	0.14768E-23	0.11578E-26
9	0.00000	0.10778E-22	0.84499E-26
10	0.00000	0.70616E-22	0.55361E-25
11	0.00000	0.42047E-21	0.32964E-24
12	0.00000	0.22981E-20	0.18017E-23
13	0.00000	0.11623E-19	0.91126E-23
14	0.00000	0.54780E-19	0.42947E-22
15	0.00000	0.24197E-18	0.18970E-21
16	0.00000	0.10067E-17	0.78924E-21
17	0.00000	0.39624E-17	0.31064E-20
18	0.00000	0.14810E-16	0.11611E-19
19	0.00000	0.52746E-16	0.41352E-19
20	0.00000	0.17952E-15	0.14074E-18
21	0.00000	0.58550E-15	0.45902E-18
22	0.00000	0.18342E-14	0.14380E-17
23	0.00000	0.55314E-14	0.43365E-17
24	0.00000	0.16089E-13	0.12614E-16
25	0.00000	0.45220E-13	0.35452E-16
26	0.00000	0.12301E-12	0.96440E-16
27	0.00000	0.32437E-12	0.25430E-15
28	0.00000	0.83024E-12	0.65089E-15
29	0.00000	0.20654E-11	0.16192E-14
30	0.00000	0.49999E-11	0.39198E-14

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 710.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.14219E-32	0.11148E-35
2	0.00000	0.78252E-31	0.61348E-34
3	0.00000	0.21764E-29	0.17063E-32
4	0.00000	0.40785E-28	0.31974E-31
5	0.00000	0.57922E-27	0.45410E-30
6	0.00000	0.66490E-26	0.52127E-29
7	0.00000	0.64253E-25	0.50373E-28
8	0.00000	0.53758E-24	0.42146E-27
9	0.00000	0.39747E-23	0.31161E-26
10	0.00000	0.26379E-22	0.20680E-25
11	0.00000	0.15909E-21	0.12472E-24
12	0.00000	0.88055E-21	0.69034E-24
13	0.00000	0.45100E-20	0.35357E-23
14	0.00000	0.21521E-19	0.16872E-22
15	0.00000	0.96238E-19	0.75448E-22
16	0.00000	0.40532E-18	0.31777E-21
17	0.00000	0.16148E-17	0.12660E-20
18	0.00000	0.61087E-17	0.47891E-20
19	0.00000	0.22017E-16	0.17261E-19
20	0.00000	0.75826E-16	0.59447E-19
21	0.00000	0.25022E-15	0.19617E-18
22	0.00000	0.79306E-15	0.62175E-18
23	0.00000	0.24194E-14	0.18968E-17
24	0.00000	0.71187E-14	0.55809E-17
25	0.00000	0.20237E-13	0.15865E-16
26	0.00000	0.55677E-13	0.43650E-16
27	0.00000	0.14847E-12	0.11640E-15
28	0.00000	0.38428E-12	0.30127E-15
29	0.00000	0.96661E-12	0.75781E-15
30	0.00000	0.23658E-11	0.18548E-14

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 720.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.47087E-33	0.36915E-36
2	0.00000	0.26271E-31	0.20596E-34
3	0.00000	0.74069E-30	0.58069E-33
4	0.00000	0.14068E-28	0.11029E-31
5	0.00000	0.20247E-27	0.15874E-30
6	0.00000	0.23551E-26	0.18464E-29
7	0.00000	0.23059E-25	0.18078E-28
8	0.00000	0.19544E-24	0.15322E-27
9	0.00000	0.14637E-23	0.11475E-26
10	0.00000	0.98381E-23	0.77129E-26
11	0.00000	0.60085E-22	0.47105E-25
12	0.00000	0.33675E-21	0.26401E-24
13	0.00000	0.17463E-20	0.13690E-23
14	0.00000	0.84358E-20	0.66135E-23
15	0.00000	0.38185E-19	0.29937E-22
16	0.00000	0.16278E-18	0.12762E-21
17	0.00000	0.65632E-18	0.51454E-21
18	0.00000	0.25125E-17	0.19697E-20
19	0.00000	0.91626E-17	0.71833E-20
20	0.00000	0.31928E-16	0.25031E-19
21	0.00000	0.10659E-15	0.83564E-19
22	0.00000	0.34174E-15	0.26792E-18
23	0.00000	0.10545E-14	0.82674E-18
24	0.00000	0.31382E-14	0.24603E-17
25	0.00000	0.90222E-14	0.70732E-17
26	0.00000	0.25101E-13	0.19679E-16
27	0.00000	0.67683E-13	0.53062E-16
28	0.00000	0.17712E-12	0.13886E-15
29	0.00000	0.45044E-12	0.35313E-15
30	0.00000	0.11145E-11	0.87376E-15

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 730.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.15593E-33	0.12224E-36
2	0.00000	0.88184E-32	0.69134E-35
3	0.00000	0.25198E-30	0.19755E-33
4	0.00000	0.48499E-29	0.38022E-32
5	0.00000	0.70727E-28	0.55448E-31
6	0.00000	0.83346E-27	0.65341E-30
7	0.00000	0.82662E-26	0.64806E-29
8	0.00000	0.70964E-25	0.55634E-28
9	0.00000	0.53823E-24	0.42196E-27
10	0.00000	0.36635E-23	0.28721E-26
11	0.00000	0.22654E-22	0.17761E-25
12	0.00000	0.12854E-21	0.10078E-24
13	0.00000	0.67478E-21	0.52901E-24
14	0.00000	0.32995E-20	0.25867E-23
15	0.00000	0.15116E-19	0.11851E-22
16	0.00000	0.65211E-19	0.51124E-22
17	0.00000	0.26606E-18	0.20858E-21
18	0.00000	0.10305E-17	0.80792E-21
19	0.00000	0.38022E-17	0.29809E-20
20	0.00000	0.13403E-16	0.10508E-19
21	0.00000	0.45261E-16	0.35484E-19
22	0.00000	0.14677E-15	0.11507E-18
23	0.00000	0.45806E-15	0.35911E-18
24	0.00000	0.13785E-14	0.10807E-17
25	0.00000	0.40075E-14	0.31418E-17
26	0.00000	0.11273E-13	0.88382E-17
27	0.00000	0.30733E-13	0.24094E-16
28	0.00000	0.81308E-13	0.63744E-16
29	0.00000	0.20902E-12	0.16387E-15
30	0.00000	0.52277E-12	0.40984E-15

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 740.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.51635E-34	0.40481E-37
2	0.00000	0.29595E-32	0.23202E-35
3	0.00000	0.85693E-31	0.67182E-34
4	0.00000	0.16711E-29	0.13101E-32
5	0.00000	0.24688E-28	0.19355E-31
6	0.00000	0.29470E-27	0.23104E-30
7	0.00000	0.29603E-26	0.23208E-29
8	0.00000	0.25736E-25	0.20177E-28
9	0.00000	0.19766E-24	0.15496E-27
10	0.00000	0.13621E-23	0.10679E-26
11	0.00000	0.85273E-23	0.66852E-26
12	0.00000	0.48979E-22	0.38398E-25
13	0.00000	0.26023E-21	0.20402E-24

14	0.00000	0.12878E-20	0.10096E-23
15	0.00000	0.59704E-20	0.46807E-23
16	0.00000	0.26062E-19	0.20432E-22
17	0.00000	0.10758E-18	0.84341E-22
18	0.00000	0.42155E-18	0.33049E-21
19	0.00000	0.15733E-17	0.12335E-20
20	0.00000	0.56099E-17	0.43980E-20
21	0.00000	0.19160E-16	0.15021E-19
22	0.00000	0.62835E-16	0.49262E-19
23	0.00000	0.19830E-15	0.15546E-18
24	0.00000	0.60342E-15	0.47307E-18
25	0.00000	0.17737E-14	0.13905E-17
26	0.00000	0.50443E-14	0.39546E-17
27	0.00000	0.13901E-13	0.10898E-16
28	0.00000	0.37176E-13	0.29145E-16
29	0.00000	0.96600E-13	0.75732E-16
30	0.00000	0.24418E-12	0.19143E-15

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 750.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.17099E-34	0.13405E-37
2	0.00000	0.99304E-33	0.77853E-36
3	0.00000	0.29132E-31	0.22839E-34
4	0.00000	0.57550E-30	0.45118E-33
5	0.00000	0.86119E-29	0.67515E-32
6	0.00000	0.10411E-27	0.81621E-31
7	0.00000	0.10591E-26	0.83028E-30
8	0.00000	0.93227E-26	0.73088E-29
9	0.00000	0.72489E-25	0.56830E-28
10	0.00000	0.50571E-24	0.39646E-27
11	0.00000	0.32045E-23	0.25123E-26
12	0.00000	0.18629E-22	0.14605E-25
13	0.00000	0.10017E-21	0.78529E-25
14	0.00000	0.50159E-21	0.39324E-24
15	0.00000	0.23529E-20	0.18446E-23
16	0.00000	0.10391E-19	0.81464E-23
17	0.00000	0.43392E-19	0.34018E-22
18	0.00000	0.17199E-18	0.13484E-21
19	0.00000	0.64926E-18	0.50901E-21
20	0.00000	0.23413E-17	0.18355E-20
21	0.00000	0.80864E-17	0.63396E-20
22	0.00000	0.26816E-16	0.21023E-19
23	0.00000	0.85568E-16	0.67084E-19
24	0.00000	0.26325E-15	0.20638E-18
25	0.00000	0.78224E-15	0.61326E-18
26	0.00000	0.22489E-14	0.17631E-17
27	0.00000	0.62645E-14	0.49112E-17
28	0.00000	0.16932E-13	0.13275E-16
29	0.00000	0.44466E-13	0.34860E-16
30	0.00000	0.11359E-12	0.89050E-16

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 760.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.56623E-35	0.44392E-38
2	0.00000	0.33315E-33	0.26119E-36
3	0.00000	0.99003E-32	0.77616E-35
4	0.00000	0.19809E-30	0.15530E-33
5	0.00000	0.30020E-29	0.23535E-32
6	0.00000	0.36750E-28	0.28811E-31
7	0.00000	0.37851E-27	0.29674E-30
8	0.00000	0.33732E-26	0.26445E-29
9	0.00000	0.26551E-25	0.20815E-28
10	0.00000	0.18748E-24	0.14698E-27
11	0.00000	0.12023E-23	0.94261E-27
12	0.00000	0.70732E-23	0.55453E-26
13	0.00000	0.38483E-22	0.30170E-25
14	0.00000	0.19498E-21	0.15286E-24
15	0.00000	0.92528E-21	0.72540E-24
16	0.00000	0.41336E-20	0.32406E-23
17	0.00000	0.17460E-19	0.13688E-22
18	0.00000	0.69993E-19	0.54873E-22
19	0.00000	0.26721E-18	0.20949E-21
20	0.00000	0.97437E-18	0.76389E-21
21	0.00000	0.34029E-17	0.26678E-20
22	0.00000	0.11409E-16	0.89446E-20
23	0.00000	0.36805E-16	0.28855E-19
24	0.00000	0.11447E-15	0.89739E-19
25	0.00000	0.34381E-15	0.26954E-18
26	0.00000	0.99904E-15	0.78323E-18
27	0.00000	0.28126E-14	0.22051E-17
28	0.00000	0.76830E-14	0.60233E-17
29	0.00000	0.20388E-13	0.15984E-16
30	0.00000	0.52627E-13	0.41258E-16

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 770.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.18751E-35	0.14700E-38
2	0.00000	0.11175E-33	0.87611E-37
3	0.00000	0.33634E-32	0.26368E-35
4	0.00000	0.68152E-31	0.53430E-34
5	0.00000	0.10458E-29	0.81989E-33
6	0.00000	0.12962E-28	0.10162E-31
7	0.00000	0.13515E-27	0.10595E-30
8	0.00000	0.12192E-26	0.95581E-30
9	0.00000	0.97125E-26	0.76144E-29
10	0.00000	0.69406E-25	0.54413E-28
11	0.00000	0.45042E-24	0.35312E-27
12	0.00000	0.26811E-23	0.21019E-26
13	0.00000	0.14758E-22	0.11570E-25
14	0.00000	0.75641E-22	0.59301E-25
15	0.00000	0.36310E-21	0.28466E-24
16	0.00000	0.16407E-20	0.12863E-23
17	0.00000	0.70086E-20	0.54946E-23
18	0.00000	0.28413E-19	0.22275E-22
19	0.00000	0.10968E-18	0.85989E-22
20	0.00000	0.40440E-18	0.31704E-21
21	0.00000	0.14279E-17	0.11194E-20
22	0.00000	0.48397E-17	0.37942E-20
23	0.00000	0.15782E-16	0.12373E-19
24	0.00000	0.49611E-16	0.38894E-19
25	0.00000	0.15061E-15	0.11807E-18
26	0.00000	0.44229E-15	0.34674E-18
27	0.00000	0.12583E-14	0.98651E-18
28	0.00000	0.34733E-14	0.27230E-17
29	0.00000	0.93130E-14	0.73012E-17
30	0.00000	0.24287E-13	0.19041E-16

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 780.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.62093E-36	0.48680E-39
2	0.00000	0.37479E-34	0.29383E-37
3	0.00000	0.11423E-32	0.89552E-36
4	0.00000	0.23436E-31	0.18373E-34
5	0.00000	0.36409E-30	0.28544E-33
6	0.00000	0.45681E-29	0.35813E-32
7	0.00000	0.48211E-28	0.37797E-31
8	0.00000	0.44016E-27	0.34508E-30
9	0.00000	0.35486E-26	0.27820E-29
10	0.00000	0.25660E-25	0.20117E-28
11	0.00000	0.16848E-24	0.13209E-27
12	0.00000	0.10146E-23	0.79542E-27
13	0.00000	0.56495E-23	0.44291E-26
14	0.00000	0.29289E-22	0.22962E-25
15	0.00000	0.14220E-21	0.11148E-24
16	0.00000	0.64979E-21	0.50942E-24
17	0.00000	0.28069E-20	0.22006E-23
18	0.00000	0.11506E-19	0.90205E-23
19	0.00000	0.44908E-19	0.35207E-22
20	0.00000	0.16739E-18	0.13123E-21
21	0.00000	0.59746E-18	0.46840E-21
22	0.00000	0.20470E-17	0.16048E-20
23	0.00000	0.67467E-17	0.52893E-20
24	0.00000	0.21435E-16	0.16804E-19
25	0.00000	0.65760E-16	0.51554E-19
26	0.00000	0.19514E-15	0.15299E-18
27	0.00000	0.56099E-15	0.43981E-18
28	0.00000	0.15645E-14	0.12265E-17
29	0.00000	0.42382E-14	0.33227E-17
30	0.00000	0.11166E-13	0.87539E-17

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 790.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.20563E-36	0.16121E-39
2	0.00000	0.12567E-34	0.98527E-38
3	0.00000	0.38782E-33	0.30404E-36
4	0.00000	0.80552E-32	0.63151E-35
5	0.00000	0.12668E-30	0.99313E-34
6	0.00000	0.16087E-29	0.12612E-32
7	0.00000	0.17182E-28	0.13471E-31
8	0.00000	0.15875E-27	0.12445E-30
9	0.00000	0.12950E-26	0.10152E-29
10	0.00000	0.94737E-26	0.74272E-29
11	0.00000	0.62929E-25	0.49335E-28
12	0.00000	0.38333E-24	0.30052E-27
13	0.00000	0.21589E-23	0.16926E-26

14	0.00000	0.11320E-22	0.88744E-26
15	0.00000	0.55577E-22	0.43571E-25
16	0.00000	0.25680E-21	0.20133E-24
17	0.00000	0.11216E-20	0.87934E-24
18	0.00000	0.46484E-20	0.36442E-23
19	0.00000	0.18341E-19	0.14379E-22
20	0.00000	0.69105E-19	0.54177E-22
21	0.00000	0.24931E-18	0.19546E-21
22	0.00000	0.86332E-18	0.67682E-21
23	0.00000	0.28757E-17	0.22545E-20
24	0.00000	0.92324E-17	0.72380E-20
25	0.00000	0.28621E-16	0.22438E-19
26	0.00000	0.85816E-16	0.67278E-19
27	0.00000	0.24925E-15	0.19541E-18
28	0.00000	0.70225E-15	0.55055E-18
29	0.00000	0.19218E-14	0.15066E-17
30	0.00000	0.51144E-14	0.40096E-17

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 800.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.68096E-37	0.53387E-40
2	0.00000	0.42135E-35	0.33033E-38
3	0.00000	0.13163E-33	0.10319E-36
4	0.00000	0.27674E-32	0.21696E-35
5	0.00000	0.44048E-31	0.34533E-34
6	0.00000	0.56609E-30	0.44381E-33
7	0.00000	0.61183E-29	0.47967E-32
8	0.00000	0.57194E-28	0.44839E-31
9	0.00000	0.47201E-27	0.37005E-30
10	0.00000	0.34932E-26	0.27386E-29
11	0.00000	0.23471E-25	0.18401E-28
12	0.00000	0.14460E-24	0.11336E-27
13	0.00000	0.82362E-24	0.64570E-27
14	0.00000	0.43669E-23	0.34236E-26
15	0.00000	0.21679E-22	0.16996E-25
16	0.00000	0.10128E-21	0.79402E-25
17	0.00000	0.44721E-21	0.35061E-24
18	0.00000	0.18736E-20	0.14688E-23
19	0.00000	0.74723E-20	0.58582E-23
20	0.00000	0.28457E-19	0.22310E-22
21	0.00000	0.10376E-18	0.81344E-22
22	0.00000	0.36309E-18	0.28466E-21
23	0.00000	0.12221E-17	0.95814E-21
24	0.00000	0.39646E-17	0.31082E-20
25	0.00000	0.12418E-16	0.97355E-20
26	0.00000	0.37617E-16	0.29491E-19
27	0.00000	0.11037E-15	0.86531E-19
28	0.00000	0.31413E-15	0.24627E-18
29	0.00000	0.86832E-15	0.68075E-18
30	0.00000	0.23340E-14	0.18298E-17

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 810.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.22552E-37	0.17680E-40
2	0.00000	0.14125E-35	0.11073E-38
3	0.00000	0.44662E-34	0.35014E-37
4	0.00000	0.95034E-33	0.74505E-36
5	0.00000	0.15307E-31	0.12001E-34
6	0.00000	0.19906E-30	0.15606E-33
7	0.00000	0.21767E-29	0.17065E-32
8	0.00000	0.20585E-28	0.16138E-31
9	0.00000	0.17185E-27	0.13473E-30
10	0.00000	0.12864E-26	0.10085E-29
11	0.00000	0.87415E-26	0.68532E-29
12	0.00000	0.54464E-25	0.42698E-28
13	0.00000	0.31368E-24	0.24592E-27
14	0.00000	0.16817E-23	0.13184E-26
15	0.00000	0.84405E-23	0.66172E-26
16	0.00000	0.39863E-22	0.31252E-25
17	0.00000	0.17793E-21	0.13949E-24
18	0.00000	0.75345E-21	0.59069E-24
19	0.00000	0.30371E-20	0.23810E-23
20	0.00000	0.11689E-19	0.91639E-23
21	0.00000	0.43069E-19	0.33765E-22
22	0.00000	0.15229E-18	0.11940E-21
23	0.00000	0.51794E-18	0.40605E-21
24	0.00000	0.16975E-17	0.13308E-20
25	0.00000	0.53715E-17	0.42112E-20
26	0.00000	0.16437E-16	0.12886E-19
27	0.00000	0.48717E-16	0.38193E-19
28	0.00000	0.14005E-15	0.10979E-18
29	0.00000	0.39098E-15	0.30652E-18
30	0.00000	0.10614E-14	0.83209E-18

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 820.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.74692E-38	0.58560E-41
2	0.00000	0.47341E-36	0.37115E-39
3	0.00000	0.15150E-34	0.11877E-37
4	0.00000	0.32621E-33	0.25574E-36
5	0.00000	0.53164E-32	0.41680E-35
6	0.00000	0.69947E-31	0.54837E-34
7	0.00000	0.77376E-30	0.60662E-33
8	0.00000	0.74018E-29	0.58029E-32
9	0.00000	0.62498E-28	0.48997E-31
10	0.00000	0.47314E-27	0.37093E-30
11	0.00000	0.32513E-26	0.25489E-29
12	0.00000	0.20483E-25	0.16058E-28
13	0.00000	0.11928E-24	0.93511E-28
14	0.00000	0.64646E-24	0.50681E-27
15	0.00000	0.32801E-23	0.25715E-26
16	0.00000	0.15659E-22	0.12276E-25
17	0.00000	0.70643E-22	0.55383E-25
18	0.00000	0.30233E-21	0.23702E-24
19	0.00000	0.12316E-20	0.96552E-24
20	0.00000	0.47897E-20	0.37550E-23
21	0.00000	0.17832E-19	0.13980E-22
22	0.00000	0.63708E-19	0.49946E-22
23	0.00000	0.21889E-18	0.17161E-21
24	0.00000	0.72475E-18	0.56819E-21
25	0.00000	0.23166E-17	0.18162E-20
26	0.00000	0.71604E-17	0.56136E-20
27	0.00000	0.21435E-16	0.16804E-19
28	0.00000	0.62230E-16	0.48787E-19
29	0.00000	0.17545E-15	0.13755E-18
30	0.00000	0.48096E-15	0.37707E-18

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 830.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.24933E-38	0.19548E-41
2	0.00000	0.15865E-36	0.12438E-39
3	0.00000	0.51374E-35	0.40277E-38
4	0.00000	0.11192E-33	0.87747E-37
5	0.00000	0.18454E-32	0.14468E-35
6	0.00000	0.24561E-31	0.19255E-34
7	0.00000	0.27482E-30	0.21546E-33
8	0.00000	0.26589E-29	0.20845E-32
9	0.00000	0.22704E-28	0.17800E-31
10	0.00000	0.17381E-27	0.13626E-30
11	0.00000	0.12076E-26	0.94677E-30
12	0.00000	0.76920E-26	0.60304E-29
13	0.00000	0.45283E-25	0.35501E-28
14	0.00000	0.24809E-24	0.19450E-27
15	0.00000	0.12723E-23	0.99750E-27
16	0.00000	0.61391E-23	0.48129E-26
17	0.00000	0.27990E-22	0.21944E-25
18	0.00000	0.12105E-21	0.94901E-25
19	0.00000	0.49827E-21	0.39063E-24
20	0.00000	0.19580E-20	0.15350E-23
21	0.00000	0.73647E-20	0.57738E-23
22	0.00000	0.26581E-19	0.20839E-22
23	0.00000	0.92260E-19	0.72330E-22
24	0.00000	0.30856E-18	0.24190E-21
25	0.00000	0.99618E-18	0.78098E-21
26	0.00000	0.31098E-17	0.24380E-20
27	0.00000	0.94015E-17	0.73706E-20
28	0.00000	0.27564E-16	0.21609E-19
29	0.00000	0.78473E-16	0.61522E-19
30	0.00000	0.21721E-15	0.17029E-18

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 840.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.88103E-39	0.69084E-42
2	0.00000	0.53174E-37	0.41687E-40
3	0.00000	0.17417E-35	0.13654E-38
4	0.00000	0.38386E-34	0.30094E-37
5	0.00000	0.64023E-33	0.50193E-36
6	0.00000	0.86185E-32	0.67568E-35
7	0.00000	0.97531E-31	0.76463E-34
8	0.00000	0.95424E-30	0.74810E-33
9	0.00000	0.82392E-29	0.64594E-32
10	0.00000	0.63773E-28	0.49997E-31
11	0.00000	0.44798E-27	0.35121E-30
12	0.00000	0.28845E-26	0.22614E-29
13	0.00000	0.17165E-25	0.13457E-28

14	0.00000	0.95051E-25	0.74518E-28
15	0.00000	0.49267E-24	0.38624E-27
16	0.00000	0.24023E-23	0.18834E-26
17	0.00000	0.11068E-22	0.86770E-26
18	0.00000	0.48366E-22	0.37918E-25
19	0.00000	0.20114E-21	0.15769E-24
20	0.00000	0.79853E-21	0.62603E-24
21	0.00000	0.30343E-20	0.23788E-23
22	0.00000	0.11063E-19	0.86728E-23
23	0.00000	0.38783E-19	0.30405E-22
24	0.00000	0.13101E-18	0.10271E-21
25	0.00000	0.42716E-18	0.33488E-21
26	0.00000	0.13466E-17	0.10557E-20
27	0.00000	0.41111E-17	0.32230E-20
28	0.00000	0.12170E-16	0.95414E-20
29	0.00000	0.34985E-16	0.27427E-19
30	0.00000	0.97768E-16	0.76648E-19

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 850.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.17837E-37	0.13984E-40
3	0.00000	0.59030E-36	0.46279E-39
4	0.00000	0.13160E-34	0.10317E-37
5	0.00000	0.22200E-33	0.17404E-36
6	0.00000	0.30223E-32	0.23694E-35
7	0.00000	0.34585E-31	0.27114E-34
8	0.00000	0.34215E-30	0.26824E-33
9	0.00000	0.29869E-29	0.23417E-32
10	0.00000	0.23372E-28	0.18323E-31
11	0.00000	0.16597E-27	0.13011E-30
12	0.00000	0.10802E-26	0.84683E-30
13	0.00000	0.64966E-26	0.50932E-29
14	0.00000	0.36358E-25	0.28504E-28
15	0.00000	0.19044E-24	0.14930E-27
16	0.00000	0.93832E-24	0.73562E-27
17	0.00000	0.43679E-23	0.34244E-26
18	0.00000	0.19284E-22	0.15119E-25
19	0.00000	0.81023E-22	0.63520E-25
20	0.00000	0.32493E-21	0.25474E-24
21	0.00000	0.12471E-20	0.97774E-24
22	0.00000	0.45926E-20	0.36005E-23
23	0.00000	0.16261E-19	0.12749E-22
24	0.00000	0.55473E-19	0.43490E-22
25	0.00000	0.18265E-18	0.14320E-21
26	0.00000	0.58145E-18	0.45585E-21
27	0.00000	0.17923E-17	0.14051E-20
28	0.00000	0.53572E-17	0.42000E-20
29	0.00000	0.15547E-16	0.12189E-19
30	0.00000	0.43863E-16	0.34388E-19

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 860.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.60983E-38	0.47812E-41
3	0.00000	0.20009E-36	0.15687E-39
4	0.00000	0.45098E-35	0.35356E-38
5	0.00000	0.76935E-34	0.60316E-37
6	0.00000	0.10591E-32	0.83033E-36
7	0.00000	0.12255E-31	0.96075E-35
8	0.00000	0.12257E-30	0.96092E-34
9	0.00000	0.10817E-29	0.84803E-33
10	0.00000	0.85561E-29	0.67078E-32
11	0.00000	0.61410E-28	0.48144E-31
12	0.00000	0.40395E-27	0.31669E-30
13	0.00000	0.24552E-26	0.19249E-29
14	0.00000	0.13885E-25	0.10886E-28
15	0.00000	0.73487E-25	0.57613E-28
16	0.00000	0.36583E-24	0.28681E-27
17	0.00000	0.17205E-23	0.13488E-26
18	0.00000	0.76736E-23	0.60160E-26
19	0.00000	0.32567E-22	0.25532E-25
20	0.00000	0.13192E-21	0.10342E-24
21	0.00000	0.51141E-21	0.40093E-24
22	0.00000	0.19020E-20	0.14911E-23
23	0.00000	0.68009E-20	0.53317E-23
24	0.00000	0.23428E-19	0.18367E-22
25	0.00000	0.77890E-19	0.61065E-22
26	0.00000	0.25035E-18	0.19627E-21
27	0.00000	0.77914E-18	0.61083E-21
28	0.00000	0.23511E-17	0.18432E-20
29	0.00000	0.68880E-17	0.54000E-20
30	0.00000	0.19616E-16	0.15379E-19

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 870.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.22085E-38	0.17320E-41
3	0.00000	0.67909E-37	0.53240E-40
4	0.00000	0.15450E-35	0.12112E-38
5	0.00000	0.26649E-34	0.20892E-37
6	0.00000	0.37092E-33	0.29080E-36
7	0.00000	0.43390E-32	0.34017E-35
8	0.00000	0.43871E-31	0.34394E-34
9	0.00000	0.39135E-30	0.30681E-33
10	0.00000	0.31287E-29	0.24528E-32
11	0.00000	0.22695E-28	0.17792E-31
12	0.00000	0.15086E-27	0.11827E-30
13	0.00000	0.92656E-27	0.72641E-30
14	0.00000	0.52944E-26	0.41507E-29
15	0.00000	0.28311E-25	0.22195E-28
16	0.00000	0.14238E-24	0.11162E-27
17	0.00000	0.67643E-24	0.53031E-27
18	0.00000	0.30474E-23	0.23891E-26
19	0.00000	0.13063E-22	0.10241E-25
20	0.00000	0.53443E-22	0.41899E-25
21	0.00000	0.20923E-21	0.16403E-24
22	0.00000	0.78580E-21	0.61605E-24
23	0.00000	0.28372E-20	0.22243E-23
24	0.00000	0.98686E-20	0.77368E-23
25	0.00000	0.33127E-19	0.25971E-22
26	0.00000	0.10750E-18	0.84276E-22
27	0.00000	0.33773E-18	0.26477E-21
28	0.00000	0.10288E-17	0.80653E-21
29	0.00000	0.30423E-17	0.23851E-20
30	0.00000	0.87451E-17	0.68560E-20

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 880.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.95655E-39	0.74969E-42
3	0.00000	0.23172E-37	0.18166E-40
4	0.00000	0.52920E-36	0.41489E-39
5	0.00000	0.92263E-35	0.72332E-38
6	0.00000	0.12982E-33	0.10178E-36
7	0.00000	0.15351E-32	0.12035E-35
8	0.00000	0.15689E-31	0.12300E-34
9	0.00000	0.14145E-30	0.11089E-33
10	0.00000	0.11428E-29	0.89596E-33
11	0.00000	0.83771E-29	0.65675E-32
12	0.00000	0.56267E-28	0.44113E-31
13	0.00000	0.34917E-27	0.27374E-30
14	0.00000	0.20157E-26	0.15803E-29
15	0.00000	0.10889E-25	0.85366E-29
16	0.00000	0.55318E-25	0.43368E-28
17	0.00000	0.26545E-24	0.20811E-27
18	0.00000	0.12079E-23	0.94696E-27
19	0.00000	0.52293E-23	0.40997E-26
20	0.00000	0.21605E-22	0.16938E-25
21	0.00000	0.85412E-22	0.66961E-25
22	0.00000	0.32390E-21	0.25393E-24
23	0.00000	0.11808E-20	0.92573E-24
24	0.00000	0.41466E-20	0.32509E-23
25	0.00000	0.14052E-19	0.11017E-22
26	0.00000	0.46032E-19	0.36088E-22
27	0.00000	0.14599E-18	0.11445E-21
28	0.00000	0.44886E-18	0.35190E-21
29	0.00000	0.13398E-17	0.10503E-20
30	0.00000	0.38868E-17	0.30472E-20

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 890.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.80571E-38	0.63171E-41
4	0.00000	0.18134E-36	0.14216E-39
5	0.00000	0.31928E-35	0.25031E-38
6	0.00000	0.45411E-34	0.35601E-37
7	0.00000	0.54274E-33	0.42550E-36
8	0.00000	0.56059E-32	0.43949E-35
9	0.00000	0.51077E-31	0.40043E-34
10	0.00000	0.41701E-30	0.32693E-33
11	0.00000	0.30885E-29	0.24214E-32
12	0.00000	0.20960E-28	0.16432E-31
13	0.00000	0.13140E-27	0.10302E-30

14	0.00000	0.76630E-27	0.60076E-30
15	0.00000	0.41813E-26	0.32781E-29
16	0.00000	0.21456E-25	0.16821E-28
17	0.00000	0.10399E-24	0.81524E-28
18	0.00000	0.47786E-24	0.37463E-27
19	0.00000	0.20891E-23	0.16378E-26
20	0.00000	0.87155E-23	0.68328E-26
21	0.00000	0.34790E-22	0.27275E-25
22	0.00000	0.13320E-21	0.10443E-24
23	0.00000	0.49026E-21	0.38436E-24
24	0.00000	0.17380E-20	0.13626E-23
25	0.00000	0.59456E-20	0.46613E-23
26	0.00000	0.19660E-19	0.15413E-22
27	0.00000	0.62931E-19	0.49337E-22
28	0.00000	0.19529E-18	0.15310E-21
29	0.00000	0.58828E-18	0.46120E-21
30	0.00000	0.17223E-17	0.13503E-20

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 900.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.30599E-38	0.23990E-41
4	0.00000	0.62312E-37	0.48852E-40
5	0.00000	0.11045E-35	0.86594E-39
6	0.00000	0.15875E-34	0.12446E-37
7	0.00000	0.19175E-33	0.15033E-36
8	0.00000	0.20014E-32	0.15691E-35
9	0.00000	0.18427E-31	0.14446E-34
10	0.00000	0.15200E-30	0.11917E-33
11	0.00000	0.11374E-29	0.89171E-33
12	0.00000	0.77978E-29	0.61133E-32
13	0.00000	0.49383E-28	0.38715E-31
14	0.00000	0.29089E-27	0.22805E-30
15	0.00000	0.16032E-26	0.12568E-29
16	0.00000	0.83081E-26	0.65134E-29
17	0.00000	0.40664E-25	0.31880E-28
18	0.00000	0.18870E-24	0.14793E-27
19	0.00000	0.83299E-24	0.65305E-27
20	0.00000	0.35087E-23	0.27508E-26
21	0.00000	0.14141E-22	0.11086E-25
22	0.00000	0.54659E-22	0.42851E-25
23	0.00000	0.20308E-21	0.15921E-24
24	0.00000	0.72673E-21	0.56974E-24
25	0.00000	0.25094E-20	0.19673E-23
26	0.00000	0.83747E-20	0.65656E-23
27	0.00000	0.27056E-19	0.21211E-22
28	0.00000	0.84732E-19	0.66428E-22
29	0.00000	0.25757E-18	0.20193E-21
30	0.00000	0.76095E-18	0.59657E-21

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 910.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.14387E-38	0.11280E-41
4	0.00000	0.21645E-37	0.16970E-40
5	0.00000	0.38214E-36	0.29959E-39
6	0.00000	0.55466E-35	0.43485E-38
7	0.00000	0.67698E-34	0.53074E-37
8	0.00000	0.71399E-33	0.55975E-36
9	0.00000	0.66416E-32	0.52069E-35
10	0.00000	0.55350E-31	0.43394E-34
11	0.00000	0.41840E-30	0.32802E-33
12	0.00000	0.28975E-29	0.22716E-32
13	0.00000	0.18534E-28	0.14531E-31
14	0.00000	0.11027E-27	0.86447E-31
15	0.00000	0.61373E-27	0.48115E-30
16	0.00000	0.32119E-26	0.25180E-29
17	0.00000	0.15874E-25	0.12445E-28
18	0.00000	0.74377E-25	0.58310E-28
19	0.00000	0.33150E-24	0.25989E-27
20	0.00000	0.14097E-23	0.11052E-26
21	0.00000	0.57355E-23	0.44966E-26
22	0.00000	0.22379E-22	0.17545E-25
23	0.00000	0.83931E-22	0.65800E-25
24	0.00000	0.30315E-21	0.23767E-24
25	0.00000	0.10565E-20	0.82827E-24
26	0.00000	0.35584E-20	0.27897E-23
27	0.00000	0.11601E-19	0.90952E-23
28	0.00000	0.36664E-19	0.28744E-22
29	0.00000	0.11246E-18	0.88169E-22
30	0.00000	0.33524E-18	0.26282E-21

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 920.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.95716E-39	0.75110E-42
4	0.00000	0.77653E-38	0.60872E-41
5	0.00000	0.13238E-36	0.10379E-39
6	0.00000	0.19371E-35	0.15186E-38
7	0.00000	0.23885E-34	0.18726E-37
8	0.00000	0.25451E-33	0.19953E-36
9	0.00000	0.23917E-32	0.18751E-35
10	0.00000	0.20135E-31	0.15786E-34
11	0.00000	0.15374E-30	0.12053E-33
12	0.00000	0.10754E-29	0.84307E-33
13	0.00000	0.69472E-29	0.54465E-32
14	0.00000	0.41740E-28	0.32723E-31
15	0.00000	0.23460E-27	0.18392E-30
16	0.00000	0.12397E-26	0.97191E-30
17	0.00000	0.61863E-26	0.48500E-29
18	0.00000	0.29265E-25	0.22943E-28
19	0.00000	0.13168E-24	0.10323E-27
20	0.00000	0.56529E-24	0.44318E-27
21	0.00000	0.23216E-23	0.18201E-26
22	0.00000	0.91434E-23	0.71683E-26
23	0.00000	0.34610E-22	0.27134E-25
24	0.00000	0.12617E-21	0.98913E-25
25	0.00000	0.44373E-21	0.34788E-24
26	0.00000	0.15082E-20	0.11824E-23
27	0.00000	0.49618E-20	0.38900E-23
28	0.00000	0.15822E-19	0.12404E-22
29	0.00000	0.48969E-19	0.38391E-22
30	0.00000	0.14728E-18	0.11546E-21

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 930.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.95716E-39	0.75110E-42
4	0.00000	0.31461E-38	0.24663E-41
5	0.00000	0.46145E-37	0.36177E-40
6	0.00000	0.67638E-36	0.53027E-39
7	0.00000	0.84218E-35	0.66025E-38
8	0.00000	0.90652E-34	0.71069E-37
9	0.00000	0.86054E-33	0.67465E-36
10	0.00000	0.73176E-32	0.57368E-35
11	0.00000	0.56432E-31	0.44242E-34
12	0.00000	0.39864E-30	0.31253E-33
13	0.00000	0.26007E-29	0.20389E-32
14	0.00000	0.15779E-28	0.12370E-31
15	0.00000	0.89545E-28	0.70201E-31
16	0.00000	0.47775E-27	0.37455E-30
17	0.00000	0.24069E-26	0.18870E-29
18	0.00000	0.11494E-25	0.90114E-29
19	0.00000	0.52210E-25	0.40932E-28
20	0.00000	0.22624E-24	0.17737E-27
21	0.00000	0.93782E-24	0.73524E-27
22	0.00000	0.37278E-23	0.29226E-26
23	0.00000	0.14241E-22	0.11165E-25
24	0.00000	0.52389E-22	0.41072E-25
25	0.00000	0.18593E-21	0.14577E-24
26	0.00000	0.63769E-21	0.49994E-24
27	0.00000	0.21168E-20	0.16595E-23
28	0.00000	0.68104E-20	0.53393E-23
29	0.00000	0.21265E-19	0.16672E-22
30	0.00000	0.64521E-19	0.50583E-22

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 940.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.95716E-39	0.75110E-42
4	0.00000	0.16515E-38	0.12948E-41
5	0.00000	0.16429E-37	0.12879E-40
6	0.00000	0.23636E-36	0.18530E-39
7	0.00000	0.29678E-35	0.23267E-38
8	0.00000	0.32265E-34	0.25295E-37
9	0.00000	0.30936E-33	0.24253E-36
10	0.00000	0.26568E-32	0.20829E-35
11	0.00000	0.20692E-31	0.16222E-34
12	0.00000	0.14761E-30	0.11572E-33
13	0.00000	0.97238E-30	0.76233E-33

14	0.00000	0.59566E-29	0.46699E-32
15	0.00000	0.34130E-28	0.26757E-31
16	0.00000	0.18384E-27	0.14412E-30
17	0.00000	0.93496E-27	0.73299E-30
18	0.00000	0.45071E-26	0.35335E-29
19	0.00000	0.20664E-25	0.16200E-28
20	0.00000	0.90376E-25	0.70853E-28
21	0.00000	0.37810E-24	0.29642E-27
22	0.00000	0.15167E-23	0.11891E-26
23	0.00000	0.58472E-23	0.45841E-26
24	0.00000	0.21706E-22	0.17017E-25
25	0.00000	0.77730E-22	0.60939E-25
26	0.00000	0.26898E-21	0.21088E-24
27	0.00000	0.90083E-21	0.70624E-24
28	0.00000	0.29240E-20	0.22923E-23
29	0.00000	0.92104E-20	0.72208E-23
30	0.00000	0.28190E-19	0.22100E-22

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 950.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.95716E-39	0.75110E-42
4	0.00000	0.12342E-38	0.96830E-42
5	0.00000	0.62160E-38	0.48737E-41
6	0.00000	0.82908E-37	0.64998E-40
7	0.00000	0.10455E-35	0.81966E-39
8	0.00000	0.11476E-34	0.89966E-38
9	0.00000	0.11112E-33	0.87115E-37
10	0.00000	0.96373E-33	0.75555E-36
11	0.00000	0.75793E-32	0.59421E-35
12	0.00000	0.54593E-31	0.42800E-34
13	0.00000	0.36312E-30	0.28468E-33
14	0.00000	0.22457E-29	0.17606E-32
15	0.00000	0.12990E-28	0.10184E-31
16	0.00000	0.70632E-28	0.55374E-31
17	0.00000	0.36260E-27	0.28427E-30
18	0.00000	0.17643E-26	0.13832E-29
19	0.00000	0.81640E-26	0.64004E-29
20	0.00000	0.36036E-25	0.28251E-28
21	0.00000	0.15214E-24	0.11927E-27
22	0.00000	0.61588E-24	0.48283E-27
23	0.00000	0.23957E-23	0.18782E-26
24	0.00000	0.89734E-23	0.70349E-26
25	0.00000	0.32422E-22	0.25418E-25
26	0.00000	0.11319E-21	0.88740E-25
27	0.00000	0.38243E-21	0.29982E-24
28	0.00000	0.12522E-20	0.98172E-24
29	0.00000	0.39789E-20	0.31194E-23
30	0.00000	0.12284E-19	0.96304E-23

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 960.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.95716E-39	0.75110E-42
4	0.00000	0.12342E-38	0.96830E-42
5	0.00000	0.28292E-38	0.22183E-41
6	0.00000	0.29489E-37	0.23119E-40
7	0.00000	0.36847E-36	0.28887E-39
8	0.00000	0.40789E-35	0.31978E-38
9	0.00000	0.39881E-34	0.31266E-37
10	0.00000	0.34926E-33	0.27382E-36
11	0.00000	0.27734E-32	0.21743E-35
12	0.00000	0.20169E-31	0.15812E-34
13	0.00000	0.13544E-30	0.10618E-33
14	0.00000	0.84559E-30	0.66293E-33
15	0.00000	0.49374E-29	0.38708E-32
16	0.00000	0.27098E-28	0.21244E-31
17	0.00000	0.14041E-27	0.11008E-30
18	0.00000	0.68951E-27	0.54056E-30
19	0.00000	0.32199E-26	0.25244E-29
20	0.00000	0.14343E-25	0.11244E-28
21	0.00000	0.61103E-25	0.47903E-28
22	0.00000	0.24958E-24	0.19567E-27
23	0.00000	0.97958E-24	0.76797E-27
24	0.00000	0.37018E-23	0.29021E-26
25	0.00000	0.13493E-22	0.10579E-25
26	0.00000	0.47523E-22	0.37257E-25
27	0.00000	0.16197E-21	0.12698E-24
28	0.00000	0.53497E-21	0.41940E-24
29	0.00000	0.17146E-20	0.13442E-23
30	0.00000	0.53388E-20	0.41855E-23

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 970.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.95716E-39	0.75110E-42
4	0.00000	0.12342E-38	0.96830E-42
5	0.00000	0.16825E-38	0.13186E-41
6	0.00000	0.10952E-37	0.85858E-41
7	0.00000	0.13022E-36	0.10209E-39
8	0.00000	0.14492E-35	0.11361E-38
9	0.00000	0.14302E-34	0.11213E-37
10	0.00000	0.12646E-33	0.99143E-37
11	0.00000	0.10139E-32	0.79485E-36
12	0.00000	0.74435E-32	0.58356E-35
13	0.00000	0.50457E-31	0.39558E-34
14	0.00000	0.31799E-30	0.24930E-33
15	0.00000	0.18741E-29	0.14693E-32
16	0.00000	0.10381E-28	0.81388E-32
17	0.00000	0.54288E-28	0.42560E-31
18	0.00000	0.26903E-27	0.21092E-30
19	0.00000	0.12678E-26	0.99393E-30
20	0.00000	0.56983E-26	0.44674E-29
21	0.00000	0.24495E-25	0.19203E-28
22	0.00000	0.10095E-24	0.79140E-28
23	0.00000	0.39972E-24	0.31338E-27
24	0.00000	0.15239E-23	0.11947E-26
25	0.00000	0.56035E-23	0.43930E-26
26	0.00000	0.19908E-22	0.15607E-25
27	0.00000	0.68438E-22	0.53654E-25
28	0.00000	0.22799E-21	0.17874E-24
29	0.00000	0.73699E-21	0.57779E-24
30	0.00000	0.23144E-20	0.18145E-23

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 980.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.95716E-39	0.75110E-42
4	0.00000	0.12342E-38	0.96830E-42
5	0.00000	0.15113E-38	0.11855E-41
6	0.00000	0.45741E-38	0.35859E-41
7	0.00000	0.46471E-37	0.36432E-40
8	0.00000	0.51497E-36	0.40372E-39
9	0.00000	0.51254E-35	0.40182E-38
10	0.00000	0.45750E-34	0.35867E-37
11	0.00000	0.37027E-33	0.29029E-36
12	0.00000	0.27441E-32	0.21513E-35
13	0.00000	0.18776E-31	0.14720E-34
14	0.00000	0.11943E-30	0.93634E-34
15	0.00000	0.71042E-30	0.55695E-33
16	0.00000	0.39715E-29	0.31136E-32
17	0.00000	0.20958E-28	0.16431E-31
18	0.00000	0.10481E-27	0.82167E-31
19	0.00000	0.49835E-27	0.39070E-30
20	0.00000	0.22600E-26	0.17718E-29
21	0.00000	0.98015E-26	0.76842E-29
22	0.00000	0.40752E-25	0.31948E-28
23	0.00000	0.16279E-24	0.12762E-27
24	0.00000	0.62603E-24	0.49080E-27
25	0.00000	0.23220E-23	0.18204E-26
26	0.00000	0.83209E-23	0.65235E-26
27	0.00000	0.28852E-22	0.22619E-25
28	0.00000	0.96938E-22	0.75998E-25
29	0.00000	0.31602E-21	0.24775E-24
30	0.00000	0.10008E-20	0.78461E-24

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 990.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.95716E-39	0.75110E-42
4	0.00000	0.12342E-38	0.96830E-42
5	0.00000	0.15113E-38	0.11855E-41
6	0.00000	0.24678E-38	0.19352E-41
7	0.00000	0.17121E-37	0.13422E-40
8	0.00000	0.18338E-36	0.14376E-39
9	0.00000	0.18358E-35	0.14393E-38
10	0.00000	0.16537E-34	0.12965E-37
11	0.00000	0.13510E-33	0.10591E-36
12	0.00000	0.10106E-32	0.79228E-36
13	0.00000	0.69792E-32	0.54715E-35

14	0.00000	0.44804E-31	0.35126E-34
15	0.00000	0.26895E-30	0.21085E-33
16	0.00000	0.15172E-29	0.11895E-32
17	0.00000	0.80793E-29	0.63340E-32
18	0.00000	0.40766E-28	0.31960E-31
19	0.00000	0.19558E-27	0.15333E-30
20	0.00000	0.89482E-27	0.70152E-30
21	0.00000	0.39151E-26	0.30693E-29
22	0.00000	0.16421E-25	0.12873E-28
23	0.00000	0.66166E-25	0.51873E-28
24	0.00000	0.25667E-24	0.20122E-27
25	0.00000	0.96022E-24	0.75280E-27
26	0.00000	0.34704E-23	0.27207E-26
27	0.00000	0.12136E-22	0.95143E-26
28	0.00000	0.41121E-22	0.32238E-25
29	0.00000	0.13518E-21	0.10598E-24
30	0.00000	0.43171E-21	0.33845E-24

Simulation Scenario: 16Cu1 - Base [I.C.=95th UCL of Log Transformed data]
Time: 1000.000

Cell	Cgas(g/cu.ft)	Cliq(g/cu.ft)	Csol(g/g)
1	0.00000	0.40306E-39	0.31669E-42
2	0.00000	0.68011E-39	0.53389E-42
3	0.00000	0.95716E-39	0.75110E-42
4	0.00000	0.12342E-38	0.96830E-42
5	0.00000	0.15113E-38	0.11855E-41
6	0.00000	0.17883E-38	0.14027E-41
7	0.00000	0.68682E-38	0.53852E-41
8	0.00000	0.65813E-37	0.51596E-40
9	0.00000	0.65759E-36	0.51554E-39
10	0.00000	0.59729E-35	0.46826E-38
11	0.00000	0.49246E-34	0.38608E-37
12	0.00000	0.37180E-33	0.29148E-36
13	0.00000	0.25913E-32	0.20315E-35
14	0.00000	0.16788E-31	0.13161E-34
15	0.00000	0.10169E-30	0.79722E-34
16	0.00000	0.57885E-30	0.45381E-33
17	0.00000	0.31100E-29	0.24382E-32
18	0.00000	0.15833E-28	0.12412E-31
19	0.00000	0.76630E-28	0.60077E-31
20	0.00000	0.35370E-27	0.27729E-30
21	0.00000	0.15611E-26	0.12238E-29
22	0.00000	0.66044E-26	0.51777E-29
23	0.00000	0.26843E-25	0.21044E-28
24	0.00000	0.10502E-24	0.82335E-28
25	0.00000	0.39626E-24	0.31066E-27
26	0.00000	0.14443E-23	0.11323E-26
27	0.00000	0.50935E-23	0.39932E-26
28	0.00000	0.17404E-22	0.13644E-25
29	0.00000	0.57692E-22	0.45229E-25
30	0.00000	0.18577E-21	0.14564E-24

Examples of SUMMERS Model Output File

Program SUMMERS - Version 1.01 (5/96) - IGWMC/CSM, Golden, Colorado

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Run # SEAD-16 CU-1

Calculation of Contamination in Ground Water

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Vsz ------------- Seepage velocity in downward direction =  .0016 [ft^2]
E - Void fraction (water volume/volume of solid) in soil =  .2
Vdz ------- Downward specific discharge (Darcy velocity) =   0.0003[ft/d]
Ap -------------------- Horizontal area of pond or spill =  25550 [ft^2]
Qp -- Volumetric flow rate of liquid transporting
                                  pollutant into aquifer =  8.176 [ft^3/d]
Vsa ------------------------ Seepage velocity in aquifer =  .93 [ft/d]
Ea ---------------------- Porosity of aquifer [fraction] =  .2
Vda ----- Specific discharge (Darcy velocity) in aquifer =   0.1860[ft/d]
Ha -------------------------------- Thickness of aquifer =  3 [ft]
Wp --- Surface pond for spill width perpendicular to
                                flow direction in aquifer =  320 [ft]
Qa ---------------- Volumetric flow rate of ground water =  178.56 [ft^3/d]
Ca --- Initial or background concentration of
                                   pollutant in aquifer =  .0049  [mg/l]

Cp  -- Concentrations of pollutant in the infiltration
             at the unsaturated-saturated zone interface =  65.27  [mg/l]
Cgw ---------- Contaminant concentration in ground water =  2.86245  [mg/l]
```

End of calculations

APPENDIX I - SEAD 16 EXPOSURE AND RISK CALCULATIONS

I-1 Ambient Air Exposure Point Concentrations
I-2 Calculation of Intake and Risk from Inhalation of Dust in Ambient Air: RME
I-3 Calculation of Intake and Risk from Inhalation of Dust in Ambient Air: CT
I-4 Calculation of Intake and Risk from Inhalation of Dust in Indoor Air: RME
I-5 Calculation of Intake and Risk from Inhalation of Dust in Indoor Air: CT
I-6 Calculation of Intake and Risk from the Ingestion of Soil: RME
I-7 Calculation of Intake and Risk from the Ingestion of Soil: CT
I-8 Calculation of Absorbed Dose and Risk from Dermal Contact to Soil: RME
I-9 Calculation of Absorbed Dose and Risk from Dermal Contact to Soil: CT
I-10 Calculation of Intake and Risk from the Ingestion of Indoor Dirt/Dust: RME
I-11 Calculation of Intake and Risk from the Ingestion of Indoor Dirt/Dust: CT
I-12 Calculation of Absorbed Dose and Risk from Dermal Contact with Indoor Dirt/Dust: RME
I-13 Calculation of Absorbed Dose and Risk from Dermal Contact with Indoor Dirt/Dust: CT
I-14 Calculation of Absorbed Dose and Risk from Dermal Contact with Surface Water: RME
I-15 Calculation of Absorbed Dose and Risk from Dermal Contact with Surface Water: CT
I-16 Calculation of Intake and Risk from the Ingestion of Sediment: RME
I-17 Calculation of Intake and Risk from the Ingestion of Sediment: CT
I-18 Calculation of Absorbed Dose and Risk from Dermal Contact with Sediment: RME
I-19 Calculation of Absorbed Dose and Risk from Dermal Contact with Sediment: CT
I-20 Calculation of Intake and Risk from the Ingestion of Groundwater: RME
I-21 Calculation of Intake and Risk from the Ingestion of Groundwater: CT

TABLE I-1
AMBIENT AIR EXPOSURE POINT CONCENTRATIONS
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Air EPC from Surface Soil (mg/m³) = $CS_{surf} \times PM_{10} \times CF$

Variables:
CS_{surf} = Chemical Concentration in Surface Soil, from EPC data (mg/kg)
PM_{10} = Average Measured PM_{10} Concentration = 17 ug/m³
CF = Conversion Factor = 1E-9 kg/ug

Equation for Air EPC from Total Soils (mg/m³) = $CS_{tot} \times PM_{10} \times CF$

Variables:
CS_{tot} = Chemical Concentration in Total Soils, from EPC data (mg/kg)
PM_{10} = PM_{10} Concentration Calculated for Construction Worker= 140 ug/m³
CF = Conversion Factor = 1E-9 kg/ug

Analyte	EPC Data for Surface Soil (mg/kg)	EPC Data for Total Soils (mg/kg)	Measured Air Samples (mg/m³)	Calculated Air EPC Surface Soil (mg/m³)	Calculated Air EPC Total Soils (mg/m³)	Air EPC from Surface Soil (mg/m³)	Air EPC from Total Soils (mg/m³)
Volatile Organics							
1,1,2,2-Tetrachloroethane	6.39E-03	6.30E-03		1.09E-10	8.82E-10	1.09E-10	8.82E-10
Butanone, 2-	6.56E-03	7.28E-03		1.12E-10	1.02E-09	1.12E-10	1.02E-09
Acetone		5.00E-03			7.00E-10		7.00E-10
Benzene	5.00E-03	5.00E-03		8.50E-11	7.00E-10	8.50E-11	7.00E-10
Carbon Disulfide	2.00E-03	2.00E-03		3.40E-11	2.80E-10	3.40E-11	2.80E-10
Chloroform	2.00E-03	2.00E-03		3.40E-11	2.80E-10	3.40E-11	2.80E-10
Methylene Chloride	3.00E-03	3.00E-03		5.10E-11	4.20E-10	5.10E-11	4.20E-10
Toluene	6.47E-03	6.28E-03		1.10E-10	8.79E-10	1.10E-10	8.79E-10
Xylene (total)	4.25E-03	4.25E-03		7.23E-11	5.95E-10	7.23E-11	5.95E-10
Semivolatile Organics							
2,4-Dinitrotoluene	4.55E+00	3.80E+00		7.74E-08	5.32E-07	7.74E-08	5.32E-07
2,6-Dinitrotoluene	1.19E+00	1.01E-01		2.02E-08	1.41E-08	2.02E-08	1.41E-08
2-Methylnaphthalene	1.20E+00	4.25E-03	ND	2.04E-08	5.95E-10	2.04E-08	5.95E-10
2-Methylphenol	1.20E-01	1.20E-01		2.04E-09	1.68E-08	2.04E-09	1.68E-08
3,3'-Dichlorobenzidine	7.68E-01	7.24E-01		1.31E-08	1.01E-07	1.31E-08	1.01E-07
3-nitroaniline	1.87E+00	1.76E+00		3.18E-08	2.46E-07	3.18E-08	2.46E-07
Acenaphthene	1.52E+00	1.33E+00	ND	2.58E-08	1.86E-07	2.58E-08	1.86E-07
Acenaphthylene	3.05E-01	2.91E-01		5.19E-09	4.07E-08	5.19E-09	4.07E-08
Anthracene	1.55E+00	1.38E+00	ND	2.64E-08	1.93E-07	2.64E-08	1.93E-07
Benzo(a)anthracene	2.70E+00	2.46E+00		4.59E-08	3.44E-07	4.59E-08	3.44E-07
Benzo(a)pyrene	3.40E+00	3.30E+00		5.78E-08	4.62E-07	5.78E-08	4.62E-07
Benzo(b)fluoranthene	3.61E+00	3.38E+00		6.14E-08	4.73E-07	6.14E-08	4.73E-07
Benzo(g,h,i)perylene	2.29E+00	2.70E+00		3.89E-08	3.78E-07	3.89E-08	3.78E-07
Benzo(k)fluoranthene	2.31E+00	2.24E+00		3.93E-08	3.14E-07	3.93E-08	3.14E-07
Butylbenzylphthalate		1.80E-02			2.52E-09		2.52E-09
Carbazole	1.59E+00	1.35E+00		2.70E-08	1.89E-07	2.70E-08	1.89E-07
Chrysene	2.97E+00	2.77E+00		5.05E-08	3.88E-07	5.05E-08	3.88E-07
Di-n-butylphthalate	1.70E+00	1.51E+00	ND	2.89E-08	2.11E-07	2.89E-08	2.11E-07
Dibenz(a,h)anthracene	1.52E+00	1.49E+00		2.58E-08	2.09E-07	2.58E-08	2.09E-07
Dibenzofuran	1.36E+00	1.17E+00	ND	2.31E-08	1.64E-07	2.31E-08	1.64E-07
Diethylphthalate	1.90E-02	1.90E-02	ND	3.23E-10	2.66E-09	3.23E-10	2.66E-09
Fluoranthene	3.84E+00	3.68E+00		6.53E-08	5.15E-07	6.53E-08	5.15E-07
Fluorene	1.39E+00	1.22E+00	ND	2.36E-08	1.71E-07	2.36E-08	1.71E-07
Indeno(1,2,3-cd)pyrene	2.38E+00	2.65E+00		4.05E-08	3.71E-07	4.05E-08	3.71E-07
N-Nitrosodiphenylamine (1)	1.85E+00	1.59E+00		3.15E-08	2.23E-07	3.15E-08	2.23E-07
Naphthalene	1.56E+00	1.34E+00		2.65E-08	1.88E-07	2.65E-08	1.88E-07
Pentachlorophenol	1.08E+00	1.11E+00		1.84E-08	1.55E-07	1.84E-08	1.55E-07
Phenanthrene	2.98E+00	2.74E+00	ND	5.07E-08	3.84E-07	5.07E-08	3.84E-07
Pyrene	3.92E+00	3.74E+00		6.66E-08	5.24E-07	6.66E-08	5.24E-07
bis(2-Ethylhexyl)phthalate	1.37E+00	1.76E+00	ND	2.33E-08	2.46E-07	2.33E-08	2.46E-07
Pesticides							
4,4'-DDD	4.88E-03	5.26E-03		8.30E-11	7.36E-10	8.30E-11	7.36E-10
4,4'-DDE	1.06E-01	8.51E-02		1.80E-09	1.19E-08	1.80E-09	1.19E-08
4,4'-DDT	4.89E-02	4.11E-02		8.31E-10	5.75E-09	8.31E-10	5.75E-09
Aldrin	1.99E-03	2.23E-03		3.38E-11	3.12E-10	3.38E-11	3.12E-10
Aroclor-1254	5.67E-02	6.00E-02		9.64E-10	8.40E-09	9.64E-10	8.40E-09
Aroclor-1260	6.24E-02	6.51E-02		1.06E-09	9.11E-09	1.06E-09	9.11E-09
Dieldrin	3.93E-03	4.65E-03		6.68E-11	6.51E-10	6.68E-11	6.51E-10
Endosulfan I	9.06E-03	8.65E-03		1.54E-10	1.21E-09	1.54E-10	1.21E-09
Endosulfan II	3.89E-03	4.34E-03		6.61E-11	6.08E-10	6.61E-11	6.08E-10
Endosulfan sulfate	3.77E-03	4.23E-03		6.41E-11	5.92E-10	6.41E-11	5.92E-10
Endrin	4.81E-03	5.23E-03		8.18E-11	7.32E-10	8.18E-11	7.32E-10
Endrin aldehyde	4.41E-03	4.83E-03		7.50E-11	6.76E-10	7.50E-11	6.76E-10
Endrin ketone	4.54E-03	4.96E-03		7.72E-11	6.94E-10	7.72E-11	6.94E-10
Heptachlor	1.77E-03	1.70E-03		3.01E-11	2.38E-10	3.01E-11	2.38E-10
Heptachlor epoxide	2.17E-03	2.40E-03		3.69E-11	3.36E-10	3.69E-11	3.36E-10
Toxaphene	1.77E-01	1.70E-01		3.01E-09	2.38E-08	3.01E-09	2.38E-08
alpha-Chlordane	5.73E-03	5.57E-03		9.74E-11	7.80E-10	9.74E-11	7.80E-10
beta-BHC	2.12E-03	2.35E-03		3.60E-11	3.29E-10	3.60E-11	3.29E-10
gamma-BHC (Lindane)	1.97E-03	2.21E-03		3.35E-11	3.09E-10	3.35E-11	3.09E-10
gamma-Chlordane	5.74E-03	5.60E-03		9.76E-11	7.84E-10	9.76E-11	7.84E-10
delta-BHC	1.97E-03	2.03E-03		3.35E-11	2.84E-10	3.35E-11	2.84E-10
Nitroaromatics							
2-amino-4,6-Dinitrotoluene	9.20E-02	8.79E-02		1.56E-09	1.23E-08	1.56E-09	1.23E-08
Tetryl	8.79E-02	8.44E-02		1.49E-09	1.18E-08	1.49E-09	1.18E-08
Metals							
Antimony	4.77E+01	5.12E+01	ND	8.11E-07	7.17E-06	8.11E-07	7.17E-06
Barium	4.11E+02	3.66E+02	1.44E-05	6.99E-06	5.12E-05	1.44E-05	5.12E-05
Copper	5.85E+02	5.24E+02	3.42E-04	9.95E-06	7.34E-05	3.42E-04	3.42E-04
Lead	6.21E+03	7.14E+03	1.31E-05	1.06E-04	1.00E-03	1.06E-04	1.00E-03
Mercury	1.32E+00	1.27E+00	3.69E-04	2.24E-08	1.78E-07	3.69E-04	3.69E-04
Selenium	6.63E-01	6.57E-01	4.62E-06	1.13E-08	9.20E-08	4.62E-06	4.62E-06
Thallium	9.97E-01	1.32E+00	ND	1.69E-08	1.85E-07	1.69E-08	1.85E-07
Zinc	4.01E+02	3.52E+02	ND	6.82E-06	4.93E-05	6.82E-06	4.93E-05
Herbicides							
2,4,5-T	4.03E-03	4.03E-03		6.85E-11	5.64E-10	6.85E-11	5.64E-10
MCPP	4.33E+00	4.33E+00		7.36E-08	6.06E-07	7.36E-08	6.06E-07

ND = Compound was not detected above the detection limit shown

TABLE I-2
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
1,1,2,2-Tetrachloroethane	NA	2.0E-01	1.09E-10	8.82E-10		2.92E-13		6E-14		Inhalation of Dust in Ambient Air Not Applicable for Future Industrial Worker		
Butanone, 2-	2.9E-01	NA	1.12E-10	1.02E-09	8.38E-13		3E-12					
Acetone	NA	NA		7.00E-10								
Benzene	1.7E-03	2.9E-02	8.50E-11	7.00E-10	6.39E-13	2.28E-13	4E-10	7E-15				
Carbon Disulfide	2.0E-01	NA	3.40E-11	2.80E-10	2.55E-13		1E-12					
Chloroform	NA	8.1E-02	3.40E-11	2.80E-10		9.12E-14		7E-15				
Methylene Chloride	8.6E-01	1.7E-03	5.10E-11	4.20E-10	3.83E-13	1.37E-13	4E-13	2E-16				
Toluene	1.1E-01	NA	1.10E-10	8.79E-10	8.27E-13		7E-12					
Xylene (total)	NA	NA	7.23E-11	5.95E-10								
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	7.74E-08	5.32E-07								
2,6-Dinitrotoluene	NA	NA	2.02E-08	1.41E-08								
2-Methylnaphthalene	NA	NA	2.04E-08	5.95E-10								
2-Methylphenol	NA	NA	2.04E-09	1.68E-08								
3,3'-Dichlorobenzidine	NA	NA	1.31E-08	1.01E-07								
3-nitroaniline	NA	NA	3.18E-08	2.46E-07								
Acenaphthene	NA	NA	2.58E-08	1.86E-07								
Acenaphthylene	NA	NA	5.19E-09	4.07E-08								
Anthracene	NA	NA	2.64E-08	1.93E-07								
Benzo(a)anthracene	NA	NA	4.59E-08	3.44E-07								
Benzo(a)pyrene	NA	NA	5.78E-08	4.62E-07								
Benzo(b)fluoranthene	NA	NA	6.14E-08	4.73E-07								
Benzo(g,h,i)perylene	NA	NA	3.89E-08	3.78E-07								
Benzo(k)fluoranthene	NA	NA	3.93E-08	3.14E-07								
Butylbenzylphthalate	NA	NA		2.52E-09								
Carbazole	NA	NA	2.70E-08	1.89E-07								
Chrysene	NA	NA	5.05E-08	3.88E-07								
Di-n-butylphthalate	NA	NA	2.89E-08	2.11E-07								
Dibenz(a,h)anthracene	NA	NA	2.58E-08	2.09E-07								
Dibenzofuran	NA	NA	2.31E-08	1.64E-07								
Diethylphthalate	NA	NA	3.23E-10	2.66E-09								
Fluoranthene	NA	NA	6.53E-08	5.15E-07								
Fluorene	NA	NA	2.36E-08	1.71E-07								
Indeno(1,2,3-cd)pyrene	NA	NA	4.05E-08	3.71E-07								
N-Nitrosodiphenylamine (1)	NA	NA	3.15E-08	2.23E-07								
Naphthalene	NA	NA	2.65E-08	1.88E-07								
Pentachlorophenol	NA	NA	1.84E-08	1.55E-07								
Phenanthrene	NA	NA	5.07E-08	3.84E-07								
Pyrene	NA	NA	6.66E-08	5.24E-07								
bis(2-Ethylhexyl)phthalate	NA	NA	2.33E-08	2.46E-07								
Pesticides												
4,4'-DDD	NA	NA	8.30E-11	7.36E-10								
4,4'-DDE	NA	NA	1.80E-09	1.19E-08								
4,4'-DDT	NA	3.4E-01	8.31E-10	5.75E-09		2.23E-12		8E-13				
Aldrin	NA	1.7E+01	3.38E-11	3.12E-10		9.08E-14		2E-12				
Aroclor-1254	NA	4.0E-01	9.64E-10	8.40E-09		2.59E-12		1E-12				
Aroclor-1260	NA	4.0E-01	1.06E-09	9.11E-09		2.85E-12		1E-12				
Dieldrin	NA	1.6E+01	6.68E-11	6.51E-10		1.79E-13		3E-12				
Endosulfan I	NA	NA	1.54E-10	1.21E-09								
Endosulfan II	NA	NA	6.61E-11	6.08E-10								
Endosulfan sulfate	NA	NA	6.41E-11	5.92E-10								
Endrin	NA	NA	8.18E-11	7.32E-10								
Endrin aldehyde	NA	NA	7.50E-11	6.76E-10								
Endrin ketone	NA	NA	7.72E-11	6.94E-10								
Heptachlor	NA	4.6E+00	3.01E-11	2.38E-10		8.08E-14		4E-13				
Heptachlor epoxide	NA	9.1E+00	3.69E-11	3.36E-10		9.90E-14		9E-13				
Toxaphene	NA	1.1E+00	3.01E-09	2.38E-08		8.08E-12		9E-12				
alpha-Chlordane	NA	1.3E+00	9.74E-11	7.80E-10		2.61E-13		3E-13				
beta-BHC	NA	1.9E+00	3.60E-11	3.29E-10		9.67E-14		2E-13				
gamma-BHC (Lindane)	NA	NA	3.35E-11	3.09E-10								
gamma-Chlordane	NA	1.3E+00	9.76E-11	7.84E-10		2.62E-13		3E-13				
delta-BHC	NA	NA	3.35E-11	2.84E-10								
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	1.56E-09	1.23E-08								
Tetryl	NA	NA	1.49E-09	1.18E-08								
Metals												
Antimony	NA	NA	8.11E-07	7.17E-06								
Barium	1.4E-04	NA	1.44E-05	5.12E-05	1.08E-07		8E-04					
Copper	NA	NA	3.42E-04	3.42E-04								
Lead	NA	NA	1.06E-04	1.00E-03								
Mercury	8.6E-05	NA	3.69E-04	3.69E-04	2.77E-06		3E-02					
Selenium	NA	NA	4.62E-06	4.62E-06								
Thallium	NA	NA	1.69E-08	1.85E-07								
Zinc	NA	NA	6.82E-06	4.93E-05								
Herbicides												
2,4,5-T	NA	NA	6.85E-11	5.64E-10								
MCPP	NA	NA	7.36E-08	6.06E-07								
Total Hazard Quotient and Cancer Risk:							3E-02	2E-11				

Assumptions for Current Site Worker

CA =	EPC Surface Only
IR =	9.6 m3/day
EF =	20 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-2
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD	Carc. Slope Inhalation	Air EPC from Surface Soil	Air EPC from Total Soils	Future Construction Worker				Future Tresspasser Child			
					Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/m3)	(mg/m3)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics												
1,1,2,2-Tetrachloroethane	NA	2.0E-01	1.09E-10	8.82E-10		1.28E-12		3E-13		2.55E-14		5E-15
Butanone, 2-	2.9E-01	NA	1.12E-10	1.02E-09	1.04E-10		4E-10		3.67E-13		1E-12	
Acetone	NA	NA		7.00E-10								
Benzene	1.7E-03	2.9E-02	8.50E-11	7.00E-10	7.12E-11	1.02E-12	4E-08	3E-14	2.79E-13	2.00E-14	2E-10	6E-16
Carbon Disulfide	2.0E-01	NA	3.40E-11	2.80E-10	2.85E-11		1E-10		1.12E-13		6E-13	
Chloroform	NA	8.1E-02	3.40E-11	2.80E-10		4.07E-13		3E-14		7.98E-15		6E-16
Methylene Chloride	8.6E-01	1.7E-03	5.10E-11	4.20E-10	4.27E-11	6.11E-13	5E-11	1E-15	1.68E-13	1.20E-14	2E-13	2E-17
Toluene	1.1E-01	NA	1.10E-10	8.79E-10	8.95E-11		8E-10		3.62E-13		3E-12	
Xylene (total)	NA	NA	7.23E-11	5.95E-10								
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	7.74E-08	5.32E-07								
2,6-Dinitrotoluene	NA	NA	2.02E-08	1.41E-08								
2-Methylnaphthalene	NA	NA	2.04E-08	5.95E-10								
2-Methylphenol	NA	NA	2.04E-09	1.68E-08								
3,3'-Dichlorobenzidine	NA	NA	1.31E-08	1.01E-07								
3-nitroaniline	NA	NA	3.18E-08	2.46E-07								
Acenaphthene	NA	NA	2.58E-08	1.86E-07								
Acenaphthylene	NA	NA	5.19E-09	4.07E-08								
Anthracene	NA	NA	2.64E-08	1.93E-07								
Benzo(a)anthracene	NA	NA	4.59E-08	3.44E-07								
Benzo(a)pyrene	NA	NA	5.78E-08	4.62E-07								
Benzo(b)fluoranthene	NA	NA	6.14E-08	4.73E-07								
Benzo(g,h,i)perylene	NA	NA	3.89E-08	3.78E-07								
Benzo(k)fluoranthene	NA	NA	3.93E-08	3.14E-07								
Butylbenzylphthalate	NA	NA		2.52E-09								
Carbazole	NA	NA	2.70E-08	1.89E-07								
Chrysene	NA	NA	5.05E-08	3.88E-07								
Di-n-butylphthalate	NA	NA	2.89E-08	2.11E-07								
Dibenz(a,h)anthracene	NA	NA	2.58E-08	2.09E-07								
Dibenzofuran	NA	NA	2.31E-08	1.64E-07								
Diethylphthalate	NA	NA	3.23E-10	2.66E-09								
Fluoranthene	NA	NA	6.53E-08	5.15E-07								
Fluorene	NA	NA	2.36E-08	1.71E-07								
Indeno(1,2,3-cd)pyrene	NA	NA	4.05E-08	3.71E-07								
N-Nitrosodiphenylamine (1)	NA	NA	3.15E-08	2.23E-07								
Naphthalene	NA	NA	2.65E-08	1.88E-07								
Pentachlorophenol	NA	NA	1.84E-08	1.55E-07								
Phenanthrene	NA	NA	5.07E-08	3.84E-07								
Pyrene	NA	NA	6.66E-08	5.24E-07								
bis(2-Ethylhexyl)phthalate	NA	NA	2.33E-08	2.46E-07								
Pesticides												
4,4'-DDD	NA	NA	8.30E-11	7.36E-10								
4,4'-DDE	NA	NA	1.80E-09	1.19E-08								
4,4'-DDT	NA	3.4E-01	8.31E-10	5.75E-09		8.36E-12		3E-12		1.95E-13		7E-14
Aldrin	NA	1.7E+01	3.38E-11	3.12E-10		4.54E-13		8E-12		7.94E-15		1E-13
Aroclor-1254	NA	4.0E-01	9.64E-10	8.40E-09		1.22E-11		5E-12		2.26E-13		9E-14
Aroclor-1260	NA	4.0E-01	1.06E-09	9.11E-09		1.32E-11		5E-12		2.49E-13		1E-13
Dieldrin	NA	1.6E+01	6.68E-11	6.51E-10		9.46E-13		2E-11		1.57E-14		3E-13
Endosulfan I	NA	NA	1.54E-10	1.21E-09								
Endosulfan II	NA	NA	6.61E-11	6.08E-10								
Endosulfan sulfate	NA	NA	6.41E-11	5.92E-10								
Endrin	NA	NA	8.18E-11	7.32E-10								
Endrin aldehyde	NA	NA	7.50E-11	6.76E-10								
Endrin ketone	NA	NA	7.72E-11	6.94E-10								
Heptachlor	NA	4.6E+00	3.01E-11	2.38E-10		3.46E-13		2E-12		7.07E-15		3E-14
Heptachlor epoxide	NA	9.1E+00	3.69E-11	3.36E-10		4.88E-13		4E-12		8.66E-15		8E-14
Toxaphene	NA	1.1E+00	3.01E-09	2.38E-08		3.46E-11		4E-11		7.07E-13		8E-13
alpha-Chlordane	NA	1.3E+00	9.74E-11	7.80E-10		1.13E-12		1E-12		2.29E-14		3E-14
beta-BHC	NA	1.9E+00	3.60E-11	3.29E-10		4.78E-13		9E-13		8.46E-15		2E-14
gamma-BHC (Lindane)	NA	NA	3.35E-11	3.09E-10								
gamma-Chlordane	NA	1.3E+00	9.76E-11	7.84E-10		1.14E-12		1E-12		2.29E-14		3E-14
delta-BHC	NA	NA	3.35E-11	2.84E-10								
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	1.56E-09	1.23E-08								
Tetryl	NA	NA	1.49E-09	1.18E-08								
Metals												
Antimony	NA	NA	8.11E-07	7.17E-06								
Barium	1.4E-04	NA	1.44E-05	5.12E-05	5.21E-06		4E-02		4.73E-08		3E-04	
Copper	NA	NA	3.42E-04	3.42E-04								
Lead	NA	NA	1.06E-04	1.00E-03								
Mercury	8.6E-05	NA	3.69E-04	3.69E-04	3.75E-05		4E-01		1.21E-06		1E-02	
Selenium	NA	NA	4.62E-06	4.62E-06								
Thallium	NA	NA	1.69E-08	1.85E-07								
Zinc	NA	NA	6.82E-06	4.93E-05								
Herbicides												
2,4,5-T	NA	NA	6.85E-11	5.64E-10								
MCPP	NA	NA	7.36E-08	6.06E-07								
Total Hazard Quotient and Cancer Risk:							**5E-01**	**9E-11**			**1E-02**	**2E-12**

Assumptions for Future Construction Worker

CA =	EPC Surface and Sub-Surface
IR =	10.4 m3/day
EF =	250 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CA =	EPC Surface Only
IR =	1.2 m3/day
EF =	50 days/year
ED =	5 years
BW =	50 kg
AT (Nc) =	1825 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-2
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
1,1,2,2-Tetrachloroethane	NA	2.0E-01	1.09E-10	8.82E-10		1.70E-12		3E-13		3.04E-12		6E-13
Butanone, 2-	2.9E-01	NA	1.12E-10	1.02E-09								
Acetone	NA	NA		7.00E-10								
Benzene	1.7E-03	2.9E-02	8.50E-11	7.00E-10	1.55E-11	1.33E-12	9E-09	4E-14	6.65E-12	2.38E-12	4E-09	7E-14
Carbon Disulfide	2.0E-01	NA	3.40E-11	2.80E-10	6.21E-12		3E-11		2.66E-12		1E-11	
Chloroform	NA	8.1E-02	3.40E-11	2.80E-10		5.32E-13		4E-14		9.51E-13		8E-14
Methylene Chloride	8.6E-01	1.7E-03	5.10E-11	4.20E-10	9.32E-12	7.98E-13	1E-11	1E-15	3.99E-12	1.43E-12	5E-12	2E-15
Toluene	1.1E-01	NA	1.10E-10	8.79E-10	2.01E-11		2E-10		8.61E-12		8E-11	
Xylene (total)	NA	NA	7.23E-11	5.95E-10								
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	7.74E-08	5.32E-07								
2,6-Dinitrotoluene	NA	NA	2.02E-08	1.41E-08								
2-Methylnaphthalene	NA	NA	2.04E-08	5.95E-10								
2-Methylphenol	NA	NA	2.04E-09	1.68E-08								
3,3'-Dichlorobenzidine	NA	NA	1.31E-08	1.01E-07								
3-nitroaniline	NA	NA	3.18E-08	2.46E-07								
Acenaphthene	NA	NA	2.58E-08	1.86E-07								
Acenaphthylene	NA	NA	5.19E-09	4.07E-08								
Anthracene	NA	NA	2.64E-08	1.93E-07								
Benzo(a)anthracene	NA	NA	4.59E-08	3.44E-07								
Benzo(a)pyrene	NA	NA	5.78E-08	4.62E-07								
Benzo(b)fluoranthene	NA	NA	6.14E-08	4.73E-07								
Benzo(g,h,i)perylene	NA	NA	3.89E-08	3.78E-07								
Benzo(k)fluoranthene	NA	NA	3.93E-08	3.14E-07								
Butylbenzylphthalate	NA	NA		2.52E-09								
Carbazole	NA	NA	2.70E-08	1.89E-07								
Chrysene	NA	NA	5.05E-08	3.88E-07								
Di-n-butylphthalate	NA	NA	2.89E-08	2.11E-07								
Dibenz(a,h)anthracene	NA	NA	2.58E-08	2.09E-07								
Dibenzofuran	NA	NA	2.31E-08	1.64E-07								
Diethylphthalate	NA	NA	3.23E-10	2.66E-09								
Fluoranthene	NA	NA	6.53E-08	5.15E-07								
Fluorene	NA	NA	2.36E-08	1.71E-07								
Indeno(1,2,3-cd)pyrene	NA	NA	4.05E-08	3.71E-07								
N-Nitrosodiphenylamine (1)	NA	NA	3.15E-08	2.23E-07								
Naphthalene	NA	NA	2.65E-08	1.88E-07								
Pentachlorophenol	NA	NA	1.84E-08	1.55E-07								
Phenanthrene	NA	NA	5.07E-08	3.84E-07								
Pyrene	NA	NA	6.66E-08	5.24E-07								
bis(2-Ethylhexyl)phthalate	NA	NA	2.33E-08	2.46E-07								
Pesticides												
4,4'-DDD	NA	NA	8.30E-11	7.36E-10								
4,4'-DDE	NA	NA	1.80E-09	1.19E-08								
4,4'-DDT	NA	3.4E-01	8.31E-10	5.75E-09		1.30E-11		4E-12		2.32E-11		8E-12
Aldrin	NA	1.7E+01	3.38E-11	3.12E-10		5.30E-13		9E-12		9.46E-13		2E-11
Aroclor-1254	NA	4.0E-01	9.64E-10	8.40E-09		1.51E-11		6E-12		2.69E-11		1E-11
Aroclor-1260	NA	4.0E-01	1.06E-09	9.11E-09		1.66E-11		7E-12		2.97E-11		1E-11
Dieldrin	NA	1.6E+01	6.68E-11	6.51E-10		1.05E-12		2E-11		1.87E-12		3E-11
Endosulfan I	NA	NA	1.54E-10	1.21E-09								
Endosulfan II	NA	NA	6.61E-11	6.08E-10								
Endosulfan sulfate	NA	NA	6.41E-11	5.92E-10								
Endrin	NA	NA	8.18E-11	7.32E-10								
Endrin aldehyde	NA	NA	7.50E-11	6.76E-10								
Endrin ketone	NA	NA	7.72E-11	6.94E-10								
Heptachlor	NA	4.6E+00	3.01E-11	2.38E-10		4.71E-13		2E-12		8.41E-13		4E-12
Heptachlor epoxide	NA	9.1E+00	3.69E-11	3.36E-10		5.78E-13		5E-12		1.03E-12		9E-12
Toxaphene	NA	1.1E+00	3.01E-09	2.38E-08		4.71E-11		5E-11		8.41E-11		9E-11
alpha-Chlordane	NA	1.3E+00	9.74E-11	7.80E-10		1.53E-12		2E-12		2.72E-12		4E-12
beta-BHC	NA	1.9E+00	3.60E-11	3.29E-10		5.64E-13		1E-12		1.01E-12		2E-12
gamma-BHC (Lindane)	NA	NA	3.35E-11	3.09E-10								
gamma-Chlordane	NA	1.3E+00	9.76E-11	7.84E-10		1.53E-12		2E-12		2.73E-12		4E-12
delta-BHC	NA	NA	3.35E-11	2.84E-10								
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	1.56E-09	1.23E-08								
Tetryl	NA	NA	1.49E-09	1.18E-08								
Metals												
Antimony	NA	NA	8.11E-07	7.17E-06								
Barium	1.4E-04	NA	1.44E-05	5.12E-05	2.63E-06		2E-02		1.13E-06		8E-03	
Copper	NA	NA	3.42E-04	3.42E-04								
Lead	NA	NA	1.06E-04	1.00E-03								
Mercury	8.6E-05	NA	3.69E-04	3.69E-04	6.74E-05		8E-01		2.89E-05		3E-01	
Selenium	NA	NA	4.62E-06	4.62E-06								
Thallium	NA	NA	1.69E-08	1.85E-07								
Zinc	NA	NA	6.82E-06	4.93E-05								
Herbicides												
2,4,5-T	NA	NA	6.85E-11	5.64E-10								
MCPP	NA	NA	7.36E-08	6.06E-07								
Total Hazard Quotient and Cancer Risk:							**8E-01**	**1E-10**			**3E-01**	**2E-10**

Assumptions for Future Day Care Center Child

CA =	EPC Surface Only
IR =	4 m3/day
EF =	250 days/year
ED =	6 years
BW =	15 kg
AT (Nc) =	2190 days
AT (Car) =	25550 days

Assumptions for Future Day Care Center Adult

CA =	EPC Surface Only
IR =	8 m3/day
EF =	250 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-3
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
1,1,2,2-Tetrachloroethane	NA	2.0E-01	1.09E-10	8.82E-10		4.08E-14		8E-15		Inhalation of Dust In Ambient Air Not Applicable for Future Industrial Worker		
Butanone, 2-	2.9E-01	NA	1.12E-10	1.02E-09	4.19E-13		1E-12					
Acetone	NA	NA		7.00E-10								
Benzene	1.7E-03	2.9E-02	8.50E-11	7.00E-10	3.19E-13	3.19E-14	2E-10	9E-16				
Carbon Disulfide	2.0E-01	NA	3.40E-11	2.80E-10	1.28E-13		6E-13					
Chloroform	NA	8.1E-02	3.40E-11	2.80E-10		1.28E-14		1E-15				
Methylene Chloride	8.6E-01	1.7E-03	5.10E-11	4.20E-10	1.92E-13	1.92E-14	2E-13	3E-17				
Toluene	1.1E-01	NA	1.10E-10	8.79E-10	4.13E-13		4E-12					
Xylene (total)	NA	NA	7.23E-11	5.95E-10								
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	7.74E-08	5.32E-07								
2,6-Dinitrotoluene	NA	NA	2.02E-08	1.41E-08								
2-Methylnaphthalene	NA	NA	2.04E-08	5.95E-10								
2-Methylphenol	NA	NA	2.04E-09	1.68E-08								
3,3'-Dichlorobenzidine	NA	NA	1.31E-08	1.01E-07								
3-nitroaniline	NA	NA	3.18E-08	2.46E-07								
Acenaphthene	NA	NA	2.58E-08	1.86E-07								
Acenaphthylene	NA	NA	5.19E-09	4.07E-08								
Anthracene	NA	NA	2.64E-08	1.93E-07								
Benzo(a)anthracene	NA	NA	4.59E-08	3.44E-07								
Benzo(a)pyrene	NA	NA	5.78E-08	4.62E-07								
Benzo(b)fluoranthene	NA	NA	6.14E-08	4.73E-07								
Benzo(g,h,i)perylene	NA	NA	3.89E-08	3.78E-07								
Benzo(k)fluoranthene	NA	NA	3.93E-08	3.14E-07								
Butylbenzylphthalate	NA	NA		2.52E-09								
Carbazole	NA	NA	2.70E-08	1.89E-07								
Chrysene	NA	NA	5.05E-08	3.88E-07								
Di-n-butylphthalate	NA	NA	2.89E-08	2.11E-07								
Dibenz(a,h)anthracene	NA	NA	2.58E-08	2.09E-07								
Dibenzofuran	NA	NA	2.31E-08	1.64E-07								
Diethylphthalate	NA	NA	3.23E-10	2.66E-09								
Fluoranthene	NA	NA	6.53E-08	5.15E-07								
Fluorene	NA	NA	2.36E-08	1.71E-07								
Indeno(1,2,3-cd)pyrene	NA	NA	4.05E-08	3.71E-07								
N-Nitrosodiphenylamine (1)	NA	NA	3.15E-08	2.23E-07								
Naphthalene	NA	NA	2.65E-08	1.88E-07								
Pentachlorophenol	NA	NA	1.84E-08	1.55E-07								
Phenanthrene	NA	NA	5.07E-08	3.84E-07								
Pyrene	NA	NA	6.66E-08	5.24E-07								
bis(2-Ethylhexyl)phthalate	NA	NA	2.33E-08	2.46E-07								
Pesticides												
4,4'-DDD	NA	NA	8.30E-11	7.36E-10								
4,4'-DDE	NA	NA	1.80E-09	1.19E-08								
4,4'-DDT	NA	3.4E-01	8.31E-10	5.75E-09		3.12E-13		1E-13				
Aldrin	NA	1.7E+01	3.38E-11	3.12E-10		1.27E-14		2E-13				
Aroclor-1254	NA	4.0E-01	9.64E-10	8.40E-09		3.62E-13		1E-13				
Aroclor-1260	NA	4.0E-01	1.06E-09	9.11E-09		3.99E-13		2E-13				
Dieldrin	NA	1.6E+01	6.68E-11	6.51E-10		2.51E-14		4E-13				
Endosulfan I	NA	NA	1.54E-10	1.21E-09								
Endosulfan II	NA	NA	6.61E-11	6.08E-10								
Endosulfan sulfate	NA	NA	6.41E-11	5.92E-10								
Endrin	NA	NA	8.18E-11	7.32E-10								
Endrin aldehyde	NA	NA	7.50E-11	6.76E-10								
Endrin ketone	NA	NA	7.72E-11	6.94E-10								
Heptachlor	NA	4.6E+00	3.01E-11	2.38E-10		1.13E-14		5E-14				
Heptachlor epoxide	NA	9.1E+00	3.69E-11	3.36E-10		1.39E-14		1E-13				
Toxaphene	NA	1.1E+00	3.01E-09	2.38E-08		1.13E-12		1E-12				
alpha-Chlordane	NA	1.3E+00	9.74E-11	7.80E-10		3.66E-14		5E-14				
beta-BHC	NA	1.9E+00	3.60E-11	3.29E-10		1.35E-14		3E-14				
gamma-BHC (Lindane)	NA	NA	3.35E-11	3.09E-10								
gamma-Chlordane	NA	1.3E+00	9.76E-11	7.84E-10		3.67E-14		5E-14				
delta-BHC	NA	NA	3.35E-11	2.84E-10								
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	1.56E-09	1.23E-08								
Tetryl	NA	NA	1.49E-09	1.18E-08								
Metals												
Antimony	NA	NA	8.11E-07	7.17E-06								
Barium	1.4E-04	NA	1.44E-05	5.12E-05	5.41E-08		4E-04					
Copper	NA	NA	3.42E-04	3.42E-04								
Lead	NA	NA	1.06E-04	1.00E-03								
Mercury	8.6E-05	NA	3.69E-04	3.69E-04	1.39E-06		2E-02					
Selenium	NA	NA	4.62E-06	4.62E-06								
Thallium	NA	NA	1.69E-08	1.85E-07								
Zinc	NA	NA	6.82E-06	4.93E-05								
Herbicides												
2,4,5-T	NA	NA	6.85E-11	5.64E-10								
MCPP	NA	NA	7.36E-08	6.06E-07								
Total Hazard Quotient and Cancer Risk:							2E-02	3E-12				

Assumptions for Current Site Worker

CA =	EPC Surface Only
IR =	9.6 m3/day
EF =	10 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-3
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Intake (mg/kg-day) (Nc)	Future Tresspasser Child Intake (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics												
1,1,2,2-Tetrachloroethane	NA	2.0E-01	1.09E-10	8.82E-10		1.12E-12		2E-13		2.55E-15		5E-16
Butanone, 2-	2.9E-01	NA	1.12E-10	1.02E-09	9.09E-11		3E-10		1.83E-13		6E-13	
Acetone	NA	NA		7.00E-10								
Benzene	1.7E-03	2.9E-02	8.50E-11	7.00E-10	6.24E-11	8.91E-13	4E-08	3E-14	1.40E-13	2.00E-15	8E-11	6E-17
Carbon Disulfide	2.0E-01	NA	3.40E-11	2.80E-10	2.50E-11		1E-10		5.59E-14		3E-13	
Chloroform	NA	8.1E-02	3.40E-11	2.80E-10		3.57E-13		3E-14		7.98E-16		6E-17
Methylene Chloride	8.6E-01	1.7E-03	5.10E-11	4.20E-10	3.74E-11	5.35E-13	4E-11	9E-16	8.38E-14	1.20E-15	1E-13	2E-18
Toluene	1.1E-01	NA	1.10E-10	8.79E-10	7.84E-11		7E-10		1.81E-13		2E-12	
Xylene (total)	NA	NA	7.23E-11	5.95E-10								
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	7.74E-08	5.32E-07								
2,6-Dinitrotoluene	NA	NA	2.02E-08	1.41E-08								
2-Methylnaphthalene	NA	NA	2.04E-08	5.95E-10								
2-Methylphenol	NA	NA	2.04E-09	1.68E-08								
3,3'-Dichlorobenzidine	NA	NA	1.31E-08	1.01E-07								
3-nitroaniline	NA	NA	3.18E-08	2.46E-07								
Acenaphthene	NA	NA	2.58E-08	1.86E-07								
Acenaphthylene	NA	NA	5.19E-09	4.07E-08								
Anthracene	NA	NA	2.64E-08	1.93E-07								
Benzo(a)anthracene	NA	NA	4.59E-08	3.44E-07								
Benzo(a)pyrene	NA	NA	5.78E-08	4.62E-07								
Benzo(b)fluoranthene	NA	NA	6.14E-08	4.73E-07								
Benzo(g,h,i)perylene	NA	NA	3.89E-08	3.78E-07								
Benzo(k)fluoranthene	NA	NA	3.93E-08	3.14E-07								
Butylbenzylphthalate	NA	NA		2.52E-09								
Carbazole	NA	NA	2.70E-08	1.89E-07								
Chrysene	NA	NA	5.05E-08	3.88E-07								
Di-n-butylphthalate	NA	NA	2.89E-08	2.11E-07								
Dibenz(a,h)anthracene	NA	NA	2.58E-08	2.09E-07								
Dibenzofuran	NA	NA	2.31E-08	1.64E-07								
Diethylphthalate	NA	NA	3.23E-10	2.66E-09								
Fluoranthene	NA	NA	6.53E-08	5.15E-07								
Fluorene	NA	NA	2.36E-08	1.71E-07								
Indeno(1,2,3-cd)pyrene	NA	NA	4.05E-08	3.71E-07								
N-Nitrosodiphenylamine (1)	NA	NA	3.15E-08	2.23E-07								
Naphthalene	NA	NA	2.65E-08	1.88E-07								
Pentachlorophenol	NA	NA	1.84E-08	1.55E-07								
Phenanthrene	NA	NA	5.07E-08	3.84E-07								
Pyrene	NA	NA	6.66E-08	5.24E-07								
bis(2-Ethylhexyl)phthalate	NA	NA	2.33E-08	2.46E-07								
Pesticides												
4,4'-DDD	NA	NA	8.30E-11	7.36E-10								
4,4'-DDE	NA	NA	1.80E-09	1.19E-08								
4,4'-DDT	NA	3.4E-01	8.31E-10	5.75E-09		7.33E-12		2E-12		1.95E-14		7E-15
Aldrin	NA	1.7E+01	3.38E-11	3.12E-10		3.98E-13		7E-12		7.94E-16		1E-14
Aroclor-1254	NA	4.0E-01	9.64E-10	8.40E-09		1.07E-11		4E-12		2.26E-14		9E-15
Aroclor-1260	NA	4.0E-01	1.06E-09	9.11E-09		1.16E-11		5E-12		2.49E-14		1E-14
Dieldrin	NA	1.6E+01	6.68E-11	6.51E-10		8.29E-13		1E-11		1.57E-15		3E-14
Endosulfan I	NA	NA	1.54E-10	1.21E-09								
Endosulfan II	NA	NA	6.61E-11	6.08E-10								
Endosulfan sulfate	NA	NA	6.41E-11	5.92E-10								
Endrin	NA	NA	8.18E-11	7.32E-10								
Endrin aldehyde	NA	NA	7.50E-11	6.76E-10								
Endrin ketone	NA	NA	7.72E-11	6.94E-10								
Heptachlor	NA	4.6E+00	3.01E-11	2.38E-10		3.03E-13		1E-12		7.07E-16		3E-15
Heptachlor epoxide	NA	9.1E+00	3.69E-11	3.36E-10		4.28E-13		4E-12		8.66E-16		8E-15
Toxaphene	NA	1.1E+00	3.01E-09	2.38E-08		3.03E-11		3E-11		7.07E-14		8E-14
alpha-Chlordane	NA	1.3E+00	9.74E-11	7.80E-10		9.93E-13		1E-12		2.29E-15		3E-15
beta-BHC	NA	1.9E+00	3.60E-11	3.29E-10		4.19E-13		8E-13		8.46E-16		2E-15
gamma-BHC (Lindane)	NA	NA	3.35E-11	3.09E-10								
gamma-Chlordane	NA	1.3E+00	9.76E-11	7.84E-10		9.98E-13		1E-12		2.29E-15		3E-15
delta-BHC	NA	NA	3.35E-11	2.84E-10								
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	1.56E-09	1.23E-08								
Tetryl	NA	NA	1.49E-09	1.18E-08								
Metals												
Antimony	NA	NA	8.11E-07	7.17E-06								
Barium	1.4E-04	NA	1.44E-05	5.12E-05	4.57E-06		3E-02		2.37E-08		2E-04	
Copper	NA	NA	3.42E-04	3.42E-04								
Lead	NA	NA	1.06E-04	1.00E-03								
Mercury	8.6E-05	NA	3.69E-04	3.69E-04	3.29E-05		4E-01		6.07E-07		7E-03	
Selenium	NA	NA	4.62E-06	4.62E-06								
Thallium	NA	NA	1.69E-08	1.85E-07								
Zinc	NA	NA	6.82E-06	4.93E-05								
Herbicides												
2,4,5-T	NA	NA	6.85E-11	5.64E-10								
MCPP	NA	NA	7.36E-08	6.06E-07								
Total Hazard Quotient and Cancer Risk:							**4E-01**	**7E-11**			**7E-03**	**2E-13**

Assumptions for Future Construction Worker

CA =	EPC Surface and Sub-Surface
IR =	10.4 m3/day
EF =	219 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CA =	EPC Surface Only
IR =	1.2 m3/day
EF =	25 days/year
ED =	1 years
BW =	50 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-3
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
1,1,2,2-Tetrachloroethane	NA	2.0E-01	1.09E-10	8.82E-10		7.4E-13		2E-13		7.4E-13		2E-13
Butanone, 2-	2.9E-01	NA	1.12E-10	1.02E-09	1.8E-11		6E-11		7.6E-12		3E-11	
Acetone	NA	NA		7.00E-10								
Benzene	1.7E-03	2.9E-02	8.50E-11	7.00E-10	1.4E-11	5.8E-13	8E-09	2E-14	5.8E-12	5.8E-13	3E-09	2E-14
Carbon Disulfide	2.0E-01	NA	3.40E-11	2.80E-10	5.4E-12		3E-11		2.3E-12		1E-11	
Chloroform	NA	8.1E-02	3.40E-11	2.80E-10		2.3E-13		2E-14		2.3E-13		2E-14
Methylene Chloride	8.6E-01	1.7E-03	5.10E-11	4.20E-10	8.2E-12	3.5E-13	1E-11	6E-16	3.5E-12	3.5E-13	4E-12	6E-16
Toluene	1.1E-01	NA	1.10E-10	8.79E-10	1.8E-11		2E-10		7.5E-12		7E-11	
Xylene (total)	NA	NA	7.23E-11	5.95E-10								
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	7.74E-08	5.32E-07								
2,6-Dinitrotoluene	NA	NA	2.02E-08	1.41E-08								
2-Methylnaphthalene	NA	NA	2.04E-08	5.95E-10								
2-Methylphenol	NA	NA	2.04E-09	1.68E-08								
3,3'-Dichlorobenzidine	NA	NA	1.31E-08	1.01E-07								
3-nitroaniline	NA	NA	3.18E-08	2.46E-07								
Acenaphthene	NA	NA	2.58E-08	1.86E-07								
Acenaphthylene	NA	NA	5.19E-09	4.07E-08								
Anthracene	NA	NA	2.64E-08	1.93E-07								
Benzo(a)anthracene	NA	NA	4.59E-08	3.44E-07								
Benzo(a)pyrene	NA	NA	5.78E-08	4.62E-07								
Benzo(b)fluoranthene	NA	NA	6.14E-08	4.73E-07								
Benzo(g,h,i)perylene	NA	NA	3.89E-08	3.78E-07								
Benzo(k)fluoranthene	NA	NA	3.93E-08	3.14E-07								
Butylbenzylphthalate	NA	NA		2.52E-09								
Carbazole	NA	NA	2.70E-08	1.89E-07								
Chrysene	NA	NA	5.05E-08	3.88E-07								
Di-n-butylphthalate	NA	NA	2.89E-08	2.11E-07								
Dibenz(a,h)anthracene	NA	NA	2.58E-08	2.09E-07								
Dibenzofuran	NA	NA	2.31E-08	1.64E-07								
Diethylphthalate	NA	NA	3.23E-10	2.66E-09								
Fluoranthene	NA	NA	6.53E-08	5.15E-07								
Fluorene	NA	NA	2.36E-08	1.71E-07								
Indeno(1,2,3-cd)pyrene	NA	NA	4.05E-08	3.71E-07								
N-Nitrosodiphenylamine (1)	NA	NA	3.15E-08	2.23E-07								
Naphthalene	NA	NA	2.65E-08	1.88E-07								
Pentachlorophenol	NA	NA	1.84E-08	1.55E-07								
Phenanthrene	NA	NA	5.07E-08	3.84E-07								
Pyrene	NA	NA	6.66E-08	5.24E-07								
bis(2-Ethylhexyl)phthalate	NA	NA	2.33E-08	2.46E-07								
Pesticides												
4,4'-DDD	NA	NA	8.30E-11	7.36E-10								
4,4'-DDE	NA	NA	1.80E-09	1.19E-08								
4,4'-DDT	NA	3.4E-01	8.31E-10	5.75E-09		5.7E-12		2E-12		5.7E-12		2E-12
Aldrin	NA	1.7E+01	3.38E-11	3.12E-10		2.3E-13		4E-12		2.3E-13		4E-12
Aroclor-1254	NA	4.0E-01	9.64E-10	8.40E-09		6.6E-12		3E-12		6.6E-12		3E-12
Aroclor-1260	NA	4.0E-01	1.06E-09	9.11E-09		7.3E-12		3E-12		7.3E-12		3E-12
Dieldrin	NA	1.6E+01	6.68E-11	6.51E-10		4.6E-13		7E-12		4.6E-13		7E-12
Endosulfan I	NA	NA	1.54E-10	1.21E-09								
Endosulfan II	NA	NA	6.61E-11	6.08E-10								
Endosulfan sulfate	NA	NA	6.41E-11	5.92E-10								
Endrin	NA	NA	8.18E-11	7.32E-10								
Endrin aldehyde	NA	NA	7.50E-11	6.76E-10								
Endrin ketone	NA	NA	7.72E-11	6.94E-10								
Heptachlor	NA	4.6E+00	3.01E-11	2.38E-10		2.1E-13		9E-13		2.1E-13		9E-13
Heptachlor epoxide	NA	9.1E+00	3.69E-11	3.36E-10		2.5E-13		2E-12		2.5E-13		2E-12
Toxaphene	NA	1.1E+00	3.01E-09	2.38E-08		2.1E-11		2E-11		2.1E-11		2E-11
alpha-Chlordane	NA	1.3E+00	9.74E-11	7.80E-10		6.7E-13		9E-13		6.7E-13		9E-13
beta-BHC	NA	1.9E+00	3.60E-11	3.29E-10		2.5E-13		5E-13		2.5E-13		5E-13
gamma-BHC (Lindane)	NA	NA	3.35E-11	3.09E-10								
gamma-Chlordane	NA	1.3E+00	9.76E-11	7.84E-10		6.7E-13		9E-13		6.7E-13		9E-13
delta-BHC	NA	NA	3.35E-11	2.84E-10								
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	1.56E-09	1.23E-08								
Tetryl	NA	NA	1.49E-09	1.18E-08								
Metals												
Antimony	NA	NA	8.11E-07	7.17E-06								
Barium	1.4E-04	NA	1.44E-05	5.12E-05	2.3E-06		2E-02		9.9E-07		7E-03	
Copper	NA	NA	3.42E-04	3.42E-04								
Lead	NA	NA	1.06E-04	1.00E-03								
Mercury	8.6E-05	NA	3.69E-04	3.69E-04	5.9E-05		7E-01		2.5E-05		3E-01	
Selenium	NA	NA	4.62E-06	4.62E-06								
Thallium	NA	NA	1.69E-08	1.85E-07								
Zinc	NA	NA	6.82E-06	4.93E-05								
Herbicides												
2,4,5-T	NA	NA	6.85E-11	5.64E-10								
MCPP	NA	NA	7.36E-08	6.06E-07								
Total Hazard Quotient and Cancer Risk:							**7E-01**	**5E-11**			**3E-01**	**5E-11**

Assumptions for Future Day Care Center Child

CA =	EPC Surface Only
IR =	4 m3/day
EF =	219 days/year
ED =	3 years
BW =	15 kg
AT (Nc) =	1095 days
AT (Car) =	25550 days

Assumptions for Future Day Care Center Adult

CA =	EPC Surface Only
IR =	8 m3/day
EF =	219 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-4
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN INDOOR AIR
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	EPC Air (mg/m3)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk
Semivolatile Organics					Inhalation of Indoor Air Dust Not Applicable for Current Site Worker								Inhalation of Indoor Air Dust Not Applicable for Future Construction Worker		
Phenol	NA	NA	6.76E-05												
Benzoic Acid	NA	NA	1.41E-04												
Napthalene	NA	NA	5.84E-05												
2-Methylnapthalene	NA	NA	7.06E-05												
Acenaphthene	NA	NA	3.07E-05												
Dibenzofuran	NA	NA	3.07E-05												
Diethylphthalate	NA	NA	6.14E-05												
Fluorene	NA	NA	2.76E-05												
Phenanthrene	NA	NA	4.91E-05												
Anthracene	NA	NA	4.61E-05												
Di-N-Butylphthalate	NA	NA	2.76E-05												
Butylbenzylphthalate	NA	NA	2.76E-05												
Bis(2-ethylhexyl)pthalate	NA	NA	8.71E-05												
Metals															
Aluminum	1.4E-03	NA	1.51E-04					1.42E-05		1E-02					
Barium	1.4E-04	NA	1.95E-05					1.83E-06		1E-02					
Copper	NA	NA	9.83E-04												
Lead	NA	NA	4.88E-05												
Manganese	1.4E-05	NA	5.50E-06					5.17E-07		4E-02					
Mercury	8.6E-05	NA	2.35E-04					2.20E-05		3E-01					
Selenium	NA	NA	5.30E-06												
Total Hazard Quotient and Cancer Risk:										**3E-01**	**0E+00**				

Assumptions for Future Industrial Worker

IR =	9.6	m3/day
EF =	250	days/year
ED =	25	years
BW =	70	kg
AT (Nc) =	9125	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-4
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN INDOOR AIR
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	EPC Air (mg/m3)	Future Tresspasser Child Intake (mg/kg-day) (Nc)	Future Tresspasser Child Intake (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Semivolatile Organics					Inhalation of Indoor Air Dust Not Applicable for Future Tresspasser Child				Inhalation of Indoor Air Dust Not Applicable for Future Day Care Center Child				Inhalation of Indoor Air Dust Not Applicable for Future Day Care Center Worker		
Phenol	NA	NA	6.76E-05												
Benzoic Acid	NA	NA	1.41E-04												
Napthalene	NA	NA	5.84E-05												
2-Methylnapthalene	NA	NA	7.06E-05												
Acenaphthene	NA	NA	3.07E-05												
Dibenzofuran	NA	NA	3.07E-05												
Diethylphthalate	NA	NA	6.14E-05												
Fluorene	NA	NA	2.76E-05												
Phenanthrene	NA	NA	4.91E-05												
Anthracene	NA	NA	4.61E-05												
Di-N-Butylphthalate	NA	NA	2.76E-05												
Butylbenzylphthalate	NA	NA	2.76E-05												
Bis(2-ethylhexyl)pthalate	NA	NA	8.71E-05												
Metals															
Aluminum	1.4E-03	NA	1.51E-04												
Barium	1.4E-04	NA	1.95E-05												
Copper	NA	NA	9.83E-04												
Lead	NA	NA	4.88E-05												
Manganese	1.4E-05	NA	5.50E-06												
Mercury	8.6E-05	NA	2.35E-04												
Selenium	NA	NA	5.30E-06												
Total Hazard Quotient and Cancer Risk:															

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-5
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN INDOOR AIR
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD	Carc. Slope Inhalation	EPC Air	Current Site Worker				Future Industrial Worker				Future Construction Worker			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/m3)	(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Semivolatile Organics															
Phenol	NA	NA	6.76E-05		Inhalation of Indoor Air Dust Not Applicable for Current Site Worker								Inhalation of Indoor Air Dust Not Applicable for Future Construction Worker		
Benzoic Acid	NA	NA	1.41E-04												
Napthalene	NA	NA	5.84E-05												
2-Methylnapthalene	NA	NA	7.06E-05												
Acenaphthene	NA	NA	3.07E-05												
Dibenzofuran	NA	NA	3.07E-05												
Diethylphthalate	NA	NA	6.14E-05												
Fluorene	NA	NA	2.76E-05												
Phenanthrene	NA	NA	4.91E-05												
Anthracene	NA	NA	4.61E-05												
Di-N-Butylphthalate	NA	NA	2.76E-05												
Butylbenzylphthalate	NA	NA	2.76E-05												
Bis(2-ethylhexyl)pthalate	NA	NA	8.71E-05												
Metals															
Aluminum	1.4E-03	NA	1.51E-04												
Barium	1.4E-04	NA	1.95E-05					1.24E-05		9E-03					
Copper	NA	NA	9.83E-04					1.60E-06		1E-02					
Lead	NA	NA	4.88E-05												
Manganese	1.4E-05	NA	5.50E-06												
Mercury	8.6E-05	NA	2.35E-04					4.53E-07		3E-02					
Selenium	NA	NA	5.30E-06					1.93E-05		2E-01					
Total Hazard Quotient and Cancer Risk:										**3E-01**	**0E+00**				

Assumptions for Future Industrial Worker

IR =	9.6 m3/day
EF =	219 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-5
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN INDOOR AIR
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD	Carc. Slope Inhalation	EPC Air	Future Tresspasser Child				Future Day Care Center Child				Future Day Care Center Adult			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/m3)	(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Semivolatile Organics					Inhalation of Indoor Air Dust Not Applicable for Future Tresspasser Child				Inhalation of Indoor Air Dust Not Applicable for Future Day Care Center Child				Inhalation of Indoor Air Dust Not Applicable for Future Day Care Center Worker		
Phenol	NA	NA	6.76E-05												
Benzoic Acid	NA	NA	1.41E-04												
Napthalene	NA	NA	5.84E-05												
2-Methylnapthalene	NA	NA	7.06E-05												
Acenaphthene	NA	NA	3.07E-05												
Dibenzofuran	NA	NA	3.07E-05												
Diethylphthalate	NA	NA	6.14E-05												
Fluorene	NA	NA	2.76E-05												
Phenanthrene	NA	NA	4.91E-05												
Anthracene	NA	NA	4.61E-05												
Di-N-Butylphthalate	NA	NA	2.76E-05												
Butylbenzylphthalate	NA	NA	2.76E-05												
Bis(2-ethylhexyl)pthalate	NA	NA	8.71E-05												
Metals															
Aluminum	1.4E-03	NA	1.51E-04												
Barium	1.4E-04	NA	1.95E-05												
Copper	NA	NA	9.83E-04												
Lead	NA	NA	4.88E-05												
Manganese	1.4E-05	NA	5.50E-06												
Mercury	8.6E-05	NA	2.35E-04												
Selenium	NA	NA	5.30E-06												
Total Hazard Quotient and Cancer Risk:															

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-6
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Soil, Calculated from Soil EP
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	6.39E-03	6.30E-03		1.79E-10		4E-11		Ingestion of Onsite Soils Not Applicable for Future Industrial Worker		
Acetone	1.0E-01	NA	6.56E-03	7.28E-03	5.14E-10		5E-09					
Butanone, 2-	6.0E-01	NA		5.00E-03								
Benzene	3.0E-03	2.9E-02	5.00E-03	5.00E-03	3.91E-10	1.40E-10	1E-07	4E-12				
Carbon Disulfide	1.0E-01	NA	2.00E-03	2.00E-03	1.57E-10		2E-09					
Chloroform	1.0E-02	6.1E-03	2.00E-03	2.00E-03	1.57E-10	5.59E-11	2E-08	3E-13				
Methylene Chloride	6.0E-02	7.5E-03	3.00E-03	3.00E-03	2.35E-10	8.39E-11	4E-09	6E-13				
Toluene	2.0E-01	NA	6.47E-03	6.28E-03	5.06E-10		3E-09					
Xylene (total)	2.0E+00	NA	4.25E-03	4.25E-03	3.33E-10		2E-10					
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	4.55E+00	3.80E+00	3.56E-07	1.27E-07	2E-04	9E-08				
2,6-Dinitrotoluene	1.0E-03	6.8E-01	1.19E+00	1.01E-01	9.32E-08	3.33E-08	9E-05	2E-08				
2-methylnaphthalene	4.0E-02	NA	1.20E+00	4.25E-03	9.39E-08		2E-06					
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	9.39E-09		2E-07					
3,3'-Dichlorobenzidine	NA	4.5E-01	7.68E-01	7.24E-01		2.15E-08		1E-08				
3-nitroaniline	NA	NA	1.87E+00	1.76E+00								
Acenaphthene	6.0E-02	NA	1.52E+00	1.33E+00	1.19E-07		2E-06					
Acenaphthylene	NA	NA	3.05E-01	2.91E-01								
Anthracene	3.0E-01	NA	1.55E+00	1.38E+00	1.21E-07		4E-07					
Benzo(a)anthracene	NA	7.3E-01	2.70E+00	2.46E+00		7.55E-08		6E-08				
Benzo(a)pyrene	NA	7.3E+00	3.40E+00	3.30E+00		9.51E-08		7E-07				
Benzo(b)fluoranthene	NA	7.3E-01	3.61E+00	3.38E+00		1.01E-07		7E-08				
Benzo(g,h,i)perylene	NA	NA	2.29E+00	2.70E+00								
Benzo(k)fluoranthene	NA	7.3E-02	2.31E+00	2.24E+00		6.46E-08		5E-09				
Butylbenzylphthalate	2.0E-01	NA		1.80E-02								
Carbazole	NA	2.0E-02	1.59E+00	1.35E+00		4.45E-08		9E-10				
Chrysene	NA	7.3E-03	2.97E+00	2.77E+00		8.30E-08		6E-10				
Di-n-butylphthalate	1.0E-01	NA	1.70E+00	1.51E+00	1.33E-07		1E-06					
Dibenz(a,h)anthracene	NA	7.3E+00	1.52E+00	1.49E+00		4.25E-08		3E-07				
Dibenzofuran	NA	NA	1.36E+00	1.17E+00								
Diethylphthalate	8.0E-01	NA	1.90E-02	1.90E-02	1.49E-09		2E-09					
Fluoranthene	4.0E-02	NA	3.84E+00	3.68E+00	3.01E-07		8E-06					
Fluorene	4.0E-02	NA	1.39E+00	1.22E+00	1.09E-07		3E-06					
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.38E+00	2.65E+00		6.65E-08		5E-08				
N-Nitrosodiphenylamine (1)	NA	4.9E-03	1.85E+00	1.59E+00		5.17E-08		3E-10				
Naphthalene	4.0E-02	NA	1.56E+00	1.34E+00	1.22E-07		3E-06					
Pentachlorophenol	3.0E-02	1.2E-01	1.08E+00	1.11E+00	8.45E-08	3.02E-08	3E-06	4E-09				
Phenanthrene	NA	NA	2.98E+00	2.74E+00								
Pyrene	3.0E-02	NA	3.92E+00	3.74E+00	3.07E-07		1E-05					
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	1.37E+00	1.76E+00	1.07E-07	3.83E-08	5E-06	5E-10				
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	4.88E-03	5.26E-03		1.36E-10		3E-11				
4,4'-DDE	NA	3.4E-01	1.06E-01	8.51E-02		2.96E-09		1E-09				
4,4'-DDT	5.0E-04	3.4E-01	4.89E-02	4.11E-02	3.83E-09	1.37E-09	8E-06	5E-10				
Aldrin	3.0E-05	1.7E+01	1.99E-03	2.23E-03	1.56E-10	5.56E-11	5E-06	9E-10				
Aroclor-1254	2.0E-05	2.0E+00	5.67E-02	6.00E-02	4.44E-09	1.59E-09	2E-04	3E-09				
Aroclor-1260	2.0E-05	2.0E+00	6.24E-02	6.51E-02	4.88E-09	1.74E-09	2E-04	3E-09				
Dieldrin	5.0E-05	1.6E+01	3.93E-03	4.65E-03	3.08E-10	1.10E-10	6E-06	2E-09				
Endosulfan I	6.0E-03	NA	9.06E-03	8.65E-03	7.09E-10		1E-07					
Endosulfan II	6.0E-03	NA	3.89E-03	4.34E-03	3.05E-10		5E-08					
Endosulfan sulfate	6.0E-03	NA	3.77E-03	4.23E-03	2.95E-10		5E-08					
Endrin	3.0E-04	NA	4.81E-03	5.23E-03	3.77E-10		1E-06					
Endrin aldehyde	NA	NA	4.41E-03	4.83E-03								
Endrin ketone	NA	NA	4.54E-03	4.96E-03								
Heptachlor	5.0E-04	4.5E+00	1.77E-03	1.70E-03	1.39E-10	4.95E-11	3E-07	2E-10				
Heptachlor epoxide	1.3E-05	9.1E+00	2.17E-03	2.40E-03	1.70E-10	6.07E-11	1E-05	6E-10				
Toxaphene	NA	1.1E+00	1.77E-01	1.70E-01		4.95E-09		5E-09				
alpha-Chlordane	6.0E-05	1.3E+00	5.73E-03	5.57E-03	4.49E-10	1.60E-10	7E-06	2E-10				
beta-BHC	NA	1.8E+00	2.12E-03	2.35E-03		5.93E-11		1E-10				
gamma-BHC (Lindane)	3.0E-04	1.3E+00	1.97E-03	2.21E-03	1.54E-10	5.51E-11	5E-07	7E-11				
gamma-Chlordane	6.0E-05	1.3E+00	5.74E-03	5.60E-03	4.49E-10	1.60E-10	7E-06	2E-10				
delta-BHC	NA	NA	1.97E-03	2.03E-03								
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	9.20E-02	8.79E-02								
Tetryl	1.0E-02	NA	8.79E-02	8.44E-02	6.88E-09		7E-07					
Metals												
Antimony	4.0E-04	NA	4.77E+01	5.12E+01	3.73E-06		9E-03					
Barium	7.0E-02	NA	4.11E+02	3.66E+02	3.22E-05		5E-04					
Copper	4.0E-02	NA	5.85E+02	5.24E+02	4.58E-05		1E-03					
Lead	NA	NA	6.21E+03	7.14E+03								
Mercury	3.0E-04	NA	1.32E+00	1.27E+00	1.03E-07		3E-04					
Selenium	5.0E-03	NA	6.63E-01	6.57E-01	5.19E-08		1E-05					
Thallium	8.0E-05	NA	9.97E-01	1.32E+00	7.80E-08		1E-03					
Zinc	3.0E-01	NA	4.01E+02	3.52E+02	3.14E-05		1E-04					
Herbicides												
2,4,5-T	1.0E-02	NA	4.03E-03	4.03E-03	3.15E-10		3E-08					
MCPP	1.0E-03	NA	4.33E+00	4.33E+00	3.39E-07		3E-04					
Total Hazard Quotient and Cancer Risk:							**1E-02**	**1E-06**				

Assumptions for Current Site Worker

CS =	EPC Surface Only
IR =	100 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	20 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-6
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, Calculated from Soil EP
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC Surface Soil	EPC from Total Soils	Future Construction Worker				Future Tresspasser Child			
					Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/kg)	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics												
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	6.39E-03	6.30E-03		4.23E-10		8E-11		2.50E-10		5E-11
Acetone	1.0E-01	NA	6.56E-03	7.28E-03	3.42E-08		3E-07		3.59E-09		4E-08	
Butanone, 2-	6.0E-01	NA		5.00E-03	2.35E-08							
Benzene	3.0E-03	2.9E-02	5.00E-03	5.00E-03	2.35E-08	3.35E-10	8E-06	1E-11	2.74E-09	1.96E-10	9E-07	6E-12
Carbon Disulfide	1.0E-01	NA	2.00E-03	2.00E-03	9.39E-09		9E-08		1.10E-09		1E-08	
Chloroform	1.0E-02	6.1E-03	2.00E-03	2.00E-03	9.39E-09	1.34E-10	9E-07	8E-13	1.10E-09	7.83E-11	1E-07	5E-13
Methylene Chloride	6.0E-02	7.5E-03	3.00E-03	3.00E-03	1.41E-08	2.01E-10	2E-07	2E-12	1.64E-09	1.17E-10	3E-08	9E-13
Toluene	2.0E-01	NA	6.47E-03	6.28E-03	2.95E-08		1E-07		3.55E-09		2E-08	
Xylene (total)	2.0E+00	NA	4.25E-03	4.25E-03	2.00E-08		1E-08		2.33E-09		1E-09	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	4.55E+00	3.80E+00	1.78E-05	2.55E-07	9E-03	2E-07	2.49E-06	1.78E-07	1E-03	1E-07
2,6-Dinitrotoluene	1.0E-03	6.8E-01	1.19E+00	1.01E-01	4.74E-07	6.78E-09	5E-04	5E-09	6.52E-07	4.66E-08	7E-04	3E-08
2-methylnaphthalene	4.0E-02	NA	1.20E+00	4.25E-03	2.00E-08		5E-07		6.58E-07		2E-05	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	5.64E-07		1E-05		6.58E-08		1E-06	
3,3'-Dichlorobenzidine	NA	4.5E-01	7.68E-01	7.24E-01		4.86E-08		2E-08		3.01E-08		1E-08
3-nitroaniline	NA	NA	1.87E+00	1.76E+00								
Acenaphthene	6.0E-02	NA	1.52E+00	1.33E+00	6.25E-06		1E-04		8.33E-07		1E-05	
Acenaphthylene	NA	NA	3.05E-01	2.91E-01								
Anthracene	3.0E-01	NA	1.55E+00	1.38E+00	6.48E-06		2E-05		8.49E-07		3E-06	
Benzo(a)anthracene	NA	7.3E-01	2.70E+00	2.46E+00		1.65E-07		1E-07		1.06E-07		8E-08
Benzo(a)pyrene	NA	7.3E+00	3.40E+00	3.30E+00		2.21E-07		2E-06		1.33E-07		1E-06
Benzo(b)fluoranthene	NA	7.3E-01	3.61E+00	3.38E+00		2.27E-07		2E-07		1.41E-07		1E-07
Benzo(g,h,i)perylene	NA	NA	2.29E+00	2.70E+00								
Benzo(k)fluoranthene	NA	7.3E-02	2.31E+00	2.24E+00		1.50E-07		1E-08		9.04E-08		7E-09
Butylbenzylphthalate	2.0E-01	NA		1.80E-02	8.45E-08							
Carbazole	NA	2.0E-02	1.59E+00	1.35E+00		9.06E-08		2E-09		6.22E-08		1E-09
Chrysene	NA	7.3E-03	2.97E+00	2.77E+00		1.86E-07		1E-09		1.16E-07		8E-10
Di-n-butylphthalate	1.0E-01	NA	1.70E+00	1.51E+00	7.09E-06		7E-05		9.32E-07		9E-06	
Dibenz(a,h)anthracene	NA	7.3E+00	1.52E+00	1.49E+00		1.00E-07		7E-07		5.95E-08		4E-07
Dibenzofuran	NA	NA	1.36E+00	1.17E+00								
Diethylphthalate	8.0E-01	NA	1.90E-02	1.90E-02	8.92E-08		1E-07		1.04E-08		1E-08	
Fluoranthene	4.0E-02	NA	3.84E+00	3.68E+00	1.73E-05		4E-04		2.10E-06		5E-05	
Fluorene	4.0E-02	NA	1.39E+00	1.22E+00	5.73E-06		1E-04		7.62E-07		2E-05	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.38E+00	2.65E+00		1.78E-07		1E-07		9.32E-08		7E-08
N-Nitrosodiphenylamine (1)	NA	4.9E-03	1.85E+00	1.59E+00		1.07E-07		5E-10		7.24E-08		4E-10
Naphthalene	4.0E-02	NA	1.56E+00	1.34E+00	6.29E-06		2E-04		8.55E-07		2E-05	
Pentachlorophenol	3.0E-02	1.2E-01	1.08E+00	1.11E+00	5.21E-06	7.45E-08	2E-04	9E-09	5.92E-07	4.23E-08	2E-05	5E-09
Phenanthrene	NA	NA	2.98E+00	2.74E+00								
Pyrene	3.0E-02	NA	3.92E+00	3.74E+00	1.76E-05		6E-04		2.15E-06		7E-05	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	1.37E+00	1.76E+00	8.27E-06	1.18E-07	4E-04	2E-09	7.51E-07	5.36E-08	4E-05	8E-10
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	4.88E-03	5.26E-03		3.53E-10		8E-11		1.91E-10		5E-11
4,4'-DDE	NA	3.4E-01	1.06E-01	8.51E-02		5.71E-09		2E-09		4.15E-09		1E-09
4,4'-DDT	5.0E-04	3.4E-01	4.89E-02	4.11E-02	1.93E-07	2.76E-09	4E-04	9E-10	2.68E-08	1.91E-09	5E-05	7E-10
Aldrin	3.0E-05	1.7E+01	1.99E-03	2.23E-03	1.05E-08	1.50E-10	3E-04	3E-09	1.09E-09	7.79E-11	4E-05	1E-09
Aroclor-1254	2.0E-05	2.0E+00	5.67E-02	6.00E-02	2.82E-07	4.03E-09	1E-02	8E-09	3.11E-08	2.22E-09	2E-03	4E-09
Aroclor-1260	2.0E-05	2.0E+00	6.24E-02	6.51E-02	3.06E-07	4.37E-09	2E-02	9E-09	3.42E-08	2.44E-09	2E-03	5E-09
Dieldrin	5.0E-05	1.6E+01	3.93E-03	4.65E-03	2.18E-08	3.12E-10	4E-04	5E-09	2.15E-09	1.54E-10	4E-05	2E-09
Endosulfan I	6.0E-03	NA	9.06E-03	8.65E-03	4.06E-08		7E-06		4.96E-09		8E-07	
Endosulfan II	6.0E-03	NA	3.89E-03	4.34E-03	2.04E-08		3E-06		2.13E-09		4E-07	
Endosulfan sulfate	6.0E-03	NA	3.77E-03	4.23E-03	1.99E-08		3E-06		2.07E-09		3E-07	
Endrin	3.0E-04	NA	4.81E-03	5.23E-03	2.46E-08		8E-05		2.64E-09		9E-06	
Endrin aldehyde	NA	NA	4.41E-03	4.83E-03								
Endrin ketone	NA	NA	4.54E-03	4.96E-03								
Heptachlor	5.0E-04	4.5E+00	1.77E-03	1.70E-03	7.98E-09	1.14E-10	2E-05	5E-10	9.70E-10	6.93E-11	2E-06	3E-10
Heptachlor epoxide	1.3E-05	9.1E+00	2.17E-03	2.40E-03	1.13E-08	1.61E-10	9E-04	1E-09	1.19E-09	8.49E-11	9E-05	8E-10
Toxaphene	NA	1.1E+00	1.77E-01	1.70E-01		1.14E-08		1E-08		6.93E-09		8E-09
alpha-Chlordane	6.0E-05	1.3E+00	5.73E-03	5.57E-03	2.62E-08	3.74E-10	4E-04	5E-10	3.14E-09	2.24E-10	5E-05	3E-10
beta-BHC	NA	1.8E+00	2.12E-03	2.35E-03		1.58E-10		3E-10		8.30E-11		1E-10
gamma-BHC (Lindane)	3.0E-04	1.3E+00	1.97E-03	2.21E-03	1.04E-08	1.48E-10	3E-05	2E-10	1.08E-09	7.71E-11	4E-06	1E-10
gamma-Chlordane	6.0E-05	1.3E+00	5.74E-03	5.60E-03	2.63E-08	3.76E-10	4E-04	5E-10	3.15E-09	2.25E-10	5E-05	3E-10
delta-BHC	NA	NA	1.97E-03									
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	9.20E-02	8.79E-02								
Tetryl	1.0E-02	NA	8.79E-02	8.44E-02	3.96E-07		4E-05		4.82E-08		5E-06	
Metals												
Antimony	4.0E-04	NA	4.77E+01	5.12E+01	2.40E-04		6E-01		2.61E-05		7E-02	
Barium	7.0E-02	NA	4.11E+02	3.66E+02	1.72E-03		2E-02		2.25E-04		3E-03	
Copper	4.0E-02	NA	5.85E+02	5.24E+02	2.46E-03		6E-02		3.21E-04		8E-03	
Lead	NA	NA	6.21E+03	7.14E+03								
Mercury	3.0E-04	NA	1.32E+00	1.27E+00	5.96E-06		2E-02		7.23E-07		2E-03	
Selenium	5.0E-03	NA	6.63E-01	6.57E-01	3.09E-06		6E-04		3.63E-07		7E-05	
Thallium	8.0E-05	NA	9.97E-01	1.32E+00	6.20E-06		8E-02		5.46E-07		7E-03	
Zinc	3.0E-01	NA	4.01E+02	3.52E+02	1.65E-03		6E-03		2.20E-04		7E-04	
Herbicides												
2,4,5-T	1.0E-02	NA	4.03E-03	4.03E-03	1.89E-08		2E-06		2.21E-09		2E-07	
MCPP	1.0E-03	NA	4.33E+00	4.33E+00	2.03E-05		2E-02		2.37E-06		2E-03	
Total Hazard Quotient and Cancer Risk:							**9E-01**	**3E-06**			**9E-02**	**2E-06**

Assumptions for Future Construction Worker		Assumptions for Future Tresspasser Child	
CS =	EPC Surface and Subsurface	CS =	EPC Surface Only
IR =	480 mg soil/day	IR =	200 mg soil/day
CF =	1E-06 kg/mg	CF =	1E-06 kg/mg
FI =	1 unitless	FI =	1 unitless
EF =	250 days/year	EF =	50 days/year
ED =	1 years	ED =	5 years
BW =	70 kg	BW =	50 kg
AT (Nc) =	365 days	AT (Nc) =	1825 days
AT (Car) =	25550 days	AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-6
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Soil, Calculated from Soil EP
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	6.39E-03	6.30E-03		5.00E-09		1E-09		2.23E-09		4E-10
Acetone	1.0E-01	NA	6.56E-03	7.28E-03	5.99E-08		6E-07		6.42E-09		6E-08	
Butanone, 2-	6.0E-01	NA		5.00E-03								
Benzene	3.0E-03	2.9E-02	5.00E-03	5.00E-03	4.57E-08	3.91E-09	2E-05	1E-10	4.89E-09	1.75E-09	2E-06	5E-11
Carbon Disulfide	1.0E-01	NA	2.00E-03	2.00E-03	1.83E-08		2E-07		1.96E-09		2E-08	
Chloroform	1.0E-02	6.1E-03	2.00E-03	2.00E-03	1.83E-08	1.57E-09	2E-06	1E-11	1.96E-09	6.99E-10	2E-07	4E-12
Methylene Chloride	6.0E-02	7.5E-03	3.00E-03	3.00E-03	2.74E-08	2.35E-09	5E-07	2E-11	2.94E-09	1.05E-09	5E-08	8E-12
Toluene	2.0E-01	NA	6.47E-03	6.28E-03	5.91E-08		3E-07		6.33E-09		3E-08	
Xylene (total)	2.0E+00	NA	4.25E-03	4.25E-03	3.88E-08		2E-08		4.16E-09		2E-09	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	4.55E+00	3.80E+00	4.16E-05	3.56E-06	2E-02	2E-06	4.45E-06	1.59E-06	2E-03	1E-06
2,6-Dinitrotoluene	1.0E-03	6.8E-01	1.19E+00	1.01E-01	1.09E-05	9.32E-07	1E-02	6E-07	1.16E-06	4.16E-07	1E-03	3E-07
2-methylnaphthalene	4.0E-02	NA	1.20E+00	4.25E-03	1.10E-05		3E-04		1.17E-06		3E-05	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	1.10E-06		2E-05		1.17E-07		2E-06	
3,3'-Dichlorobenzidine	NA	4.5E-01	7.68E-01	7.24E-01		6.01E-07		3E-07		2.68E-07		1E-07
3-nitroaniline	NA	NA	1.87E+00	1.76E+00								
Acenaphthene	6.0E-02	NA	1.52E+00	1.33E+00	1.39E-05		2E-04		1.49E-06		2E-05	
Acenaphthylene	NA	NA	3.05E-01	2.91E-01								
Anthracene	3.0E-01	NA	1.55E+00	1.38E+00	1.42E-05		5E-05		1.52E-06		5E-06	
Benzo(a)anthracene	NA	7.3E-01	2.70E+00	2.46E+00		2.11E-06		2E-06		9.44E-07		7E-07
Benzo(a)pyrene	NA	7.3E+00	3.40E+00	3.30E+00		2.66E-06		2E-05		1.19E-06		9E-06
Benzo(b)fluoranthene	NA	7.3E-01	3.61E+00	3.38E+00		2.83E-06		2E-06		1.26E-06		9E-07
Benzo(g,h,i)perylene	NA	NA	2.29E+00	2.70E+00								
Benzo(k)fluoranthene	NA	7.3E-02	2.31E+00	2.24E+00		1.81E-06		1E-07		8.07E-07		6E-08
Butylbenzylphthalate	2.0E-01	NA		1.80E-02								
Carbazole	NA	2.0E-02	1.59E+00	1.35E+00		1.24E-06		2E-08		5.56E-07		1E-08
Chrysene	NA	7.3E-03	2.97E+00	2.77E+00		2.32E-06		2E-08		1.04E-06		8E-09
Di-n-butylphthalate	1.0E-01	NA	1.70E+00	1.51E+00	1.55E-05		2E-04		1.66E-06		2E-05	
Dibenz(a,h)anthracene	NA	7.3E+00	1.52E+00	1.49E+00		1.19E-06		9E-06		5.31E-07		4E-06
Dibenzofuran	NA	NA	1.36E+00	1.17E+00								
Diethylphthalate	8.0E-01	NA	1.90E-02	1.90E-02	1.74E-07		2E-07		1.86E-08		2E-08	
Fluoranthene	4.0E-02	NA	3.84E+00	3.68E+00	3.51E-05		9E-04		3.76E-06		9E-05	
Fluorene	4.0E-02	NA	1.39E+00	1.22E+00	1.27E-05		3E-04		1.36E-06		3E-05	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.38E+00	2.65E+00		1.86E-06		1E-06		8.32E-07		6E-07
N-Nitrosodiphenylamine (1)	NA	4.9E-03	1.85E+00	1.59E+00		1.45E-06		7E-09		6.46E-07		3E-09
Naphthalene	4.0E-02	NA	1.56E+00	1.34E+00	1.42E-05		4E-04		1.53E-06		4E-05	
Pentachlorophenol	3.0E-02	1.2E-01	1.08E+00	1.11E+00	9.86E-06	8.45E-07	3E-04	1E-07	1.06E-06	3.77E-07	4E-05	5E-08
Phenanthrene	NA	NA	2.98E+00	2.74E+00								
Pyrene	3.0E-02	NA	3.92E+00	3.74E+00	3.58E-05		1E-03		3.84E-06		1E-04	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	1.37E+00	1.76E+00	1.25E-05	1.07E-06	6E-04	2E-08	1.34E-06	4.79E-07	7E-05	7E-09
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	4.88E-03	5.26E-03		3.82E-09		9E-10		1.71E-09		4E-10
4,4'-DDE	NA	3.4E-01	1.06E-01	8.51E-02		8.30E-08		3E-08		3.70E-08		1E-08
4,4'-DDT	5.0E-04	3.4E-01	4.89E-02	4.11E-02	4.47E-07	3.83E-08	9E-04	1E-08	4.78E-08	1.71E-08	1E-04	6E-09
Aldrin	3.0E-05	1.7E+01	1.99E-03	2.23E-03	1.82E-08	1.56E-09	6E-04	3E-08	1.95E-09	6.95E-10	6E-05	1E-08
Aroclor-1254	2.0E-05	2.0E+00	5.67E-02	6.00E-02	5.18E-07	4.44E-08	3E-02	9E-08	5.55E-08	1.98E-08	3E-03	4E-08
Aroclor-1260	2.0E-05	2.0E+00	6.24E-02	6.51E-02	5.70E-07	4.88E-08	3E-02	1E-07	6.11E-08	2.18E-08	3E-03	4E-08
Dieldrin	5.0E-05	1.6E+01	3.93E-03	4.65E-03	3.59E-08	3.08E-09	7E-04	5E-08	3.85E-09	1.37E-09	8E-05	2E-08
Endosulfan I	6.0E-03	NA	9.06E-03	8.65E-03	8.27E-08		1E-05		8.86E-09		1E-06	
Endosulfan II	6.0E-03	NA	3.89E-03	4.34E-03	3.55E-08		6E-06		3.81E-09		6E-07	
Endosulfan sulfate	6.0E-03	NA	3.77E-03	4.23E-03	3.44E-08		6E-06		3.69E-09		6E-07	
Endrin	3.0E-04	NA	4.81E-03	5.23E-03	4.39E-08		1E-04		4.71E-09		2E-05	
Endrin aldehyde	NA	NA	4.41E-03	4.83E-03								
Endrin ketone	NA	NA	4.54E-03	4.96E-03								
Heptachlor	5.0E-04	4.5E+00	1.77E-03	1.70E-03	1.62E-08	1.39E-09	3E-05	6E-09	1.73E-09	6.19E-10	3E-06	3E-09
Heptachlor epoxide	1.3E-05	9.1E+00	2.17E-03	2.40E-03	1.98E-08	1.70E-09	2E-03	2E-08	2.12E-09	7.58E-10	2E-04	7E-09
Toxaphene	NA	1.1E+00	1.77E-01	1.70E-01		1.39E-07		2E-07		6.19E-08		7E-08
alpha-Chlordane	6.0E-05	1.3E+00	5.73E-03	5.57E-03	5.23E-08	4.49E-09	9E-04	6E-09	5.61E-09	2.00E-09	9E-05	3E-09
beta-BHC	NA	1.8E+00	2.12E-03	2.35E-03		1.66E-09		3E-09		7.41E-10		1E-09
gamma-BHC (Lindane)	3.0E-04	1.3E+00	1.97E-03	2.21E-03	1.80E-08	1.54E-09	6E-05	2E-09	1.93E-09	6.88E-10	6E-06	9E-10
gamma-Chlordane	6.0E-05	1.3E+00	5.74E-03	5.60E-03	5.24E-08	4.49E-09	9E-04	6E-09	5.62E-09	2.01E-09	9E-05	3E-09
delta-BHC	NA	NA	1.97E-03									
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	9.20E-02	8.79E-02								
Tetryl	1.0E-02	NA	8.79E-02	8.44E-02	8.03E-07		8E-05		8.60E-08		9E-06	
Metals												
Antimony	4.0E-04	NA	4.77E+01	5.12E+01	4.36E-04		1E+00		4.67E-05		1E-01	
Barium	7.0E-02	NA	4.11E+02	3.66E+02	3.75E-03		5E-02		4.02E-04		6E-03	
Copper	4.0E-02	NA	5.85E+02	5.24E+02	5.34E-03		1E-01		5.72E-04		1E-02	
Lead	NA	NA	6.21E+03	7.14E+03								
Mercury	3.0E-04	NA	1.32E+00	1.27E+00	1.21E-05		4E-02		1.29E-06		4E-03	
Selenium	5.0E-03	NA	6.63E-01	6.57E-01	6.05E-06		1E-03		6.49E-07		1E-04	
Thallium	8.0E-05	NA	9.97E-01	1.32E+00	9.11E-06		1E-01		9.76E-07		1E-02	
Zinc	3.0E-01	NA	4.01E+02	3.52E+02	3.66E-03		1E-02		3.92E-04		1E-03	
Herbicides												
2,4,5-T	1.0E-02	NA	4.03E-03	4.03E-03	3.68E-08		4E-06		3.94E-09		4E-07	
MCPP	1.0E-03	NA	4.33E+00	4.33E+00	3.95E-05		4E-02		4.24E-06		4E-03	
Total Hazard Quotient and Cancer Risk:							**2E+00**	**4E-05**			**2E-01**	**2E-05**

Assumptions for Future Day Care Center Child

CS =	EPC Surface Only
IR =	200 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	250 days/year
ED =	6 years
BW =	15 kg
AT (Nc) =	2190 days
AT (Car) =	25550 days

Assumptions for Future Day Care Center Adult

CS =	EPC Surface Only
IR =	100 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	250 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-7
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, Calculated from Soil EP
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	6.39E-03	6.30E-03		1.25E-11		3E-12		Ingestion of Onsite Soils Not Applicable for Future Industrial Worker		
Acetone	1.0E-01	NA	6.56E-03	7.28E-03	1.28E-10		1E-09					
Butanone, 2-	6.0E-01	NA		5.00E-03								
Benzene	3.0E-03	2.9E-02	5.00E-03	5.00E-03	9.78E-11	9.78E-12	3E-08	3E-13				
Carbon Disulfide	1.0E-01	NA	2.00E-03	2.00E-03	3.91E-11		4E-10					
Chloroform	1.0E-02	6.1E-03	2.00E-03	2.00E-03	3.91E-11	3.91E-12	4E-09	2E-14				
Methylene Chloride	6.0E-02	7.5E-03	3.00E-03	3.00E-03	5.87E-11	5.87E-12	1E-09	4E-14				
Toluene	2.0E-01	NA	6.47E-03	6.28E-03	1.27E-10		6E-10					
Xylene (total)	2.0E+00	NA	4.25E-03	4.25E-03	8.32E-11		4E-11					
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	4.55E+00	3.80E+00	8.90E-08	8.90E-09	4E-05	6E-09				
2,6-Dinitrotoluene	1.0E-03	6.8E-01	1.19E+00	1.01E-01	2.33E-08	2.33E-09	2E-05	2E-09				
2-methylnaphthalene	4.0E-02	NA	1.20E+00	4.25E-03	2.35E-08		6E-07					
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	2.35E-09		5E-08					
3,3'-Dichlorobenzidine	NA	4.5E-01	7.68E-01	7.24E-01		1.50E-09		7E-10				
3-nitroaniline	NA	NA	1.87E+00	1.76E+00								
Acenaphthene	6.0E-02	NA	1.52E+00	1.33E+00	2.97E-08		5E-07					
Acenaphthylene	NA	NA	3.05E-01	2.91E-01								
Anthracene	3.0E-01	NA	1.55E+00	1.38E+00	3.03E-08		1E-07					
Benzo(a)anthracene	NA	7.3E-01	2.70E+00	2.46E+00		5.28E-09		4E-09				
Benzo(a)pyrene	NA	7.3E+00	3.40E+00	3.30E+00		6.65E-09		5E-08				
Benzo(b)fluoranthene	NA	7.3E-01	3.61E+00	3.38E+00		7.06E-09		5E-09				
Benzo(g,h,i)perylene	NA	NA	2.29E+00	2.70E+00								
Benzo(k)fluoranthene	NA	7.3E-02	2.31E+00	2.24E+00		4.52E-09		3E-10				
Butylbenzylphthalate	2.0E-01	NA		1.80E-02								
Carbazole	NA	2.0E-02	1.59E+00	1.35E+00		3.11E-09		6E-11				
Chrysene	NA	7.3E-03	2.97E+00	2.77E+00		5.81E-09		4E-11				
Di-n-butylphthalate	1.0E-01	NA	1.70E+00	1.51E+00	3.33E-08		3E-07					
Dibenz(a,h)anthracene	NA	7.3E+00	1.52E+00	1.49E+00		2.97E-09		2E-08				
Dibenzofuran	NA	NA	1.36E+00	1.17E+00								
Diethylphthalate	8.0E-01	NA	1.90E-02	1.90E-02	3.72E-10		5E-10					
Fluoranthene	4.0E-02	NA	3.84E+00	3.68E+00	7.51E-08		2E-06					
Fluorene	4.0E-02	NA	1.39E+00	1.22E+00	2.72E-08		7E-07					
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.38E+00	2.65E+00		4.66E-09		3E-09				
N-Nitrosodiphenylamine (1)	NA	4.9E-03	1.85E+00	1.59E+00		3.62E-09		2E-11				
Naphthalene	4.0E-02	NA	1.56E+00	1.34E+00	3.05E-08		8E-07					
Pentachlorophenol	3.0E-02	1.2E-01	1.08E+00	1.11E+00	2.11E-08	2.11E-09	7E-07	3E-10				
Phenanthrene	NA	NA	2.98E+00	2.74E+00								
Pyrene	3.0E-02	NA	3.92E+00	3.74E+00	7.67E-08		3E-06					
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	1.37E+00	1.76E+00	2.68E-08	2.68E-09	1E-06	4E-11				
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	4.88E-03	5.26E-03		9.55E-12		2E-12				
4,4'-DDE	NA	3.4E-01	1.06E-01	8.51E-02		2.07E-10		7E-11				
4,4'-DDT	5.0E-04	3.4E-01	4.89E-02	4.11E-02	9.57E-10	9.57E-11	2E-06	3E-11				
Aldrin	3.0E-05	1.7E+01	1.99E-03	2.23E-03	3.89E-11	3.89E-12	1E-06	7E-11				
Aroclor-1254	2.0E-05	2.0E+00	5.67E-02	6.00E-02	1.11E-09	1.11E-10	6E-05	2E-10				
Aroclor-1260	2.0E-05	2.0E+00	6.24E-02	6.51E-02	1.22E-09	1.22E-10	6E-05	2E-10				
Dieldrin	5.0E-05	1.6E+01	3.93E-03	4.65E-03	7.69E-11	7.69E-12	2E-06	1E-10				
Endosulfan I	6.0E-03	NA	9.06E-03	8.65E-03	1.77E-10		3E-08					
Endosulfan II	6.0E-03	NA	3.89E-03	4.34E-03	7.61E-11		1E-08					
Endosulfan sulfate	6.0E-03	NA	3.77E-03	4.23E-03	7.38E-11		1E-08					
Endrin	3.0E-04	NA	4.81E-03	5.23E-03	9.41E-11		3E-07					
Endrin aldehyde	NA	NA	4.41E-03	4.83E-03								
Endrin ketone	NA	NA	4.54E-03	4.96E-03								
Heptachlor	5.0E-04	4.5E+00	1.77E-03	1.70E-03	3.46E-11	3.46E-12	7E-08	2E-11				
Heptachlor epoxide	1.3E-05	9.1E+00	2.17E-03	2.40E-03	4.25E-11	4.25E-12	3E-06	4E-11				
Toxaphene	NA	1.1E+00	1.77E-01	1.70E-01		3.46E-10		4E-10				
alpha-Chlordane	6.0E-05	1.3E+00	5.73E-03	5.57E-03	1.12E-10	1.12E-11	2E-06	1E-11				
beta-BHC	NA	1.8E+00	2.12E-03	2.35E-03		4.15E-12		7E-12				
gamma-BHC (Lindane)	3.0E-04	1.3E+00	1.97E-03	2.21E-03	3.86E-11	3.86E-12	1E-07	5E-12				
gamma-Chlordane	6.0E-05	1.3E+00	5.74E-03	5.60E-03	1.12E-10	1.12E-11	2E-06	1E-11				
delta-BHC	NA	NA	1.97E-03	2.03E-03								
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	9.20E-02	8.79E-02								
Tetryl	1.0E-02	NA	8.79E-02	8.44E-02	1.72E-09		2E-07					
Metals												
Antimony	4.0E-04	NA	4.77E+01	5.12E+01	9.33E-07		2E-03					
Barium	7.0E-02	NA	4.11E+02	3.66E+02	8.04E-06		1E-04					
Copper	4.0E-02	NA	5.85E+02	5.24E+02	1.14E-05		3E-04					
Lead	NA	NA	6.21E+03	7.14E+03								
Mercury	3.0E-04	NA	1.32E+00	1.27E+00	2.58E-08		9E-05					
Selenium	5.0E-03	NA	6.63E-01	6.57E-01	1.30E-08		3E-06					
Thallium	8.0E-05	NA	9.97E-01	1.32E+00	1.95E-08		2E-04					
Zinc	3.0E-01	NA	4.01E+02	3.52E+02	7.85E-06		3E-05					
Herbicides												
2,4,5-T	1.0E-02	NA	4.03E-03	4.03E-03	7.89E-11		8E-09					
MCPP	1.0E-03	NA	4.33E+00	4.33E+00	8.47E-08		8E-05					
Total Hazard Quotient and Cancer Risk:							3E-03	9E-08				

Assumptions for Current Site Worker

CS =	EPC Surface Only
IR =	50 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	10 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-7
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, Calculated from Soil EP
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Intake (mg/kg-day) (Nc)	Future Tresspasser Child Intake (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics												
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	6.39E-03	6.30E-03		7.71E-11		2E-11		1.25E-11		3E-12
Acetone	1.0E-01	NA	6.56E-03	7.28E-03	6.24E-09		6E-08		8.99E-10		9E-09	
Butanone, 2-	6.0E-01	NA		5.00E-03	4.29E-09		7E-09					
Benzene	3.0E-03	2.9E-02	5.00E-03	5.00E-03	4.29E-09	6.12E-11	1E-06	2E-12	6.85E-10	9.78E-12	2E-07	3E-13
Carbon Disulfide	1.0E-01	NA	2.00E-03	2.00E-03	1.71E-09		2E-08		2.74E-10		3E-09	
Chloroform	1.0E-02	6.1E-03	2.00E-03	2.00E-03	1.71E-09	2.45E-11	2E-07	1E-13	2.74E-10	3.91E-12	3E-08	2E-14
Methylene Chloride	6.0E-02	7.5E-03	3.00E-03	3.00E-03	2.57E-09	3.67E-11	4E-08	3E-13	4.11E-10	5.87E-12	7E-09	4E-14
Toluene	2.0E-01	NA	6.47E-03	6.28E-03	5.38E-09		3E-08		8.86E-10		4E-09	
Xylene (total)	2.0E+00	NA	4.25E-03	4.25E-03	3.64E-09		2E-09		5.82E-10		3E-10	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	4.55E+00	3.80E+00	3.26E-06	4.65E-08	2E-03	3E-08	6.23E-07	8.90E-09	3E-04	6E-09
2,6-Dinitrotoluene	1.0E-03	6.8E-01	1.19E+00	1.01E-01	8.66E-08	1.24E-09	9E-05	8E-10	1.63E-07	2.33E-09	2E-04	2E-09
2-methylnaphthalene	4.0E-02	NA	1.20E+00	4.25E-03	3.64E-09		9E-08		1.64E-07		4E-06	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	1.03E-07		2E-06		1.64E-08		3E-07	
3,3'-Dichlorobenzidine	NA	4.5E-01	7.68E-01	7.24E-01		8.87E-09		4E-09		1.50E-09		7E-10
3-nitroaniline	NA	NA	1.87E+00	1.76E+00								
Acenaphthene	6.0E-02	NA	1.52E+00	1.33E+00	1.14E-06		2E-05		2.08E-07		3E-06	
Acenaphthylene	NA	NA	3.05E-01	2.91E-01								
Anthracene	3.0E-01	NA	1.55E+00	1.38E+00	1.18E-06		4E-06		2.12E-07		7E-07	
Benzo(a)anthracene	NA	7.3E-01	2.70E+00	2.46E+00		3.01E-08		2E-08		5.28E-09		4E-09
Benzo(a)pyrene	NA	7.3E+00	3.40E+00	3.30E+00		4.04E-08		3E-07		6.65E-09		5E-08
Benzo(b)fluoranthene	NA	7.3E-01	3.61E+00	3.38E+00		4.14E-08		3E-08		7.06E-09		5E-09
Benzo(g,h,i)perylene	NA	NA	2.29E+00	2.70E+00								
Benzo(k)fluoranthene	NA	7.3E-02	2.31E+00	2.24E+00		2.74E-08		2E-09		4.52E-09		3E-10
Butylbenzylphthalate	2.0E-01	NA		1.80E-02	1.54E-08							
Carbazole	NA	2.0E-02	1.59E+00	1.35E+00		1.65E-08		3E-10		3.11E-09		6E-11
Chrysene	NA	7.3E-03	2.97E+00	2.77E+00		3.39E-08		2E-10		5.81E-09		4E-11
Di-n-butylphthalate	1.0E-01	NA	1.70E+00	1.51E+00	1.29E-06		1E-05		2.33E-07		2E-06	
Dibenz(a,h)anthracene	NA	7.3E+00	1.52E+00	1.49E+00		1.82E-08		1E-07		2.97E-09		2E-08
Dibenzofuran	NA	NA	1.36E+00	1.17E+00								
Diethylphthalate	8.0E-01	NA	1.90E-02	1.90E-02	1.63E-08		2E-08		2.60E-09		3E-09	
Fluoranthene	4.0E-02	NA	3.84E+00	3.68E+00	3.15E-06		8E-05		5.26E-07		1E-05	
Fluorene	4.0E-02	NA	1.39E+00	1.22E+00	1.05E-06		3E-05		1.90E-07		5E-06	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.38E+00	2.65E+00		3.24E-08		2E-08		4.66E-09		3E-09
N-Nitrosodiphenylamine (1)	NA	4.9E-03	1.85E+00	1.59E+00		1.95E-08		1E-10		3.62E-09		2E-11
Naphthalene	4.0E-02	NA	1.56E+00	1.34E+00	1.15E-06		3E-05		2.14E-07		5E-06	
Pentachlorophenol	3.0E-02	1.2E-01	1.08E+00	1.11E+00	9.51E-07	1.36E-08	3E-05	2E-09	1.48E-07	2.11E-09	5E-06	3E-10
Phenanthrene	NA	NA	2.98E+00	2.74E+00								
Pyrene	3.0E-02	NA	3.92E+00	3.74E+00	3.21E-06		1E-04		5.37E-07		2E-05	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	1.37E+00	1.76E+00	1.51E-06	2.16E-08	8E-05	3E-10	1.88E-07	2.68E-09	9E-06	4E-11
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	4.88E-03	5.26E-03		6.44E-11		2E-11		9.55E-12		2E-12
4,4'-DDE	NA	3.4E-01	1.06E-01	8.51E-02		1.04E-09		4E-10		2.07E-10		7E-11
4,4'-DDT	5.0E-04	3.4E-01	4.89E-02	4.11E-02	3.52E-08	5.03E-10	7E-05	2E-10	6.70E-09	9.57E-11	1E-05	3E-11
Aldrin	3.0E-05	1.7E+01	1.99E-03	2.23E-03	1.91E-09	2.73E-11	6E-05	5E-10	2.73E-10	3.89E-12	9E-06	7E-11
Aroclor-1254	2.0E-05	2.0E+00	5.67E-02	6.00E-02	5.14E-08	7.35E-10	3E-03	1E-09	7.77E-09	1.11E-10	4E-04	2E-10
Aroclor-1260	2.0E-05	2.0E+00	6.24E-02	6.51E-02	5.58E-08	7.97E-10	3E-03	2E-09	8.55E-09	1.22E-10	4E-04	2E-10
Dieldrin	5.0E-05	1.6E+01	3.93E-03	4.65E-03	3.99E-09	5.69E-11	8E-05	9E-10	5.38E-10	7.69E-12	1E-05	1E-10
Endosulfan I	6.0E-03	NA	9.06E-03	8.65E-03	7.41E-09		1E-06		1.24E-09		2E-07	
Endosulfan II	6.0E-03	NA	3.89E-03	4.34E-03	3.72E-09		6E-07		5.33E-10		9E-08	
Endosulfan sulfate	6.0E-03	NA	3.77E-03	4.23E-03	3.63E-09		6E-07		5.16E-10		9E-08	
Endrin	3.0E-04	NA	4.81E-03	5.23E-03	4.48E-09		1E-05		6.59E-10		2E-06	
Endrin aldehyde	NA	NA	4.41E-03	4.83E-03								
Endrin ketone	NA	NA	4.54E-03	4.96E-03								
Heptachlor	5.0E-04	4.5E+00	1.77E-03	1.70E-03	1.46E-09	2.08E-11	3E-06	9E-11	2.42E-10	3.46E-12	5E-07	2E-11
Heptachlor epoxide	1.3E-05	9.1E+00	2.17E-03	2.40E-03	2.06E-09	2.94E-11	2E-04	3E-10	2.97E-10	4.25E-12	2E-05	4E-11
Toxaphene	NA	1.1E+00	1.77E-01	1.70E-01		2.08E-09		2E-09		3.46E-10		4E-10
alpha-Chlordane	6.0E-05	1.3E+00	5.73E-03	5.57E-03	4.77E-09	6.82E-11	8E-05	9E-11	7.85E-10	1.12E-11	1E-05	1E-11
beta-BHC	NA	1.8E+00	2.12E-03	2.35E-03		2.88E-11		5E-11		4.15E-12		7E-12
gamma-BHC (Lindane)	3.0E-04	1.3E+00	1.97E-03	2.21E-03	1.89E-09	2.71E-11	6E-06	4E-11	2.70E-10	3.86E-12	9E-07	5E-12
gamma-Chlordane	6.0E-05	1.3E+00	5.74E-03	5.60E-03	4.80E-09	6.86E-11	8E-05	9E-11	7.86E-10	1.12E-11	1E-05	1E-11
delta-BHC	NA	NA	1.97E-03									
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	9.20E-02	8.79E-02								
Tetryl	1.0E-02	NA	8.79E-02	8.44E-02	7.23E-08		7E-06		1.20E-08		1E-06	
Metals												
Antimony	4.0E-04	NA	4.77E+01	5.12E+01	4.39E-05		1E-01		6.53E-06		2E-02	
Barium	7.0E-02	NA	4.11E+02	3.66E+02	3.14E-04		4E-03		5.63E-05		8E-04	
Copper	4.0E-02	NA	5.85E+02	5.24E+02	4.49E-04		1E-02		8.01E-05		2E-03	
Lead	NA	NA	6.21E+03	7.14E+03								
Mercury	3.0E-04	NA	1.32E+00	1.27E+00	1.09E-06		4E-03		1.81E-07		6E-04	
Selenium	5.0E-03	NA	6.63E-01	6.57E-01	5.63E-07		1E-04		9.08E-08		2E-05	
Thallium	8.0E-05	NA	9.97E-01	1.32E+00	1.13E-06		1E-02		1.37E-07		2E-03	
Zinc	3.0E-01	NA	4.01E+02	3.52E+02	3.02E-04		1E-03		5.49E-05		2E-04	
Herbicides												
2,4,5-T	1.0E-02	NA	4.03E-03	4.03E-03	3.45E-09		3E-07		5.52E-10		6E-08	
MCPP	1.0E-03	NA	4.33E+00	4.33E+00	3.71E-06		4E-03		5.93E-07		6E-04	
Total Hazard Quotient and Cancer Risk:							**2E-01**	**6E-07**			**2E-02**	**9E-08**

Assumptions for Future Construction Worker

CS =	EPC Surface and Subsurface
IR =	100 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	219 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CS =	EPC Surface Only
IR =	100 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	25 days/year
ED =	1 years
BW =	50 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available

TABLE I-7
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, Calculated from Soil EP
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	6.39E-03	6.30E-03		1.10E-09		2E-10		2.74E-10		5E-11
Acetone	1.0E-01	NA	6.56E-03	7.28E-03	2.62E-08		3E-07		2.81E-09		3E-08	
Butanone, 2-	6.0E-01	NA		5.00E-03								
Benzene	3.0E-03	2.9E-02	5.00E-03	5.00E-03	2.00E-08	8.57E-10	7E-06	2E-11	2.14E-09	2.14E-10	7E-07	6E-12
Carbon Disulfide	1.0E-01	NA	2.00E-03	2.00E-03	8.00E-09		8E-08		8.57E-10		9E-09	
Chloroform	1.0E-02	6.1E-03	2.00E-03	2.00E-03	8.00E-09	3.43E-10	8E-07	2E-12	8.57E-10	8.57E-11	9E-08	5E-13
Methylene Chloride	6.0E-02	7.5E-03	3.00E-03	3.00E-03	1.20E-08	5.14E-10	2E-07	4E-12	1.29E-09	1.29E-10	2E-08	1E-12
Toluene	2.0E-01	NA	6.47E-03	6.28E-03	2.59E-08		1E-07		2.77E-09		1E-08	
Xylene (total)	2.0E+00	NA	4.25E-03	4.25E-03	1.70E-08		9E-09		1.82E-09		9E-10	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	4.55E+00	3.80E+00	1.82E-05	7.80E-07	9E-03	5E-07	1.95E-06	1.95E-07	1E-03	1E-07
2,6-Dinitrotoluene	1.0E-03	6.8E-01	1.19E+00	1.01E-01	4.76E-06	2.04E-07	5E-03	1E-07	5.10E-07	5.10E-08	5E-04	3E-08
2-methylnaphthalene	4.0E-02	NA	1.20E+00	4.25E-03	4.80E-06		1E-04		5.14E-07		1E-05	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	4.80E-07		1E-05		5.14E-08		1E-06	
3,3'-Dichlorobenzidine	NA	4.5E-01	7.68E-01	7.24E-01		1.32E-07		6E-08		3.29E-08		1E-08
3-nitroaniline	NA	NA	1.87E+00	1.76E+00								
Acenaphthene	6.0E-02	NA	1.52E+00	1.33E+00	6.08E-06		1E-04		6.51E-07		1E-05	
Acenaphthylene	NA	NA	3.05E-01	2.91E-01								
Anthracene	3.0E-01	NA	1.55E+00	1.38E+00	6.20E-06		2E-05		6.64E-07		2E-06	
Benzo(a)anthracene	NA	7.3E-01	2.70E+00	2.46E+00		4.63E-07		3E-07		1.16E-07		8E-08
Benzo(a)pyrene	NA	7.3E+00	3.40E+00	3.30E+00		5.83E-07		4E-06		1.46E-07		1E-06
Benzo(b)fluoranthene	NA	7.3E-01	3.61E+00	3.38E+00		6.19E-07		5E-07		1.55E-07		1E-07
Benzo(g,h,i)perylene	NA	NA	2.29E+00	2.70E+00								
Benzo(k)fluoranthene	NA	7.3E-02	2.31E+00	2.24E+00		3.96E-07		3E-08		9.90E-08		7E-09
Butylbenzylphthalate	2.0E-01	NA		1.80E-02								
Carbazole	NA	2.0E-02	1.59E+00	1.35E+00		2.73E-07		5E-09		6.81E-08		1E-09
Chrysene	NA	7.3E-03	2.97E+00	2.77E+00		5.09E-07		4E-09		1.27E-07		9E-10
Di-n-butylphthalate	1.0E-01	NA	1.70E+00	1.51E+00	6.80E-06		7E-05		7.29E-07		7E-06	
Dibenz(a,h)anthracene	NA	7.3E+00	1.52E+00	1.49E+00		2.61E-07		2E-06		6.51E-08		5E-07
Dibenzofuran	NA	NA	1.36E+00	1.17E+00								
Diethylphthalate	8.0E-01	NA	1.90E-02	1.90E-02	7.60E-08		1E-07		8.14E-09		1E-08	
Fluoranthene	4.0E-02	NA	3.84E+00	3.68E+00	1.54E-05		4E-04		1.65E-06		4E-05	
Fluorene	4.0E-02	NA	1.39E+00	1.22E+00	5.56E-06		1E-04		5.96E-07		1E-05	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.38E+00	2.65E+00		4.08E-07		3E-07		1.02E-07		7E-08
N-Nitrosodiphenylamine (1)	NA	4.9E-03	1.85E+00	1.59E+00		3.17E-07		2E-09		7.93E-08		4E-10
Naphthalene	4.0E-02	NA	1.56E+00	1.34E+00	6.24E-06		2E-04		6.69E-07		2E-05	
Pentachlorophenol	3.0E-02	1.2E-01	1.08E+00	1.11E+00	4.32E-06	1.85E-07	1E-04	2E-08	4.63E-07	4.63E-08	2E-05	6E-09
Phenanthrene	NA	NA	2.98E+00	2.74E+00								
Pyrene	3.0E-02	NA	3.92E+00	3.74E+00	1.57E-05		5E-04		1.68E-06		6E-05	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	1.37E+00	1.76E+00	5.48E-06	2.35E-07	3E-04	3E-09	5.87E-07	5.87E-08	3E-05	8E-10
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	4.88E-03	5.26E-03		8.37E-10		2E-10		2.09E-10		5E-11
4,4'-DDE	NA	3.4E-01	1.06E-01	8.51E-02		1.82E-08		6E-09		4.54E-09		2E-09
4,4'-DDT	5.0E-04	3.4E-01	4.89E-02	4.11E-02	1.96E-07	8.38E-09	4E-04	3E-09	2.10E-08	2.10E-09	4E-05	7E-10
Aldrin	3.0E-05	1.7E+01	1.99E-03	2.23E-03	7.96E-09	3.41E-10	3E-04	6E-09	8.53E-10	8.53E-11	3E-05	1E-09
Aroclor-1254	2.0E-05	2.0E+00	5.67E-02	6.00E-02	2.27E-07	9.72E-09	1E-02	2E-08	2.43E-08	2.43E-09	1E-03	5E-09
Aroclor-1260	2.0E-05	2.0E+00	6.24E-02	6.51E-02	2.50E-07	1.07E-08	1E-02	2E-08	2.67E-08	2.67E-09	1E-03	5E-09
Dieldrin	5.0E-05	1.6E+01	3.93E-03	4.65E-03	1.57E-08	6.74E-10	3E-04	1E-08	1.68E-09	1.68E-10	3E-05	3E-09
Endosulfan I	6.0E-03	NA	9.06E-03	8.65E-03	3.62E-08		6E-06		3.88E-09		6E-07	
Endosulfan II	6.0E-03	NA	3.89E-03	4.34E-03	1.56E-08		3E-06		1.67E-09		3E-07	
Endosulfan sulfate	6.0E-03	NA	3.77E-03	4.23E-03	1.51E-08		3E-06		1.62E-09		3E-07	
Endrin	3.0E-04	NA	4.81E-03	5.23E-03	1.92E-08		6E-05		2.06E-09		7E-06	
Endrin aldehyde	NA	NA	4.41E-03	4.83E-03								
Endrin ketone	NA	NA	4.54E-03	4.96E-03								
Heptachlor	5.0E-04	4.5E+00	1.77E-03	1.70E-03	7.08E-09	3.03E-10	1E-05	1E-09	7.59E-10	7.59E-11	2E-06	3E-10
Heptachlor epoxide	1.3E-05	9.1E+00	2.17E-03	2.40E-03	8.68E-09	3.72E-10	7E-04	3E-09	9.30E-10	9.30E-11	7E-05	8E-10
Toxaphene	NA	1.1E+00	1.77E-01	1.70E-01		3.03E-08		3E-08		7.59E-09		8E-09
alpha-Chlordane	6.0E-05	1.3E+00	5.73E-03	5.57E-03	2.29E-08	9.82E-10	4E-04	1E-09	2.46E-09	2.46E-10	4E-05	3E-10
beta-BHC	NA	1.8E+00	2.12E-03	2.35E-03		3.63E-10		7E-10		9.09E-11		2E-10
gamma-BHC (Lindane)	3.0E-04	1.3E+00	1.97E-03	2.21E-03	7.88E-09	3.38E-10	3E-05	4E-10	8.44E-10	8.44E-11	3E-06	1E-10
gamma-Chlordane	6.0E-05	1.3E+00	5.74E-03	5.60E-03	2.30E-08	9.84E-10	4E-04	1E-09	2.46E-09	2.46E-10	4E-05	3E-10
delta-BHC	NA	NA	1.97E-03									
Nitroaromatics												
2-amino-4,6-Dinitrotoluene	NA	NA	9.20E-02	8.79E-02								
Tetryl	1.0E-02	NA	8.79E-02	8.44E-02	3.52E-07		4E-05		3.77E-08		4E-06	
Metals												
Antimony	4.0E-04	NA	4.77E+01	5.12E+01	1.91E-04		5E-01		2.04E-05		5E-02	
Barium	7.0E-02	NA	4.11E+02	3.66E+02	1.64E-03		2E-02		1.76E-04		3E-03	
Copper	4.0E-02	NA	5.85E+02	5.24E+02	2.34E-03		6E-02		2.51E-04		6E-03	
Lead	NA	NA	6.21E+03	7.14E+03								
Mercury	3.0E-04	NA	1.32E+00	1.27E+00	5.28E-06		2E-02		5.66E-07		2E-03	
Selenium	5.0E-03	NA	6.63E-01	6.57E-01	2.65E-06		5E-04		2.84E-07		6E-05	
Thallium	8.0E-05	NA	9.97E-01	1.32E+00	3.99E-06		5E-02		4.27E-07		5E-03	
Zinc	3.0E-01	NA	4.01E+02	3.52E+02	1.60E-03		5E-03		1.72E-04		6E-04	
Herbicides												
2,4,5-T	1.0E-02	NA	4.03E-03	4.03E-03	1.61E-08		2E-06		1.73E-09		2E-07	
MCPP	1.0E-03	NA	4.33E+00	4.33E+00	1.73E-05		2E-02		1.86E-06		2E-03	
Total Hazard Quotient and Cancer Risk:							7E-01	8E-06			7E-02	2E-06

Assumptions for Future Day Care Center Child

CS =	EPC Surface Only
IR =	100 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	219 days/year
ED =	3 years
BW =	15 kg
AT (Nc) =	1095 days
AT (Car) =	25550 days

Assumptions for Future Day Care Center Adult

CS =	EPC Surface Only
IR =	50 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	219 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available

TABLE I-8
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Soil, from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Current Site Worker Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker Absorbed Dose (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics											Contact to Onsite Soils Not Applicable for Future Industrial Worker		
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	NA	6.39E-03	6.30E-03								
Acetone	1.0E-01	NA	NA	6.56E-03	7.28E-03								
Butanone, 2-	6.0E-01	NA	NA		5.00E-03								
Benzene	2.9E-03	3.1E-02	NA	5.00E-03	5.00E-03								
Carbon Disulfide	6.3E-02	NA	NA	2.00E-03	2.00E-03								
Chloroform	1.0E-02	6.1E-03	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.9E-02	7.7E-03	NA	3.00E-03	3.00E-03								
Toluene	2.0E-01	NA	NA	6.47E-03	6.28E-03								
Xylene (total)	1.8E+00	NA	NA	4.25E-03	4.25E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	4.55E+00	3.80E+00								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	1.19E+00	1.01E-01								
2-methylnaphthalene	4.0E-02	NA	NA	1.20E+00	4.25E-03								
2-Methylphenol	5.0E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.5E-01	NA	7.68E-01	7.24E-01								
3-nitroaniline	NA	NA	NA	1.87E+00	1.76E+00								
Acenaphthene	6.0E-02	NA	NA	1.52E+00	1.33E+00								
Acenaphthylene	NA	NA	NA	3.05E-01	2.91E-01								
Anthracene	3.0E-01	NA	NA	1.55E+00	1.38E+00								
Benzo(a)anthracene	NA	7.3E-01	NA	2.70E+00	2.46E+00								
Benzo(a)pyrene	NA	1.8E+01	NA	3.40E+00	3.30E+00								
Benzo(b)fluoranthene	NA	7.3E-01	NA	3.61E+00	3.38E+00								
Benzo(g,h,i)perylene	NA	NA	NA	2.29E+00	2.70E+00								
Benzo(k)fluoranthene	NA	7.3E-02	NA	2.31E+00	2.24E+00								
Butylbenzylphthalate	2.0E-01	NA	NA		1.80E-02								
Carbazole	NA	2.0E-02	NA	1.59E+00	1.35E+00								
Chrysene	NA	7.3E-03	NA	2.97E+00	2.77E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	1.70E+00	1.51E+00								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.52E+00	1.49E+00								
Dibenzofuran	NA	NA	NA	1.36E+00	1.17E+00								
Diethylphthalate	8.0E-01	NA	NA	1.90E-02	1.90E-02								
Fluoranthene	4.0E-02	NA	NA	3.84E+00	3.68E+00								
Fluorene	4.0E-02	NA	NA	1.39E+00	1.22E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.38E+00	2.65E+00								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	1.85E+00	1.59E+00								
Naphthalene	4.0E-02	NA	NA	1.56E+00	1.34E+00								
Pentachlorophenol	3.0E-02	1.2E-01	0.01	1.08E+00	1.11E+00	4.90E-08	1.75E-08	2E-06	2E-09				
Phenanthrene	NA	NA	NA	2.98E+00	2.74E+00								
Pyrene	3.0E-02	NA	NA	3.92E+00	3.74E+00								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	1.37E+00	1.76E+00								
Pesticides/PCBs													
4,4'-DDD	NA	1.2E+00	NA	4.88E-03	5.26E-03								
4,4'-DDE	NA	1.7E+00	NA	1.06E-01	8.51E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.89E-02	4.11E-02								
Aldrin	1.5E-05	3.4E+01	NA	1.99E-03	2.23E-03								
Aroclor-1254	1.8E-05	2.2E+00	0.06	5.67E-02	6.00E-02	1.54E-08	5.52E-09	9E-04	1E-08				
Aroclor-1260	1.8E-05	2.2E+00	0.06	6.24E-02	6.51E-02	1.70E-08	6.07E-09	9E-04	1E-08				
Dieldrin	2.5E-05	3.2E+01	NA	3.93E-03	4.65E-03								
Endosulfan I	6.0E-03	NA	NA	9.06E-03	8.65E-03								
Endosulfan II	6.0E-03	NA	NA	3.89E-03	4.34E-03								
Endosulfan sulfate	6.0E-03	NA	NA	3.77E-03	4.23E-03								
Endrin	3.0E-04	NA	NA	4.81E-03	5.23E-03								
Endrin aldehyde	NA	NA	NA	4.41E-03	4.83E-03								
Endrin ketone	NA	NA	NA	4.54E-03	4.96E-03								
Heptachlor	5.0E-04	4.5E+00	NA	1.77E-03	1.70E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	2.17E-03	2.40E-03								
Toxaphene	NA	1.1E+00	NA	1.77E-01	1.70E-01								
alpha-Chlordane	6.0E-05	1.3E+00	NA	5.73E-03	5.57E-03								
beta-BHC	NA	1.8E+00	NA	2.12E-03	2.35E-03								
gamma-BHC (Lindane)	3.0E-04	NA	NA	1.97E-03	2.21E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	5.74E-03	5.60E-03								
delta-BHC	NA	NA	NA	1.97E-03	2.03E-03								
Nitroaromatics													
2-amino-4,6-Dinitrotoluene	NA	NA	NA	9.20E-02	8.79E-02								
Tetryl	1.0E-02	NA	NA	8.79E-02	8.44E-02								
Metals													
Antimony	4.0E-04	NA	NA	4.77E+01	5.12E+01								
Barium	3.5E-03	NA	NA	4.11E+02	3.66E+02								
Copper	2.4E-02	NA	NA	5.85E+02	5.24E+02								
Lead	NA	NA	NA	6.21E+03	7.14E+03								
Mercury	3.0E-06	NA	NA	1.32E+00	1.27E+00								
Selenium	4.5E-03	NA	NA	6.63E-01	6.57E-01								
Thallium	8.0E-05	NA	NA	9.97E-01	1.32E+00								
Zinc	7.5E-02	NA	NA	4.01E+02	3.52E+02								
Herbicides													
2,4,5-T	1.0E-02	NA	NA	4.03E-03	4.03E-03								
MCPP	1.0E-03	NA	NA	4.33E+00	4.33E+00								
Total Hazard Quotient and Cancer Risk:								2E-03	3E-08				

Assumptions for Current Site Worker

CS =	EPC Surface Only	
CF =	1.00E-06	kg/mg
SA =	5800	cm2
AF =	1	mg/cm2
EF =	20	days/year
ED =	25	years
BW =	70	kg
AT (Nc) =	9125	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-8
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Construction Worker Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Trespasser Child Absorbed Dose (mg/kg-day) (Nc)	Future Trespasser Child Absorbed Dose (mg/kg-day) (Car)	Future Trespasser Child Hazard Quotient	Future Trespasser Child Cancer Risk
Volatile Organics													
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	NA	6.39E-03	6.31E-03								
Acetone	1.0E-01	NA	NA	6.56E-03	5.00E-03								
Butanone, 2-	6.0E-01		NA		7.30E-03								
Benzene	2.9E-03	3.1E-02	NA	5.00E-03	5.00E-03								
Carbon Disulfide	6.3E-02	NA	NA	2.00E-03	2.00E-03								
Chloroform	1.0E-02	6.1E-03	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.9E-02	7.7E-03	NA	3.00E-03	3.00E-03								
Toluene	2.0E-01	NA	NA	6.47E-03	6.11E-03								
Xylene (total)	1.8E+00	NA	NA	4.25E-03	4.25E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	4.55E+00	4.02E+00								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	1.19E+00	1.11E+00								
2-methylnaphthalene	4.0E-02	NA	NA	1.20E+00	1.11E+00								
2-Methylphenol	5.0E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.5E-01	NA	7.68E-01	7.44E-01								
3-nitroaniline	NA	NA	NA	1.87E+00	1.81E+00								
Acenaphthene	6.0E-02	NA	NA	1.52E+00	1.39E+00								
Acenaphthylene	NA	NA	NA	3.05E-01	2.94E-01								
Anthracene	3.0E-01	NA	NA	1.55E+00	1.44E+00								
Benzo(a)anthracene	NA	7.3E-01	NA	2.70E+00	2.57E+00								
Benzo(a)pyrene	NA	1.8E+01	NA	3.40E+00	3.49E+00								
Benzo(b)fluoranthene	NA	7.3E-01	NA	3.61E+00	3.56E+00								
Benzo(g,h,i)perylene	NA	NA	NA	2.29E+00	2.82E+00								
Benzo(k)fluoranthene	NA	7.3E-02	NA	2.31E+00	2.35E+00								
Butylbenzylphthalate	2.0E-01	NA	NA		1.80E-02								
Carbazole	NA	2.0E-02	NA	1.59E+00	1.41E+00								
Chrysene	NA	7.3E-03	NA	2.97E+00	2.94E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	1.70E+00	1.57E+00								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.52E+00	1.52E+00								
Dibenzofuran	NA	NA	NA	1.36E+00	1.22E+00								
Diethylphthalate	8.0E-01	NA	NA	1.90E-02	1.90E-02								
Fluoranthene	4.0E-02	NA	NA	3.84E+00	3.92E+00								
Fluorene	4.0E-02	NA	NA	1.39E+00	1.26E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.38E+00	2.75E+00								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	1.85E+00	1.65E+00								
Naphthalene	4.0E-02	NA	NA	1.56E+00	1.40E+00								
Pentachlorophenol	3.0E-02	1.2E-01	0.01	1.08E+00	1.13E+00	6.13E-07	8.76E-09	2E-05	1E-09	1.37E-07	9.77E-09	5E-06	1E-09
Phenanthrene	NA	NA	NA	2.98E+00	2.86E+00								
Pyrene	3.0E-02	NA	NA	3.92E+00	3.98E+00								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	1.37E+00	1.85E+00								
Pesticides/PCBs													
4,4'-DDD	NA	1.2E+00	NA	4.88E-03	5.35E-03								
4,4'-DDE	NA	1.7E+00	NA	1.06E-01	8.90E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.89E-02	4.30E-02								
Aldrin	1.5E-05	3.4E+01	NA	1.99E-03	2.26E-03								
Aroclor-1254	1.8E-05	2.2E+00	0.06	5.67E-02	6.12E-02	1.93E-07	2.76E-09	1E-02	6E-09	4.31E-08	3.08E-09	2E-03	7E-09
Aroclor-1260	1.8E-05	2.2E+00	0.06	6.24E-02	6.64E-02	2.12E-07	3.04E-09	1E-02	7E-09	4.74E-08	3.39E-09	3E-03	8E-09
Dieldrin	2.5E-05	3.2E+01	NA	3.93E-03	4.72E-03								
Endosulfan I	6.0E-03	NA	NA	9.06E-03	8.94E-03								
Endosulfan II	6.0E-03	NA	NA	3.89E-03	4.40E-03								
Endosulfan sulfate	6.0E-03	NA	NA	3.77E-03	4.28E-03								
Endrin	3.0E-04	NA	NA	4.81E-03	5.32E-03								
Endrin aldehyde	NA	NA	NA	4.41E-03	4.86E-03								
Endrin ketone	NA	NA	NA	4.54E-03	5.04E-03								
Heptachlor	5.0E-04	4.5E+00	NA	1.77E-03	1.24E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	2.17E-03	2.43E-03								
Toxaphene	NA	1.1E+00	NA	1.77E-01	1.24E-01								
alpha-Chlordane	6.0E-05	1.3E+00	NA	5.73E-03	5.72E-03								
beta-BHC	NA	1.8E+00	NA	2.12E-03	2.39E-03								
gamma-BHC (Lindane)	3.0E-04	NA	NA	1.97E-03	2.24E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	5.74E-03	5.73E-03								
delta-BHC	NA	NA	NA	1.97E-03									
Nitroaromatics													
2-amino-4,6-Dinitrotoluene	NA	NA	NA	9.20E-02	8.86E-02								
Tetryl	1.0E-02	NA	NA	8.79E-02	8.50E-02								
Metals													
Antimony	4.0E-04	NA	NA	4.77E+01	5.18E+01								
Barium	3.5E-03	NA	NA	4.11E+02	3.79E+02								
Copper	2.4E-02	NA	NA	5.85E+02	5.47E+02								
Lead	NA	NA	NA	6.21E+03	7.45E+03								
Mercury	3.0E-06	NA	NA	1.32E+00	1.34E+00								
Selenium	4.5E-03	NA	NA	6.63E-01	6.38E-01								
Thallium	8.0E-05	NA	NA	9.97E-01	1.36E+00								
Zinc	7.5E-02	NA	NA	4.01E+02	3.61E+02								
Herbicides													
2,4,5-T	1.0E-02	NA	NA	4.03E-03	4.03E-03								
MCPP	1.0E-03	NA	NA	4.33E+00	4.33E+00								
Total Hazard Quotient and Cancer Risk:								**2E-02**	**1E-08**			**5E-03**	**2E-08**

Assumptions for Future Construction Worker

CS =	EPC Surface and Subsurface
CF =	1.00E-06 kg/mg
SA =	5800 cm2
AF =	1 mg/cm2
EF =	250 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CS =	EPC Surface Only
CF =	1.00E-06 kg/mg
SA =	4625 cm2
AF =	1 mg/cm2
EF =	50 days/year
ED =	5 years
BW =	50 kg
AT (Nc) =	1825 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-8
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Soil, from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics													
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	NA	6.39E-03	6.31E-03								
Acetone	1.0E-01	NA	NA	6.56E-03	5.00E-03								
Butanone, 2-	6.0E-01	NA			7.30E-03								
Benzene	2.9E-03	3.1E-02	NA	5.00E-03	5.00E-03								
Carbon Disulfide	6.3E-02	NA	NA	2.00E-03	2.00E-03								
Chloroform	1.0E-02	6.1E-03	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.9E-02	7.7E-03	NA	3.00E-03	3.00E-03								
Toluene	2.0E-01	NA	NA	6.47E-03	6.11E-03								
Xylene (total)	1.8E+00	NA	NA	4.25E-03	4.25E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	4.55E+00	4.02E+00								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	1.19E+00	1.11E+00								
2-methylnaphthalene	4.0E-02	NA	NA	1.20E+00	1.11E+00								
2-Methylphenol	5.0E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.5E-01	NA	7.68E-01	7.44E-01								
3-nitroaniline	NA	NA	NA	1.87E+00	1.81E+00								
Acenaphthene	6.0E-02	NA	NA	1.52E+00	1.39E+00								
Acenaphthylene	NA	NA	NA	3.05E-01	2.94E-01								
Anthracene	3.0E-01	NA	NA	1.55E+00	1.44E+00								
Benzo(a)anthracene	NA	7.3E-01	NA	2.70E+00	2.57E+00								
Benzo(a)pyrene	NA	1.8E+01	NA	3.40E+00	3.49E+00								
Benzo(b)fluoranthene	NA	7.3E-01	NA	3.61E+00	3.56E+00								
Benzo(g,h,i)perylene	NA	NA	NA	2.29E+00	2.82E+00								
Benzo(k)fluoranthene	NA	7.3E-02	NA	2.31E+00	2.35E+00								
Butylbenzylphthalate	2.0E-01	NA	NA		1.80E-02								
Carbazole	NA	2.0E-02	NA	1.59E+00	1.41E+00								
Chrysene	NA	7.3E-03	NA	2.97E+00	2.94E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	1.70E+00	1.57E+00								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.52E+00	1.52E+00								
Dibenzofuran	NA	NA	NA	1.36E+00	1.22E+00								
Diethylphthalate	8.0E-01	NA	NA	1.90E-02	1.90E-02								
Fluoranthene	4.0E-02	NA	NA	3.84E+00	3.92E+00								
Fluorene	4.0E-02	NA	NA	1.39E+00	1.26E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.38E+00	2.75E+00								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	1.85E+00	1.65E+00								
Naphthalene	4.0E-02	NA	NA	1.56E+00	1.40E+00								
Pentachlorophenol	3.0E-02	1.2E-01	0.01	1.08E+00	1.13E+00	1.08E-06	9.26E-08	4E-05	1E-08	6.13E-07	2.19E-07	2E-05	3E-08
Phenanthrene	NA	NA	NA	2.98E+00	2.86E+00								
Pyrene	3.0E-02	NA	NA	3.92E+00	3.98E+00								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	1.37E+00	1.85E+00								
Pesticides/PCBs													
4,4'-DDD	NA	1.2E+00	NA	4.88E-03	5.35E-03								
4,4'-DDE	NA	1.7E+00	NA	1.06E-01	8.90E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.89E-02	4.30E-02								
Aldrin	1.5E-05	3.4E+01	NA	1.99E-03	2.26E-03								
Aroclor-1254	1.8E-05	2.2E+00	0.06	5.67E-02	6.12E-02	3.40E-07	2.92E-08	2E-02	6E-08	1.93E-07	6.90E-08	1E-02	2E-07
Aroclor-1260	1.8E-05	2.2E+00	0.06	6.24E-02	6.64E-02	3.74E-07	3.21E-08	2E-02	7E-08	2.12E-07	7.59E-08	1E-02	2E-07
Dieldrin	2.5E-05	3.2E+01	NA	3.93E-03	4.72E-03								
Endosulfan I	6.0E-03	NA	NA	9.06E-03	8.94E-03								
Endosulfan II	6.0E-03	NA	NA	3.89E-03	4.40E-03								
Endosulfan sulfate	6.0E-03	NA	NA	3.77E-03	4.28E-03								
Endrin	3.0E-04	NA	NA	4.81E-03	5.32E-03								
Endrin aldehyde	NA	NA	NA	4.41E-03	4.86E-03								
Endrin ketone	NA	NA	NA	4.54E-03	5.04E-03								
Heptachlor	5.0E-04	4.5E+00	NA	1.77E-03	1.24E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	2.17E-03	2.43E-03								
Toxaphene	NA	1.1E+00	NA	1.77E-01	1.24E-01								
alpha-Chlordane	6.0E-05	1.3E+00	NA	5.73E-03	5.72E-03								
beta-BHC	NA	1.8E+00	NA	2.12E-03	2.39E-03								
gamma-BHC (Lindane)	3.0E-04	NA	NA	1.97E-03	2.24E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	5.74E-03	5.73E-03								
delta-BHC	NA	NA	NA	1.97E-03									
Nitroaromatics													
2-amino-4,6-Dinitrotoluene	NA	NA	NA	9.20E-02	8.86E-02								
Tetryl	1.0E-02	NA	NA	8.79E-02	8.50E-02								
Metals													
Antimony	4.0E-04	NA	NA	4.77E+01	5.18E+01								
Barium	3.5E-03	NA	NA	4.11E+02	3.79E+02								
Copper	2.4E-02	NA	NA	5.85E+02	5.47E+02								
Lead	NA	NA	NA	6.21E+03	7.45E+03								
Mercury	3.0E-06	NA	NA	1.32E+00	1.34E+00								
Selenium	4.5E-03	NA	NA	6.63E-01	6.38E-01								
Thallium	8.0E-05	NA	NA	9.97E-01	1.36E+00								
Zinc	7.5E-02	NA	NA	4.01E+02	3.61E+02								
Herbicides													
2,4,5-T	1.0E-02	NA	NA	4.03E-03	4.03E-03								
MCPP	1.0E-03	NA	NA	4.33E+00	4.33E+00								
Total Hazard Quotient and Cancer Risk:								**4E-02**	**1E-07**			**2E-02**	**3E-07**

Assumptions for Day Care Center Child		Assumptions for Day Care Center Adult	
CS =	EPC Surface Only	CS =	EPC Surface Only
CF =	1.00E-06 kg/mg	CF =	1.00E-06 kg/mg
SA =	2190 cm2	SA =	5800 cm2
AF =	1 mg/cm2	AF =	1 mg/cm2
EF =	250 days/year	EF =	250 days/year
ED =	6 years	ED =	25 years
BW =	15 kg	BW =	70 kg
AT (Nc) =	2190 days	AT (Nc) =	9125 days
AT (Car) =	25550 days	AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-9
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, Calculated from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor (unitless)	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Current Site Worker Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker Absorbed Dose (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics											Contact to Onsite Soils Not Applicable for Future Industrial Worker		
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	NA	6.39E-03	6.30E-03								
Acetone	1.0E-01	NA	NA	6.56E-03	7.28E-03								
Butanone, 2-	6.0E-01	NA	NA		5.00E-03								
Benzene	2.9E-03	3.1E-02	NA	5.00E-03	5.00E-03								
Carbon Disulfide	6.3E-02	NA	NA	2.00E-03	2.00E-03								
Chloroform	1.0E-02	6.1E-03	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.9E-02	7.7E-03	NA	3.00E-03	3.00E-03								
Toluene	2.0E-01	NA	NA	6.47E-03	6.28E-03								
Xylene (total)	1.8E+00	NA	NA	4.25E-03	4.25E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	4.55E+00	3.80E+00								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	1.19E+00	1.01E-01								
2-methylnaphthalene	4.0E-02	NA	NA	1.20E+00	4.25E-03								
2-Methylphenol	5.0E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.5E-01	NA	7.68E-01	7.24E-01								
3-nitroaniline	NA	NA	NA	1.87E+00	1.76E+00								
Acenaphthene	6.0E-02	NA	NA	1.52E+00	1.33E+00								
Acenaphthylene	NA	NA	NA	3.05E-01	2.91E-01								
Anthracene	3.0E-01	NA	NA	1.55E+00	1.38E+00								
Benzo(a)anthracene	NA	7.3E-01	NA	2.70E+00	2.46E+00								
Benzo(a)pyrene	NA	1.8E+01	NA	3.40E+00	3.30E+00								
Benzo(b)fluoranthene	NA	7.3E-01	NA	3.61E+00	3.38E+00								
Benzo(g,h,i)perylene	NA	NA	NA	2.29E+00	2.70E+00								
Benzo(k)fluoranthene	NA	7.3E-02	NA	2.31E+00	2.24E+00								
Butylbenzylphthalate	2.0E-01	NA	NA		1.80E-02								
Carbazole	NA	2.0E-02	NA	1.59E+00	1.35E+00								
Chrysene	NA	7.3E-03	NA	2.97E+00	2.77E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	1.70E+00	1.51E+00								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.52E+00	1.49E+00								
Dibenzofuran	NA	NA	NA	1.36E+00	1.17E+00								
Diethylphthalate	8.0E-01	NA	NA	1.90E-02	1.90E-02								
Fluoranthene	4.0E-02	NA	NA	3.84E+00	3.68E+00								
Fluorene	4.0E-02	NA	NA	1.39E+00	1.22E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.38E+00	2.65E+00								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	1.85E+00	1.59E+00								
Naphthalene	4.0E-02	NA	NA	1.56E+00	1.34E+00								
Pentachlorophenol	3.0E-02	1.2E-01	0.01	1.08E+00	1.11E+00	4.23E-09	4.23E-10	1E-07	5E-11				
Phenanthrene	NA	NA	NA	2.98E+00	2.74E+00								
Pyrene	3.0E-02	NA	NA	3.92E+00	3.74E+00								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	1.37E+00	1.76E+00								
Pesticides/PCBs													
4,4'-DDD	NA	1.2E+00	NA	4.88E-03	5.26E-03								
4,4'-DDE	NA	1.7E+00	NA	1.06E-01	8.51E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.89E-02	4.11E-02								
Aldrin	1.5E-05	3.4E+01	NA	1.99E-03	2.23E-03								
Aroclor-1254	1.8E-05	2.2E+00	0.06	5.67E-02	6.00E-02	1.33E-09	1.33E-10	7E-05	3E-10				
Aroclor-1260	1.8E-05	2.2E+00	0.06	6.24E-02	6.51E-02	1.47E-09	1.47E-10	8E-05	3E-10				
Dieldrin	2.5E-05	3.2E+01	NA	3.93E-03	4.65E-03								
Endosulfan I	6.0E-03	NA	NA	9.06E-03	8.65E-03								
Endosulfan II	6.0E-03	NA	NA	3.89E-03	4.34E-03								
Endosulfan sulfate	6.0E-03	NA	NA	3.77E-03	4.23E-03								
Endrin	3.0E-04	NA	NA	4.81E-03	5.23E-03								
Endrin aldehyde	NA	NA	NA	4.41E-03	4.83E-03								
Endrin ketone	NA	NA	NA	4.54E-03	4.96E-03								
Heptachlor	5.0E-04	4.5E+00	NA	1.77E-03	1.70E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	2.17E-03	2.40E-03								
Toxaphene	NA	1.1E+00	NA	1.77E-01	1.70E-01								
alpha-Chlordane	6.0E-05	1.3E+00	NA	5.73E-03	5.57E-03								
beta-BHC	NA	1.8E+00	NA	2.12E-03	2.35E-03								
gamma-BHC (Lindane)	3.0E-04	NA	NA	1.97E-03	2.21E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	5.74E-03	5.60E-03								
delta-BHC	NA	NA	NA	1.97E-03	2.03E-03								
Nitroaromatics													
2-amino-4,6-Dinitrotoluene	NA	NA	NA	9.20E-02	8.79E-02								
Tetryl	1.0E-02	NA	NA	8.79E-02	8.44E-02								
Metals			NA										
Antimony	4.0E-04	NA	NA	4.77E+01	5.12E+01								
Barium	3.5E-03	NA	NA	4.11E+02	3.66E+02								
Copper	2.4E-02	NA	NA	5.85E+02	5.24E+02								
Lead	NA	NA	NA	6.21E+03	7.14E+03								
Mercury	3.0E-06	NA	NA	1.32E+00	1.27E+00								
Selenium	4.5E-03	NA	NA	6.63E-01	6.57E-01								
Thallium	8.0E-05	NA	NA	9.97E-01	1.32E+00								
Zinc	7.5E-02	NA	NA	4.01E+02	3.52E+02								
Herbicides													
2,4,5-T	1.0E-02	NA	NA	4.03E-03	4.03E-03								
MCPP	1.0E-03	NA	NA	4.33E+00	4.33E+00								
Total Hazard Quotient and Cancer Risk:								**2E-04**	**7E-10**				

Assumptions for Current Site Worker

CS =	EPC Surface Only
CF =	1.00E-06 kg/mg
SA =	5000 cm2
AF =	0.2 mg/cm2
EF =	10 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-9
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, Calculated from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor (unitless)	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Construction Worker Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Absorbed Dose (mg/kg-day) (Nc)	Future Tresspasser Child Absorbed Dose (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics													
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	NA	6.39E-03	6.31E-03								
Acetone	1.0E-01	NA	NA	6.56E-03	5.00E-03								
Butanone, 2-	6.0E-01	NA	NA		7.30E-03								
Benzene	2.9E-03	3.1E-02	NA	5.00E-03	5.00E-03								
Carbon Disulfide	6.3E-02	NA	NA	2.00E-03	2.00E-03								
Chloroform	1.0E-02	6.1E-03	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.9E-02	7.7E-03	NA	3.00E-03	3.00E-03								
Toluene	2.0E-01	NA	NA	6.47E-03	6.11E-03								
Xylene (total)	1.8E+00	NA	NA	4.25E-03	4.25E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	4.55E+00	4.02E+00								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	1.19E+00	1.11E+00								
2-methylnaphthalene	4.0E-02	NA	NA	1.20E+00	1.11E+00								
2-Methylphenol	5.0E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.5E-01	NA	7.68E-01	7.44E-01								
3-nitroaniline	NA	NA	NA	1.87E+00	1.81E+00								
Acenaphthene	6.0E-02	NA	NA	1.52E+00	1.39E+00								
Acenaphthylene	NA	NA	NA	3.05E-01	2.94E-01								
Anthracene	3.0E-01	NA	NA	1.55E+00	1.44E+00								
Benzo(a)anthracene	NA	7.3E-01	NA	2.70E+00	2.57E+00								
Benzo(a)pyrene	NA	1.8E+01	NA	3.40E+00	3.49E+00								
Benzo(b)fluoranthene	NA	7.3E-01	NA	3.61E+00	3.56E+00								
Benzo(g,h,i)perylene	NA	NA	NA	2.29E+00	2.82E+00								
Benzo(k)fluoranthene	NA	7.3E-02	NA	2.31E+00	2.35E+00								
Butylbenzylphthalate	2.0E-01	NA	NA		1.80E-02								
Carbazole	NA	2.0E-02	NA	1.59E+00	1.41E+00								
Chrysene	NA	7.3E-03	NA	2.97E+00	2.94E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	1.70E+00	1.57E+00								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.52E+00	1.52E+00								
Dibenzofuran	NA	NA	NA	1.36E+00	1.22E+00								
Diethylphthalate	8.0E-01	NA	NA	1.90E-02	1.90E-02								
Fluoranthene	4.0E-02	NA	NA	3.84E+00	3.92E+00								
Fluorene	4.0E-02	NA	NA	1.39E+00	1.26E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.38E+00	2.75E+00								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	1.85E+00	1.65E+00								
Naphthalene	4.0E-02	NA	NA	1.56E+00	1.40E+00								
Pentachlorophenol	3.0E-02	1.2E-01	0.01	1.08E+00	1.13E+00	9.26E-08	1.32E-09	3E-06	2E-10	1.10E-08	1.57E-10	4E-07	2E-11
Phenanthrene	NA	NA	NA	2.98E+00	2.86E+00								
Pyrene	3.0E-02	NA	NA	3.92E+00	3.98E+00								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	1.37E+00	1.85E+00								
Pesticides/PCBs													
4,4'-DDD	NA	1.2E+00	NA	4.88E-03	5.35E-03								
4,4'-DDE	NA	1.7E+00	NA	1.06E-01	8.90E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.89E-02	4.30E-02								
Aldrin	1.5E-05	3.4E+01	NA	1.99E-03	2.26E-03								
Aroclor-1254	1.8E-05	2.2E+00	0.06	5.67E-02	6.12E-02	3.15E-08	4.50E-10	2E-03	1E-09	3.47E-09	4.96E-11	2E-04	1E-10
Aroclor-1260	1.8E-05	2.2E+00	0.06	6.24E-02	6.64E-02	3.41E-08	4.88E-10	2E-03	1E-09	3.82E-09	5.46E-11	2E-04	1E-10
Dieldrin	2.5E-05	3.2E+01	NA	3.93E-03	4.72E-03								
Endosulfan I	6.0E-03	NA	NA	9.06E-03	8.94E-03								
Endosulfan II	6.0E-03	NA	NA	3.89E-03	4.40E-03								
Endosulfan sulfate	6.0E-03	NA	NA	3.77E-03	4.28E-03								
Endrin	3.0E-04	NA	NA	4.81E-03	5.32E-03								
Endrin aldehyde	NA	NA	NA	4.41E-03	4.86E-03								
Endrin ketone	NA	NA	NA	4.54E-03	5.04E-03								
Heptachlor	5.0E-04	4.5E+00	NA	1.77E-03	1.24E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	2.17E-03	2.43E-03								
Toxaphene	NA	1.1E+00	NA	1.77E-01	1.24E-01								
alpha-Chlordane	6.0E-05	1.3E+00	NA	5.73E-03	5.72E-03								
beta-BHC	NA	1.8E+00	NA	2.12E-03	2.39E-03								
gamma-BHC (Lindane)	3.0E-04	NA	NA	1.97E-03	2.24E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	5.74E-03	5.73E-03								
delta-BHC	NA	NA	NA	1.97E-03									
Nitroaromatics													
2-amino-4,6-Dinitrotoluene	NA	NA	NA	9.20E-02	8.86E-02								
Tetryl	1.0E-02	NA	NA	8.79E-02	8.50E-02								
Metals													
Antimony	4.0E-04	NA	NA	4.77E+01	5.18E+01								
Barium	3.5E-03	NA	NA	4.11E+02	3.79E+02								
Copper	2.4E-02	NA	NA	5.85E+02	5.47E+02								
Lead	NA	NA	NA	6.21E+03	7.45E+03								
Mercury	3.0E-06	NA	NA	1.32E+00	1.34E+00								
Selenium	4.5E-03	NA	NA	6.63E-01	6.38E-01								
Thallium	8.0E-05	NA	NA	9.97E-01	1.36E+00								
Zinc	7.5E-02	NA	NA	4.01E+02	3.61E+02								
Herbicides													
2,4,5-T	1.0E-02	NA	NA	4.03E-03	4.03E-03								
MCPP	1.0E-03	NA	NA	4.33E+00	4.33E+00								
Total Hazard Quotient and Cancer Risk:								**4E-03**	**2E-09**			**4E-04**	**3E-10**

Assumptions for Future Construction Worker

CS =	EPC Surface and Subsurface
CF =	1.00E-06 kg/mg
SA =	5000 cm2
AF =	0.2 mg/cm2
EF =	219 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CS =	EPC Surface Only
CF =	1.00E-06 kg/mg
SA =	3725 cm2
AF =	0.2 mg/cm2
EF =	25 days/year
ED =	1 years
BW =	50 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-9
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Soil, Calculated from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor (unitless)	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics													
1,1,2,2,-Tetrachloroethane	NA	2.0E-01	NA	6.39E-03	6.31E-03								
Acetone	1.0E-01	NA	NA	6.56E-03	5.00E-03								
Butanone, 2-	6.0E-01	NA	NA		7.30E-03								
Benzene	2.9E-03	3.1E-02	NA	5.00E-03	5.00E-03								
Carbon Disulfide	6.3E-02	NA	NA	2.00E-03	2.00E-03								
Chloroform	1.0E-02	6.1E-03	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.9E-02	7.7E-03	NA	3.00E-03	3.00E-03								
Toluene	2.0E-01	NA	NA	6.47E-03	6.11E-03								
Xylene (total)	1.8E+00	NA	NA	4.25E-03	4.25E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	4.55E+00	4.02E+00								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	1.19E+00	1.11E+00								
2-methylnaphthalene	4.0E-02	NA	NA	1.20E+00	1.11E+00								
2-Methylphenol	5.0E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.5E-01	NA	7.68E-01	7.44E-01								
3-nitroaniline	NA	NA	NA	1.87E+00	1.81E+00								
Acenaphthene	6.0E-02	NA	NA	1.52E+00	1.39E+00								
Acenaphthylene	NA	NA	NA	3.05E-01	2.94E-01								
Anthracene	3.0E-01	NA	NA	1.55E+00	1.44E+00								
Benzo(a)anthracene	NA	7.3E-01	NA	2.70E+00	2.57E+00								
Benzo(a)pyrene	NA	1.8E+01	NA	3.40E+00	3.49E+00								
Benzo(b)fluoranthene	NA	7.3E-01	NA	3.61E+00	3.56E+00								
Benzo(g,h,i)perylene	NA	NA	NA	2.29E+00	2.82E+00								
Benzo(k)fluoranthene	NA	7.3E-02	NA	2.31E+00	2.35E+00								
Butylbenzylphthalate	2.0E-01	NA	NA		1.80E-02								
Carbazole	NA	2.0E-02	NA	1.59E+00	1.41E+00								
Chrysene	NA	7.3E-03	NA	2.97E+00	2.94E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	1.70E+00	1.57E+00								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.52E+00	1.52E+00								
Dibenzofuran	NA	NA	NA	1.36E+00	1.22E+00								
Diethylphthalate	8.0E-01	NA	NA	1.90E-02	1.90E-02								
Fluoranthene	4.0E-02	NA	NA	3.84E+00	3.92E+00								
Fluorene	4.0E-02	NA	NA	1.39E+00	1.26E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.38E+00	2.75E+00								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	1.85E+00	1.65E+00								
Naphthalene	4.0E-02	NA	NA	1.56E+00	1.40E+00								
Pentachlorophenol	3.0E-02	1.2E-01	0.01	1.08E+00	1.13E+00	1.57E-07	6.74E-09	5E-06	8E-10	9.26E-08	9.26E-09	3E-06	1E-09
Phenanthrene	NA	NA	NA	2.98E+00	2.86E+00								
Pyrene	3.0E-02	NA	NA	3.92E+00	3.98E+00								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	1.37E+00	1.85E+00								
Pesticides/PCBs													
4,4'-DDD	NA	1.2E+00	NA	4.88E-03	5.35E-03								
4,4'-DDE	NA	1.7E+00	NA	1.06E-01	8.90E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.89E-02	4.30E-02								
Aldrin	1.5E-05	3.4E+01	NA	1.99E-03	2.26E-03								
Aroclor-1254	1.8E-05	2.2E+00	0.06	5.67E-02	6.12E-02	4.95E-08	2.12E-09	3E-03	5E-09	2.92E-08	2.92E-09	2E-03	6E-09
Aroclor-1260	1.8E-05	2.2E+00	0.06	6.24E-02	6.64E-02	5.45E-08	2.34E-09	3E-03	5E-09	3.21E-08	3.21E-09	2E-03	7E-09
Dieldrin	2.5E-05	3.2E+01	NA	3.93E-03	4.72E-03								
Endosulfan I	6.0E-03	NA	NA	9.06E-03	8.94E-03								
Endosulfan II	6.0E-03	NA	NA	3.89E-03	4.40E-03								
Endosulfan sulfate	6.0E-03	NA	NA	3.77E-03	4.28E-03								
Endrin	3.0E-04	NA	NA	4.81E-03	5.32E-03								
Endrin aldehyde	NA	NA	NA	4.41E-03	4.86E-03								
Endrin ketone	NA	NA	NA	4.54E-03	5.04E-03								
Heptachlor	5.0E-04	4.5E+00	NA	1.77E-03	1.24E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	2.17E-03	2.43E-03								
Toxaphene	NA	1.1E+00	NA	1.77E-01	1.24E-01								
alpha-Chlordane	6.0E-05	1.3E+00	NA	5.73E-03	5.72E-03								
beta-BHC	NA	1.8E+00	NA	2.12E-03	2.39E-03								
gamma-BHC (Lindane)	3.0E-04	NA	NA	1.97E-03	2.24E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	5.74E-03	5.73E-03								
delta-BHC	NA	NA	NA	1.97E-03									
Nitroaromatics													
2-amino-4,6-Dinitrotoluene	NA	NA	NA	9.20E-02	8.86E-02								
Tetryl	1.0E-02	NA	NA	8.79E-02	8.50E-02								
Metals													
Antimony	4.0E-04	NA	NA	4.77E+01	5.18E+01								
Barium	3.5E-03	NA	NA	4.11E+02	3.79E+02								
Copper	2.4E-02	NA	NA	5.85E+02	5.47E+02								
Lead	NA	NA	NA	6.21E+03	7.45E+03								
Mercury	3.0E-06	NA	NA	1.32E+00	1.34E+00								
Selenium	4.5E-03	NA	NA	6.63E-01	6.38E-01								
Thallium	8.0E-05	NA	NA	9.97E-01	1.36E+00								
Zinc	7.5E-02	NA	NA	4.01E+02	3.61E+02								
Herbicides													
2,4,5-T	1.0E-02	NA	NA	4.03E-03	4.03E-03								
MCPP	1.0E-03	NA	NA	4.33E+00	4.33E+00								
Total Hazard Quotient and Cancer Risk:								**6E-03**	**1E-08**			**3E-03**	**1E-08**

Assumptions for Day Care Center Child

CS =	EPC Surface Only
CF =	1.00E-06 kg/mg
SA =	1820 cm2
AF =	0.2 mg/cm2
EF =	219 days/year
ED =	3 years
BW =	15 kg
AT (Nc) =	1095 days
AT (Car) =	25550 days

Assumptions for Day Care Center Adult

CS =	EPC Surface Only
CF =	1.00E-06 kg/mg
SA =	5000 cm2
AF =	0.2 mg/cm2
EF =	219 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern

TABLE I-10
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF INDOOR DUST/DIRT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Solids (mg/kg)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics											
1,1,1-Trichloroethane	2.0E-02	NA	6.27E-03		Ingestion of Indoor Dust/Dirt Not Applicable for Current Site Worker			6.13E-09		3E-07	
Methylene Chloride	6.0E-02	7.5E-03	6.27E-03					6.13E-09	2.19E-09	1E-07	2E-11
Toluene	2.0E-01	NA	1.31E-02					1.28E-08		6E-08	
Trichloroethene	NA	1.1E-02	1.13E-02						3.96E-09		4E-11
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	1.90E+04					1.86E-02	6.64E-03	9E+00	5E-03
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.40E+01					7.24E-05	2.59E-05	7E-02	2E-05
2-Methylnaphthalene	4.0E-02	NA	1.90E+01					1.86E-05		5E-04	
Acenaphthene	6.0E-02	NA	4.50E+00					4.40E-06		7E-05	
Anthracene	3.0E-01	NA	2.90E+00					2.84E-06		9E-06	
Benzo(a)anthracene	NA	7.3E-01	1.60E+00						5.59E-07		4E-07
Benzo(a)pyrene	NA	7.3E+00	1.50E+00						5.24E-07		4E-06
Benzo(b)fluoranthene	NA	7.3E-01	1.60E+00						5.59E-07		4E-07
Benzo(g,h,i)perylene	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.3E-02	1.60E+00						5.59E-07		4E-08
Butylbenzylphthalate	2.0E-01	NA	5.40E+01					5.28E-05		3E-04	
Carbazole	NA	2.0E-02	4.33E-01						1.51E-07		3E-09
Chrysene	NA	7.3E-03	1.90E+00						6.64E-07		5E-09
Di-n-butylphthalate	1.0E-01	NA	9.50E+02					9.30E-04		9E-03	
Dibenz(a,h)anthracene	NA	7.3E+00	3.69E-01						1.29E-07		9E-07
Dibenzofuran	NA	NA	1.50E+00								
Diethylphthalate	8.0E-01	NA	3.80E-01					3.72E-07		5E-07	
Fluoranthene	4.0E-02	NA	3.90E+00					3.82E-06		1E-04	
Fluorene	4.0E-02	NA	6.10E+00					5.97E-06		1E-04	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.17E-01						1.11E-07		8E-08
N-Nitrosodiphenylamine (1)	NA	4.9E-03	2.00E+02						6.99E-05		3E-07
Naphthalene	4.0E-02	NA	1.60E+00					1.57E-06		4E-05	
Pentachlorophenol	3.0E-02	1.2E-01	2.20E-01					2.15E-07	7.69E-08	7E-06	9E-09
Phenanthrene	NA	NA	2.20E+01								
Phenol	6.0E-01	NA	3.70E+01					3.62E-05		6E-05	
Pyrene	3.0E-02	NA	5.00E+00					4.89E-06		2E-04	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	5.00E+00					4.89E-06	1.75E-06	2E-04	2E-08
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	3.01E-02						1.05E-08		3E-09
4,4'-DDE	NA	3.4E-01	7.50E-01						2.62E-07		9E-08
4,4'-DDT	5.0E-04	3.4E-01	9.40E-01					9.20E-07	3.28E-07	2E-03	1E-07
Aroclor-1254	2.0E-05	2.0E+00	1.40E+00					1.37E-06	4.89E-07	7E-02	1E-06
Aroclor-1260	2.0E-05	2.0E+00	4.51E-01					4.42E-07	1.58E-07	2E-02	3E-07
Dieldrin	5.0E-05	1.6E+01	1.82E-02					1.78E-08	6.37E-09	4E-04	1E-07
Endosulfan I	6.0E-03	NA	1.78E-02					1.74E-08		3E-06	
Endosulfan II	6.0E-03	NA	4.99E-03					4.89E-09		8E-07	
Endrin	3.0E-04	NA	6.02E-03					5.89E-09		2E-05	
Heptachlor epoxide	1.3E-05	9.1E+00	2.45E-03					2.40E-09	8.56E-10	2E-04	8E-09
alpha-BHC	NA	6.3E+00	2.82E-03						9.85E-10		6E-09
alpha-Chlordane	6.0E-05	1.3E+00	4.07E-02					3.98E-08	1.42E-08	7E-04	2E-08
gamma-BHC (Lindane)	3.0E-04	1.3E+00	9.30E-04					9.10E-10	3.25E-10	3E-06	4E-10
gamma-Chlordane	6.0E-05	1.3E+00	3.27E-02					3.20E-08	1.14E-08	5E-04	1E-08
Nitroaromatics											
2,4,6-Trinitrotoluene	5.0E-04	3.0E-02	1.02E-01					9.99E-08	3.57E-08	2E-04	1E-09
Metals											
Antimony	4.0E-04	NA	1.56E+03					1.53E-03		4E+00	
Arsenic	3.0E-04	1.5E+00	3.73E+01					3.65E-05	1.30E-05	1E-01	2E-05
Barium	7.0E-02	NA	4.05E+04					3.96E-02		6E-01	
Cadmium	5.0E-04	NA	1.27E+02					1.24E-04		2E-01	
Copper	4.0E-02	NA	8.14E+04					7.96E-02		2E+00	
Cyanide	2.0E-02	NA	2.42E+01					2.37E-05		1E-03	
Lead	NA	NA	5.27E+05								
Mercury	3.0E-04	NA	3.93E+01					3.85E-05		1E-01	
Selenium	5.0E-03	NA	5.80E+00					5.68E-06		1E-03	
Silver	5.0E-03	NA	2.27E+01					2.22E-05		4E-03	
Sodium	NA	NA	3.69E+03								
Thallium	8.0E-05	NA	8.97E-01					8.77E-07		1E-02	
Zinc	3.0E-01	NA	4.26E+04					4.17E-02		1E-01	
Herbicides											
2,4,5-T	1.0E-02	NA	8.01E-03					7.84E-09		8E-07	
2,4,5-TP (Silvex)	8.0E-03	NA	5.82E-03					5.69E-09		7E-07	
2,4-D	1.0E-02	NA	9.29E-02					9.09E-08		9E-06	
2,4-DB	8.0E-03	NA	8.65E-02					8.46E-08		1E-05	
Dichloroprop	NA	NA	5.34E-02								
MCPA	5.0E-04	NA	5.90E+00					5.77E-06		1E-02	
MCPP	1.0E-03	NA	1.28E+01					1.25E-05		1E-02	
Total Hazard Quotient and Cancer Risk:										**2E+01**	**5E-03**

Assumptions for Future Industrial Worker

IR =	100	mg solid/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	250	days/year
ED =	25	years
BW =	70	kg
AT (Nc) =	9125	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-10
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF INDOOR DUST/DIRT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Solids (mg/kg)	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Intake (mg/kg-day) (Nc)	Future Tresspasser Child Intake (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics											
1,1,1-Trichloroethane	2.0E-02	NA	6.27E-03		Ingestion of Indoor Dust/Dirt Not Applicable for Future Construction Worker				Ingestion of Indoor Dust/Dirt Not Applicable for Future Tresspasser Child		
Methylene Chloride	6.0E-02	7.5E-03	6.27E-03								
Toluene	2.0E-01	NA	1.31E-02								
Trichloroethene	NA	1.1E-02	1.13E-02								
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	1.90E+04								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.40E+01								
2-Methylnaphthalene	4.0E-02	NA	1.90E+01								
Acenaphthene	6.0E-02	NA	4.50E+00								
Anthracene	3.0E-01	NA	2.90E+00								
Benzo(a)anthracene	NA	7.3E-01	1.60E+00								
Benzo(a)pyrene	NA	7.3E+00	1.50E+00								
Benzo(b)fluoranthene	NA	7.3E-01	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.3E-02	1.60E+00								
Butylbenzylphthalate	2.0E-01	NA	5.40E+01								
Carbazole	NA	2.0E-02	4.33E-01								
Chrysene	NA	7.3E-03	1.90E+00								
Di-n-butylphthalate	1.0E-01	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.3E+00	3.69E-01								
Dibenzofuran	NA	NA	1.50E+00								
Diethylphthalate	8.0E-01	NA	3.80E-01								
Fluoranthene	4.0E-02	NA	3.90E+00								
Fluorene	4.0E-02	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	2.00E+02								
Naphthalene	4.0E-02	NA	1.60E+00								
Pentachlorophenol	3.0E-02	1.2E-01	2.20E-01								
Phenanthrene	NA	NA	2.20E+01								
Phenol	6.0E-01	NA	3.70E+01								
Pyrene	3.0E-02	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	5.00E+00								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	3.01E-02								
4,4'-DDE	NA	3.4E-01	7.50E-01								
4,4'-DDT	5.0E-04	3.4E-01	9.40E-01								
Aroclor-1254	2.0E-05	2.0E+00	1.40E+00								
Aroclor-1260	2.0E-05	2.0E+00	4.51E-01								
Dieldrin	5.0E-05	1.6E+01	1.82E-02								
Endosulfan I	6.0E-03	NA	1.78E-02								
Endosulfan II	6.0E-03	NA	4.99E-03								
Endrin	3.0E-04	NA	6.02E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	2.45E-03								
alpha-BHC	NA	6.3E+00	2.82E-03								
alpha-Chlordane	6.0E-05	1.3E+00	4.07E-02								
gamma-BHC (Lindane)	3.0E-04	1.3E+00	9.30E-04								
gamma-Chlordane	6.0E-05	1.3E+00	3.27E-02								
Nitroaromatics											
2,4,6-Trinitrotoluene	5.0E-04	3.0E-02	1.02E-01								
Metals											
Antimony	4.0E-04	NA	1.56E+03								
Arsenic	3.0E-04	1.5E+00	3.73E+01								
Barium	7.0E-02	NA	4.05E+04								
Cadmium	5.0E-04	NA	1.27E+02								
Copper	4.0E-02	NA	8.14E+04								
Cyanide	2.0E-02	NA	2.42E+01								
Lead	NA	NA	5.27E+05								
Mercury	3.0E-04	NA	3.93E+01								
Selenium	5.0E-03	NA	5.80E+00								
Silver	5.0E-03	NA	2.27E+01								
Sodium	NA	NA	3.69E+03								
Thallium	8.0E-05	NA	8.97E-01								
Zinc	3.0E-01	NA	4.26E+04								
Herbicides											
2,4,5-T	1.0E-02	NA	8.01E-03								
2,4,5-TP (Silvex)	8.0E-03	NA	5.82E-03								
2,4-D	1.0E-02	NA	9.29E-02								
2,4-DB	8.0E-03	NA	8.65E-02								
Dichloroprop	NA	NA	5.34E-02								
MCPA	5.0E-04	NA	5.90E+00								
MCPP	1.0E-03	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available

TABLE I-10
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF INDOOR DUST/DIRT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Solids (mg/kg)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics											
1,1,1-Trichloroethane	2.0E-02	NA	6.27E-03		Ingestion of Indoor Dust/Dirt Not Applicable for Future Day Care Center Child				Ingestion of Indoor Dust/Dirt Not Applicable for Future Day Care Center Adult		
Methylene Chloride	6.0E-02	7.5E-03	6.27E-03								
Toluene	2.0E-01	NA	1.31E-02								
Trichloroethene	NA	1.1E-02	1.13E-02								
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	1.90E+04								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.40E+01								
2-Methylnaphthalene	4.0E-02	NA	1.90E+01								
Acenaphthene	6.0E-02	NA	4.50E+00								
Anthracene	3.0E-01	NA	2.90E+00								
Benzo(a)anthracene	NA	7.3E-01	1.60E+00								
Benzo(a)pyrene	NA	7.3E+00	1.50E+00								
Benzo(b)fluoranthene	NA	7.3E-01	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.3E-02	1.60E+00								
Butylbenzylphthalate	2.0E-01	NA	5.40E+01								
Carbazole	NA	2.0E-02	4.33E-01								
Chrysene	NA	7.3E-03	1.90E+00								
Di-n-butylphthalate	1.0E-01	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.3E+00	3.69E-01								
Dibenzofuran	NA	NA	1.50E+00								
Diethylphthalate	8.0E-01	NA	3.80E-01								
Fluoranthene	4.0E-02	NA	3.90E+00								
Fluorene	4.0E-02	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	2.00E+02								
Naphthalene	4.0E-02	NA	1.60E+00								
Pentachlorophenol	3.0E-02	1.2E-01	2.20E-01								
Phenanthrene	NA	NA	2.20E+01								
Phenol	6.0E-01	NA	3.70E+01								
Pyrene	3.0E-02	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	5.00E+00								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	3.01E-02								
4,4'-DDE	NA	3.4E-01	7.50E-01								
4,4'-DDT	5.0E-04	3.4E-01	9.40E-01								
Aroclor-1254	2.0E-05	2.0E+00	1.40E+00								
Aroclor-1260	2.0E-05	2.0E+00	4.51E-01								
Dieldrin	5.0E-05	1.6E+01	1.82E-02								
Endosulfan I	6.0E-03	NA	1.78E-02								
Endosulfan II	6.0E-03	NA	4.99E-03								
Endrin	3.0E-04	NA	6.02E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	2.45E-03								
alpha-BHC	NA	6.3E+00	2.82E-03								
alpha-Chlordane	6.0E-05	1.3E+00	4.07E-02								
gamma-BHC (Lindane)	3.0E-04	1.3E+00	9.30E-04								
gamma-Chlordane	6.0E-05	1.3E+00	3.27E-02								
Nitroaromatics											
2,4,6-Trinitrotoluene	5.0E-04	3.0E-02	1.02E-01								
Metals											
Antimony	4.0E-04	NA	1.56E+03								
Arsenic	3.0E-04	1.5E+00	3.73E+01								
Barium	7.0E-02	NA	4.05E+04								
Cadmium	5.0E-04	NA	1.27E+02								
Copper	4.0E-02	NA	8.14E+04								
Cyanide	2.0E-02	NA	2.42E+01								
Lead	NA	NA	5.27E+05								
Mercury	3.0E-04	NA	3.93E+01								
Selenium	5.0E-03	NA	5.80E+00								
Silver	5.0E-03	NA	2.27E+01								
Sodium	NA	NA	3.69E+03								
Thallium	8.0E-05	NA	8.97E-01								
Zinc	3.0E-01	NA	4.26E+04								
Herbicides											
2,4,5-T	1.0E-02	NA	8.01E-03								
2,4,5-TP (Silvex)	8.0E-03	NA	5.82E-03								
2,4-D	1.0E-02	NA	9.29E-02								
2,4-DB	8.0E-03	NA	8.65E-02								
Dichloroprop	NA	NA	5.34E-02								
MCPA	5.0E-04	NA	5.90E+00								
MCPP	1.0E-03	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-11
CALCULATION OF INTAKE AND RISK FROM INGESTION OF INDOOR DUST/DIRT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Solids (mg/kg)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics											
1,1,1-Trichloroethane	2.0E-02	NA	6.27E-03		Ingestion of Indoor Dust/Dirt Not Applicable for Current Site Worker			2.69E-09		1E-07	
Methylene Chloride	6.0E-02	7.5E-03	6.27E-03					2.69E-09	2.69E-10	4E-08	2E-12
Toluene	2.0E-01	NA	1.31E-02					5.62E-09		3E-08	
Trichloroethene	NA	1.1E-02	1.13E-02						4.86E-10		5E-12
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	1.90E+04					8.14E-03	8.14E-04	4E+00	6E-04
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.40E+01					3.17E-05	3.17E-06	3E-02	2E-06
2-Methylnaphthalene	4.0E-02	NA	1.90E+01					8.14E-06		2E-04	
Acenaphthene	6.0E-02	NA	4.50E+00					1.93E-06		3E-05	
Anthracene	3.0E-01	NA	2.90E+00					1.24E-06		4E-06	
Benzo(a)anthracene	NA	7.3E-01	1.60E+00						6.86E-08		5E-08
Benzo(a)pyrene	NA	7.3E+00	1.50E+00						6.43E-08		5E-07
Benzo(b)fluoranthene	NA	7.3E-01	1.60E+00						6.86E-08		5E-08
Benzo(g,h,i)perylene	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.3E-02	1.60E+00						6.86E-08		5E-09
Butylbenzylphthalate	2.0E-01	NA	5.40E+01					2.31E-05		1E-04	
Carbazole	NA	2.0E-02	4.33E-01						1.86E-08		4E-10
Chrysene	NA	7.3E-03	1.90E+00						8.14E-08		6E-10
Di-n-butylphthalate	1.0E-01	NA	9.50E+02					4.07E-04		4E-03	
Dibenz(a,h)anthracene	NA	7.3E+00	3.69E-01						1.58E-08		1E-07
Dibenzofuran	NA	NA	1.50E+00								
Diethylphthalate	8.0E-01	NA	3.80E-01					1.63E-07		2E-07	
Fluoranthene	4.0E-02	NA	3.90E+00					1.67E-06		4E-05	
Fluorene	4.0E-02	NA	6.10E+00					2.61E-06		7E-05	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.17E-01						1.36E-08		1E-08
N-Nitrosodiphenylamine (1)	NA	4.9E-03	2.00E+02						8.57E-06		4E-08
Naphthalene	4.0E-02	NA	1.60E+00					6.86E-07		2E-05	
Pentachlorophenol	3.0E-02	1.2E-01	2.20E-01					9.43E-08	9.43E-09	3E-06	1E-09
Phenanthrene	NA	NA	2.20E+01								
Phenol	6.0E-01	NA	3.70E+01					1.59E-05		3E-05	
Pyrene	3.0E-02	NA	5.00E+00					2.14E-06		7E-05	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	5.00E+00					2.14E-06	2.14E-07	1E-04	3E-09
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	3.01E-02						1.29E-09		3E-10
4,4'-DDE	NA	3.4E-01	7.50E-01						3.21E-08		1E-08
4,4'-DDT	5.0E-04	3.4E-01	9.40E-01					4.03E-07	4.03E-08	8E-04	1E-08
Aroclor-1254	2.0E-05	2.0E+00	1.40E+00					6.00E-07	6.00E-08	3E-02	1E-07
Aroclor-1260	2.0E-05	2.0E+00	4.51E-01					1.93E-07	1.93E-08	1E-02	4E-08
Dieldrin	5.0E-05	1.6E+01	1.82E-02					7.81E-09	7.81E-10	2E-04	1E-08
Endosulfan I	6.0E-03	NA	1.78E-02					7.61E-09		1E-06	
Endosulfan II	6.0E-03	NA	4.99E-03					2.14E-09		4E-07	
Endrin	3.0E-04	NA	6.02E-03					2.58E-09		9E-06	
Heptachlor epoxide	1.3E-05	9.1E+00	2.45E-03					1.05E-09	1.05E-10	8E-05	1E-09
alpha-BHC	NA	6.3E+00	2.82E-03						1.21E-10		8E-10
alpha-Chlordane	6.0E-05	1.3E+00	4.07E-02					1.74E-08	1.74E-09	3E-04	2E-09
gamma-BHC (Lindane)	3.0E-04	1.3E+00	9.30E-04					3.99E-10	3.99E-11	1E-06	5E-11
gamma-Chlordane	6.0E-05	1.3E+00	3.27E-02					1.40E-08	1.40E-09	2E-04	2E-09
Nitroaromatics											
2,4,6-Trinitrotoluene	5.0E-04	3.0E-02	1.02E-01					4.38E-08	4.38E-09	9E-05	1E-10
Metals											
Antimony	4.0E-04	NA	1.56E+03					6.69E-04		2E+00	
Arsenic	3.0E-04	1.5E+00	3.73E+01					1.60E-05	1.60E-06	5E-02	2E-06
Barium	7.0E-02	NA	4.05E+04					1.74E-02		2E-01	
Cadmium	5.0E-04	NA	1.27E+02					5.44E-05		1E-01	
Copper	4.0E-02	NA	8.14E+04					3.49E-02		9E-01	
Cyanide	2.0E-02	NA	2.42E+01					1.04E-05		5E-04	
Lead	NA	NA	5.27E+05								
Mercury	3.0E-04	NA	3.93E+01					1.68E-05		6E-02	
Selenium	5.0E-03	NA	5.80E+00					2.49E-06		5E-04	
Silver	5.0E-03	NA	2.27E+01					9.73E-06		2E-03	
Sodium	NA	NA	3.69E+03								
Thallium	8.0E-05	NA	8.97E-01					3.84E-07		5E-03	
Zinc	3.0E-01	NA	4.26E+04					1.83E-02		6E-02	
Herbicides											
2,4,5-T	1.0E-02	NA	8.01E-03					3.43E-09		3E-07	
2,4,5-TP (Silvex)	8.0E-03	NA	5.82E-03					2.49E-09		3E-07	
2,4-D	1.0E-02	NA	9.29E-02					3.98E-08		4E-06	
2,4-DB	8.0E-03	NA	8.65E-02					3.71E-08		5E-06	
Dichloroprop	NA	NA	5.34E-02								
MCPA	5.0E-04	NA	5.90E+00					2.53E-06		5E-03	
MCPP	1.0E-03	NA	1.28E+01					5.49E-06		5E-03	
Total Hazard Quotient and Cancer Risk:										**7E+00**	**6E-04**

Assumptions for Future Industrial Worker

IR =	50	mg solid/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	219	days/year
ED =	7	years
BW =	70	kg
AT (Nc) =	2555	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-11
CALCULATION OF INTAKE AND RISK FROM INGESTION OF INDOOR DUST/DIRT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Solids (mg/kg)	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Intake (mg/kg-day) (Nc)	Future Tresspasser Child Intake (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics											
1,1,1-Trichloroethane	2.0E-02	NA	6.27E-03		Ingestion of Indoor Dust/Dirt Not Applicable for Future Construction Worker				Ingestion of Indoor Dust/Dirt Not Applicable for Future Tresspasser Child		
Methylene Chloride	6.0E-02	7.5E-03	6.27E-03								
Toluene	2.0E-01	NA	1.31E-02								
Trichloroethene	NA	1.1E-02	1.13E-02								
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	1.90E+04								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.40E+01								
2-Methylnaphthalene	4.0E-02	NA	1.90E+01								
Acenaphthene	6.0E-02	NA	4.50E+00								
Anthracene	3.0E-01	NA	2.90E+00								
Benzo(a)anthracene	NA	7.3E-01	1.60E+00								
Benzo(a)pyrene	NA	7.3E+00	1.50E+00								
Benzo(b)fluoranthene	NA	7.3E-01	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.3E-02	1.60E+00								
Butylbenzylphthalate	2.0E-01	NA	5.40E+01								
Carbazole	NA	2.0E-02	4.33E-01								
Chrysene	NA	7.3E-03	1.90E+00								
Di-n-butylphthalate	1.0E-01	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.3E+00	3.69E-01								
Dibenzofuran	NA	NA	1.50E+00								
Diethylphthalate	8.0E-01	NA	3.80E-01								
Fluoranthene	4.0E-02	NA	3.90E+00								
Fluorene	4.0E-02	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	2.00E+02								
Naphthalene	4.0E-02	NA	1.60E+00								
Pentachlorophenol	3.0E-02	1.2E-01	2.20E-01								
Phenanthrene	NA	NA	2.20E+01								
Phenol	6.0E-01	NA	3.70E+01								
Pyrene	3.0E-02	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	5.00E+00								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	3.01E-02								
4,4'-DDE	NA	3.4E-01	7.50E-01								
4,4'-DDT	5.0E-04	3.4E-01	9.40E-01								
Aroclor-1254	2.0E-05	2.0E+00	1.40E+00								
Aroclor-1260	2.0E-05	2.0E+00	4.51E-01								
Dieldrin	5.0E-05	1.6E+01	1.82E-02								
Endosulfan I	6.0E-03	NA	1.78E-02								
Endosulfan II	6.0E-03	NA	4.99E-03								
Endrin	3.0E-04	NA	6.02E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	2.45E-03								
alpha-BHC	NA	6.3E+00	2.82E-03								
alpha-Chlordane	6.0E-05	1.3E+00	4.07E-02								
gamma-BHC (Lindane)	3.0E-04	1.3E+00	9.30E-04								
gamma-Chlordane	6.0E-05	1.3E+00	3.27E-02								
Nitroaromatics											
2,4,6-Trinitrotoluene	5.0E-04	3.0E-02	1.02E-01								
Metals											
Antimony	4.0E-04	NA	1.56E+03								
Arsenic	3.0E-04	1.5E+00	3.73E+01								
Barium	7.0E-02	NA	4.05E+04								
Cadmium	5.0E-04	NA	1.27E+02								
Copper	4.0E-02	NA	8.14E+04								
Cyanide	2.0E-02	NA	2.42E+01								
Lead	NA	NA	5.27E+05								
Mercury	3.0E-04	NA	3.93E+01								
Selenium	5.0E-03	NA	5.80E+00								
Silver	5.0E-03	NA	2.27E+01								
Sodium	NA	NA	3.69E+03								
Thallium	8.0E-05	NA	8.97E-01								
Zinc	3.0E-01	NA	4.26E+04								
Herbicides											
2,4,5-T	1.0E-02	NA	8.01E-03								
2,4,5-TP (Silvex)	8.0E-03	NA	5.82E-03								
2,4-D	1.0E-02	NA	9.29E-02								
2,4-DB	8.0E-03	NA	8.65E-02								
Dichloroprop	NA	NA	5.34E-02								
MCPA	5.0E-04	NA	5.90E+00								
MCPP	1.0E-03	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-11
CALCULATION OF INTAKE AND RISK FROM INGESTION OF INDOOR DUST/DIRT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, from EPC Solids Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Solids (mg/kg)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics											
1,1,1-Trichloroethane	2.0E-02	NA	6.27E-03		Ingestion of Indoor Dust/Dirt Not Applicable for Future Day Care Center Child				Ingestion of Indoor Dust/Dirt Not Applicable for Future Day Care Center Worker		
Methylene Chloride	6.0E-02	7.5E-03	6.27E-03								
Toluene	2.0E-01	NA	1.31E-02								
Trichloroethene	NA	1.1E-02	1.13E-02								
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	1.90E+04								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.40E+01								
2-Methylnaphthalene	4.0E-02	NA	1.90E+01								
Acenaphthene	6.0E-02	NA	4.50E+00								
Anthracene	3.0E-01	NA	2.90E+00								
Benzo(a)anthracene	NA	7.3E-01	1.60E+00								
Benzo(a)pyrene	NA	7.3E+00	1.50E+00								
Benzo(b)fluoranthene	NA	7.3E-01	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.3E-02	1.60E+00								
Butylbenzylphthalate	2.0E-01	NA	5.40E+01								
Carbazole	NA	2.0E-02	4.33E-01								
Chrysene	NA	7.3E-03	1.90E+00								
Di-n-butylphthalate	1.0E-01	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.3E+00	3.69E-01								
Dibenzofuran	NA	NA	1.50E+00								
Diethylphthalate	8.0E-01	NA	3.80E-01								
Fluoranthene	4.0E-02	NA	3.90E+00								
Fluorene	4.0E-02	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	2.00E+02								
Naphthalene	4.0E-02	NA	1.60E+00								
Pentachlorophenol	3.0E-02	1.2E-01	2.20E-01								
Phenanthrene	NA	NA	2.20E+01								
Phenol	6.0E-01	NA	3.70E+01								
Pyrene	3.0E-02	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	5.00E+00								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	3.01E-02								
4,4'-DDE	NA	3.4E-01	7.50E-01								
4,4'-DDT	5.0E-04	3.4E-01	9.40E-01								
Aroclor-1254	2.0E-05	2.0E+00	1.40E+00								
Aroclor-1260	2.0E-05	2.0E+00	4.51E-01								
Dieldrin	5.0E-05	1.6E+01	1.82E-02								
Endosulfan I	6.0E-03	NA	1.78E-02								
Endosulfan II	6.0E-03	NA	4.99E-03								
Endrin	3.0E-04	NA	6.02E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	2.45E-03								
alpha-BHC	NA	6.3E+00	2.82E-03								
alpha-Chlordane	6.0E-05	1.3E+00	4.07E-02								
gamma-BHC (Lindane)	3.0E-04	1.3E+00	9.30E-04								
gamma-Chlordane	6.0E-05	1.3E+00	3.27E-02								
Nitroaromatics											
2,4,6-Trinitrotoluene	5.0E-04	3.0E-02	1.02E-01								
Metals											
Antimony	4.0E-04	NA	1.56E+03								
Arsenic	3.0E-04	1.5E+00	3.73E+01								
Barium	7.0E-02	NA	4.05E+04								
Cadmium	5.0E-04	NA	1.27E+02								
Copper	4.0E-02	NA	8.14E+04								
Cyanide	2.0E-02	NA	2.42E+01								
Lead	NA	NA	5.27E+05								
Mercury	3.0E-04	NA	3.93E+01								
Selenium	5.0E-03	NA	5.80E+00								
Silver	5.0E-03	NA	2.27E+01								
Sodium	NA	NA	3.69E+03								
Thallium	8.0E-05	NA	8.97E-01								
Zinc	3.0E-01	NA	4.26E+04								
Herbicides											
2,4,5-T	1.0E-02	NA	8.01E-03								
2,4,5-TP (Silvex)	8.0E-03	NA	5.82E-03								
2,4-D	1.0E-02	NA	9.29E-02								
2,4-DB	8.0E-03	NA	8.65E-02								
Dichloroprop	NA	NA	5.34E-02								
MCPA	5.0E-04	NA	5.90E+00								
MCPP	1.0E-03	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-12
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO INDOOR DUST/DIRT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Absorbed Dose (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Air, from EPC Solids Data
CF = Conversion Factor
SA = Surface Area
AF = Soil to Skin Adherence Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Solids (mg/kg)	Current Site Worker: Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker: Absorbed Dose (mg/kg-day) (Car)	Current Site Worker: Hazard Quotient	Current Site Worker: Cancer Risk	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker: Hazard Quotient	Future Industrial Worker: Cancer Risk
Volatile Organics												
1,1,1-Trichloroethane	2.0E-02	NA	NA	6.27E-03		Dermal Contact to Indoor Dust/Dirt Not Applicable for Current Site Worker						
Methylene Chloride	5.9E-02	7.7E-03	NA	6.27E-03								
Toluene	2.0E-01	NA	NA	1.31E-02								
Trichloroethene	NA	1.2E-02	NA	1.13E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.00E+03								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	7.40E+01								
2-Methylnaphthalene	4.0E-02	NA	NA	1.90E+01								
Acenaphthene	6.0E-02	NA	NA	4.50E+00								
Anthracene	3.0E-01	NA	NA	2.90E+00								
Benzo(a)anthracene	NA	7.3E-01	NA	1.60E+00								
Benzo(a)pyrene	NA	1.8E+01	NA	1.50E+00								
Benzo(b)fluoranthene	NA	7.3E-01	NA	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	1.60E+00								
Butylbenzylphthalate	2.0E-01	NA	NA	5.40E+01								
Carbazole	NA	2.0E-02	NA	4.33E-01								
Chrysene	NA	7.3E-03	NA	1.90E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	3.69E-01								
Dibenzofuran	NA	NA	NA	1.50E+00								
Diethylphthalate	8.0E-01	NA	NA	3.80E-01								
Fluoranthene	4.0E-02	NA	NA	3.90E+00								
Fluorene	4.0E-02	NA	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	2.00E+02								
Naphthalene	4.0E-02	NA	NA	1.60E+00								
Pentachlorophenol	3.0E-02	1.2E-01	0.010	2.20E-01					1.25E-07	4.46E-08	4E-06	5E-09
Phenanthrene	NA	NA	NA	2.20E+01								
Phenol	5.4E-01	NA	NA	3.70E+01								
Pyrene	3.0E-02	NA	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	5.00E+00								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	3.01E-02								
4,4'-DDE	NA	1.7E+00	NA	7.50E-01								
4,4'-DDT	1.0E-04	1.7E+00	NA	9.40E-01								
Aroclor-1254	1.8E-05	2.2E+00	0.060	1.40E+00					4.77E-06	1.70E-06	3E-01	4E-06
Aroclor-1260	1.8E-05	2.2E+00	0.060	4.51E-01					1.54E-06	5.49E-07	9E-02	1E-06
Dieldrin	2.5E-05	3.2E+01	NA	1.82E-02								
Endosulfan I	6.0E-03	NA	NA	1.78E-02								
Endosulfan II	6.0E-03	NA	NA	4.99E-03								
Endrin	3.0E-04	NA	NA	6.02E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	2.45E-03								
alpha-BHC	NA	NA	NA	2.82E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	4.07E-02								
gamma-BHC (Lindane)	3.0E-04	NA	NA	9.30E-04								
gamma-Chlordane	6.0E-05	1.3E+00	NA	3.27E-02								
Nitroaromatics												
2,4,6-Trinitrotoluene	5.0E-04	3.0E-02	NA	1.02E-01								
Metals												
Antimony	4.0E-04	NA	NA	1.56E+03								
Arsenic	2.4E-04	1.9E+00	0.001	3.73E+01					2.12E-06	7.56E-07	9E-03	1E-06
Barium	3.5E-03	NA	NA	4.05E+04								
Cadmium	5.0E-05	NA	0.010	1.27E+02					7.21E-05		1E+00	
Copper	2.4E-02	NA	NA	8.14E+04								
Cyanide	1.0E-02	NA	NA	2.42E+01								
Lead	NA	NA	NA	5.27E+05								
Mercury	3.0E-06	NA	NA	3.93E+01								
Selenium	4.5E-03	NA	NA	5.80E+00								
Silver	1.0E-03	NA	NA	2.27E+01								
Sodium	NA	NA	NA	3.69E+03								
Thallium	8.0E-05	NA	NA	8.97E-01								
Zinc	7.5E-02	NA	NA	4.26E+04								
Herbicides												
2,4,5-T	1.0E-02	NA	NA	8.01E-03								
2,4,5-TP (Silvex)	8.0E-03	NA	NA	5.82E-03								
2,4-D	1.0E-02	NA	NA	9.29E-02								
2,4-DB	8.0E-03	NA	NA	8.65E-02								
Dichloroprop	NA	NA	NA	5.34E-02								
MCPA	5.0E-04	NA	NA	5.90E+00								
MCPP	1.0E-03	NA	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:											2E+00	6E-06

Assumptions for Future Industrial Worker

CF =	1E-06	kg/mg
SA =	5800	cm2
AF =	1	mg/cm2
EF =	250	days/year
ED =	25	years
BW =	70	kg
AT (Nc) =	9125	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-12
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO INDOOR DUST/DIRT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Absorbed Dose (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Air, from EPC Solids Data
CF = Conversion Factor
SA = Surface Area
AF = Soil to Skin Adherence Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Solids (mg/kg)	Future Construction Worker Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Absorbed Dose (mg/kg-day) (Nc)	Future Tresspasser Child Absorbed Dose (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics						Dermal Contact to Indoor Dust/Dirt Not Applicable for Future Construction Worker				Dermal Contact to Indoor Dust/Dirt Not Applicable for Future Tresspasser Child		
1,1,1-Trichloroethane	2.0E-02	NA	NA	6.27E-03								
Methylene Chloride	5.9E-02	7.7E-03	NA	6.27E-03								
Toluene	2.0E-01	NA	NA	1.31E-02								
Trichloroethene	NA	1.2E-02	NA	1.13E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.00E+03								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	7.40E+01								
2-Methylnaphthalene	4.0E-02	NA	NA	1.90E+01								
Acenaphthene	6.0E-02	NA	NA	4.50E+00								
Anthracene	3.0E-01	NA	NA	2.90E+00								
Benzo(a)anthracene	NA	7.3E-01	NA	1.60E+00								
Benzo(a)pyrene	NA	1.8E+01	NA	1.50E+00								
Benzo(b)fluoranthene	NA	7.3E-01	NA	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	1.60E+00								
Butylbenzylphthalate	2.0E-01	NA	NA	5.40E+01								
Carbazole	NA	2.0E-02	NA	4.33E-01								
Chrysene	NA	7.3E-03	NA	1.90E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	3.69E-01								
Dibenzofuran	NA	NA	NA	1.50E+00								
Diethylphthalate	8.0E-01	NA	NA	3.80E-01								
Fluoranthene	4.0E-02	NA	NA	3.90E+00								
Fluorene	4.0E-02	NA	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	2.00E+02								
Naphthalene	4.0E-02	NA	NA	1.60E+00								
Pentachlorophenol	3.0E-02	1.2E-01	0.010	2.20E-01								
Phenanthrene	NA	NA	NA	2.20E+01								
Phenol	5.4E-01	NA	NA	3.70E+01								
Pyrene	3.0E-02	NA	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	5.00E+00								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	3.01E-02								
4,4'-DDE	NA	1.7E+00	NA	7.50E-01								
4,4'-DDT	1.0E-04	1.7E+00	NA	9.40E-01								
Aroclor-1254	1.8E-05	2.2E+00	0.060	1.40E+00								
Aroclor-1260	1.8E-05	2.2E+00	0.060	4.51E-01								
Dieldrin	2.5E-05	3.2E+01	NA	1.82E-02								
Endosulfan I	6.0E-03	NA	NA	1.78E-02								
Endosulfan II	6.0E-03	NA	NA	4.99E-03								
Endrin	3.0E-04	NA	NA	6.02E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	2.45E-03								
alpha-BHC	NA	NA	NA	2.82E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	4.07E-02								
gamma-BHC (Lindane)	3.0E-04	NA	NA	9.30E-04								
gamma-Chlordane	6.0E-05	1.3E+00	NA	3.27E-02								
Nitroaromatics												
2,4,6-Trinitrotoluene	5.0E-04	3.0E-02		1.02E-01								
Metals												
Antimony	4.0E-04	NA	NA	1.56E+03								
Arsenic	2.4E-04	1.9E+00	0.001	3.73E+01								
Barium	3.5E-03	NA	NA	4.05E+04								
Cadmium	5.0E-05	NA	0.010	1.27E+02								
Copper	2.4E-02	NA	NA	8.14E+04								
Cyanide	1.0E-02	NA	NA	2.42E+01								
Lead	NA	NA	NA	5.27E+05								
Mercury	3.0E-06	NA	NA	3.93E+01								
Selenium	4.5E-03	NA	NA	5.80E+00								
Silver	1.0E-03	NA	NA	2.27E+01								
Sodium	NA	NA	NA	3.69E+03								
Thallium	8.0E-05	NA	NA	8.97E-01								
Zinc	7.5E-02	NA	NA	4.26E+04								
Herbicides												
2,4,5-T	1.0E-02	NA	NA	8.01E-03								
2,4,5-TP (Silvex)	8.0E-03	NA	NA	5.82E-03								
2,4-D	1.0E-02	NA	NA	9.29E-02								
2,4-DB	8.0E-03	NA	NA	8.65E-02								
Dichloroprop	NA	NA	NA	5.34E-02								
MCPA	5.0E-04	NA	NA	5.90E+00								
MCPP	1.0E-03	NA	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-12
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO INDOOR DUST/DIRT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Absorbed Dose (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Air, from EPC Solids Data
CF = Conversion Factor
SA = Surface Area
AF = Soil to Skin Adherence Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Solids (mg/kg)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
1,1,1-Trichloroethane	2.0E-02	NA	NA	6.27E-03		Dermal Contact to Indoor Dust/Dirt Not Applicable for Future Day Care Center Child				Dermal Contact to Indoor Dust/Dirt Not Applicable for Future Day Care Center Worker		
Methylene Chloride	5.9E-02	7.7E-03	NA	6.27E-03								
Toluene	2.0E-01	NA	NA	1.31E-02								
Trichloroethene	NA	1.2E-02	NA	1.13E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.00E+03								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	7.40E+01								
2-Methylnaphthalene	4.0E-02	NA	NA	1.90E+01								
Acenaphthene	6.0E-02	NA	NA	4.50E+00								
Anthracene	3.0E-01	NA	NA	2.90E+00								
Benzo(a)anthracene	NA	7.3E-01	NA	1.60E+00								
Benzo(a)pyrene	NA	1.8E+01	NA	1.50E+00								
Benzo(b)fluoranthene	NA	7.3E-01	NA	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	1.60E+00								
Butylbenzylphthalate	2.0E-01	NA	NA	5.40E+01								
Carbazole	NA	2.0E-02	NA	4.33E-01								
Chrysene	NA	7.3E-03	NA	1.90E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	3.69E-01								
Dibenzofuran	NA	NA	NA	1.50E+00								
Diethylphthalate	8.0E-01	NA	NA	3.80E-01								
Fluoranthene	4.0E-02	NA	NA	3.90E+00								
Fluorene	4.0E-02	NA	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	2.00E+02								
Naphthalene	4.0E-02	NA	NA	1.60E+00								
Pentachlorophenol	3.0E-02	1.2E-01	0.010	2.20E-01								
Phenanthrene	NA	NA	NA	2.20E+01								
Phenol	5.4E-01	NA	NA	3.70E+01								
Pyrene	3.0E-02	NA	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	5.00E+00								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	3.01E-02								
4,4'-DDE	NA	1.7E+00	NA	7.50E-01								
4,4'-DDT	1.0E-04	1.7E+00	NA	9.40E-01								
Aroclor-1254	1.8E-05	2.2E+00	0.060	1.40E+00								
Aroclor-1260	1.8E-05	2.2E+00	0.060	4.51E-01								
Dieldrin	2.5E-05	3.2E+01	NA	1.82E-02								
Endosulfan I	6.0E-03	NA	NA	1.78E-02								
Endosulfan II	6.0E-03	NA	NA	4.99E-03								
Endrin	3.0E-04	NA	NA	6.02E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	2.45E-03								
alpha-BHC	NA	NA	NA	2.82E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	4.07E-02								
gamma-BHC (Lindane)	3.0E-04	NA	NA	9.30E-04								
gamma-Chlordane	6.0E-05	1.3E+00	NA	3.27E-02								
Nitroaromatics												
2,4,6-Trinitrotoluene	5.0E-04	3.0E-02	NA	1.02E-01								
Metals												
Antimony	4.0E-04	NA	NA	1.56E+03								
Arsenic	2.4E-04	1.9E+00	0.001	3.73E+01								
Barium	3.5E-03	NA	NA	4.05E+04								
Cadmium	5.0E-05	NA	0.010	1.27E+02								
Copper	2.4E-02	NA	NA	8.14E+04								
Cyanide	1.0E-02	NA	NA	2.42E+01								
Lead	NA	NA	NA	5.27E+05								
Mercury	3.0E-06	NA	NA	3.93E+01								
Selenium	4.5E-03	NA	NA	5.80E+00								
Silver	1.0E-03	NA	NA	2.27E+01								
Sodium	NA	NA	NA	3.69E+03								
Thallium	8.0E-05	NA	NA	8.97E-01								
Zinc	7.5E-02	NA	NA	4.26E+04								
Herbicides												
2,4,5-T	1.0E-02	NA	NA	8.01E-03								
2,4,5-TP (Silvex)	8.0E-03	NA	NA	5.82E-03								
2,4-D	1.0E-02	NA	NA	9.29E-02								
2,4-DB	8.0E-03	NA	NA	8.65E-02								
Dichloroprop	NA	NA	NA	5.34E-02								
MCPA	5.0E-04	NA	NA	5.90E+00								
MCPP	1.0E-03	NA	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-13
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO INDOOR DUST/DIRT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Absorbed Dose (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Air, from EPC Solids Data
CF = Conversion Factor
SA = Surface Area
AF = Soil to Skin Adherence Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Solids (mg/kg)	Current Site Worker Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker Absorbed Dose (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
1,1,1-Trichloroethane	2.00E-02	NA	NA	6.27E-03		Dermal Contact to Indoor Dust/Dirt Not Applicable for Current Site Worker						
Methylene Chloride	5.88E-02	7.65E-03	NA	6.27E-03								
Toluene	2.00E-01	NA	NA	1.31E-02								
Trichloroethene	NA	1.22E-02	NA	1.13E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.00E-03	6.80E-01	NA	3.00E+03								
2,6-Dinitrotoluene	1.00E-03	6.80E-01	NA	7.40E+01								
2-Methylnaphthalene	4.00E-02	NA	NA	1.90E+01								
Acenaphthene	6.00E-02	NA	NA	4.50E+00								
Anthracene	3.00E-01	NA	NA	2.90E+00								
Benzo(a)anthracene	NA	7.30E-01	NA	1.60E+00								
Benzo(a)pyrene	NA	1.83E+01	NA	1.50E+00								
Benzo(b)fluoranthene	NA	7.30E-01	NA	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.30E-02	NA	1.60E+00								
Butylbenzylphthalate	2.00E-01	NA	NA	5.40E+01								
Carbazole	NA	2.00E-02	NA	4.33E-01								
Chrysene	NA	7.30E-03	NA	1.90E+00								
Di-n-butylphthalate	9.00E-02	NA	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.30E+00	NA	3.69E-01								
Dibenzofuran	NA	NA	NA	1.50E+00								
Diethylphthalate	8.00E-01	NA	NA	3.80E-01								
Fluoranthene	4.00E-02	NA	NA	3.90E+00								
Fluorene	4.00E-02	NA	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.30E-01	NA	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.90E-03	NA	2.00E+02								
Naphthalene	4.00E-02	NA	NA	1.60E+00								
Pentachlorophenol	3.00E-02	1.20E-01	0.010	2.20E-01					1.89E-08	1.89E-09	6E-07	2E-10
Phenanthrene	NA	NA	NA	2.20E+01								
Phenol	5.40E-01	NA	NA	3.70E+01								
Pyrene	3.00E-02	NA	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	1.00E-02	2.80E-02	NA	5.00E+00								
Pesticides/PCBs												
4,4'-DDD	NA	1.20E+00	NA	3.01E-02								
4,4'-DDE	NA	1.70E+00	NA	7.50E-01								
4,4'-DDT	1.00E-04	1.70E+00	NA	9.40E-01								
Aroclor-1254	1.80E-05	2.22E+00	0.060	1.40E+00					7.20E-07	7.20E-08	4E-02	2E-07
Aroclor-1260	1.80E-05	2.22E+00	0.060	4.51E-01					2.32E-07	2.32E-08	1E-02	5E-08
Dieldrin	2.50E-05	3.20E+01	NA	1.82E-02								
Endosulfan I	6.00E-03	NA	NA	1.78E-02								
Endosulfan II	6.00E-03	NA	NA	4.99E-03								
Endrin	3.00E-04	NA	NA	6.02E-03								
Heptachlor epoxide	1.30E-05	9.10E+00	NA	2.45E-03								
alpha-BHC	NA	NA	NA	2.82E-03								
alpha-Chlordane	6.00E-05	1.30E+00	NA	4.07E-02								
gamma-BHC (Lindane)	3.00E-04	NA	NA	9.30E-04								
gamma-Chlordane	6.00E-05	1.30E+00	NA	3.27E-02								
Nitroaromatics												
2,4,6-Trinitrotoluene	5.00E-04	3.00E-02	NA	1.02E-01								
Metals												
Antimony	4.00E-04	NA	NA	1.56E+03								
Arsenic	2.40E-04	1.88E+00	0.001	3.73E+01					3.19E-07	3.19E-08	1E-03	6E-08
Barium	3.50E-03	NA	NA	4.05E+04								
Cadmium	5.00E-05	NA	0.010	1.27E+02					1.09E-05		2E-01	
Copper	2.40E-02	NA	NA	8.14E+04								
Cyanide	1.00E-02	NA	NA	2.42E+01								
Lead	NA	NA	NA	5.27E+05								
Mercury	3.00E-06	NA	NA	3.93E+01								
Selenium	4.50E-03	NA	NA	5.80E+00								
Silver	1.00E-03	NA	NA	2.27E+01								
Sodium	NA	NA	NA	3.69E+03								
Thallium	8.00E-05	NA	NA	8.97E-01								
Zinc	7.50E-02	NA	NA	4.26E+04								
Herbicides												
2,4,5-T	1.00E-02	NA	NA	8.01E-03								
2,4,5-TP (Silvex)	8.00E-03	NA	NA	5.82E-03								
2,4-D	1.00E-02	NA	NA	9.29E-02								
2,4-DB	8.00E-03	NA	NA	8.65E-02								
Dichloroprop	NA	NA	NA	5.34E-02								
MCPA	5.00E-04	NA	NA	5.90E+00								
MCPP	1.00E-03	NA	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:											**3E-01**	**3E-07**

Assumptions for Future Industrial Worker

CF =	1E-06	kg/mg
SA =	5000	cm2
AF =	0.2	mg/cm2
EF =	219	days/year
ED =	7	years
BW =	70	kg
AT (Nc) =	2555	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-13
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO INDOOR DUST/DIRT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Absorbed Dose (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Air, from EPC Solids Data
CF = Conversion Factor
SA = Surface Area
AF = Soil to Skin Adherence Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Solids (mg/kg)	Future Construction Worker Absorbed Dose (mg/kg-day) (Nc)	(Car)	Hazard Quotient	Cancer Risk	Future Tresspasser Child Absorbed Dose (mg/kg-day) (Nc)	(Car)	Hazard Quotient	Cancer Risk
Volatile Organics					Dermal Contact to Indoor Dust/Dirt Not Applicable for Future Construction Worker				Dermal Contact to Indoor Dust/Dirt Not Applicable for Future Tresspasser Child			
1,1,1-Trichloroethane	2.00E-02	NA	NA	6.27E-03								
Methylene Chloride	5.88E-02	7.65E-03	NA	6.27E-03								
Toluene	2.00E-01	NA	NA	1.31E-02								
Trichloroethene	NA	1.22E-02	NA	1.13E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.00E-03	6.80E-01	NA	3.00E+03								
2,6-Dinitrotoluene	1.00E-03	6.80E-01	NA	7.40E+01								
2-Methylnaphthalene	4.00E-02	NA	NA	1.90E+01								
Acenaphthene	6.00E-02	NA	NA	4.50E+00								
Anthracene	3.00E-01	NA	NA	2.90E+00								
Benzo(a)anthracene	NA	7.30E-01	NA	1.60E+00								
Benzo(a)pyrene	NA	1.83E+01	NA	1.50E+00								
Benzo(b)fluoranthene	NA	7.30E-01	NA	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.30E-02	NA	1.60E+00								
Butylbenzylphthalate	2.00E-01	NA	NA	5.40E+01								
Carbazole	NA	2.00E-02	NA	4.33E-01								
Chrysene	NA	7.30E-03	NA	1.90E+00								
Di-n-butylphthalate	9.00E-02	NA	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.30E+00	NA	3.69E-01								
Dibenzofuran	NA	NA	NA	1.50E+00								
Diethylphthalate	8.00E-01	NA	NA	3.80E-01								
Fluoranthene	4.00E-02	NA	NA	3.90E+00								
Fluorene	4.00E-02	NA	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.30E-01	NA	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.90E-03	NA	2.00E+02								
Naphthalene	4.00E-02	NA	NA	1.60E+00								
Pentachlorophenol	3.00E-02	1.20E-01	0.010	2.20E-01								
Phenanthrene	NA	NA	NA	2.20E+01								
Phenol	5.40E-01	NA	NA	3.70E+01								
Pyrene	3.00E-02	NA	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	1.00E-02	2.80E-02	NA	5.00E+00								
Pesticides/PCBs												
4,4'-DDD	NA	1.20E+00	NA	3.01E-02								
4,4'-DDE	NA	1.70E+00	NA	7.50E-01								
4,4'-DDT	1.00E-04	1.70E+00	NA	9.40E-01								
Aroclor-1254	1.80E-05	2.22E+00	0.060	1.40E+00								
Aroclor-1260	1.80E-05	2.22E+00	0.060	4.51E-01								
Dieldrin	2.50E-05	3.20E+01	NA	1.82E-02								
Endosulfan I	6.00E-03	NA	NA	1.78E-02								
Endosulfan II	6.00E-03	NA	NA	4.99E-03								
Endrin	3.00E-04	NA	NA	6.02E-03								
Heptachlor epoxide	1.30E-05	9.10E+00	NA	2.45E-03								
alpha-BHC	NA	NA	NA	2.82E-03								
alpha-Chlordane	6.00E-05	1.30E+00	NA	4.07E-02								
gamma-BHC (Lindane)	3.00E-04	NA	NA	9.30E-04								
gamma-Chlordane	6.00E-05	1.30E+00	NA	3.27E-02								
Nitroaromatics												
2,4,6-Trinitrotoluene	5.00E-04	3.00E-02	NA	1.02E-01								
Metals												
Antimony	4.00E-04	NA	NA	1.56E+03								
Arsenic	2.40E-04	1.88E+00	0.001	3.73E+01								
Barium	3.50E-03	NA	NA	4.05E+04								
Cadmium	5.00E-05	NA	0.010	1.27E+02								
Copper	2.40E-02	NA	NA	8.14E+04								
Cyanide	1.00E-02	NA	NA	2.42E+01								
Lead	NA	NA	NA	5.27E+05								
Mercury	3.00E-06	NA	NA	3.93E+01								
Selenium	4.50E-03	NA	NA	5.80E+00								
Silver	1.00E-03	NA	NA	2.27E+01								
Sodium	NA	NA	NA	3.69E+03								
Thallium	8.00E-05	NA	NA	8.97E-01								
Zinc	7.50E-02	NA	NA	4.26E+04								
Herbicides												
2,4,5-T	1.00E-02	NA	NA	8.01E-03								
2,4,5-TP (Silvex)	8.00E-03	NA	NA	5.82E-03								
2,4-D	1.00E-02	NA	NA	9.29E-02								
2,4-DB	8.00E-03	NA	NA	8.65E-02								
Dichloroprop	NA	NA	NA	5.34E-02								
MCPA	5.00E-04	NA	NA	5.90E+00								
MCPP	1.00E-03	NA	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-13
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO INDOOR DUST/DIRT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Absorbed Dose (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Air, from EPC Solids Data
CF = Conversion Factor
SA = Surface Area
AF = Soil to Skin Adherence Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	Absorption Factor*	EPC Solids	Future Day Care Center Child				Future Day Care Center Adult			
					Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(unitless)	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics						Dermal Contact to Indoor Dust/Dirt Not Applicable for Future Day Care Center Child				Dermal Contact to Indoor Dust/Dirt Not Applicable for Future Day Care Center Worker		
1,1,1-Trichloroethane	2.00E-02	NA	NA	6.27E-03								
Methylene Chloride	5.88E-02	7.65E-03	NA	6.27E-03								
Toluene	2.00E-01	NA	NA	1.31E-02								
Trichloroethene	NA	1.22E-02	NA	1.13E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.00E-03	6.80E-01	NA	3.00E+03								
2,6-Dinitrotoluene	1.00E-03	6.80E-01	NA	7.40E+01								
2-Methylnaphthalene	4.00E-02	NA	NA	1.90E+01								
Acenaphthene	6.00E-02	NA	NA	4.50E+00								
Anthracene	3.00E-01	NA	NA	2.90E+00								
Benzo(a)anthracene	NA	7.30E-01	NA	1.60E+00								
Benzo(a)pyrene	NA	1.83E+01	NA	1.50E+00								
Benzo(b)fluoranthene	NA	7.30E-01	NA	1.60E+00								
Benzo(g,h,i)perylene	NA	NA	NA	8.05E-01								
Benzo(k)fluoranthene	NA	7.30E-02	NA	1.60E+00								
Butylbenzylphthalate	2.00E-01	NA	NA	5.40E+01								
Carbazole	NA	2.00E-02	NA	4.33E-01								
Chrysene	NA	7.30E-03	NA	1.90E+00								
Di-n-butylphthalate	9.00E-02	NA	NA	9.50E+02								
Dibenz(a,h)anthracene	NA	7.30E+00	NA	3.69E-01								
Dibenzofuran	NA	NA	NA	1.50E+00								
Diethylphthalate	8.00E-01	NA	NA	3.80E-01								
Fluoranthene	4.00E-02	NA	NA	3.90E+00								
Fluorene	4.00E-02	NA	NA	6.10E+00								
Indeno(1,2,3-cd)pyrene	NA	7.30E-01	NA	3.17E-01								
N-Nitrosodiphenylamine (1)	NA	4.90E-03	NA	2.00E+02								
Naphthalene	4.00E-02	NA	NA	1.60E+00								
Pentachlorophenol	3.00E-02	1.20E-01	0.010	2.20E-01								
Phenanthrene	NA	NA	NA	2.20E+01								
Phenol	5.40E-01	NA	NA	3.70E+01								
Pyrene	3.00E-02	NA	NA	5.00E+00								
bis(2-Ethylhexyl)phthalate	1.00E-02	2.80E-02	NA	5.00E+00								
Pesticides/PCBs												
4,4'-DDD	NA	1.20E+00	NA	3.01E-02								
4,4'-DDE	NA	1.70E+00	NA	7.50E-01								
4,4'-DDT	1.00E-04	1.70E+00	NA	9.40E-01								
Aroclor-1254	1.80E-05	2.22E+00	0.060	1.40E+00								
Aroclor-1260	1.80E-05	2.22E+00	0.060	4.51E-01								
Dieldrin	2.50E-05	3.20E+01	NA	1.82E-02								
Endosulfan I	6.00E-03	NA	NA	1.78E-02								
Endosulfan II	6.00E-03	NA	NA	4.99E-03								
Endrin	3.00E-04	NA	NA	6.02E-03								
Heptachlor epoxide	1.30E-05	9.10E+00	NA	2.45E-03								
alpha-BHC	NA	NA	NA	2.82E-03								
alpha-Chlordane	6.00E-05	1.30E+00	NA	4.07E-02								
gamma-BHC (Lindane)	3.00E-04	NA	NA	9.30E-04								
gamma-Chlordane	6.00E-05	1.30E+00	NA	3.27E-02								
Nitroaromatics												
2,4,6-Trinitrotoluene	5.00E-04	3.00E-02	NA	1.02E-01								
Metals												
Antimony	4.00E-04	NA	NA	1.56E+03								
Arsenic	2.40E-04	1.88E+00	0.001	3.73E+01								
Barium	3.50E-03	NA	NA	4.05E+04								
Cadmium	5.00E-05	NA	0.010	1.27E+02								
Copper	2.40E-02	NA	NA	8.14E+04								
Cyanide	1.00E-02	NA	NA	2.42E+01								
Lead	NA	NA	NA	5.27E+05								
Mercury	3.00E-06	NA	NA	3.93E+01								
Selenium	4.50E-03	NA	NA	5.80E+00								
Silver	1.00E-03	NA	NA	2.27E+01								
Sodium	NA	NA	NA	3.69E+03								
Thallium	8.00E-05	NA	NA	8.97E-01								
Zinc	7.50E-02	NA	NA	4.26E+04								
Herbicides												
2,4,5-T	1.00E-02	NA	NA	8.01E-03								
2,4,5-TP (Silvex)	8.00E-03	NA	NA	5.82E-03								
2,4-D	1.00E-02	NA	NA	9.29E-02								
2,4-DB	8.00E-03	NA	NA	8.65E-02								
Dichloroprop	NA	NA	NA	5.34E-02								
MCPA	5.00E-04	NA	NA	5.90E+00								
MCPP	1.00E-03	NA	NA	1.28E+01								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-14
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficient
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Current Site Worker: Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker: Absorbed Dose (mg/kg-day) (Car)	Current Site Worker: Hazard Quotient	Current Site Worker: Cancer Risk	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker: Hazard Quotient	Future Industrial Worker: Cancer Risk
Semivolatile Organics													
Di-n-butylphthalate	9.0E-02	NA	5.00E-04	4.3	3.30E-02								
Pentachlorophenol	3.0E-02	1.2E-01	4.00E-03	3.7	6.50E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	3.00E-03	21	3.30E-02								
Metals													
Aluminum	NA	NA	1.40E-01	NA	1.00E-03		**Onsite Surface Water Dermal Contact Not Applicable for Current Site Worker**				**Onsite Surface Water Dermal Contact Not Applicable for Future Industrial Worker**		
Antimony	4.0E-04	NA	5.74E-02	NA	1.00E-03								
Arsenic	2.4E-04	1.9E+00	3.68E-03	NA	1.00E-03								
Barium	3.5E-03	NA	1.54E-01	NA	1.00E-03								
Cadmium	5.0E-05	NA	1.39E-03	NA	1.00E-03								
Calcium	NA	NA	7.99E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	1.90E-03	NA	2.00E-03								
Cobalt	NA	NA	2.31E-03	NA	4.00E-04								
Copper	2.4E-02	NA	1.12E-01	NA	1.00E-03								
Iron	3.0E-01	NA	3.65E+00	NA	1.00E-03								
Lead	NA	NA	5.32E-01	NA	4.00E-06								
Magnesium	NA	NA	1.01E+01	NA	1.00E-03								
Manganese	1.5E-03	NA	2.17E-01	NA	1.00E-03								
Mercury	3.0E-06	NA	2.29E-04	NA	1.00E-03								
Nickel	8.0E-04	NA	3.88E-03	NA	1.00E-03								
Potassium	NA	NA	3.42E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	2.58E-03	NA	1.00E-03								
Silver	1.0E-03	NA	1.70E-03	NA	6.00E-04								
Sodium	NA	NA	6.87E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	4.11E-03	NA	1.00E-03								
Zinc	7.5E-02	NA	2.50E-01	NA	6.00E-04								
Total Hazard Quotient and Cancer Risk:													

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-14
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficient
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker: Hazard Quotient	Future Construction Worker: Cancer Risk	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Nc)	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Car)	Future Tresspasser Child: Hazard Quotient	Future Tresspasser Child: Cancer Risk
Semivolatile Organics													
Di-n-butylphthalate	9.0E-02	NA	5.00E-04	4.3	3.30E-02					5.99E-07		7E-06	
Pentachlorophenol	3.0E-02	1.2E-01	4.00E-03	3.7	6.50E-01					8.76E-05	6.26E-06	3E-03	8E-07
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	3.00E-03	21	3.30E-02					7.95E-06	5.68E-07	8E-04	2E-08
Metals													
Aluminum	NA	NA	1.40E-01	NA	1.00E-03		Onsite Surface Water Dermal Contact Not Applicable for Future Construction Worker						
Antimony	4.0E-04	NA	5.74E-02	NA	1.00E-03					3.64E-07		9E-04	
Arsenic	2.4E-04	1.9E+00	3.68E-03	NA	1.00E-03					2.33E-08	1.67E-09	1E-04	3E-09
Barium	3.5E-03	NA	1.54E-01	NA	1.00E-03					9.76E-07		3E-04	
Cadmium	5.0E-05	NA	1.39E-03	NA	1.00E-03					8.81E-09		2E-04	
Calcium	NA	NA	7.99E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	1.90E-03	NA	2.00E-03					2.41E-08		2E-04	
Cobalt	NA	NA	2.31E-03	NA	4.00E-04								
Copper	2.4E-02	NA	1.12E-01	NA	1.00E-03					7.10E-07		3E-05	
Iron	3.0E-01	NA	3.65E+00	NA	1.00E-03					2.31E-05		8E-05	
Lead	NA	NA	5.32E-01	NA	4.00E-06								
Magnesium	NA	NA	1.01E+01	NA	1.00E-03								
Manganese	1.5E-03	NA	2.17E-01	NA	1.00E-03					1.38E-06		9E-04	
Mercury	3.0E-06	NA	2.29E-04	NA	1.00E-03					1.45E-09		5E-04	
Nickel	8.0E-04	NA	3.88E-03	NA	1.00E-03					2.46E-08		3E-05	
Potassium	NA	NA	3.42E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	2.58E-03	NA	1.00E-03					1.64E-08		4E-06	
Silver	1.0E-03	NA	1.70E-03	NA	6.00E-04					6.46E-09		6E-06	
Sodium	NA	NA	6.87E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	4.11E-03	NA	1.00E-03					2.60E-08		4E-04	
Zinc	7.5E-02	NA	2.50E-01	NA	6.00E-04					9.52E-07		1E-05	
Total Hazard Quotient and Cancer Risk:												**7E-03**	**8E-07**

Assumptions for Future Tresspasser Child

SA =	4625	cm2
EF =	25	days/year
ED =	5	years
BW =	50	kg
AT (Nc) =	1825	days
AT (Car) =	25550	days
ET =	1	hour/day
CF =	1E-03	liter/cm3

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-14
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficient
CW = EPC Surface Water
ET = Exposure Time
Tau = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	Tau (hours)	Kp (cm/hr)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child: Hazard Quotient	Future Day Care Center Child: Cancer Risk	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult: Hazard Quotient	Future Day Care Center Adult: Cancer Risk
Semivolatile Organics													
Di-n-butylphthalate	9.0E-02	NA	5.00E-04	4.3	3.30E-02								
Pentachlorophenol	3.0E-02	1.2E-01	4.00E-03	3.7	6.50E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	3.00E-03	21	3.30E-02								
Metals													
Aluminum	NA	NA	1.40E-01	NA	1.00E-03		**Onsite Surface Water Dermal Contact Not Applicable for Future Day Care Center Child**				**Onsite Surface Water Dermal Contact Not Applicable for Future Day Care Center Adult**		
Antimony	4.0E-04	NA	5.74E-02	NA	1.00E-03								
Arsenic	2.4E-04	1.9E+00	3.68E-03	NA	1.00E-03								
Barium	3.5E-03	NA	1.54E-01	NA	1.00E-03								
Cadmium	5.0E-05	NA	1.39E-03	NA	1.00E-03								
Calcium	NA	NA	7.99E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	1.90E-03	NA	2.00E-03								
Cobalt	NA	NA	2.31E-03	NA	4.00E-04								
Copper	2.4E-02	NA	1.12E-01	NA	1.00E-03								
Iron	3.0E-01	NA	3.65E+00	NA	1.00E-03								
Lead	NA	NA	5.32E-01	NA	4.00E-06								
Magnesium	NA	NA	1.01E+01	NA	1.00E-03								
Manganese	1.5E-03	NA	2.17E-01	NA	1.00E-03								
Mercury	3.0E-06	NA	2.29E-04	NA	1.00E-03								
Nickel	8.0E-04	NA	3.88E-03	NA	1.00E-03								
Potassium	NA	NA	3.42E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	2.58E-03	NA	1.00E-03								
Silver	1.0E-03	NA	1.70E-03	NA	6.00E-04								
Sodium	NA	NA	6.87E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	4.11E-03	NA	1.00E-03								
Zinc	7.5E-02	NA	2.50E-01	NA	6.00E-04								
Total Hazard Quotient and Cancer Risk:													

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-15
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficient
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Current Site Worker: Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker: Absorbed Dose (mg/kg-day) (Car)	Current Site Worker: Hazard Quotient	Current Site Worker: Cancer Risk	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker: Hazard Quotient	Future Industrial Worker: Cancer Risk
Semivolatile Organics													
Di-n-butylphthalate	9.0E-02	NA	5.00E-04	4.3	3.30E-02								
Pentachlorophenol	3.0E-02	1.2E-01	4.00E-03	3.7	6.50E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	3.00E-03	21	3.30E-02								
Metals													
Aluminum	NA	NA	1.40E-01	NA	1.00E-03		**Onsite Surface Water Dermal Contact Not Applicable for Current Site Worker**				**Onsite Surface Water Dermal Contact Not Applicable for Future Industrial Worker**		
Antimony	4.0E-04	NA	5.74E-02	NA	1.00E-03								
Arsenic	2.4E-04	1.9E+00	3.68E-03	NA	1.00E-03								
Barium	3.5E-03	NA	1.54E-01	NA	1.00E-03								
Cadmium	5.0E-05	NA	1.39E-03	NA	1.00E-03								
Calcium	NA	NA	7.99E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	1.90E-03	NA	2.00E-03								
Cobalt	NA	NA	2.31E-03	NA	4.00E-04								
Copper	2.4E-02	NA	1.12E-01	NA	1.00E-03								
Iron	3.0E-01	NA	3.65E+00	NA	1.00E-03								
Lead	NA	NA	5.32E-01	NA	4.00E-06								
Magnesium	NA	NA	1.01E+01	NA	1.00E-03								
Manganese	1.5E-03	NA	2.17E-01	NA	1.00E-03								
Mercury	3.0E-06	NA	2.29E-04	NA	1.00E-03								
Nickel	8.0E-04	NA	3.88E-03	NA	1.00E-03								
Potassium	NA	NA	3.42E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	2.58E-03	NA	1.00E-03								
Silver	1.0E-03	NA	1.70E-03	NA	6.00E-04								
Sodium	NA	NA	6.87E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	4.11E-03	NA	1.00E-03								
Zinc	7.5E-02	NA	2.50E-01	NA	6.00E-04								
Total Hazard Quotient and Cancer Risk:													

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-15
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficient
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker: Hazard Quotient	Future Construction Worker: Cancer Risk	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Nc)	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Car)	Future Tresspasser Child: Hazard Quotient	Future Tresspasser Child: Cancer Risk
Semivolatile Organics													
Di-n-butylphthalate	9.0E-02	NA	5.00E-04	4.3	3.30E-02					2.51E-07		3E-06	
Pentachlorophenol	3.0E-02	1.2E-01	4.00E-03	3.7	6.50E-01					3.67E-05	5.24E-07	1E-03	6E-08
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	3.00E-03	21	3.30E-02					3.33E-06	4.75E-08	3E-04	1E-09
Metals													
Aluminum	NA	NA	1.40E-01	NA	1.00E-03		Onsite Surface Water						
Antimony	4.0E-04	NA	5.74E-02	NA	1.00E-03		Dermal Contact			1.52E-07		4E-04	
Arsenic	2.4E-04	1.9E+00	3.68E-03	NA	1.00E-03		Not Applicable			9.77E-09	1.40E-10	4E-05	3E-10
Barium	3.5E-03	NA	1.54E-01	NA	1.00E-03		for Future			4.09E-07		1E-04	
Cadmium	5.0E-05	NA	1.39E-03	NA	1.00E-03		Construction Worker			3.69E-09		7E-05	
Calcium	NA	NA	7.99E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	1.90E-03	NA	2.00E-03					1.01E-08		1E-04	
Cobalt	NA	NA	2.31E-03	NA	4.00E-04								
Copper	2.4E-02	NA	1.12E-01	NA	1.00E-03					2.97E-07		1E-05	
Iron	3.0E-01	NA	3.65E+00	NA	1.00E-03					9.69E-06		3E-05	
Lead	NA	NA	5.32E-01	NA	4.00E-06								
Magnesium	NA	NA	1.01E+01	NA	1.00E-03								
Manganese	1.5E-03	NA	2.17E-01	NA	1.00E-03					5.76E-07		4E-04	
Mercury	3.0E-06	NA	2.29E-04	NA	1.00E-03					6.08E-10		2E-04	
Nickel	8.0E-04	NA	3.88E-03	NA	1.00E-03					1.03E-08		1E-05	
Potassium	NA	NA	3.42E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	2.58E-03	NA	1.00E-03					6.85E-09		2E-06	
Silver	1.0E-03	NA	1.70E-03	NA	6.00E-04					2.70E-09		3E-06	
Sodium	NA	NA	6.87E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	4.11E-03	NA	1.00E-03					1.09E-08		2E-04	
Zinc	7.5E-02	NA	2.50E-01	NA	6.00E-04					3.99E-07		5E-06	
Total Hazard Quotient and Cancer Risk:												**3E-03**	**6E-08**

Assumptions for Future Tresspasser Child

SA =	3725	cm2
EF =	13	days/year
ED =	1	years
BW =	50	kg
AT (Nc) =	365	days
AT (Car) =	25550	days
ET =	1	hour/day
CF =	1E-03	liter/cm3

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-15
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom).
DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: DA = Kp x CW x ET x CF

Kp = Permeability Coefficient
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient =
Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk =
Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child: Hazard Quotient	Future Day Care Center Child: Cancer Risk	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult: Hazard Quotient	Future Day Care Center Adult: Cancer Risk
Semivolatile Organics													
Di-n-butylphthalate	9.0E-02	NA	5.00E-04	4.3	3.30E-02								
Pentachlorophenol	3.0E-02	1.2E-01	4.00E-03	3.7	6.50E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	3.00E-03	21	3.30E-02								
Metals													
Aluminum	NA	NA	1.40E-01	NA	1.00E-03		**Onsite Surface Water Dermal Contact Not Applicable for Future Day Care Center Child**				**Onsite Surface Water Dermal Contact Not Applicable for Future Day Care Center Adult**		
Antimony	4.0E-04	NA	5.74E-02	NA	1.00E-03								
Arsenic	2.4E-04	1.9E+00	3.68E-03	NA	1.00E-03								
Barium	3.5E-03	NA	1.54E-01	NA	1.00E-03								
Cadmium	5.0E-05	NA	1.39E-03	NA	1.00E-03								
Calcium	NA	NA	7.99E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	1.90E-03	NA	2.00E-03								
Cobalt	NA	NA	2.31E-03	NA	4.00E-04								
Copper	2.4E-02	NA	1.12E-01	NA	1.00E-03								
Iron	3.0E-01	NA	3.65E+00	NA	1.00E-03								
Lead	NA	NA	5.32E-01	NA	4.00E-06								
Magnesium	NA	NA	1.01E+01	NA	1.00E-03								
Manganese	1.5E-03	NA	2.17E-01	NA	1.00E-03								
Mercury	3.0E-06	NA	2.29E-04	NA	1.00E-03								
Nickel	8.0E-04	NA	3.88E-03	NA	1.00E-03								
Potassium	NA	NA	3.42E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	2.58E-03	NA	1.00E-03								
Silver	1.0E-03	NA	1.70E-03	NA	6.00E-04								
Sodium	NA	NA	6.87E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	4.11E-03	NA	1.00E-03								
Zinc	7.5E-02	NA	2.50E-01	NA	6.00E-04								
Total Hazard Quotient and Cancer Risk:													

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-16
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Sediment (mg/kg)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics											
2-Butanone	6.0E-01	NA	1.01E-02								
Acetone	1.0E-01	NA	2.38E-02								
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.04E+00		Ingestion of Onsite Sediment Not Applicable for Current Site Worker				Ingestion of Onsite Sediment Not Applicable for Future Industrial Worker		
2-Methylnaphthalene	4.0E-02	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	3.20E-02								
Acenaphthylene	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	3.39E-01								
Benzo(a)pyrene	NA	7.3E+00	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	4.43E-01								
Carbazole	NA	2.0E-02	1.10E-01								
Chrysene	NA	7.3E-03	1.16E+00								
Di-n-butylphthalate	1.0E-01	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	1.70E-01								
Fluoranthene	4.0E-02	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	3.81E-01								
Phenanthrene	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	2.30E-01								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	7.30E-01								
4,4'-DDE	NA	3.4E-01	5.70E-01								
4,4'-DDT	5.0E-04	3.4E-01	4.20E-01								
Aroclor-1254	2.0E-05	2.0E+00	3.00E-01								
Aroclor-1260	2.0E-05	2.0E+00	8.00E-02								
Endosulfan I	6.0E-03	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	7.58E-03								
Endrin aldehyde	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	2.38E-03								
Metals											
Aluminum	1.0E+00	NA	1.69E+04								
Antimony	4.0E-04	NA	5.03E+01								
Arsenic	3.0E-04	1.5E+00	7.39E+00								
Barium	7.0E-02	NA	2.53E+03								
Beryllium	5.0E-03	4.3E+00	6.95E-01								
Cadmium	5.0E-04	NA	4.55E+00								
Calcium	NA	NA	5.14E+04								
Chromium	5.0E-03	NA	3.39E+01								
Cobalt	NA	NA	1.18E+01								
Copper	4.0E-02	NA	1.40E+04								
Iron	3.0E-01	NA	3.38E+04								
Lead	NA	NA	2.22E+03								
Magnesium	NA	NA	1.02E+04								
Manganese	5.0E-02	NA	3.31E+02								
Mercury	3.0E-04	NA	2.50E+00								
Nickel	2.0E-02	NA	4.04E+01								
Potassium	NA	NA	2.63E+03								
Selenium	5.0E-03	NA	1.98E+00								
Silver	5.0E-03	NA	2.69E-01								
Sodium	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	9.31E-01								
Vanadium	7.0E-03	NA	3.14E+01								
Zinc	3.0E-01	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-16
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC Sediment	Future Construction Worker				Future Tresspasser Child			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics											
2-Butanone	6.0E-01	NA	1.01E-02					2.78E-09		5E-09	
Acetone	1.0E-01	NA	2.38E-02					6.53E-09		7E-08	
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.04E+00		**Ingestion of Onsite Sediment Not Applicable for Future Construction Worker**			8.33E-07	5.95E-08	4E-04	4E-08
2-Methylnaphthalene	4.0E-02	NA	5.50E-02					1.51E-08		4E-07	
Acenaphthene	6.0E-02	NA	3.20E-02					8.77E-09		1E-07	
Acenaphthylene	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	1.00E-01					2.74E-08		9E-08	
Benzo(a)anthracene	NA	7.3E-01	3.39E-01						6.62E-09		5E-09
Benzo(a)pyrene	NA	7.3E+00	3.81E-01						7.45E-09		5E-08
Benzo(b)fluoranthene	NA	7.3E-01	7.43E-01						1.45E-08		1E-08
Benzo(g,h,i)perylene	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	4.43E-01						8.66E-09		6E-10
Carbazole	NA	2.0E-02	1.10E-01						2.15E-09		4E-11
Chrysene	NA	7.3E-03	1.16E+00						2.27E-08		2E-10
Di-n-butylphthalate	1.0E-01	NA	2.50E-01					6.85E-08		7E-07	
Dibenz(a,h)anthracene	NA	7.3E+00	1.70E-01						3.33E-09		2E-08
Fluoranthene	4.0E-02	NA	1.60E+00					4.38E-07		1E-05	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.23E-01						6.31E-09		5E-09
N-Nitrosodiphenylamine (1)	NA	4.9E-03	3.81E-01						7.45E-09		4E-11
Phenanthrene	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	6.60E-01					1.81E-07		6E-06	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	2.30E-01					6.31E-08	4.51E-09	3E-06	6E-11
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	7.30E-01						1.43E-08		3E-09
4,4'-DDE	NA	3.4E-01	5.70E-01						1.12E-08		4E-09
4,4'-DDT	5.0E-04	3.4E-01	4.20E-01					1.15E-07	8.22E-09	2E-04	3E-09
Aroclor-1254	2.0E-05	2.0E+00	3.00E-01					8.21E-08	5.87E-09	4E-03	1E-08
Aroclor-1260	2.0E-05	2.0E+00	8.00E-02					2.19E-08	1.57E-09	1E-03	3E-09
Endosulfan I	6.0E-03	NA	2.59E-02					7.10E-09		1E-06	
Endosulfan II	6.0E-03	NA	4.31E-03					1.18E-09		2E-07	
Endosulfan sulfate	6.0E-03	NA	7.58E-03					2.08E-09		3E-07	
Endrin aldehyde	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.96E-03					5.36E-10	3.83E-11	4E-05	3E-10
alpha-Chlordane	6.0E-05	1.3E+00	8.44E-03					2.31E-09	1.65E-10	4E-05	2E-10
gamma-Chlordane	6.0E-05	1.3E+00	2.38E-03					6.51E-10	4.65E-11	1E-05	6E-11
Metals											
Aluminum	1.0E+00	NA	1.69E+04					4.62E-03		5E-03	
Antimony	4.0E-04	NA	5.03E+01					1.38E-05		3E-02	
Arsenic	3.0E-04	1.5E+00	7.39E+00					2.02E-06	1.45E-07	7E-03	2E-07
Barium	7.0E-02	NA	2.53E+03					6.93E-04		1E-02	
Beryllium	5.0E-03	4.3E+00	6.95E-01					1.90E-07	1.36E-08	4E-05	6E-08
Cadmium	5.0E-04	NA	4.55E+00					1.25E-06		2E-03	
Calcium	NA	NA	5.14E+04								
Chromium	5.0E-03	NA	3.39E+01					9.30E-06		2E-03	
Cobalt	NA	NA	1.18E+01								
Copper	4.0E-02	NA	1.40E+04					3.85E-03		1E-01	
Iron	3.0E-01	NA	3.38E+04					9.26E-03		3E-02	
Lead	NA	NA	2.22E+03								
Magnesium	NA	NA	1.02E+04								
Manganese	5.0E-02	NA	3.31E+02					9.07E-05		2E-03	
Mercury	3.0E-04	NA	2.50E+00					6.85E-07		2E-03	
Nickel	2.0E-02	NA	4.04E+01					1.11E-05		6E-04	
Potassium	NA	NA	2.63E+03								
Selenium	5.0E-03	NA	1.98E+00					5.41E-07			
Silver	5.0E-03	NA	2.69E-01					7.38E-08			
Sodium	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	9.31E-01					2.55E-07		3E-03	
Vanadium	7.0E-03	NA	3.14E+01					8.60E-06		1E-03	
Zinc	3.0E-01	NA	5.02E+02					1.37E-04			
Total Hazard Quotient and Cancer Risk:										**2E-01**	**4E-07**

Assumptions for Future Tresspasser Child

IR =	200	mg sed/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	25	days/year
ED =	5	years
BW =	50	kg
AT (Nc) =	1825	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-16
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Sediment (mg/kg)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics											
2-Butanone	6.0E-01	NA	1.01E-02								
Acetone	1.0E-01	NA	2.38E-02								
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.04E+00		Ingestion of Onsite Sediment Not Applicable for Future Day Care Center Child				Ingestion of Onsite Sediment Not Applicable for Future Day Care Center Worker		
2-Methylnaphthalene	4.0E-02	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	3.20E-02								
Acenaphthylene	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	3.39E-01								
Benzo(a)pyrene	NA	7.3E+00	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	4.43E-01								
Carbazole	NA	2.0E-02	1.10E-01								
Chrysene	NA	7.3E-03	1.16E+00								
Di-n-butylphthalate	1.0E-01	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	1.70E-01								
Fluoranthene	4.0E-02	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	3.81E-01								
Phenanthrene	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	2.30E-01								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	7.30E-01								
4,4'-DDE	NA	3.4E-01	5.70E-01								
4,4'-DDT	5.0E-04	3.4E-01	4.20E-01								
Aroclor-1254	2.0E-05	2.0E+00	3.00E-01								
Aroclor-1260	2.0E-05	2.0E+00	8.00E-02								
Endosulfan I	6.0E-03	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	7.58E-03								
Endrin aldehyde	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	2.38E-03								
Metals											
Aluminum	1.0E+00	NA	1.69E+04								
Antimony	4.0E-04	NA	5.03E+01								
Arsenic	3.0E-04	1.5E+00	7.39E+00								
Barium	7.0E-02	NA	2.53E+03								
Beryllium	5.0E-03	4.3E+00	6.95E-01								
Cadmium	5.0E-04	NA	4.55E+00								
Calcium	NA	NA	5.14E+04								
Chromium	5.0E-03	NA	3.39E+01								
Cobalt	NA	NA	1.18E+01								
Copper	4.0E-02	NA	1.40E+04								
Iron	3.0E-01	NA	3.38E+04								
Lead	NA	NA	2.22E+03								
Magnesium	NA	NA	1.02E+04								
Manganese	5.0E-02	NA	3.31E+02								
Mercury	3.0E-04	NA	2.50E+00								
Nickel	2.0E-02	NA	4.04E+01								
Potassium	NA	NA	2.63E+03								
Selenium	5.0E-03	NA	1.98E+00								
Silver	5.0E-03	NA	2.69E-01								
Sodium	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	9.31E-01								
Vanadium	7.0E-03	NA	3.14E+01								
Zinc	3.0E-01	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-17
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Sediment (mg/kg)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics											
2-Butanone	6.0E-01	NA	1.01E-02								
Acetone	1.0E-01	NA	2.38E-02								
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.04E+00		Ingestion of Onsite Sediment Not Applicable for Current Site Worker				Ingestion of Onsite Sediment Not Applicable for Future Industrial Worker		
2-Methylnaphthalene	4.0E-02	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	3.20E-02								
Acenaphthylene	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	3.39E-01								
Benzo(a)pyrene	NA	7.3E+00	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	4.43E-01								
Carbazole	NA	2.0E-02	1.10E-01								
Chrysene	NA	7.3E-03	1.16E+00								
Di-n-butylphthalate	1.0E-01	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	1.70E-01								
Fluoranthene	4.0E-02	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	3.81E-01								
Phenanthrene	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	2.30E-01								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	7.30E-01								
4,4'-DDE	NA	3.4E-01	5.70E-01								
4,4'-DDT	5.0E-04	3.4E-01	4.20E-01								
Aroclor-1254	2.0E-05	2.0E+00	3.00E-01								
Aroclor-1260	2.0E-05	2.0E+00	8.00E-02								
Endosulfan I	6.0E-03	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	7.58E-03								
Endrin aldehyde	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	2.38E-03								
Metals											
Aluminum	1.0E+00	NA	1.69E+04								
Antimony	4.0E-04	NA	5.03E+01								
Arsenic	3.0E-04	1.5E+00	7.39E+00								
Barium	7.0E-02	NA	2.53E+03								
Beryllium	5.0E-03	4.3E+00	6.95E-01								
Cadmium	5.0E-04	NA	4.55E+00								
Calcium	NA	NA	5.14E+04								
Chromium	5.0E-03	NA	3.39E+01								
Cobalt	NA	NA	1.18E+01								
Copper	4.0E-02	NA	1.40E+04								
Iron	3.0E-01	NA	3.38E+04								
Lead	NA	NA	2.22E+03								
Magnesium	NA	NA	1.02E+04								
Manganese	5.0E-02	NA	3.31E+02								
Mercury	3.0E-04	NA	2.50E+00								
Nickel	2.0E-02	NA	4.04E+01								
Potassium	NA	NA	2.63E+03								
Selenium	5.0E-03	NA	1.98E+00								
Silver	5.0E-03	NA	2.69E-01								
Sodium	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	9.31E-01								
Vanadium	7.0E-03	NA	3.14E+01								
Zinc	3.0E-01	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-17
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC Sediment	Future Construction Worker				Future Tresspasser Child			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics											
2-Butanone	6.0E-01	NA	1.01E-02					7.23E-10		1E-09	
Acetone	1.0E-01	NA	2.38E-02					1.70E-09		2E-08	
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.04E+00		**Ingestion of Onsite Sediment Not Applicable for Future Construction Worker**			2.17E-07	3.09E-09	1E-04	2E-09
2-Methylnaphthalene	4.0E-02	NA	5.50E-02					3.92E-09		1E-07	
Acenaphthene	6.0E-02	NA	3.20E-02					2.28E-09		4E-08	
Acenaphthylene	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	1.00E-01					7.12E-09		2E-08	
Benzo(a)anthracene	NA	7.3E-01	3.39E-01						3.44E-10		3E-10
Benzo(a)pyrene	NA	7.3E+00	3.81E-01						3.88E-10		3E-09
Benzo(b)fluoranthene	NA	7.3E-01	7.43E-01						7.56E-10		6E-10
Benzo(g,h,i)perylene	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	4.43E-01						4.50E-10		3E-11
Carbazole	NA	2.0E-02	1.10E-01						1.12E-10		2E-12
Chrysene	NA	7.3E-03	1.16E+00						1.18E-09		9E-12
Di-n-butylphthalate	1.0E-01	NA	2.50E-01					1.78E-08		2E-07	
Dibenz(a,h)anthracene	NA	7.3E+00	1.70E-01						1.73E-10		1E-09
Fluoranthene	4.0E-02	NA	1.60E+00					1.14E-07		3E-06	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.23E-01						3.28E-10		2E-10
N-Nitrosodiphenylamine (1)	NA	4.9E-03	3.81E-01						3.87E-10		2E-12
Phenanthrene	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	6.60E-01					4.70E-08		2E-06	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	2.30E-01					1.64E-08	2.34E-10	8E-07	3E-12
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	7.30E-01						7.43E-10		2E-10
4,4'-DDE	NA	3.4E-01	5.70E-01						5.80E-10		2E-10
4,4'-DDT	5.0E-04	3.4E-01	4.20E-01					2.99E-08	4.27E-10	6E-05	1E-10
Aroclor-1254	2.0E-05	2.0E+00	3.00E-01					2.14E-08	3.05E-10	1E-03	6E-10
Aroclor-1260	2.0E-05	2.0E+00	8.00E-02					5.70E-09	8.15E-11	3E-04	2E-10
Endosulfan I	6.0E-03	NA	2.59E-02					1.85E-09		3E-07	
Endosulfan II	6.0E-03	NA	4.31E-03					3.07E-10		5E-08	
Endosulfan sulfate	6.0E-03	NA	7.58E-03					5.40E-10		9E-08	
Endrin aldehyde	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.96E-03					1.39E-10	1.99E-12	1E-05	2E-11
alpha-Chlordane	6.0E-05	1.3E+00	8.44E-03					6.01E-10	8.58E-12	1E-05	1E-11
gamma-Chlordane	6.0E-05	1.3E+00	2.38E-03					1.69E-10	2.42E-12	3E-06	3E-12
Metals											
Aluminum	1.0E+00	NA	1.69E+04					1.20E-03		1E-03	
Antimony	4.0E-04	NA	5.03E+01					3.58E-06		9E-03	
Arsenic	3.0E-04	1.5E+00	7.39E+00					5.26E-07	7.52E-09	2E-03	1E-08
Barium	7.0E-02	NA	2.53E+03					1.80E-04		3E-03	
Beryllium	5.0E-03	4.3E+00	6.95E-01					4.95E-08	7.07E-10	1E-05	3E-09
Cadmium	5.0E-04	NA	4.55E+00					3.24E-07		6E-04	
Calcium	NA	NA	5.14E+04								
Chromium	5.0E-03	NA	3.39E+01					2.42E-06		5E-04	
Cobalt	NA	NA	1.18E+01								
Copper	4.0E-02	NA	1.40E+04					1.00E-03		3E-02	
Iron	3.0E-01	NA	3.38E+04					2.41E-03		8E-03	
Lead	NA	NA	2.22E+03								
Magnesium	NA	NA	1.02E+04								
Manganese	5.0E-02	NA	3.31E+02					2.36E-05		5E-04	
Mercury	3.0E-04	NA	2.50E+00					1.78E-07		6E-04	
Nickel	2.0E-02	NA	4.04E+01					2.87E-06		1E-04	
Potassium	NA	NA	2.63E+03								
Selenium	5.0E-03	NA	1.98E+00					1.41E-07		3E-05	
Silver	5.0E-03	NA	2.69E-01					1.92E-08		4E-06	
Sodium	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	9.31E-01					6.63E-08		8E-04	
Vanadium	7.0E-03	NA	3.14E+01					2.24E-06		3E-04	
Zinc	3.0E-01	NA	5.02E+02					3.57E-05		1E-04	
Total Hazard Quotient and Cancer Risk:										**5E-02**	**2E-08**

Assumptions for Future Tresspasser Child

IR =	100	mg sed/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	13	days/year
ED =	1	years
BW =	50	kg
AT (Nc) =	365	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-17
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC Sediment	Future Day Care Center Child				Future Day Care Center Adult			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics											
2-Butanone	6.0E-01	NA	1.01E-02								
Acetone	1.0E-01	NA	2.38E-02								
Semivolatile Organics											
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.04E+00		Ingestion of Onsite Sediment Not Applicable for Future Day Care Center Child				Ingestion of Onsite Sediment Not Applicable for Future Day Care Center Worker		
2-Methylnaphthalene	4.0E-02	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	3.20E-02								
Acenaphthylene	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	3.39E-01								
Benzo(a)pyrene	NA	7.3E+00	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	4.43E-01								
Carbazole	NA	2.0E-02	1.10E-01								
Chrysene	NA	7.3E-03	1.16E+00								
Di-n-butylphthalate	1.0E-01	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	1.70E-01								
Fluoranthene	4.0E-02	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	3.81E-01								
Phenanthrene	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	2.30E-01								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	7.30E-01								
4,4'-DDE	NA	3.4E-01	5.70E-01								
4,4'-DDT	5.0E-04	3.4E-01	4.20E-01								
Aroclor-1254	2.0E-05	2.0E+00	3.00E-01								
Aroclor-1260	2.0E-05	2.0E+00	8.00E-02								
Endosulfan I	6.0E-03	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	7.58E-03								
Endrin aldehyde	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	2.38E-03								
Metals											
Aluminum	1.0E+00	NA	1.69E+04								
Antimony	4.0E-04	NA	5.03E+01								
Arsenic	3.0E-04	1.5E+00	7.39E+00								
Barium	7.0E-02	NA	2.53E+03								
Beryllium	5.0E-03	4.3E+00	6.95E-01								
Cadmium	5.0E-04	NA	4.55E+00								
Calcium	NA	NA	5.14E+04								
Chromium	5.0E-03	NA	3.39E+01								
Cobalt	NA	NA	1.18E+01								
Copper	4.0E-02	NA	1.40E+04								
Iron	3.0E-01	NA	3.38E+04								
Lead	NA	NA	2.22E+03								
Magnesium	NA	NA	1.02E+04								
Manganese	5.0E-02	NA	3.31E+02								
Mercury	3.0E-04	NA	2.50E+00								
Nickel	2.0E-02	NA	4.04E+01								
Potassium	NA	NA	2.63E+03								
Selenium	5.0E-03	NA	1.98E+00								
Silver	5.0E-03	NA	2.69E-01								
Sodium	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	9.31E-01								
Vanadium	7.0E-03	NA	3.14E+01								
Zinc	3.0E-01	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-18
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD	Carc. Slope Dermal	Absorption Factor*	EPC Sediment	Current Site Worker				Future Industrial Worker			
					Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(unitless)	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics												
2-Butanone	6.0E-01	NA	NA	1.01E-02								
Acetone	1.0E-01	NA	NA	2.38E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.04E+00		Contact to Onsite Sediment Not Applicable for Current Site Worker				Contact to Onsite Sediment Not Applicable for Future Industrial Worker		
2-Methylnaphthalene	4.0E-02	NA	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	NA	3.20E-02								
Acenaphthylene	NA	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	3.39E-01								
Benzo(a)pyrene	NA	1.8E+01	NA	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	NA	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	4.43E-01								
Carbazole	NA	2.0E-02	NA	1.10E-01								
Chrysene	NA	7.3E-03	NA	1.16E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.70E-01								
Fluoranthene	4.0E-02	NA	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	3.81E-01								
Phenanthrene	NA	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	2.30E-01								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	7.30E-01								
4,4'-DDE	NA	1.7E+00	NA	5.70E-01								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.20E-01								
Aroclor-1254	1.8E-05	2.2E+00	0.06	3.00E-01								
Aroclor-1260	1.8E-05	2.2E+00	0.06	8.00E-02								
Endosulfan I	6.0E-03	NA	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	NA	7.58E-03								
Endrin aldehyde	NA	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	2.38E-03								
Metals												
Aluminum	NA	NA	NA	1.69E+04								
Antimony	4.0E-04	NA	NA	5.03E+01								
Arsenic	2.4E-04	1.9E+00	0.001	7.39E+00								
Barium	3.5E-03	NA	NA	2.53E+03								
Beryllium	5.0E-05	4.3E+02	NA	6.95E-01								
Cadmium	5.0E-05	NA	0.01	4.55E+00								
Calcium	NA	NA	NA	5.14E+04								
Chromium	1.0E-04	NA	NA	3.39E+01								
Cobalt	NA	NA	NA	1.18E+01								
Copper	2.4E-02	NA	NA	1.40E+04								
Iron	3.0E-01	NA	NA	3.38E+04								
Lead	NA	NA	NA	2.22E+03								
Magnesium	NA	NA	NA	1.02E+04								
Manganese	1.5E-03	NA	NA	3.31E+02								
Mercury	3.0E-06	NA	NA	2.50E+00								
Nickel	8.0E-04	NA	NA	4.04E+01								
Potassium	NA	NA	NA	2.63E+03								
Selenium	4.5E-03	NA	NA	1.98E+00								
Silver	1.0E-03	NA	NA	2.69E-01								
Sodium	NA	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	NA	9.31E-01								
Vanadium	7.0E-05	NA	NA	3.14E+01								
Zinc	7.5E-02	NA	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concer

TABLE I-18
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD	Carc. Slope Dermal	Absorption Factor*	EPC Sediment	Future Construction Worker				Future Tresspasser Child			
					Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(unitless)	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics												
2-Butanone	6.0E-01	NA	NA	1.01E-02								
Acetone	1.0E-01	NA	NA	2.38E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.04E+00		Contact to Onsite Sediment Not Applicable for Future Construction Worker						
2-Methylnaphthalene	4.0E-02	NA	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	NA	3.20E-02								
Acenaphthylene	NA	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	3.39E-01								
Benzo(a)pyrene	NA	1.8E+01	NA	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	NA	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	4.43E-01								
Carbazole	NA	2.0E-02	NA	1.10E-01								
Chrysene	NA	7.3E-03	NA	1.16E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.70E-01								
Fluoranthene	4.0E-02	NA	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	3.81E-01								
Phenanthrene	NA	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	2.30E-01								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	7.30E-01								
4,4'-DDE	NA	1.7E+00	NA	5.70E-01								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.20E-01								
Aroclor-1254	1.8E-05	2.2E+00	0.06	3.00E-01					1.1E-07	8.1E-09	6E-03	2E-08
Aroclor-1260	1.8E-05	2.2E+00	0.06	8.00E-02					3.0E-08	2.2E-09	2E-03	5E-09
Endosulfan I	6.0E-03	NA	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	NA	7.58E-03								
Endrin aldehyde	NA	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	2.38E-03								
Metals												
Aluminum	NA	NA	NA	1.69E+04								
Antimony	4.0E-04	NA	NA	5.03E+01								
Arsenic	2.4E-04	1.9E+00	0.001	7.39E+00					4.7E-08	3.3E-09	2E-04	6E-09
Barium	3.5E-03	NA	NA	2.53E+03								
Beryllium	5.0E-05	4.3E+02	NA	6.95E-01								
Cadmium	5.0E-05	NA	0.01	4.55E+00					2.9E-07		6E-03	
Calcium	NA	NA	NA	5.14E+04								
Chromium	1.0E-04	NA	NA	3.39E+01								
Cobalt	NA	NA	NA	1.18E+01								
Copper	2.4E-02	NA	NA	1.40E+04								
Iron	3.0E-01	NA	NA	3.38E+04								
Lead	NA	NA	NA	2.22E+03								
Magnesium	NA	NA	NA	1.02E+04								
Manganese	1.5E-03	NA	NA	3.31E+02								
Mercury	3.0E-06	NA	NA	2.50E+00								
Nickel	8.0E-04	NA	NA	4.04E+01								
Potassium	NA	NA	NA	2.63E+03								
Selenium	4.5E-03	NA	NA	1.98E+00								
Silver	1.0E-03	NA	NA	2.69E-01								
Sodium	NA	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	NA	9.31E-01								
Vanadium	7.0E-05	NA	NA	3.14E+01								
Zinc	7.5E-02	NA	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:											**1E-02**	**3E-08**

Assumptions for Future Tresspasser Child

CF =	1E-06	kg/mg
SA =	4625	cm2
AF =	1	mg/cm2
EF =	25	days/year
ED =	5	years
BW =	50	kg
AT (Nc) =	1825	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-18
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Sediment (mg/kg)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child: Hazard Quotient	Future Day Care Center Child: Cancer Risk	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult: Hazard Quotient	Future Day Care Center Adult: Cancer Risk
Volatile Organics												
2-Butanone	6.0E-01	NA	NA	1.01E-02								
Acetone	1.0E-01	NA	NA	2.38E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.04E+00		Contact to Onsite Sediment Not Applicable for Future Day Care Center Child				Contact to Onsite Sediment Not Applicable for Future Day Care Center Worker		
2-Methylnaphthalene	4.0E-02	NA	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	NA	3.20E-02								
Acenaphthylene	NA	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	3.39E-01								
Benzo(a)pyrene	NA	1.8E+01	NA	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	NA	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	4.43E-01								
Carbazole	NA	2.0E-02	NA	1.10E-01								
Chrysene	NA	7.3E-03	NA	1.16E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.70E-01								
Fluoranthene	4.0E-02	NA	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	3.81E-01								
Phenanthrene	NA	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	2.30E-01								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	7.30E-01								
4,4'-DDE	NA	1.7E+00	NA	5.70E-01								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.20E-01								
Aroclor-1254	1.8E-05	2.2E+00	0.06	3.00E-01								
Aroclor-1260	1.8E-05	2.2E+00	0.06	8.00E-02								
Endosulfan I	6.0E-03	NA	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	NA	7.58E-03								
Endrin aldehyde	NA	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	2.38E-03								
Metals												
Aluminum	NA	NA	NA	1.69E+04								
Antimony	4.0E-04	NA	NA	5.03E+01								
Arsenic	2.4E-04	1.9E+00	0.001	7.39E+00								
Barium	3.5E-03	NA	NA	2.53E+03								
Beryllium	5.0E-05	4.3E+02	NA	6.95E-01								
Cadmium	5.0E-05	NA	0.01	4.55E+00								
Calcium	NA	NA	NA	5.14E+04								
Chromium	1.0E-04	NA	NA	3.39E+01								
Cobalt	NA	NA	NA	1.18E+01								
Copper	2.4E-02	NA	NA	1.40E+04								
Iron	3.0E-01	NA	NA	3.38E+04								
Lead	NA	NA	NA	2.22E+03								
Magnesium	NA	NA	NA	1.02E+04								
Manganese	1.5E-03	NA	NA	3.31E+02								
Mercury	3.0E-06	NA	NA	2.50E+00								
Nickel	8.0E-04	NA	NA	4.04E+01								
Potassium	NA	NA	NA	2.63E+03								
Selenium	4.5E-03	NA	NA	1.98E+00								
Silver	1.0E-03	NA	NA	2.69E-01								
Sodium	NA	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	NA	9.31E-01								
Vanadium	7.0E-05	NA	NA	3.14E+01								
Zinc	7.5E-02	NA	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE I-19
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Sediment (mg/kg)	Current Site Worker: Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker: Absorbed Dose (mg/kg-day) (Car)	Current Site Worker: Hazard Quotient	Current Site Worker: Cancer Risk	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker: Hazard Quotient	Future Industrial Worker: Cancer Risk
Volatile Organics												
2-Butanone	6.0E-01	NA	NA	1.01E-02								
Acetone	1.0E-01	NA	NA	2.38E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.04E+00		Contact to Onsite Sediment Not Applicable for Current Site Worker				Contact to Onsite Sediment Not Applicable for Future Industrial Worker		
2-Methylnaphthalene	4.0E-02	NA	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	NA	3.20E-02								
Acenaphthylene	NA	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	3.39E-01								
Benzo(a)pyrene	NA	1.8E+01	NA	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	NA	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	4.43E-01								
Carbazole	NA	2.0E-02	NA	1.10E-01								
Chrysene	NA	7.3E-03	NA	1.16E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.70E-01								
Fluoranthene	4.0E-02	NA	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	3.81E-01								
Phenanthrene	NA	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	2.30E-01								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	7.30E-01								
4,4'-DDE	NA	1.7E+00	NA	5.70E-01								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.20E-01								
Aroclor-1254	1.8E-05	2.2E+00	0.06	3.00E-01								
Aroclor-1260	1.8E-05	2.2E+00	0.06	8.00E-02								
Endosulfan I	6.0E-03	NA	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	NA	7.58E-03								
Endrin aldehyde	NA	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	2.38E-03								
Metals												
Aluminum	NA	NA	NA	1.69E+04								
Antimony	4.0E-04	NA	NA	5.03E+01								
Arsenic	2.4E-04	1.9E+00	0.001	7.39E+00								
Barium	3.5E-03	NA	NA	2.53E+03								
Beryllium	5.0E-05	4.3E+02	NA	6.95E-01								
Cadmium	5.0E-05	NA	0.01	4.55E+00								
Calcium	NA	NA	NA	5.14E+04								
Chromium	1.0E-04	NA	NA	3.39E+01								
Cobalt	NA	NA	NA	1.18E+01								
Copper	2.4E-02	NA	NA	1.40E+04								
Iron	3.0E-01	NA	NA	3.38E+04								
Lead	NA	NA	NA	2.22E+03								
Magnesium	NA	NA	NA	1.02E+04								
Manganese	1.5E-03	NA	NA	3.31E+02								
Mercury	3.0E-06	NA	NA	2.50E+00								
Nickel	8.0E-04	NA	NA	4.04E+01								
Potassium	NA	NA	NA	2.63E+03								
Selenium	4.5E-03	NA	NA	1.98E+00								
Silver	1.0E-03	NA	NA	2.69E-01								
Sodium	NA	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	NA	9.31E-01								
Vanadium	7.0E-05	NA	NA	3.14E+01								
Zinc	7.5E-02	NA	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of con

TABLE I-19
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD	Carc. Slope Dermal	Absorption Factor*	EPC Sediment	Future Construction Worker				Future Tresspasser Child			
					Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(unitless)	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics												
2-Butanone	6.0E-01	NA	NA	1.01E-02								
Acetone	1.0E-01	NA	NA	2.38E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.04E+00		Contact to Onsite Sediment Not Applicable for Future Construction Worker						
2-Methylnaphthalene	4.0E-02	NA	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	NA	3.20E-02								
Acenaphthylene	NA	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	3.39E-01								
Benzo(a)pyrene	NA	1.8E+01	NA	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	NA	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	4.43E-01								
Carbazole	NA	2.0E-02	NA	1.10E-01								
Chrysene	NA	7.3E-03	NA	1.16E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.70E-01								
Fluoranthene	4.0E-02	NA	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	3.81E-01								
Phenanthrene	NA	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	2.30E-01								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	7.30E-01								
4,4'-DDE	NA	1.7E+00	NA	5.70E-01								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.20E-01								
Aroclor-1254	1.8E-05	2.2E+00	0.06	3.00E-01					9.55E-09	1.36E-10	5E-04	3E-10
Aroclor-1260	1.8E-05	2.2E+00	0.06	8.00E-02					2.55E-09	3.64E-11	1E-04	8E-11
Endosulfan I	6.0E-03	NA	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	NA	7.58E-03								
Endrin aldehyde	NA	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	2.38E-03								
Metals												
Aluminum	NA	NA	NA	1.69E+04								
Antimony	4.0E-04	NA	NA	5.03E+01								
Arsenic	2.4E-04	1.9E+00	0.001	7.39E+00					3.92E-09	5.60E-11	2E-05	1E-10
Barium	3.5E-03	NA	NA	2.53E+03								
Beryllium	5.0E-05	4.3E+02	NA	6.95E-01								
Cadmium	5.0E-05	NA	0.01	4.55E+00					2.41E-08		5E-04	
Calcium	NA	NA	NA	5.14E+04								
Chromium	1.0E-04	NA	NA	3.39E+01								
Cobalt	NA	NA	NA	1.18E+01								
Copper	2.4E-02	NA	NA	1.40E+04								
Iron	3.0E-01	NA	NA	3.38E+04								
Lead	NA	NA	NA	2.22E+03								
Magnesium	NA	NA	NA	1.02E+04								
Manganese	1.5E-03	NA	NA	3.31E+02								
Mercury	3.0E-06	NA	NA	2.50E+00								
Nickel	8.0E-04	NA	NA	4.04E+01								
Potassium	NA	NA	NA	2.63E+03								
Selenium	4.5E-03	NA	NA	1.98E+00								
Silver	1.0E-03	NA	NA	2.69E-01								
Sodium	NA	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	NA	9.31E-01								
Vanadium	7.0E-05	NA	NA	3.14E+01								
Zinc	7.5E-02	NA	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:											**1E-03**	**5E-10**

Assumptions for Future Tresspasser Child

CF =	1E-06	kg/mg
SA =	3725	cm2
AF =	0.2	mg/cm2
EF =	13	days/year
ED =	1	years
BW =	50	kg
AT (Nc) =	365	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of con

TABLE I-19
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Ne)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Sediment (mg/kg)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Ne)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Ne)	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
2-Butanone	6.0E-01	NA	NA	1.01E-02								
Acetone	1.0E-01	NA	NA	2.38E-02								
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.04E+00		Contact to Onsite Sediment Not Applicable for Future Day Care Center Child				Contact to Onsite Sediment Not Applicable for Future Day Care Center Worker		
2-Methylnaphthalene	4.0E-02	NA	NA	5.50E-02								
Acenaphthene	6.0E-02	NA	NA	3.20E-02								
Acenaphthylene	NA	NA	NA	5.40E-02								
Anthracene	3.0E-01	NA	NA	1.00E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	3.39E-01								
Benzo(a)pyrene	NA	1.8E+01	NA	3.81E-01								
Benzo(b)fluoranthene	NA	7.3E-01	NA	7.43E-01								
Benzo(g,h,i)perylene	NA	NA	NA	3.37E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	4.43E-01								
Carbazole	NA	2.0E-02	NA	1.10E-01								
Chrysene	NA	7.3E-03	NA	1.16E+00								
Di-n-butylphthalate	9.0E-02	NA	NA	2.50E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	1.70E-01								
Fluoranthene	4.0E-02	NA	NA	1.60E+00								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	3.23E-01								
N-Nitrosodiphenylamine (1)	NA	4.9E-03	NA	3.81E-01								
Phenanthrene	NA	NA	NA	2.88E-01								
Pyrene	3.0E-02	NA	NA	6.60E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	2.30E-01								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	7.30E-01								
4,4'-DDE	NA	1.7E+00	NA	5.70E-01								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.20E-01								
Aroclor-1254	1.8E-05	2.2E+00	0.06	3.00E-01								
Aroclor-1260	1.8E-05	2.2E+00	0.06	8.00E-02								
Endosulfan I	6.0E-03	NA	NA	2.59E-02								
Endosulfan II	6.0E-03	NA	NA	4.31E-03								
Endosulfan sulfate	6.0E-03	NA	NA	7.58E-03								
Endrin aldehyde	NA	NA	NA	3.20E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	1.96E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	8.44E-03								
gamma-Chlordane	6.0E-05	1.3E+00	NA	2.38E-03								
Metals												
Aluminum	NA	NA	NA	1.69E+04								
Antimony	4.0E-04	NA	NA	5.03E+01								
Arsenic	2.4E-04	1.9E+00	0.001	7.39E+00								
Barium	3.5E-03	NA	NA	2.53E+03								
Beryllium	5.0E-05	4.3E+02	NA	6.95E-01								
Cadmium	5.0E-05	NA	0.01	4.55E+00								
Calcium	NA	NA	NA	5.14E+04								
Chromium	1.0E-04	NA	NA	3.39E+01								
Cobalt	NA	NA	NA	1.18E+01								
Copper	2.4E-02	NA	NA	1.40E+04								
Iron	3.0E-01	NA	NA	3.38E+04								
Lead	NA	NA	NA	2.22E+03								
Magnesium	NA	NA	NA	1.02E+04								
Manganese	1.5E-03	NA	NA	3.31E+02								
Mercury	3.0E-06	NA	NA	2.50E+00								
Nickel	8.0E-04	NA	NA	4.04E+01								
Potassium	NA	NA	NA	2.63E+03								
Selenium	4.5E-03	NA	NA	1.98E+00								
Silver	1.0E-03	NA	NA	2.69E-01								
Sodium	NA	NA	NA	4.73E+02								
Thallium	8.0E-05	NA	NA	9.31E-01								
Vanadium	7.0E-05	NA	NA	3.14E+01								
Zinc	7.5E-02	NA	NA	5.02E+02								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of con

TABLE I-20
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF GROUNDWATER
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CW \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CW = Chemical Concentration in Groundwater, from Groundwater EPC Data
IR = Ingestion Rate
EF = Exposure Frequency
ED=Exposure Duration
BW=Bodyweight
AT=Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Groundwater (mg/liter)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk
Semivolatile Organics					Ingestion of Groundwater Not Applicable for Current Site Worker								Ingestion of Groundwater Not Applicable for Future Construction Worker		
3-Nitroaniline	NA	NA	1.54E-02												
4-Chloroaniline	4.0E-03	NA	6.16E-03					1.21E-04		3E-02					
Benzo[ghi]perylene	NA	NA	1.00E-03												
Dibenz[a,h]anthracene	NA	7.3E+00	7.00E-04						4.89E-06		4E-05				
Indeno[1,2,3-cd]pyrene	NA	7.3E-01	6.00E-04						4.19E-06		3E-06				
Nitroaromatics															
1,3-Dinitrobenzene	1.0E-04	NA	4.71E-04					9.22E-06		9E-02					
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.41E-04					4.72E-06	1.68E-06	2E-03	1E-06				
Metals															
Copper	4.0E-02	NA	5.68E-02					1.11E-03		3E-02					
Lead	NA	NA	2.41E-02												
Sodium	NA	NA	4.09E+02												
Thallium	8.0E-05	NA	6.14E-03					1.20E-04		2E+00					
Vanadium	7.0E-03	NA	2.45E-03					4.79E-05		7E-03					
Total Hazard Quotient and Cancer Risk:										**2E+00**	**4E-05**				

Assumptions for Future Industrial Worker

IR =	2	liters/day
EF =	250	days/year
ED =	25	years
BW =	70	kg
AT (Nc) =	9125	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-20
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF GROUNDWATER
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CW \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CW = Chemical Concentration in Groundwater, from Groundwater EPC Data
IR = Ingestion Rate
EF = Exposure Frequency
ED=Exposure Duration
BW=Bodyweight
AT=Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC Groundwater	Future Tresspasser Child				Future Day Care Center Child				Future Day Care Center Adult			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/liter)	(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Semivolatile Organics															
3-Nitroaniline	NA	NA	1.54E-02		Ingestion of Groundwater Not Applicable for Future Tresspasser Child										
4-Chloroaniline	4.0E-03	NA	6.16E-03					2.81E-04		7E-02		1.21E-04		3E-02	
Benzo[ghi]perylene	NA	NA	1.00E-03												
Dibenz[a,h]anthracene	NA	7.3E+00	7.00E-04						2.74E-06		2E-05		4.89E-06		4E-05
Indeno[1,2,3-cd]pyrene	NA	7.3E-01	6.00E-04						2.35E-06		2E-06		4.19E-06		3E-06
Nitroaromatics															
1,3-Dinitrobenzene	1.0E-04	NA	4.71E-04					2.15E-05		2E-01		9.22E-06		9E-02	
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.41E-04					1.10E-05	9.43E-07	6E-03	6E-07	4.72E-06	1.68E-06	2E-03	1E-06
Metals															
Copper	4.0E-02	NA	5.68E-02					2.59E-03		6E-02		1.11E-03		3E-02	
Lead	NA	NA	2.41E-02												
Sodium	NA	NA	4.09E+02												
Thallium	8.0E-05	NA	6.14E-03					2.80E-04		4E+00		1.20E-04		2E+00	
Vanadium	7.0E-03	NA	2.45E-03					1.12E-04		2E-02		4.79E-05		7E-03	
Total Hazard Quotient and Cancer Risk:										**4E+00**	**2E-05**			**2E+00**	**4E-05**

Assumptions for Future Day Care Center Child		Assumptions for Future Day Care Center Adult	
IR =	1 liters/day	IR =	2 liters/day
EF =	250 days/year	EF =	250 days/year
ED =	6 years	ED =	25 years
BW =	15 kg	BW =	70 kg
AT (Nc) =	2190 days	AT (Nc) =	9125 days
AT (Car) =	25550 days	AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-21
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF GROUNDWATER
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CW \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CW = Chemical Concentration in Groundwater, from Groundwater EPC Data
IR = Ingestion Rate
EF = Exposure Frequency
ED=Exposure Duration
BW=Bodyweight
AT=Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Groundwater (mg/liter)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk
Semivolatile Organics															
3-Nitroaniline	NA	NA	1.54E-02												
4-Chloroaniline	4.0E-03	NA	6.16E-03					1.06E-04		3E-02					
Benzo[ghi]perylene	NA	NA	1.00E-03												
Dibenz[a,h]anthracene	NA	7.3E+00	7.00E-04						1.20E-06		9E-06				
Indeno[1,2,3-cd]pyrene	NA	7.3E-01	6.00E-04						1.03E-06		8E-07				
Nitroaromatics															
1,3-Dinitrobenzene	1.0E-04	NA	4.71E-04					8.07E-06		8E-02					
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.41E-04					4.13E-06	4.13E-07	2E-03	3E-07				
Metals															
Copper	4.0E-02	NA	5.68E-02					9.74E-04		2E-02					
Lead	NA	NA	2.41E-02												
Sodium	NA	NA	4.09E+02												
Thallium	8.0E-05	NA	6.14E-03					1.05E-04		1E+00					
Vanadium	7.0E-03	NA	2.45E-03					4.20E-05		6E-03					
Total Hazard Quotient and Cancer Risk:										**1E+00**	**1E-05**				

Ingestion of Groundwater Not Applicable for Current Site Worker

Ingestion of Groundwater Not Applicable for Future Construction Worker

Assumptions for Future Industrial Worker

IR =	2	liters/day
EF =	219	days/year
ED =	7	years
BW =	70	kg
AT (Nc) =	2555	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE I-21
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF GROUNDWATER
CENTRAL TENDENCY (CT)
SEAD-16 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CW \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CW = Chemical Concentration in Groundwater, from Groundwater EPC Data
IR = Ingestion Rate
EF = Exposure Frequency
ED=Exposure Duration
BW=Bodyweight
AT=Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Groundwater (mg/liter)	Future Tresspasser Child Intake (mg/kg-day) (Nc)	Future Tresspasser Child Intake (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Semivolatile Organics															
3-Nitroaniline	NA	NA	1.54E-02		Ingestion of Groundwater Not Applicable for Future Tresspasser Child										
4-Chloroaniline	4.0E-03	NA	6.16E-03					2.46E-04		6E-02		1.06E-04		3E-02	
Benzo[ghi]perylene	NA	NA	1.00E-03												
Dibenz[a,h]anthracene	NA	7.3E+00	7.00E-04						1.20E-06		9E-06		1.20E-06		9E-06
Indeno[1,2,3-cd]pyrene	NA	7.3E-01	6.00E-04						1.03E-06		8E-07		1.03E-06		8E-07
Nitroaromatics															
1,3-Dinitrobenzene	1.0E-04	NA	4.71E-04					1.88E-05		2E-01		8.07E-06		8E-02	
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.41E-04					9.64E-06	4.13E-07	5E-03	3E-07	4.13E-06	4.13E-07	2E-03	3E-07
Metals															
Copper	4.0E-02	NA	5.68E-02					2.27E-03		6E-02		9.74E-04		2E-02	
Lead	NA	NA	2.41E-02												
Sodium	NA	NA	4.09E+02												
Thallium	8.0E-05	NA	6.14E-03					2.46E-04		3E+00		1.05E-04		1E+00	
Vanadium	7.0E-03	NA	2.45E-03					9.80E-05		1E-02		4.20E-05		6E-03	
Total Hazard Quotient and Cancer Risk:										**3E+00**	**1E-05**			**1E+00**	**1E-05**

Assumptions for Future Day Care Center Child

IR =	1	liters/day
EF =	219	days/year
ED =	3	years
BW =	15	kg
AT (Nc) =	1095	days
AT (Car) =	25550	days

Assumptions for Future Day Care Center Adult

IR =	2	liters/day
EF =	219	days/year
ED =	7	years
BW =	70	kg
AT (Nc) =	2555	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

APPENDIX J - SEAD 17 EXPOSURE AND RISK CALCULATIONS

J-1 Ambient Air Exposure Point Concentrations
J-2 Calculation of Intake and Risk from Inhalation of Dust in Ambient Air: RME
J-3 Calculation of Intake and Risk from Inhalation of Dust in Ambient Air: CT
J-4 Calculation of Intake and Risk from the Ingestion of Soil: RME
J-5 Calculation of Intake and Risk from the Ingestion of Soil: CT
J-6 Calculation of Absorbed Dose and Risk from Dermal Contact to Soil: RME
J-7 Calculation of Absorbed Dose and Risk from Dermal Contact to Soil: CT
J-8 Calculation of Absorbed Dose and Risk from Dermal Contact with Surface Water : RME
J-9 Calculation of Absorbed Dose and Risk from Dermal Contact with Surface Water: CT
J-10 Calculation of Intake and Risk from the Ingestion of Sediment: RME
J-11 Calculation of Intake and Risk from the Ingestion of Sediment: CT
J-12 Calculation of Absorbed Dose and Risk from Dermal Contact with Sediment: RME
J-13 Calculation of Absorbed Dose and Risk from Dermal Contact with Sediment : CT

TABLE J-1
AMBIENT AIR EXPOSURE POINT CONCENTRATIONS
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Air EPC from Surface Soil (mg/m³) = $CS_{surf} \times PM_{10} \times CF$

Variables:
CS_{surf} = Chemical Concentration in Surface Soil, from EPC data (mg/kg)
PM_{10} = Average Measured PM_{10} Concentration = 17 ug/m³
CF = Conversion Factor = 1E-9 kg/ug

Equation for Air EPC from Surface and Subsurface Soils (mg/m³) =

Variables:
CS_{sub} = Chemical Concentration in Surface and Subsurface Soils, from EPC data (mg/kg)
PM_{10} = PM_{10} Concentration Calculated for Construction Worker= 154 ug/m³
CF = Conversion Factor = 1E-9 kg/ug

Analyte	EPC Data for Surface Soil (mg/kg)	EPC Data for Total Soils (mg/kg)	Calculated Air EPC Surface Soil (mg/m³)	Calculated Air EPC Total Soils (mg/m³)
Volatile Organics				
Acetone	7.52E-03	7.25E-03	1.28E-10	1.12E-09
Benzene	2.00E-03	2.00E-03	3.40E-11	3.08E-10
Methylene Chloride	4.00E-03	4.00E-03	6.80E-11	6.16E-10
Toluene	6.55E-03	6.46E-03	1.11E-10	9.95E-10
Semivolatile Organics				
2,4-Dinitrotoluene	2.91E-01	2.71E-01	4.95E-09	4.17E-08
2,6-Dinitrotoluene	7.92E-02	7.66E-02	1.35E-09	1.18E-08
2-Methylnaphthalene	1.30E-01	1.30E-01	2.21E-09	2.00E-08
2-Methylphenol	1.20E-01	1.20E-01	2.04E-09	1.85E-08
3,3'-Dichlorobenzidine	2.32E-01	2.25E-01	3.94E-09	3.47E-08
3-Nitroaniline	5.62E-01	5.45E-01	9.55E-09	8.39E-08
4-Nitroaniline	5.62E-01	5.45E-01	9.55E-09	8.39E-08
Acenaphthene	3.30E-02	3.30E-02	5.61E-10	5.08E-09
Acenaphthylene	9.60E-02	9.60E-02	1.63E-09	1.48E-08
Anthracene	1.30E-01	1.30E-01	2.21E-09	2.00E-08
Benzo(a)anthracene	2.86E-01	2.70E-01	4.86E-09	4.16E-08
Benzo(a)pyrene	2.91E-01	2.75E-01	4.95E-09	4.24E-08
Benzo(b)fluoranthene	3.03E-01	2.81E-01	5.15E-09	4.33E-08
Benzo(g,h,i)perylene	2.64E-01	2.50E-01	4.49E-09	3.85E-08
Benzo(k)fluoranthene	2.67E-01	2.54E-01	4.54E-09	3.91E-08
Butylbenzylphthalate	4.60E-02	4.60E-02	7.82E-10	7.08E-09
Carbazole	2.37E-01	2.29E-01	4.03E-09	3.53E-08
Chrysene	2.27E-01	2.33E-01	3.86E-09	3.59E-08
Di-n-butylphthalate	2.84E-01	2.65E-01	4.83E-09	4.08E-08
Dibenzi(a,h)anthracene	2.55E-01	2.42E-01	4.34E-09	3.73E-08
Dibenzofuran	3.60E-02	3.60E-02	6.12E-10	5.54E-09
Fluoranthene	2.11E-01	2.20E-01	3.59E-09	3.39E-08
Fluorene	3.80E-02	3.80E-02	6.46E-10	5.85E-09
Indeno(1,2,3-cd)pyrene	2.77E-01	2.60E-01	4.71E-09	4.00E-08
N-Nitrosodiphenylamine (1)	9.50E-02	9.50E-02	1.62E-09	1.46E-08
Naphthalene	3.70E-02	3.70E-02	6.29E-10	5.70E-09
Pentachlorophenol	6.10E-01	5.83E-01	1.04E-08	8.98E-08
Phenanthrene	2.55E-01	2.47E-01	4.34E-09	3.80E-08
Pyrene	2.06E-01	2.14E-01	3.50E-09	3.30E-08
bis(2-Chloroisopropyl) ether	2.13E-01	2.13E-01	3.62E-09	3.28E-08
bis(2-Ethylhexyl)phthalate	3.43E-01	3.44E-01	5.83E-09	5.30E-08
Pesticides/PCBs				
4,4'-DDD	2.76E-03	2.61E-03	4.69E-11	4.02E-10
4,4'-DDE	8.57E-03	6.91E-03	1.46E-10	1.06E-09
4,4'-DDT	3.96E-03	3.55E-03	6.73E-11	5.47E-10
Aldrin	1.25E-03	1.20E-03	2.13E-11	1.85E-10
Aroclor-1254		2.39E-02		3.68E-09
Aroclor-1260	2.42E-02	2.33E-02	4.11E-10	3.59E-09
Dieldrin	6.01E-03	5.02E-03	1.02E-10	7.73E-10
Endosulfan I	2.72E-03	2.29E-03	4.62E-11	3.53E-10
Endosulfan sulfate	2.41E-03	2.32E-03	4.10E-11	3.57E-10
Endrin	2.76E-03	2.60E-03	4.69E-11	4.00E-10
Endrin ketone	2.93E-03	2.73E-03	4.98E-11	4.20E-10
Heptachlor epoxide	1.05E-03	1.03E-03	1.79E-11	1.59E-10
alpha-Chlordane	1.05E-03	1.03E-03	1.79E-11	1.59E-10
beta-BHC	1.35E-03	1.28E-03	2.30E-11	1.97E-10
delta-BHC	1.26E-03	1.21E-03	2.14E-11	1.86E-10
Metals				
Antimony	1.15E+01	9.89E+00	1.96E-07	1.52E-06
Arsenic	6.44E+00	6.21E+00	1.09E-07	9.56E-07
Barium	1.67E+02	1.53E+02	2.84E-06	2.36E-05
Cadmium	8.82E+00	6.61E+00	1.50E-07	1.02E-06
Copper	2.21E+02	1.76E+02	3.76E-06	2.71E-05
Lead	2.25E+03	2.46E+03	3.83E-05	3.79E-04
Mercury	1.31E-01	1.15E-01	2.23E-09	1.77E-08
Selenium	1.03E+00	6.98E-01	1.75E-08	1.07E-07
Silver	2.06E+00	1.65E+00	3.50E-08	2.54E-07
Thallium	6.38E-01	5.30E-01	1.08E-08	8.16E-08
Zinc	3.57E+02	3.01E+02	6.07E-06	4.64E-05
Herbicides				
MCPA	8.49E+00	6.26E+00	1.44E-07	9.64E-07

TABLE J-2
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
Acetone	NA	NA	1.28E-10	1.12E-09								
Benzene	1.7E-03	2.9E-02	3.40E-11	3.08E-10	2.55E-13	9.12E-14	1E-10	3E-15	3.19E-12	1.14E-12	2E-09	3E-14
Methylene Chloride	8.6E-01	1.7E-03	6.80E-11	6.16E-10	5.11E-13	1.82E-13	6E-13	3E-16	6.39E-12	2.28E-12	7E-12	4E-15
Toluene	1.1E-01	NA	1.11E-10	9.95E-10	8.37E-13		7E-12		1.05E-11		9E-11	
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	4.95E-09	4.17E-08								
2,6-Dinitrotoluene	NA	NA	1.35E-09	1.18E-08								
2-Methylnaphthalene	NA	NA	2.21E-09	2.00E-08								
2-Methylphenol	NA	NA	2.04E-09	1.85E-08								
3,3'-Dichlorobenzidine	NA	NA	3.94E-09	3.47E-08								
3-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
4-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
Acenaphthene	NA	NA	5.61E-10	5.08E-09								
Acenaphthylene	NA	NA	1.63E-09	1.48E-08								
Anthracene	NA	NA	2.21E-09	2.00E-08								
Benzo(a)anthracene	NA	NA	4.86E-09	4.16E-08								
Benzo(a)pyrene	NA	NA	4.95E-09	4.24E-08								
Benzo(b)fluoranthene	NA	NA	5.15E-09	4.33E-08								
Benzo(g,h,i)perylene	NA	NA	4.49E-09	3.85E-08								
Benzo(k)fluoranthene	NA	NA	4.54E-09	3.91E-08								
Butylbenzylphthalate	NA	NA	7.82E-10	7.08E-09								
Carbazole	NA	NA	4.03E-09	3.53E-08								
Chrysene	NA	NA	3.86E-09	3.59E-08								
Di-n-butylphthalate	NA	NA	4.83E-09	4.08E-08								
Dibenz(a,h)anthracene	NA	NA	4.34E-09	3.73E-08								
Dibenzofuran	NA	NA	6.12E-10	5.54E-09								
Fluoranthene	NA	NA	3.59E-09	3.39E-08								
Fluorene	NA	NA	6.46E-10	5.85E-09								
Indeno(1,2,3-cd)pyrene	NA	NA	4.71E-09	4.00E-08								
N-Nitrosodiphenylamine (1)	NA	NA	1.62E-09	1.46E-08								
Naphthalene	NA	NA	6.29E-10	5.70E-09								
Pentachlorophenol	NA	NA	1.04E-08	8.98E-08								
Phenanthrene	NA	NA	4.34E-09	3.80E-08								
Pyrene	NA	NA	3.50E-09	3.30E-08								
bis(2-Chloroisopropyl) ether	NA	3.5E-02	3.62E-09	3.28E-08		9.72E-12		3E-13		1.21E-10		4E-12
bis(2-Ethylhexyl)phthalate	NA	NA	5.83E-09	5.30E-08								
Pesticides/PCBs												
4,4'-DDD	NA	NA	4.69E-11	4.02E-10								
4,4'-DDE	NA	NA	1.46E-10	1.06E-09								
4,4'-DDT	NA	3.4E-01	6.73E-11	5.47E-10		1.81E-13		6E-14		2.26E-12		8E-13
Aldrin	NA	1.7E+01	2.13E-11	1.85E-10		5.70E-14		1E-12		7.13E-13		1E-11
Aroclor-1254	NA	4.0E-01		3.68E-09								
Aroclor-1260	NA	4.0E-01	4.11E-10	3.59E-09		1.10E-12		4E-13		1.38E-11		6E-12
Dieldrin	NA	1.6E+01	1.02E-10	7.73E-10		2.74E-13		4E-12		3.43E-12		6E-11
Endosulfan I	NA	NA	4.62E-11	3.53E-10								
Endosulfan sulfate	NA	NA	4.10E-11	3.57E-10								
Endrin	NA	NA	4.69E-11	4.00E-10								
Endrin ketone	NA	NA	4.98E-11	4.20E-10								
Heptachlor epoxide	NA	9.1E+00	1.79E-11	1.59E-10		4.79E-14		4E-13		5.99E-13		5E-12
alpha-Chlordane	NA	1.3E+00	1.79E-11	1.59E-10								
beta-BHC	NA	1.9E+00	2.30E-11	1.97E-10								
delta-BHC	NA	NA	2.14E-11	1.86E-10								
Metals												
Antimony	NA	NA	1.96E-07	1.52E-06								
Arsenic	NA	1.5E+01	1.09E-07	9.56E-07		2.94E-10		4E-09		3.67E-09		6E-08
Barium	1.4E-04	NA	2.84E-06	2.36E-05	2.13E-08		1E-04		2.67E-07		2E-03	
Cadmium	NA	6.3E+00	1.50E-07	1.02E-06		4.02E-10		3E-09		5.03E-09		3E-08
Copper	NA	NA	3.76E-06	2.71E-05								
Lead	NA	NA	3.83E-05	3.79E-04								
Mercury	8.6E-05	NA	2.23E-09	1.77E-08	1.67E-11		2E-07		2.09E-10		2E-06	
Selenium	NA	NA	1.75E-08	1.07E-07								
Silver	NA	NA	3.50E-08	2.54E-07								
Thallium	NA	NA	1.08E-08	8.16E-08								
Zinc	NA	NA	6.07E-06	4.64E-05								
Herbicides												
MCPA	NA	NA	1.44E-07	9.64E-07								
Total Hazard Quotient and Cancer Risk:							**1E-04**	**7E-09**			**2E-03**	**9E-08**

Assumptions for Current Site Worker

CA =	EPC Surface Only
IR =	9.6 m3/day
EF =	20 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Assumptions for Future Industrial Worker

CA =	EPC Surface Only
IR =	9.6 m3/day
EF =	250 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA = Information not available

TABLE J-2
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Intake (mg/kg-day) (Nc)	Future Tresspasser Child Intake (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics												
Acetone	NA	NA	1.28E-10	1.12E-09								
Benzene	1.7E-03	2.9E-02	3.40E-11	3.08E-10	3.13E-11	4.48E-13	2E-08	1E-14	1.12E-13	7.98E-15	7E-11	2E-16
Methylene Chloride	8.6E-01	1.7E-03	6.80E-11	6.16E-10	6.27E-11	8.95E-13	7E-11	1E-15	2.24E-13	1.60E-14	3E-13	3E-17
Toluene	1.1E-01	NA	1.11E-10	9.95E-10	1.01E-10		9E-10		3.66E-13		3E-12	
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	4.95E-09	4.17E-08								
2,6-Dinitrotoluene	NA	NA	1.35E-09	1.18E-08								
2-Methylnaphthalene	NA	NA	2.21E-09	2.00E-08								
2-Methylphenol	NA	NA	2.04E-09	1.85E-08								
3,3'-Dichlorobenzidine	NA	NA	3.94E-09	3.47E-08								
3-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
4-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
Acenaphthene	NA	NA	5.61E-10	5.08E-09								
Acenaphthylene	NA	NA	1.63E-09	1.48E-08								
Anthracene	NA	NA	2.21E-09	2.00E-08								
Benzo(a)anthracene	NA	NA	4.86E-09	4.16E-08								
Benzo(a)pyrene	NA	NA	4.95E-09	4.24E-08								
Benzo(b)fluoranthene	NA	NA	5.15E-09	4.33E-08								
Benzo(g,h,i)perylene	NA	NA	4.49E-09	3.85E-08								
Benzo(k)fluoranthene	NA	NA	4.54E-09	3.91E-08								
Butylbenzylphthalate	NA	NA	7.82E-10	7.08E-09								
Carbazole	NA	NA	4.03E-09	3.53E-08								
Chrysene	NA	NA	3.86E-09	3.59E-08								
Di-n-butylphthalate	NA	NA	4.83E-09	4.08E-08								
Dibenz(a,h)anthracene	NA	NA	4.34E-09	3.73E-08								
Dibenzofuran	NA	NA	6.12E-10	5.54E-09								
Fluoranthene	NA	NA	3.59E-09	3.39E-08								
Fluorene	NA	NA	6.46E-10	5.85E-09								
Indeno(1,2,3-cd)pyrene	NA	NA	4.71E-09	4.00E-08								
N-Nitrosodiphenylamine (1)	NA	NA	1.62E-09	1.46E-08								
Naphthalene	NA	NA	6.29E-10	5.70E-09								
Pentachlorophenol	NA	NA	1.04E-08	8.98E-08								
Phenanthrene	NA	NA	4.34E-09	3.80E-08								
Pyrene	NA	NA	3.50E-09	3.30E-08								
bis(2-Chloroisopropyl) ether	NA	3.5E-02	3.62E-09	3.28E-08		4.77E-11		2E-12		8.50E-13		3E-14
bis(2-Ethylhexyl)phthalate	NA	NA	5.83E-09	5.30E-08								
Pesticides/PCBs												
4,4'-DDD	NA	NA	4.69E-11	4.02E-10								
4,4'-DDE	NA	NA	1.46E-10	1.06E-09								
4,4'-DDT	NA	3.4E-01	6.73E-11	5.47E-10		7.95E-13		3E-13		1.58E-14		5E-15
Aldrin	NA	1.7E+01	2.13E-11	1.85E-10		2.69E-13		5E-12		4.99E-15		9E-14
Aroclor-1254	NA	4.0E-01		3.68E-09								
Aroclor-1260	NA	4.0E-01	4.11E-10	3.59E-09		5.22E-12		2E-12		9.66E-14		4E-14
Dieldrin	NA	1.6E+01	1.02E-10	7.73E-10		1.12E-12		2E-11		2.40E-14		4E-13
Endosulfan I	NA	NA	4.62E-11	3.53E-10								
Endosulfan sulfate	NA	NA	4.10E-11	3.57E-10								
Endrin	NA	NA	4.69E-11	4.00E-10								
Endrin ketone	NA	NA	4.98E-11	4.20E-10								
Heptachlor epoxide	NA	9.1E+00	1.79E-11	1.59E-10		2.31E-13		2E-12		4.19E-15		4E-14
alpha-Chlordane	NA	1.3E+00	1.79E-11	1.59E-10		2.31E-13		3E-13				
beta-BHC	NA	1.9E+00	2.30E-11	1.97E-10		2.87E-13		5E-13				
delta-BHC	NA	NA	2.14E-11	1.86E-10								
Metals												
Antimony	NA	NA	1.96E-07	1.52E-06								
Arsenic	NA	1.5E+01	1.09E-07	9.56E-07		1.39E-09		2E-08		2.57E-11		4E-10
Barium	1.4E-04	NA	2.84E-06	2.36E-05	2.40E-06		2E-02		9.33E-09		7E-05	
Cadmium	NA	6.3E+00	1.50E-07	1.02E-06		1.48E-09		9E-09		3.52E-11		2E-10
Copper	NA	NA	3.76E-06	2.71E-05								
Lead	NA	NA	3.83E-05	3.79E-04								
Mercury	8.6E-05	NA	2.23E-09	1.77E-08	1.80E-09		2E-05		7.32E-12		9E-08	
Selenium	NA	NA	1.75E-08	1.07E-07								
Silver	NA	NA	3.50E-08	2.54E-07								
Thallium	NA	NA	1.08E-08	8.16E-08								
Zinc	NA	NA	6.07E-06	4.64E-05								
Herbicides												
MCPA	NA	NA	1.44E-07	9.64E-07								
Total Hazard Quotient and Cancer Risk:							**2E-02**	**3E-08**			**7E-05**	**6E-10**

Assumptions for Future Construction Worker

CA =	EPC Surface and Sub-Surface
IR =	10.4 m3/day
EF =	250 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CA =	EPC Surface Only
IR =	1.2 m3/day
EF =	50 days/year
ED =	5 years
BW =	50 kg
AT (Nc) =	1825 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA = Information not available

TABLE J-2
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
Acetone	NA	NA	1.28E-10	1.12E-09								
Benzene	1.7E-03	2.9E-02	3.40E-11	3.08E-10	6.21E-12	5.32E-13	4E-09	2E-14	2.66E-12	9.51E-13	2E-09	3E-14
Methylene Chloride	8.6E-01	1.7E-03	6.80E-11	6.16E-10	1.24E-11	1.06E-12	1E-11	2E-15	5.32E-12	1.90E-12	6E-12	3E-15
Toluene	1.1E-01	NA	1.11E-10	9.95E-10	2.03E-11		2E-10		8.72E-12		8E-11	
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	4.95E-09	4.17E-08								
2,6-Dinitrotoluene	NA	NA	1.35E-09	1.18E-08								
2-Methylnaphthalene	NA	NA	2.21E-09	2.00E-08								
2-Methylphenol	NA	NA	2.04E-09	1.85E-08								
3,3'-Dichlorobenzidine	NA	NA	3.94E-09	3.47E-08								
3-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
4-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
Acenaphthene	NA	NA	5.61E-10	5.08E-09								
Acenaphthylene	NA	NA	1.63E-09	1.48E-08								
Anthracene	NA	NA	2.21E-09	2.00E-08								
Benzo(a)anthracene	NA	NA	4.86E-09	4.16E-08								
Benzo(a)pyrene	NA	NA	4.95E-09	4.24E-08								
Benzo(b)fluoranthene	NA	NA	5.15E-09	4.33E-08								
Benzo(g,h,i)perylene	NA	NA	4.49E-09	3.85E-08								
Benzo(k)fluoranthene	NA	NA	4.54E-09	3.91E-08								
Butylbenzylphthalate	NA	NA	7.82E-10	7.08E-09								
Carbazole	NA	NA	4.03E-09	3.53E-08								
Chrysene	NA	NA	3.86E-09	3.59E-08								
Di-n-butylphthalate	NA	NA	4.83E-09	4.08E-08								
Dibenz(a,h)anthracene	NA	NA	4.34E-09	3.73E-08								
Dibenzofuran	NA	NA	6.12E-10	5.54E-09								
Fluoranthene	NA	NA	3.59E-09	3.39E-08								
Fluorene	NA	NA	6.46E-10	5.85E-09								
Indeno(1,2,3-cd)pyrene	NA	NA	4.71E-09	4.00E-08								
N-Nitrosodiphenylamine (1)	NA	NA	1.62E-09	1.46E-08								
Naphthalene	NA	NA	6.29E-10	5.70E-09								
Pentachlorophenol	NA	NA	1.04E-08	8.98E-08								
Phenanthrene	NA	NA	4.34E-09	3.80E-08								
Pyrene	NA	NA	3.50E-09	3.30E-08								
bis(2-Chloroisopropyl) ether	NA	3.5E-02	3.62E-09	3.28E-08		5.67E-11		2E-12		1.01E-10		4E-12
bis(2-Ethylhexyl)phthalate	NA	NA	5.83E-09	5.30E-08								
Pesticides/PCBs												
4,4'-DDD	NA	NA	4.69E-11	4.02E-10								
4,4'-DDE	NA	NA	1.46E-10	1.06E-09								
4,4'-DDT	NA	3.4E-01	6.73E-11	5.47E-10		1.05E-12		4E-13		1.88E-12		6E-13
Aldrin	NA	1.7E+01	2.13E-11	1.85E-10		3.33E-13		6E-12		5.94E-13		1E-11
Aroclor-1254	NA	4.0E-01		3.68E-09								
Aroclor-1260	NA	4.0E-01	4.11E-10	3.59E-09		6.44E-12		3E-12		1.15E-11		5E-12
Dieldrin	NA	1.6E+01	1.02E-10	7.73E-10		1.60E-12		3E-11		2.86E-12		5E-11
Endosulfan I	NA	NA	4.62E-11	3.53E-10								
Endosulfan sulfate	NA	NA	4.10E-11	3.57E-10								
Endrin	NA	NA	4.69E-11	4.00E-10								
Endrin ketone	NA	NA	4.98E-11	4.20E-10								
Heptachlor epoxide	NA	9.1E+00	1.79E-11	1.59E-10		2.79E-13		3E-12		4.99E-13		5E-12
alpha-Chlordane	NA	1.3E+00	1.79E-11	1.59E-10								
beta-BHC	NA	1.9E+00	2.30E-11	1.97E-10								
delta-BHC	NA	NA	2.14E-11	1.86E-10								
Metals												
Antimony	NA	NA	1.96E-07	1.52E-06								
Arsenic	NA	1.5E+01	1.09E-07	9.56E-07		1.71E-09		3E-08		3.06E-09		5E-08
Barium	1.4E-04	NA	2.84E-06	2.36E-05	5.19E-07		4E-03		2.22E-07		2E-03	
Cadmium	NA	6.3E+00	1.50E-07	1.02E-06		2.35E-09		1E-08		4.19E-09		3E-08
Copper	NA	NA	3.76E-06	2.71E-05								
Lead	NA	NA	3.83E-05	3.79E-04								
Mercury	8.6E-05	NA	2.23E-09	1.77E-08	4.07E-10		5E-06		1.74E-10		2E-06	
Selenium	NA	NA	1.75E-08	1.07E-07								
Silver	NA	NA	3.50E-08	2.54E-07								
Thallium	NA	NA	1.08E-08	8.16E-08								
Zinc	NA	NA	6.07E-06	4.64E-05								
Herbicides												
MCPA	NA	NA	1.44E-07	9.64E-07								
Total Hazard Quotient and Cancer Risk:							**4E-03**	**4E-08**			**2E-03**	**7E-08**

Assumptions for Day Care Center Child

CA =	EPC Surface Only
IR =	4 m3/day
EF =	250 days/year
ED =	6 years
BW =	15 kg
AT (Nc) =	2190 days
AT (Car) =	25550 days

Assumptions for Day Care Center Adult

CA =	EPC Surface Only
IR =	8 m3/day
EF =	250 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA = Information not available

TABLE J-3
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
Acetone	NA	NA	1.28E-10	1.12E-09								
Benzene	1.7E-03	2.9E-02	3.40E-11	3.08E-10	1.28E-13	1.28E-14	7E-11	4E-16	2.80E-12	2.80E-13	2E-09	8E-15
Methylene Chloride	8.6E-01	1.7E-03	6.80E-11	6.16E-10	2.55E-13	2.55E-14	3E-13	4E-17	5.60E-12	5.60E-13	7E-12	9E-16
Toluene	1.1E-01	NA	1.11E-10	9.95E-10	4.18E-13		4E-12		9.16E-12		8E-11	
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	4.95E-09	4.17E-08								
2,6-Dinitrotoluene	NA	NA	1.35E-09	1.18E-08								
2-Methylnaphthalene	NA	NA	2.21E-09	2.00E-08								
2-Methylphenol	NA	NA	2.04E-09	1.85E-08								
3,3'-Dichlorobenzidine	NA	NA	3.94E-09	3.47E-08								
3-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
4-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
Acenaphthene	NA	NA	5.61E-10	5.08E-09								
Acenaphthylene	NA	NA	1.63E-09	1.48E-08								
Anthracene	NA	NA	2.21E-09	2.00E-08								
Benzo(a)anthracene	NA	NA	4.86E-09	4.16E-08								
Benzo(a)pyrene	NA	NA	4.95E-09	4.24E-08								
Benzo(b)fluoranthene	NA	NA	5.15E-09	4.33E-08								
Benzo(g,h,i)perylene	NA	NA	4.49E-09	3.85E-08								
Benzo(k)fluoranthene	NA	NA	4.54E-09	3.91E-08								
Butylbenzylphthalate	NA	NA	7.82E-10	7.08E-09								
Carbazole	NA	NA	4.03E-09	3.53E-08								
Chrysene	NA	NA	3.86E-09	3.59E-08								
Di-n-butylphthalate	NA	NA	4.83E-09	4.08E-08								
Dibenz(a,h)anthracene	NA	NA	4.34E-09	3.73E-08								
Dibenzofuran	NA	NA	6.12E-10	5.54E-09								
Fluoranthene	NA	NA	3.59E-09	3.39E-08								
Fluorene	NA	NA	6.46E-10	5.85E-09								
Indeno(1,2,3-cd)pyrene	NA	NA	4.71E-09	4.00E-08								
N-Nitrosodiphenylamine (1)	NA	NA	1.62E-09	1.46E-08								
Naphthalene	NA	NA	6.29E-10	5.70E-09								
Pentachlorophenol	NA	NA	1.04E-08	8.98E-08								
Phenanthrene	NA	NA	4.34E-09	3.80E-08								
Pyrene	NA	NA	3.50E-09	3.30E-08								
bis(2-Chloroisopropyl) ether	NA	3.5E-02	3.62E-09	3.28E-08		1.36E-12		5E-14		2.98E-11		1E-12
bis(2-Ethylhexyl)phthalate	NA	NA	5.83E-09	5.30E-08								
Pesticides/PCBs												
4,4'-DDD	NA	NA	4.69E-11	4.02E-10								
4,4'-DDE	NA	NA	1.46E-10	1.06E-09								
4,4'-DDT	NA	3.4E-01	6.73E-11	5.47E-10		2.53E-14		9E-15		5.54E-13		2E-13
Aldrin	NA	1.7E+01	2.13E-11	1.85E-10		7.98E-15		1E-13		1.75E-13		3E-12
Aroclor-1254	NA	4.0E-01		3.68E-09						0.00E+00		0E+00
Aroclor-1260	NA	4.0E-01	4.11E-10	3.59E-09		1.55E-13		6E-14		3.39E-12		1E-12
Dieldrin	NA	1.6E+01	1.02E-10	7.73E-10		3.84E-14		6E-13		8.41E-13		1E-11
Endosulfan I	NA	NA	4.62E-11	3.53E-10								
Endosulfan sulfate	NA	NA	4.10E-11	3.57E-10								
Endrin	NA	NA	4.69E-11	4.00E-10								
Endrin ketone	NA	NA	4.98E-11	4.20E-10								
Heptachlor epoxide	NA	9.1E+00	1.79E-11	1.59E-10		6.71E-15		6E-14		1.47E-13		1E-12
alpha-Chlordane	NA	1.3E+00	1.79E-11	1.59E-10						1.47E-13		2E-13
beta-BHC	NA	1.9E+00	2.30E-11	1.97E-10						1.89E-13		4E-13
delta-BHC	NA	NA	2.14E-11	1.86E-10								
Metals												
Antimony	NA	NA	1.96E-07	1.52E-06								
Arsenic	NA	1.5E+01	1.09E-07	9.56E-07		4.11E-11		6E-10		9.01E-10		1E-08
Barium	1.4E-04	NA	2.84E-06	2.36E-05	1.07E-08		7E-05		2.34E-07		2E-03	
Cadmium	NA	6.3E+00	1.50E-07	1.02E-06		5.63E-11		4E-10		1.23E-09		8E-09
Copper	NA	NA	3.76E-06	2.71E-05								
Lead	NA	NA	3.83E-05	3.79E-04								
Mercury	8.6E-05	NA	2.23E-09	1.77E-08	8.37E-12		1E-07		1.83E-10		2E-06	
Selenium	NA	NA	1.75E-08	1.07E-07								
Silver	NA	NA	3.50E-08	2.54E-07								
Thallium	NA	NA	1.08E-08	8.16E-08								
Zinc	NA	NA	6.07E-06	4.64E-05								
Herbicides												
MCPA	NA	NA	1.44E-07	9.64E-07								
Total Hazard Quotient and Cancer Risk:							**7E-05**	**1E-09**			**2E-03**	**2E-08**

Assumptions for Current Site Worker

CA =	EPC Surface Only	
IR =	9.6	m3/day
EF =	10	days/year
ED =	7	years
BW =	70	kg
AT (Nc) =	2555	days
AT (Car) =	25550	days

Assumptions for Future Industrial Worker

CA =	EPC Surface Only	
IR =	9.6	m3/day
EF =	219	days/year
ED =	7	years
BW =	70	kg
AT (Nc) =	2555	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA = Information not available

TABLE J-3
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Intake (mg/kg-day) (Nc)	Future Tresspasser Child Intake (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics												
Acetone	NA	NA	1.28E-10	1.12E-09								
Benzene	1.7E-03	2.9E-02	3.40E-11	3.08E-10	2.75E-11	3.92E-13	2E-08	1E-14	5.59E-14	7.98E-16	3E-11	2E-17
Methylene Chloride	8.6E-01	1.7E-03	6.80E-11	6.16E-10	5.49E-11	7.84E-13	6E-11	1E-15	1.12E-13	1.60E-15	1E-13	3E-18
Toluene	1.1E-01	NA	1.11E-10	9.95E-10	8.87E-11		8E-10		1.83E-13		2E-12	
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	4.95E-09	4.17E-08								
2,6-Dinitrotoluene	NA	NA	1.35E-09	1.18E-08								
2-Methylnaphthalene	NA	NA	2.21E-09	2.00E-08								
2-Methylphenol	NA	NA	2.04E-09	1.85E-08								
3,3'-Dichlorobenzidine	NA	NA	3.94E-09	3.47E-08								
3-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
4-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
Acenaphthene	NA	NA	5.61E-10	5.08E-09								
Acenaphthylene	NA	NA	1.63E-09	1.48E-08								
Anthracene	NA	NA	2.21E-09	2.00E-08								
Benzo(a)anthracene	NA	NA	4.86E-09	4.16E-08								
Benzo(a)pyrene	NA	NA	4.95E-09	4.24E-08								
Benzo(b)fluoranthene	NA	NA	5.15E-09	4.33E-08								
Benzo(g,h,i)perylene	NA	NA	4.49E-09	3.85E-08								
Benzo(k)fluoranthene	NA	NA	4.54E-09	3.91E-08								
Butylbenzylphthalate	NA	NA	7.82E-10	7.08E-09								
Carbazole	NA	NA	4.03E-09	3.53E-08								
Chrysene	NA	NA	3.86E-09	3.59E-08								
Di-n-butylphthalate	NA	NA	4.83E-09	4.08E-08								
Dibenz(a,h)anthracene	NA	NA	4.34E-09	3.73E-08								
Dibenzofuran	NA	NA	6.12E-10	5.54E-09								
Fluoranthene	NA	NA	3.59E-09	3.39E-08								
Fluorene	NA	NA	6.46E-10	5.85E-09								
Indeno(1,2,3-cd)pyrene	NA	NA	4.71E-09	4.00E-08								
N-Nitrosodiphenylamine (1)	NA	NA	1.62E-09	1.46E-08								
Naphthalene	NA	NA	6.29E-10	5.70E-09								
Pentachlorophenol	NA	NA	1.04E-08	8.98E-08								
Phenanthrene	NA	NA	4.34E-09	3.80E-08								
Pyrene	NA	NA	3.50E-09	3.30E-08								
bis(2-Chloroisopropyl) ether	NA	3.5E-02	3.62E-09	3.28E-08		4.18E-11		1E-12		8.50E-14		3E-15
bis(2-Ethylhexyl)phthalate	NA	NA	5.83E-09	5.30E-08								
Pesticides/PCBs												
4,4'-DDD	NA	NA	4.69E-11	4.02E-10								
4,4'-DDE	NA	NA	1.46E-10	1.06E-09								
4,4'-DDT	NA	3.4E-01	6.73E-11	5.47E-10		6.96E-13		2E-13		1.58E-15		5E-16
Aldrin	NA	1.7E+01	2.13E-11	1.85E-10		2.35E-13		4E-12		4.99E-16		9E-15
Aroclor-1254	NA	4.0E-01		3.68E-09								
Aroclor-1260	NA	4.0E-01	4.11E-10	3.59E-09		4.57E-12		2E-12		9.66E-15		4E-15
Dieldrin	NA	1.6E+01	1.02E-10	7.73E-10		9.84E-13		2E-11		2.40E-15		4E-14
Endosulfan I	NA	NA	4.62E-11	3.53E-10								
Endosulfan sulfate	NA	NA	4.10E-11	3.57E-10								
Endrin	NA	NA	4.69E-11	4.00E-10								
Endrin ketone	NA	NA	4.98E-11	4.20E-10								
Heptachlor epoxide	NA	9.1E+00	1.79E-11	1.59E-10		2.02E-13		2E-12		4.19E-16		4E-15
alpha-Chlordane	NA	1.3E+00	1.79E-11	1.59E-10		2.02E-13		3E-13		4.19E-16		5E-16
beta-BHC	NA	1.9E+00	2.30E-11	1.97E-10		2.51E-13		5E-13		5.39E-16		1E-15
delta-BHC	NA	NA	2.14E-11	1.86E-10								
Metals												
Antimony	NA	NA	1.96E-07	1.52E-06								
Arsenic	NA	1.5E+01	1.09E-07	9.56E-07		1.22E-09		2E-08		2.57E-12		4E-11
Barium	1.4E-04	NA	2.84E-06	2.36E-05	2.10E-06		1E-02		4.67E-09		3E-05	
Cadmium	NA	6.3E+00	1.50E-07	1.02E-06		1.30E-09		8E-09		3.52E-12		2E-11
Copper	NA	NA	3.76E-06	2.71E-05								
Lead	NA	NA	3.83E-05	3.79E-04								
Mercury	8.6E-05	NA	2.23E-09	1.77E-08	1.58E-09		2E-05		3.66E-12		4E-08	
Selenium	NA	NA	1.75E-08	1.07E-07								
Silver	NA	NA	3.50E-08	2.54E-07								
Thallium	NA	NA	1.08E-08	8.16E-08								
Zinc	NA	NA	6.07E-06	4.64E-05								
Herbicides												
MCPA	NA	NA	1.44E-07	9.64E-07								
Total Hazard Quotient and Cancer Risk:							**1E-02**	**3E-08**			**3E-05**	**6E-11**

Assumptions for Future Construction Worker

CA =	EPC Surface and Sub-Surface
IR =	10.4 m3/day
EF =	219 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CA =	EPC Surface Only
IR =	1.2 m3/day
EF =	25 days/year
ED =	1 years
BW =	50 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA = Information not available

TABLE J-3
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CA \times IR \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CA = Chemical Concentration in Air, Calculated from Air EPC Data
IR = Inhalation Rate
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
Acetone	NA	NA	1.28E-10	1.12E-09								
Benzene	1.7E-03	2.9E-02	3.40E-11	3.08E-10	5.44E-12	2.33E-13	3E-09	7E-15	2.33E-12	2.33E-13	1E-09	7E-15
Methylene Chloride	8.6E-01	1.7E-03	6.80E-11	6.16E-10	1.09E-11	4.66E-13	1E-11	8E-16	4.66E-12	4.66E-13	5E-12	8E-16
Toluene	1.1E-01	NA	1.11E-10	9.95E-10	1.78E-11		2E-10		7.64E-12		7E-11	
Semivolatile Organics												
2,4-Dinitrotoluene	NA	NA	4.95E-09	4.17E-08								
2,6-Dinitrotoluene	NA	NA	1.35E-09	1.18E-08								
2-Methylnaphthalene	NA	NA	2.21E-09	2.00E-08								
2-Methylphenol	NA	NA	2.04E-09	1.85E-08								
3,3'-Dichlorobenzidine	NA	NA	3.94E-09	3.47E-08								
3-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
4-Nitroaniline	NA	NA	9.55E-09	8.39E-08								
Acenaphthene	NA	NA	5.61E-10	5.08E-09								
Acenaphthylene	NA	NA	1.63E-09	1.48E-08								
Anthracene	NA	NA	2.21E-09	2.00E-08								
Benzo(a)anthracene	NA	NA	4.86E-09	4.16E-08								
Benzo(a)pyrene	NA	NA	4.95E-09	4.24E-08								
Benzo(b)fluoranthene	NA	NA	5.15E-09	4.33E-08								
Benzo(g,h,i)perylene	NA	NA	4.49E-09	3.85E-08								
Benzo(k)fluoranthene	NA	NA	4.54E-09	3.91E-08								
Butylbenzylphthalate	NA	NA	7.82E-10	7.08E-09								
Carbazole	NA	NA	4.03E-09	3.53E-08								
Chrysene	NA	NA	3.86E-09	3.59E-08								
Di-n-butylphthalate	NA	NA	4.83E-09	4.08E-08								
Dibenz(a,h)anthracene	NA	NA	4.34E-09	3.73E-08								
Dibenzofuran	NA	NA	6.12E-10	5.54E-09								
Fluoranthene	NA	NA	3.59E-09	3.39E-08								
Fluorene	NA	NA	6.46E-10	5.85E-09								
Indeno(1,2,3-cd)pyrene	NA	NA	4.71E-09	4.00E-08								
N-Nitrosodiphenylamine (1)	NA	NA	1.62E-09	1.46E-08								
Naphthalene	NA	NA	6.29E-10	5.70E-09								
Pentachlorophenol	NA	NA	1.04E-08	8.98E-08								
Phenanthrene	NA	NA	4.34E-09	3.80E-08								
Pyrene	NA	NA	3.50E-09	3.30E-08								
bis(2-Chloroisopropyl) ether	NA	3.5E-02	3.62E-09	3.28E-08		2.48E-11		9E-13		2.48E-11		9E-13
bis(2-Ethylhexyl)phthalate	NA	NA	5.83E-09	5.30E-08								
Pesticides/PCBs												
4,4'-DDD	NA	NA	4.69E-11	4.02E-10								
4,4'-DDE	NA	NA	1.46E-10	1.06E-09								
4,4'-DDT	NA	3.4E-01	6.73E-11	5.47E-10		4.62E-13		2E-13		4.62E-13		2E-13
Aldrin	NA	1.7E+01	2.13E-11	1.85E-10		1.46E-13		2E-12		1.46E-13		2E-12
Aroclor-1254	NA	4.0E-01		3.68E-09								
Aroclor-1260	NA	4.0E-01	4.11E-10	3.59E-09		2.82E-12		1E-12		2.82E-12		1E-12
Dieldrin	NA	1.6E+01	1.02E-10	7.73E-10		7.01E-13		1E-11		7.01E-13		1E-11
Endosulfan I	NA	NA	4.62E-11	3.53E-10								
Endosulfan sulfate	NA	NA	4.10E-11	3.57E-10								
Endrin	NA	NA	4.69E-11	4.00E-10								
Endrin ketone	NA	NA	4.98E-11	4.20E-10								
Heptachlor epoxide	NA	9.1E+00	1.79E-11	1.59E-10		1.22E-13		1E-12		1.22E-13		1E-12
alpha-Chlordane	NA	1.3E+00	1.79E-11	1.59E-10								
beta-BHC	NA	1.9E+00	2.30E-11	1.97E-10								
delta-BHC	NA	NA	2.14E-11	1.86E-10								
Metals												
Antimony	NA	NA	1.96E-07	1.52E-06								
Arsenic	NA	1.5E+01	1.09E-07	9.56E-07		7.51E-10		1E-08		7.51E-10		1E-08
Barium	1.4E-04	NA	2.84E-06	2.36E-05	4.54E-07		3E-03		1.95E-07		1E-03	
Cadmium	NA	6.3E+00	1.50E-07	1.02E-06		1.03E-09		6E-09		1.03E-09		6E-09
Copper	NA	NA	3.76E-06	2.71E-05								
Lead	NA	NA	3.83E-05	3.79E-04								
Mercury	8.6E-05	NA	2.23E-09	1.77E-08	3.56E-10		4E-06		1.53E-10		2E-06	
Selenium	NA	NA	1.75E-08	1.07E-07								
Silver	NA	NA	3.50E-08	2.54E-07								
Thallium	NA	NA	1.08E-08	8.16E-08								
Zinc	NA	NA	6.07E-06	4.64E-05								
Herbicides												
MCPA	NA	NA	1.44E-07	9.64E-07								
Total Hazard Quotient and Cancer Risk:							**3E-03**	**2E-08**			**1E-03**	**2E-08**

Assumptions for Day Care Center Child

CA =	EPC Surface Only
IR =	4 m3/day
EF =	219 days/year
ED =	3 years
BW =	15 kg
AT (Nc) =	1095 days
AT (Car) =	25550 days

Assumptions for Day Care Center Adult

CA =	EPC Surface Only
IR =	8 m3/day
EF =	219 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA = Information not available

TABLE J-4
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Soil, from Soil EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	7.52E-03	7.25E-03	5.89E-10		6E-09		7.36E-09		7E-08	
Benzene	3.0E-03	2.9E-02	2.00E-03	2.00E-03	1.57E-10	5.59E-11	5E-08	2E-12	1.96E-09	6.99E-10	7E-07	2E-11
Methylene Chloride	6.0E-02	7.5E-03	4.00E-03	4.00E-03	3.13E-10	1.12E-10	5E-09	8E-13	3.91E-09	1.40E-09	7E-08	1E-11
Toluene	2.0E-01	NA	6.55E-03	6.46E-03	5.13E-10		3E-09		6.41E-09		3E-08	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.91E-01	2.71E-01	2.28E-08	8.14E-09	1E-05	6E-09	2.85E-07	1.02E-07	1E-04	7E-08
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.92E-02	7.66E-02	6.20E-09	2.21E-09	6E-06	2E-09	7.75E-08	2.77E-08	8E-05	2E-08
2-Methylnaphthalene	4.0E-02	NA	1.30E-01	1.30E-01	1.02E-08		3E-07		1.27E-07		3E-06	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	9.39E-09		2E-07		1.17E-07		2E-06	
3,3'-Dichlorobenzidine	NA	4.5E-01	2.32E-01	2.25E-01		6.49E-09		3E-09		8.11E-08		4E-08
3-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.0E-02	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.0E-01	NA	1.30E-01	1.30E-01	1.02E-08		3E-08		1.27E-07		4E-07	
Benzo(a)anthracene	NA	7.3E-01	2.86E-01	2.70E-01		8.00E-09		6E-09		9.99E-08		7E-08
Benzo(a)pyrene	NA	7.3E+00	2.91E-01	2.75E-01		8.14E-09		6E-08		1.02E-07		7E-07
Benzo(b)fluoranthene	NA	7.3E-01	3.03E-01	2.81E-01		8.47E-09		6E-09		1.06E-07		8E-08
Benzo(g,h,i)perylene	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.3E-02	2.67E-01	2.54E-01		7.46E-09		5E-10		9.33E-08		7E-09
Butylbenzylphthalate	2.0E-01	NA	4.60E-02	4.60E-02	3.60E-09		2E-08		4.50E-08		2E-07	
Carbazole	NA	2.0E-02	2.37E-01	2.29E-01		6.63E-09		1E-10		8.28E-08		2E-09
Chrysene	NA	7.3E-03	2.27E-01	2.33E-01		6.35E-09		5E-11		7.93E-08		6E-10
Di-n-butylphthalate	1.0E-01	NA	2.84E-01	2.65E-01	2.22E-08		2E-07		2.78E-07		3E-06	
Dibenz(a,h)anthracene	NA	7.3E+00	2.55E-01	2.42E-01		7.13E-09		5E-08		8.91E-08		7E-07
Dibenzofuran	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.0E-02	NA	2.11E-01	2.20E-01	1.65E-08		4E-07		2.06E-07		5E-06	
Fluorene	4.0E-02	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.77E-01	2.60E-01		7.74E-09		6E-09		9.68E-08		7E-08
N-Nitrosodiphenylamine (1)	NA	4.9E-03	9.50E-02	9.50E-02		2.66E-09		1E-11		3.32E-08		2E-10
Naphthalene	4.0E-02	NA	3.70E-02	3.70E-02	2.90E-09		7E-08		3.62E-08		9E-07	
Pentachlorophenol	3.0E-02	1.2E-01	6.10E-01	5.83E-01	4.77E-08	1.71E-08	2E-06	2E-09	5.97E-07	2.13E-07	2E-05	3E-08
Phenanthrene	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.0E-02	NA	2.06E-01	2.14E-01	1.61E-08		5E-07		2.02E-07		7E-06	
bis(2-Chloroisopropyl) ether	4.0E-02	7.0E-02	2.13E-01	2.13E-01	1.67E-08	5.95E-09	4E-07	4E-10	2.08E-07	7.44E-08	5E-06	5E-09
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	3.43E-01	3.44E-01	2.68E-08	9.59E-09	1E-06	1E-10	3.36E-07	1.20E-07	2E-05	2E-09
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	2.76E-03	2.61E-03		7.72E-11		2E-11		9.64E-10		2E-10
4,4'-DDE	NA	3.4E-01	8.57E-03	6.91E-03		2.40E-10		8E-11		2.99E-09		1E-09
4,4'-DDT	5.0E-04	3.4E-01	3.96E-03	3.55E-03	3.10E-10	1.11E-10	6E-07	4E-11	3.87E-09	1.38E-09	8E-06	5E-10
Aldrin	3.0E-05	1.7E+01	1.25E-03	1.20E-03	9.78E-11	3.49E-11	3E-06	6E-10	1.22E-09	4.37E-10	4E-05	7E-09
Aroclor-1254	2.0E-05	2.0E+00		2.39E-02								
Aroclor-1260	2.0E-05	2.0E+00	2.42E-02	2.33E-02	1.89E-09	6.77E-10	9E-05	1E-09	2.37E-08	8.46E-09	1E-03	2E-08
Dieldrin	5.0E-05	1.6E+01	6.01E-03	5.02E-03	4.70E-10	1.68E-10	9E-06	3E-09	5.88E-09	2.10E-09	1E-04	3E-08
Endosulfan I	6.0E-03	NA	2.72E-03	2.29E-03	2.13E-10		4E-08		2.66E-09		4E-07	
Endosulfan sulfate	6.0E-03	NA	2.41E-03	2.32E-03								
Endrin	3.0E-04	NA	2.76E-03	2.60E-03	2.16E-10		7E-07		2.70E-09		9E-06	
Endrin ketone	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.05E-03	1.03E-03	8.22E-11	2.94E-11	6E-06	3E-10	1.03E-09	3.67E-10	8E-05	3E-09
alpha-Chlordane	6.0E-05	1.3E+00	1.05E-03	1.03E-03								
beta-BHC	NA	1.8E+00	1.35E-03	1.28E-03								
delta-BHC	NA	NA	1.26E-03	1.21E-03								
Metals												
Antimony	4.0E-04	NA	1.15E+01	9.89E+00								
Arsenic	3.0E-04	1.5E+00	6.44E+00	6.21E+00	5.04E-07	1.80E-07	2E-03	3E-07	6.30E-06	2.25E-06	2E-02	3E-06
Barium	7.0E-02	NA	1.67E+02	1.53E+02	1.31E-05		2E-04		1.63E-04		2E-03	
Cadmium	5.0E-04	NA	8.82E+00	6.61E+00	6.90E-07		1E-03		8.63E-06		2E-02	
Copper	4.0E-02	NA	2.21E+02	1.76E+02	1.73E-05		4E-04		2.16E-04		5E-03	
Lead	NA	NA	2.25E+03	2.46E+03								
Mercury	3.0E-04	NA	1.31E-01	1.15E-01	1.03E-08		3E-05		1.28E-07		4E-04	
Selenium	5.0E-03	NA	1.03E+00	6.98E-01	8.06E-08		2E-05		1.01E-06		2E-04	
Silver	5.0E-03	NA	2.06E+00	1.65E+00	1.61E-07		3E-05		2.02E-06		4E-04	
Thallium	8.0E-05	NA	6.38E-01	5.30E-01	4.99E-08		6E-04		6.24E-07		8E-03	
Zinc	3.0E-01	NA	3.57E+02	3.01E+02	2.79E-05		9E-05		3.49E-04		1E-03	
Herbicides												
MCPA	5.0E-04	NA	8.49E+00	6.26E+00	6.65E-07		1E-03		8.31E-06		2E-02	
Total Hazard Quotient and Cancer Risk:							**6E-03**	**4E-07**			**7E-02**	**5E-06**

Assumptions for Current Site Worker

CS =	EPC Surface Only	
IR =	100	mg soil/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	20	days/year
ED =	25	years
BW =	70	kg
AT (Nc) =	9125	days
AT (Car) =	25550	days

Assumptions for Future Industrial Worker

CS =	EPC Surface Only	
IR =	100	mg soil/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	250	days/year
ED =	25	years
BW =	70	kg
AT (Nc) =	9125	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA = Information not available

TABLE J-4
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, from Soil EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC from Surface Soil	EPC from Total Soils	Future Construction Worker				Future Tresspasser Child			
					Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/kg)	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics												
Acetone	1.0E-01	NA	7.52E-03	7.25E-03	3.41E-08		3E-07		4.12E-09		4E-08	
Benzene	3.0E-03	2.9E-02	2.00E-03	2.00E-03	9.39E-09	1.34E-10	3E-06	4E-12	1.10E-09	7.83E-11	4E-07	2E-12
Methylene Chloride	6.0E-02	7.5E-03	4.00E-03	4.00E-03	1.88E-08	2.68E-10	3E-07	2E-12	2.19E-09	1.57E-10	4E-08	1E-12
Toluene	2.0E-01	NA	6.55E-03	6.46E-03	3.03E-08		2E-07		3.59E-09		2E-08	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.91E-01	2.71E-01	1.27E-06	1.82E-08	6E-04	1E-08	1.59E-07	1.14E-08	8E-05	8E-09
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.92E-02	7.66E-02	3.60E-07	5.14E-09	4E-04	3E-09	4.34E-08	3.10E-09	4E-05	2E-09
2-Methylnaphthalene	4.0E-02	NA	1.30E-01	1.30E-01	6.11E-07		2E-05		7.12E-08		2E-06	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	5.64E-07		1E-05		6.58E-08		1E-06	
3,3'-Dichlorobenzidine	NA	4.5E-01	2.32E-01	2.25E-01		1.51E-08		7E-09		9.08E-09		4E-09
3-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.0E-02	NA	3.30E-02	3.30E-02	1.55E-07							
Acenaphthylene	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.0E-01	NA	1.30E-01	1.30E-01	6.11E-07		2E-06		7.12E-08		2E-07	
Benzo(a)anthracene	NA	7.3E-01	2.86E-01	2.70E-01		1.81E-08		1E-08		1.12E-08		8E-09
Benzo(a)pyrene	NA	7.3E+00	2.91E-01	2.75E-01		1.85E-08		1E-07		1.14E-08		8E-08
Benzo(b)fluoranthene	NA	7.3E-01	3.03E-01	2.81E-01		1.89E-08		1E-08		1.19E-08		9E-09
Benzo(g,h,i)perylene	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.3E-02	2.67E-01	2.54E-01		1.70E-08		1E-09		1.05E-08		8E-10
Butylbenzylphthalate	2.0E-01	NA	4.60E-02	4.60E-02	2.16E-07		1E-06		2.52E-08		1E-07	
Carbazole	NA	2.0E-02	2.37E-01	2.29E-01		1.54E-08		3E-10		9.28E-09		2E-10
Chrysene	NA	7.3E-03	2.27E-01	2.33E-01		1.56E-08		1E-10		8.88E-09		6E-11
Di-n-butylphthalate	1.0E-01	NA	2.84E-01	2.65E-01	1.24E-06		1E-05		1.56E-07		2E-06	
Dibenz(a,h)anthracene	NA	7.3E+00	2.55E-01	2.42E-01		1.62E-08		1E-07		9.98E-09		7E-08
Dibenzofuran	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.0E-02	NA	2.11E-01	2.20E-01	1.03E-06		3E-05		1.16E-07		3E-06	
Fluorene	4.0E-02	NA	3.80E-02	3.80E-02	1.78E-07							
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.77E-01	2.60E-01		1.74E-08		1E-08		1.08E-08		8E-09
N-Nitrosodiphenylamine (1)	NA	4.9E-03	9.50E-02	9.50E-02		6.37E-09		3E-11		3.72E-09		2E-11
Naphthalene	4.0E-02	NA	3.70E-02	3.70E-02	1.74E-07		4E-06		2.03E-08		5E-07	
Pentachlorophenol	3.0E-02	1.2E-01	6.10E-01	5.83E-01	2.74E-06	3.91E-08	9E-05	5E-09	3.34E-07	2.39E-08	1E-05	3E-09
Phenanthrene	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.0E-02	NA	2.06E-01	2.14E-01	1.01E-06		3E-05		1.13E-07		4E-06	
bis(2-Chloroisopropyl) ether	4.0E-02	7.0E-02	2.13E-01	2.13E-01	1.00E-06	1.43E-08	3E-05	1E-09	1.17E-07	8.34E-09	3E-06	6E-10
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	3.43E-01	3.44E-01	1.62E-06	2.31E-08	8E-05	3E-10	1.88E-07	1.34E-08	9E-06	2E-10
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	2.76E-03	2.61E-03		1.75E-10		4E-11		1.08E-10		3E-11
4,4'-DDE	NA	3.4E-01	8.57E-03	6.91E-03		4.64E-10		2E-10		3.35E-10		1E-10
4,4'-DDT	5.0E-04	3.4E-01	3.96E-03	3.55E-03	1.67E-08	2.38E-10	3E-05	8E-11	2.17E-09	1.55E-10	4E-06	5E-11
Aldrin	3.0E-05	1.7E+01	1.25E-03	1.20E-03	5.64E-09	8.05E-11	2E-04	1E-09	6.85E-10	4.89E-11	2E-05	8E-10
Aroclor-1254	2.0E-05	2.0E+00		2.39E-02	1.12E-07	1.60E-09						
Aroclor-1260	2.0E-05	2.0E+00	2.42E-02	2.33E-02	1.09E-07	1.56E-09	5E-03	3E-09	1.33E-08	9.47E-10	7E-04	2E-09
Dieldrin	5.0E-05	1.6E+01	6.01E-03	5.02E-03	2.36E-08	3.37E-10	5E-04	5E-09	3.29E-09	2.35E-10	7E-05	4E-09
Endosulfan I	6.0E-03	NA	2.72E-03	2.29E-03	1.08E-08		2E-06		1.49E-09		2E-07	
Endosulfan sulfate	6.0E-03	NA	2.41E-03	2.32E-03	1.09E-08							
Endrin	3.0E-04	NA	2.76E-03	2.60E-03	1.22E-08		4E-05		1.51E-09		5E-06	
Endrin ketone	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.05E-03	1.03E-03	4.84E-09	2.27E-14	3E-16	2E-15	3.4E-19	5.64E-10	4E-11	6E-11
alpha-Chlordane	6.0E-05	1.3E+00	1.05E-03	1.03E-03	4.84E-09	2.27E-14	3E-16	2E-14	3.4E-19	5.64E-10	4E-11	4E-10
beta-BHC	NA	1.8E+00	1.35E-03	1.28E-03		8.59E-11		2E-10		5.28E-11		1E-10
delta-BHC	NA	NA	1.26E-03	1.21E-03								
Metals												
Antimony	4.0E-04	NA	1.15E+01	9.89E+00	4.65E-05							
Arsenic	3.0E-04	1.5E+00	6.44E+00	6.21E+00	2.92E-05	4.17E-07	1E-01	6E-07	3.53E-06	2.52E-07	1E-02	4E-07
Barium	7.0E-02	NA	1.67E+02	1.53E+02	7.19E-04		1E-02		9.15E-05		1E-03	
Cadmium	5.0E-04	NA	8.82E+00	6.61E+00	3.10E-05		6E-02		4.83E-06		1E-02	
Copper	4.0E-02	NA	2.21E+02	1.76E+02	8.27E-04		2E-02		1.21E-04		3E-03	
Lead	NA	NA	2.25E+03	2.46E+03								
Mercury	3.0E-04	NA	1.31E-01	1.15E-01	5.40E-07		2E-03		7.18E-08		2E-04	
Selenium	5.0E-03	NA	1.03E+00	6.98E-01	3.28E-06		7E-04		5.64E-07		1E-04	
Silver	5.0E-03	NA	2.06E+00	1.65E+00	7.75E-06		2E-03		1.13E-06		2E-04	
Thallium	8.0E-05	NA	6.38E-01	5.30E-01					3.50E-07		4E-03	
Zinc	3.0E-01	NA	3.57E+02	3.01E+02	1.41E-03		5E-03		1.96E-04		7E-04	
Herbicides												
MCPA	5.0E-04	NA	8.49E+00	6.26E+00	2.94E-05		6E-02		4.65E-06		9E-03	
Total Hazard Quotient and Cancer Risk:							**3E-01**	**1E-06**			**4E-02**	**6E-07**

Assumptions for Future Construction Worker

CS =	EPC Surface and Subsurface
IR =	480 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	250 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CS =	EPC Surface Only
IR =	200 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	50 days/year
ED =	5 years
BW =	50 kg
AT (Nc) =	1825 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-4
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Soil, from Soil EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	7.52E-03	7.25E-03	6.87E-08		7E-07		7.36E-09		7E-08	
Benzene	3.0E-03	2.9E-02	2.00E-03	2.00E-03	1.83E-08	1.57E-09	6E-06	5E-11	1.96E-09	6.99E-10	7E-07	2E-11
Methylene Chloride	6.0E-02	7.5E-03	4.00E-03	4.00E-03	3.65E-08	3.13E-09	6E-07	2E-11	3.91E-09	1.40E-09	7E-08	1E-11
Toluene	2.0E-01	NA	6.55E-03	6.46E-03	5.98E-08		3E-07		6.41E-09		3E-08	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.91E-01	2.71E-01	2.66E-06	2.28E-07	1E-03	2E-07	2.85E-07	1.02E-07	1E-04	7E-08
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.92E-02	7.66E-02	7.23E-07	6.20E-08	7E-04	4E-08	7.75E-08	2.77E-08	8E-05	2E-08
2-Methylnaphthalene	4.0E-02	NA	1.30E-01	1.30E-01	1.19E-06		3E-05		1.27E-07		3E-06	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	1.10E-06		2E-05		1.17E-07		2E-06	
3,3'-Dichlorobenzidine	NA	4.5E-01	2.32E-01	2.25E-01		1.82E-07		8E-08		8.11E-08		4E-08
3-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.0E-02	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.0E-01	NA	1.30E-01	1.30E-01	1.19E-06		4E-06		1.27E-07		4E-07	
Benzo(a)anthracene	NA	7.3E-01	2.86E-01	2.70E-01		2.24E-07		2E-07		9.99E-08		7E-08
Benzo(a)pyrene	NA	7.3E+00	2.91E-01	2.75E-01		2.28E-07		2E-06		1.02E-07		7E-07
Benzo(b)fluoranthene	NA	7.3E-01	3.03E-01	2.81E-01		2.37E-07		2E-07		1.06E-07		8E-08
Benzo(g,h,i)perylene	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.3E-02	2.67E-01	2.54E-01		2.09E-07		2E-08		9.33E-08		7E-09
Butylbenzylphthalate	2.0E-01	NA	4.60E-02	4.60E-02	4.20E-07		2E-06		4.50E-08		2E-07	
Carbazole	NA	2.0E-02	2.37E-01	2.29E-01		1.86E-07		4E-09		8.28E-08		2E-09
Chrysene	NA	7.3E-03	2.27E-01	2.33E-01		1.78E-07		1E-09		7.93E-08		6E-10
Di-n-butylphthalate	1.0E-01	NA	2.84E-01	2.65E-01	2.59E-06		3E-05		2.78E-07		3E-06	
Dibenz(a,h)anthracene	NA	7.3E+00	2.55E-01	2.42E-01		2.00E-07		1E-06		8.91E-08		7E-07
Dibenzofuran	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.0E-02	NA	2.11E-01	2.20E-01	1.93E-06		5E-05		2.06E-07		5E-06	
Fluorene	4.0E-02	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.77E-01	2.60E-01		2.17E-07		2E-07		9.68E-08		7E-08
N-Nitrosodiphenylamine (1)	NA	4.9E-03	9.50E-02	9.50E-02		7.44E-08		4E-10		3.32E-08		2E-10
Naphthalene	4.0E-02	NA	3.70E-02	3.70E-02	3.38E-07		8E-06		3.62E-08		9E-07	
Pentachlorophenol	3.0E-02	1.2E-01	6.10E-01	5.83E-01	5.57E-06	4.77E-07	2E-04	6E-08	5.97E-07	2.13E-07	2E-05	3E-08
Phenanthrene	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.0E-02	NA	2.06E-01	2.14E-01	1.88E-06		6E-05		2.02E-07		7E-06	
bis(2-Chloroisopropyl) ether	4.0E-02	7.0E-02	2.13E-01	2.13E-01	1.95E-06	1.67E-07	5E-05	1E-08	2.08E-07	7.44E-08	5E-06	5E-09
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	3.43E-01	3.44E-01	3.13E-06	2.68E-07	2E-04	4E-09	3.36E-07	1.20E-07	2E-05	2E-09
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	2.76E-03	2.61E-03		2.16E-09		5E-10		9.64E-10		2E-10
4,4'-DDE	NA	3.4E-01	8.57E-03	6.91E-03		6.71E-09		2E-09		2.99E-09		1E-09
4,4'-DDT	5.0E-04	3.4E-01	3.96E-03	3.55E-03	3.62E-08	3.10E-09	7E-05	1E-09	3.87E-09	1.38E-09	8E-06	5E-10
Aldrin	3.0E-05	1.7E+01	1.25E-03	1.20E-03	1.14E-08	9.78E-10	4E-04	2E-08	1.22E-09	4.37E-10	4E-05	7E-09
Aroclor-1254	2.0E-05	2.0E+00		2.39E-02								
Aroclor-1260	2.0E-05	2.0E+00	2.42E-02	2.33E-02	2.21E-07	1.89E-08	1E-02	4E-08	2.37E-08	8.46E-09	1E-03	2E-08
Dieldrin	5.0E-05	1.6E+01	6.01E-03	5.02E-03	5.49E-08	4.70E-09	1E-03	8E-08	5.88E-09	2.10E-09	1E-04	3E-08
Endosulfan I	6.0E-03	NA	2.72E-03	2.29E-03	2.48E-08		4E-06		2.66E-09		4E-07	
Endosulfan sulfate	6.0E-03	NA	2.41E-03	2.32E-03								
Endrin	3.0E-04	NA	2.76E-03	2.60E-03	2.52E-08		8E-05		2.70E-09		9E-06	
Endrin ketone	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.05E-03	1.03E-03	9.59E-09	8.22E-10	7E-04	7E-09	1.03E-09	3.67E-10	8E-05	3E-09
alpha-Chlordane	6.0E-05	1.3E+00	1.05E-03	1.03E-03								
beta-BHC	NA	1.8E+00	1.35E-03	1.28E-03								
delta-BHC	NA	NA	1.26E-03	1.21E-03								
Metals												
Antimony	4.0E-04	NA	1.15E+01	9.89E+00								
Arsenic	3.0E-04	1.5E+00	6.44E+00	6.21E+00	5.88E-05	5.04E-06	2E-01	8E-06	6.30E-06	2.25E-06	2E-02	3E-06
Barium	7.0E-02	NA	1.67E+02	1.53E+02	1.53E-03		2E-02		1.63E-04		2E-03	
Cadmium	5.0E-04	NA	8.82E+00	6.61E+00	8.05E-05		2E-01		8.63E-06		2E-02	
Copper	4.0E-02	NA	2.21E+02	1.76E+02	2.02E-03		5E-02		2.16E-04		5E-03	
Lead	NA	NA	2.25E+03	2.46E+03								
Mercury	3.0E-04	NA	1.31E-01	1.15E-01	1.20E-06		4E-03		1.28E-07		4E-04	
Selenium	5.0E-03	NA	1.03E+00	6.98E-01	9.41E-06		2E-03		1.01E-06		2E-04	
Silver	5.0E-03	NA	2.06E+00	1.65E+00	1.88E-05		4E-03		2.02E-06		4E-04	
Thallium	8.0E-05	NA	6.38E-01	5.30E-01	5.83E-06		7E-02		6.24E-07		8E-03	
Zinc	3.0E-01	NA	3.57E+02	3.01E+02	3.26E-03		1E-02		3.49E-04		1E-03	
Herbicides												
MCPA	5.0E-04	NA	8.49E+00	6.26E+00	7.75E-05		2E-01		8.31E-06		2E-02	
Total Hazard Quotient and Cancer Risk:							**7E-01**	**1E-05**			**7E-02**	**5E-06**

Assumptions for Future Day Care Center Child

CS =	EPC Surface Only
IR =	200 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	250 days/year
ED =	6 years
BW =	15 kg
AT (Nc) =	2190 days
AT (Car) =	25550 days

Assumptions for Future Day Care Center Worker

CS =	EPC Surface Only
IR =	100 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	250 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-5
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Soil, from Soil EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	7.52E-03	7.25E-03	1.47E-10		1E-09		3.22E-09		3E-08	
Benzene	3.0E-03	2.9E-02	2.00E-03	2.00E-03	3.91E-11	3.91E-12	1E-08	1E-13	8.57E-10	8.57E-11	3E-07	2E-12
Methylene Chloride	6.0E-02	7.5E-03	4.00E-03	4.00E-03	7.83E-11	7.83E-12	1E-09	6E-14	1.71E-09	1.71E-10	3E-08	1E-12
Toluene	2.0E-01	NA	6.55E-03	6.46E-03	1.28E-10		6E-10		2.81E-09		1E-08	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.91E-01	2.71E-01	5.69E-09	5.69E-10	3E-06	4E-10	1.25E-07	1.25E-08	6E-05	8E-09
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.92E-02	7.66E-02	1.55E-09	1.55E-10	2E-06	1E-10	3.39E-08	3.39E-09	3E-05	2E-09
2-Methylnaphthalene	4.0E-02	NA	1.30E-01	1.30E-01	2.54E-09		6E-08		5.57E-08		1E-06	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	2.35E-09		5E-08		5.14E-08		1E-06	
3,3'-Dichlorobenzidine	NA	4.5E-01	2.32E-01	2.25E-01		4.54E-10		2E-10		9.94E-09		4E-09
3-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.0E-02	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.0E-01	NA	1.30E-01	1.30E-01	2.54E-09		8E-09		5.57E-08		2E-07	
Benzo(a)anthracene	NA	7.3E-01	2.86E-01	2.70E-01		5.60E-10		4E-10		1.23E-08		9E-09
Benzo(a)pyrene	NA	7.3E+00	2.91E-01	2.75E-01		5.69E-10		4E-09		1.25E-08		9E-08
Benzo(b)fluoranthene	NA	7.3E-01	3.03E-01	2.81E-01		5.93E-10		4E-10		1.30E-08		9E-09
Benzo(g,h,i)perylene	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.3E-02	2.67E-01	2.54E-01		5.23E-10		4E-11		1.14E-08		8E-10
Butylbenzylphthalate	2.0E-01	NA	4.60E-02	4.60E-02	9.00E-10		5E-09		1.97E-08		1E-07	
Carbazole	NA	2.0E-02	2.37E-01	2.29E-01		4.64E-10		9E-12		1.02E-08		2E-10
Chrysene	NA	7.3E-03	2.27E-01	2.33E-01		4.44E-10		3E-12		9.73E-09		7E-11
Di-n-butylphthalate	1.0E-01	NA	2.84E-01	2.65E-01	5.56E-09		6E-08		1.22E-07		1E-06	
Dibenz(a,h)anthracene	NA	7.3E+00	2.55E-01	2.42E-01		4.99E-10		4E-09		1.09E-08		8E-08
Dibenzofuran	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.0E-02	NA	2.11E-01	2.20E-01	4.13E-09		1E-07		9.04E-08		2E-06	
Fluorene	4.0E-02	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.77E-01	2.60E-01		5.42E-10		4E-10		1.19E-08		9E-09
N-Nitrosodiphenylamine (1)	NA	4.9E-03	9.50E-02	9.50E-02		1.86E-10		9E-13		4.07E-09		2E-11
Naphthalene	4.0E-02	NA	3.70E-02	3.70E-02	7.24E-10		2E-08		1.59E-08		4E-07	
Pentachlorophenol	3.0E-02	1.2E-01	6.10E-01	5.83E-01	1.19E-08	1.19E-09	4E-07	1E-10	2.61E-07	2.61E-08	9E-06	3E-09
Phenanthrene	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.0E-02	NA	2.06E-01	2.14E-01	4.03E-09		1E-07		8.83E-08		3E-06	
bis(2-Chloroisopropyl) ether	4.0E-02	7.0E-02	2.13E-01	2.13E-01	4.17E-09	4.17E-10	1E-07	3E-11	9.13E-08	9.13E-09	2E-06	6E-10
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	3.43E-01	3.44E-01	6.71E-09	6.71E-10	3E-07	9E-12	1.47E-07	1.47E-08	7E-06	2E-10
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	2.76E-03	2.61E-03		5.40E-12		1E-12		1.18E-10		3E-11
4,4'-DDE	NA	3.4E-01	8.57E-03	6.91E-03		1.68E-11		6E-12		3.67E-10		1E-10
4,4'-DDT	5.0E-04	3.4E-01	3.96E-03	3.55E-03	7.75E-11	7.75E-12	2E-07	3E-12	1.70E-09	1.70E-10	3E-06	6E-11
Aldrin	3.0E-05	1.7E+01	1.25E-03	1.20E-03	2.45E-11	2.45E-12	8E-07	4E-11	5.36E-10	5.36E-11	2E-05	9E-10
Aroclor-1254	2.0E-05	2.0E+00		2.39E-02								
Aroclor-1260	2.0E-05	2.0E+00	2.42E-02	2.33E-02	4.74E-10	4.74E-11	2E-05	9E-11	1.04E-08	1.04E-09	5E-04	2E-09
Dieldrin	5.0E-05	1.6E+01	6.01E-03	5.02E-03	1.18E-10	1.18E-11	2E-06	2E-10	2.58E-09	2.58E-10	5E-05	4E-09
Endosulfan I	6.0E-03	NA	2.72E-03	2.29E-03	5.32E-11		9E-09		1.17E-09		2E-07	
Endosulfan sulfate	6.0E-03	NA	2.41E-03	2.32E-03								
Endrin	3.0E-04	NA	2.76E-03	2.60E-03	5.40E-11		2E-07		1.18E-09		4E-06	
Endrin ketone	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.05E-03	1.03E-03	2.05E-11	2.05E-12	2E-06	2E-11	4.50E-10	4.50E-11	3E-05	4E-10
alpha-Chlordane	6.0E-05	1.3E+00	1.05E-03	1.03E-03								
beta-BHC	NA	1.8E+00	1.35E-03	1.28E-03								
delta-BHC	NA	NA	1.26E-03	1.21E-03								
Metals												
Antimony	4.0E-04	NA	1.15E+01	9.89E+00								
Arsenic	3.0E-04	1.5E+00	6.44E+00	6.21E+00	1.26E-07	1.26E-08	4E-04	2E-08	2.76E-06	2.76E-07	9E-03	4E-07
Barium	7.0E-02	NA	1.67E+02	1.53E+02	3.27E-06		5E-05		7.16E-05		1E-03	
Cadmium	5.0E-04	NA	8.82E+00	6.61E+00	1.73E-07		3E-04		3.78E-06		8E-03	
Copper	4.0E-02	NA	2.21E+02	1.76E+02	4.32E-06		1E-04		9.47E-05		2E-03	
Lead	NA	NA	2.25E+03	2.46E+03								
Mercury	3.0E-04	NA	1.31E-01	1.15E-01	2.56E-09		9E-06		5.61E-08		2E-04	
Selenium	5.0E-03	NA	1.03E+00	6.98E-01	2.02E-08		4E-06		4.41E-07		9E-05	
Silver	5.0E-03	NA	2.06E+00	1.65E+00	4.03E-08		8E-06		8.83E-07		2E-04	
Thallium	8.0E-05	NA	6.38E-01	5.30E-01	1.25E-08		2E-04		2.73E-07		3E-03	
Zinc	3.0E-01	NA	3.57E+02	3.01E+02	6.99E-06		2E-05		1.53E-04		5E-04	
Herbicides												
MCPA	5.0E-04	NA	8.49E+00	6.26E+00	1.66E-07		3E-04		3.64E-06		7E-03	
Total Hazard Quotient and Cancer Risk:							**1E-03**	**3E-08**			**3E-02**	**6E-07**

Assumptions for Current Site Worker

IR =	50	mg soil/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	10	days/year
ED =	7	years
BW =	70	kg
AT (Nc) =	2555	days
AT (Car) =	25550	days

Assumptions for Future Industrial Worker

IR =	50	mg soil/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	219	days/year
ED =	7	years
BW =	70	kg
AT (Nc) =	2555	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
A = Information not available.

TABLE J-5
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, from Soil EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC from Surface Soil	EPC from Total Soils	Future Construction Worker				Future Tresspasser Child			
					Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/kg)	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics												
Acetone	1.0E-01	NA	7.52E-03	7.25E-03	6.45E-09		6E-08		1.03E-09		1E-08	
Benzene	3.0E-03	2.9E-02	2.00E-03	2.00E-03	1.71E-09	2.45E-11	6E-07	7E-13	2.74E-10	3.91E-12	9E-08	1E-13
Methylene Chloride	6.0E-02	7.5E-03	4.00E-03	4.00E-03	3.43E-09	4.90E-11	6E-08	4E-13	5.48E-10	7.83E-12	9E-09	6E-14
Toluene	2.0E-01	NA	6.55E-03	6.46E-03	5.61E-09		3E-08		8.97E-10		4E-09	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.91E-01	2.71E-01	2.49E-07	3.56E-09	1E-04	2E-09	3.99E-08	5.69E-10	2E-05	4E-10
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.92E-02	7.66E-02	6.79E-08	9.70E-10	7E-05	7E-10	1.08E-08	1.55E-10	1E-05	1E-10
2-Methylnaphthalene	4.0E-02	NA	1.30E-01	1.30E-01	1.11E-07		3E-06		1.78E-08		4E-07	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	1.03E-07		2E-06		1.64E-08		3E-07	
3,3'-Dichlorobenzidine	NA	4.5E-01	2.32E-01	2.25E-01		2.84E-09		1E-09		4.54E-10		2E-10
3-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.0E-02	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.0E-01	NA	1.30E-01	1.30E-01	1.11E-07		4E-07		1.78E-08		6E-08	
Benzo(a)anthracene	NA	7.3E-01	2.86E-01	2.70E-01		3.50E-09		3E-09		5.60E-10		4E-10
Benzo(a)pyrene	NA	7.3E+00	2.91E-01	2.75E-01		3.56E-09		3E-08		5.69E-10		4E-09
Benzo(b)fluoranthene	NA	7.3E-01	3.03E-01	2.81E-01		3.71E-09		3E-09		5.93E-10		4E-10
Benzo(g,h,i)perylene	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.3E-02	2.67E-01	2.54E-01		3.27E-09		2E-10		5.23E-10		4E-11
Butylbenzylphthalate	2.0E-01	NA	4.60E-02	4.60E-02	3.94E-08		2E-07		6.30E-09		3E-08	
Carbazole	NA	2.0E-02	2.37E-01	2.29E-01		2.90E-09		6E-11		4.64E-10		9E-12
Chrysene	NA	7.3E-03	2.27E-01	2.33E-01		2.78E-09		2E-11		4.44E-10		3E-12
Di-n-butylphthalate	1.0E-01	NA	2.84E-01	2.65E-01	2.43E-07		2E-06		3.89E-08		4E-07	
Dibenz(a,h)anthracene	NA	7.3E+00	2.55E-01	2.42E-01		3.12E-09		2E-08		4.99E-10		4E-09
Dibenzofuran	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.0E-02	NA	2.11E-01	2.20E-01	1.81E-07		5E-06		2.89E-08		7E-07	
Fluorene	4.0E-02	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.77E-01	2.60E-01		3.39E-09		2E-09		5.42E-10		4E-10
N-Nitrosodiphenylamine (1)	NA	4.9E-03	9.50E-02	9.50E-02		1.16E-09		6E-12		1.86E-10		9E-13
Naphthalene	4.0E-02	NA	3.70E-02	3.70E-02	3.17E-08		8E-07		5.07E-09		1E-07	
Pentachlorophenol	3.0E-02	1.2E-01	6.10E-01	5.83E-01	5.23E-07	7.47E-09	2E-05	9E-10	8.36E-08	1.19E-09	3E-06	1E-10
Phenanthrene	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.0E-02	NA	2.06E-01	2.14E-01	1.77E-07		6E-06		2.82E-08		9E-07	
bis(2-Chloroisopropyl) ether	4.0E-02	7.0E-02	2.13E-01	2.13E-01	1.83E-07	2.61E-09	5E-06	2E-10	2.92E-08	4.17E-10	7E-07	3E-11
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	3.43E-01	3.44E-01	2.94E-07	4.20E-09	1E-05	6E-11	4.70E-08	6.71E-10	2E-06	9E-12
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	2.76E-03	2.61E-03		3.38E-11		8E-12		5.40E-12		1E-12
4,4'-DDE	NA	3.4E-01	8.57E-03	6.91E-03		1.05E-10		4E-11		1.68E-11		6E-12
4,4'-DDT	5.0E-04	3.4E-01	3.96E-03	3.55E-03	3.39E-09	4.85E-11	7E-06	2E-11	5.42E-10	7.75E-12	1E-06	3E-12
Aldrin	3.0E-05	1.7E+01	1.25E-03	1.20E-03	1.07E-09	1.53E-11	4E-05	3E-10	1.71E-10	2.45E-12	6E-06	4E-11
Aroclor-1254	2.0E-05	2.0E+00	0.00E+00	2.39E-02								
Aroclor-1260	2.0E-05	2.0E+00	2.42E-02	2.33E-02	2.07E-08	2.96E-10	1E-03	6E-10	3.32E-09	4.74E-11	2E-04	9E-11
Dieldrin	5.0E-05	1.6E+01	6.01E-03	5.02E-03	5.15E-09	7.36E-11	1E-04	1E-09	8.23E-10	1.18E-11	2E-05	2E-10
Endosulfan I	6.0E-03	NA	2.72E-03	2.29E-03	2.33E-09		4E-07		3.73E-10		6E-08	
Endosulfan sulfate	6.0E-03	NA		2.32E-03								
Endrin	3.0E-04	NA	2.76E-03	2.60E-03	2.37E-09		8E-06		3.78E-10		1E-06	
Endrin ketone	NA	NA		2.73E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.05E-03	1.03E-03	9.00E-10	1.29E-11	7E-05	1E-10	1.44E-10	2.05E-12	1E-05	2E-11
alpha-Chlordane	6.0E-05	1.3E+00		1.03E-03								
beta-BHC	NA	1.8E+00		1.28E-03								
delta-BHC	NA	NA		1.21E-03								
Metals												
Antimony	4.0E-04	NA		9.89E+00								
Arsenic	3.0E-04	1.5E+00	6.44E+00	6.21E+00	5.52E-06	7.89E-08	2E-02	1E-07	8.82E-07	1.26E-08	3E-03	2E-08
Barium	7.0E-02	NA	1.67E+02	1.53E+02	1.43E-04		2E-03		2.29E-05		3E-04	
Cadmium	5.0E-04	NA	8.82E+00	6.61E+00	7.56E-06		2E-02		1.21E-06		2E-03	
Copper	4.0E-02	NA	2.21E+02	1.76E+02	1.89E-04		5E-03		3.03E-05		8E-04	
Lead	NA	NA	2.25E+03	2.46E+03								
Mercury	3.0E-04	NA	1.31E-01	1.15E-01	1.12E-07		4E-04		1.79E-08		6E-05	
Selenium	5.0E-03	NA	1.03E+00	6.98E-01	8.83E-07		2E-04		1.41E-07		3E-05	
Silver	5.0E-03	NA	2.06E+00	1.65E+00	1.77E-06		4E-04		2.82E-07		6E-05	
Thallium	8.0E-05	NA	6.38E-01		5.47E-07		7E-03		8.74E-08		1E-03	
Zinc	3.0E-01	NA	3.57E+02	3.01E+02	3.06E-04		1E-03		4.89E-05		2E-04	
Herbicides												
MCPA	5.0E-04	NA	8.49E+00	6.26E+00	7.28E-06		1E-02		1.16E-06		2E-03	
Total Hazard Quotient and Cancer Risk:							**7E-02**	**2E-07**			**1E-02**	**3E-08**

Assumptions for Future Construction Worker

IR =	100 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	219 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

IR =	100 mg soil/day
CF =	1E-06 kg/mg
FI =	1 unitless
EF =	25 days/year
ED =	1 years
BW =	50 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA = Information not available.

TABLE J-5
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

CS = Chemical Concentration in Soil, from Soil EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Day Care Center Child Intake (mg/kg-day) (Nc)	Future Day Care Center Child Intake (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Intake (mg/kg-day) (Nc)	Future Day Care Center Adult Intake (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	7.52E-03	7.25E-03	3.01E-08		3E-07		3.22E-09		3E-08	
Benzene	3.0E-03	2.9E-02	2.00E-03	2.00E-03	8.00E-09	3.43E-10	3E-06	1E-11	8.57E-10	8.57E-11	3E-07	2E-12
Methylene Chloride	6.0E-02	7.5E-03	4.00E-03	4.00E-03	1.60E-08	6.86E-10	3E-07	5E-12	1.71E-09	1.71E-10	3E-08	1E-12
Toluene	2.0E-01	NA	6.55E-03	6.46E-03	2.62E-08		1E-07		2.81E-09		1E-08	
Semivolatile Organics												
2,4-Dinitrotoluene	2.0E-03	6.8E-01	2.91E-01	2.71E-01	1.16E-06	4.99E-08	6E-04	3E-08	1.25E-07	1.25E-08	6E-05	8E-09
2,6-Dinitrotoluene	1.0E-03	6.8E-01	7.92E-02	7.66E-02	3.17E-07	1.36E-08	3E-04	9E-09	3.39E-08	3.39E-09	3E-05	2E-09
2-Methylnaphthalene	4.0E-02	NA	1.30E-01	1.30E-01	5.20E-07		1E-05		5.57E-08		1E-06	
2-Methylphenol	5.0E-02	NA	1.20E-01	1.20E-01	4.80E-07		1E-05		5.14E-08		1E-06	
3,3'-Dichlorobenzidine	NA	4.5E-01	2.32E-01	2.25E-01		3.98E-08		2E-08		9.94E-09		4E-09
3-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.0E-02	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.0E-01	NA	1.30E-01	1.30E-01	5.20E-07		2E-06		5.57E-08		2E-07	
Benzo(a)anthracene	NA	7.3E-01	2.86E-01	2.70E-01		4.90E-08		4E-08		1.23E-08		9E-09
Benzo(a)pyrene	NA	7.3E+00	2.91E-01	2.75E-01		4.99E-08		4E-07		1.25E-08		9E-08
Benzo(b)fluoranthene	NA	7.3E-01	3.03E-01	2.81E-01		5.19E-08		4E-08		1.30E-08		9E-09
Benzo(g,h,i)perylene	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.3E-02	2.67E-01	2.54E-01		4.58E-08		3E-09		1.14E-08		8E-10
Butylbenzylphthalate	2.0E-01	NA	4.60E-02	4.60E-02	1.84E-07		9E-07		1.97E-08		1E-07	
Carbazole	NA	2.0E-02	2.37E-01	2.29E-01		4.06E-08		8E-10		1.02E-08		2E-10
Chrysene	NA	7.3E-03	2.27E-01	2.33E-01		3.89E-08		3E-10		9.73E-09		7E-11
Di-n-butylphthalate	1.0E-01	NA	2.84E-01	2.65E-01	1.14E-06		1E-05		1.22E-07		1E-06	
Dibenz(a,h)anthracene	NA	7.3E+00	2.55E-01	2.42E-01		4.37E-08		3E-07		1.09E-08		8E-08
Dibenzofuran	NA	NA		3.60E-02								
Fluoranthene	4.0E-02	NA	2.11E-01	2.20E-01	8.44E-07		2E-05		9.04E-08		2E-06	
Fluorene	4.0E-02	NA		3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.77E-01	2.60E-01		4.75E-08		3E-08		1.19E-08		9E-09
N-Nitrosodiphenylamine (1)	NA	4.9E-03	9.50E-02	9.50E-02		1.63E-08		8E-11		4.07E-09		2E-11
Naphthalene	4.0E-02	NA	3.70E-02	3.70E-02	1.48E-07		4E-06		1.59E-08		4E-07	
Pentachlorophenol	3.0E-02	1.2E-01	6.10E-01	5.83E-01	2.44E-06	1.05E-07	8E-05	1E-08	2.61E-07	2.61E-08	9E-06	3E-09
Phenanthrene	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.0E-02	NA	2.06E-01	2.14E-01	8.24E-07		3E-05		8.83E-08		3E-06	
bis(2-Chloroisopropyl) ether	4.0E-02	7.0E-02	2.13E-01	2.13E-01	8.52E-07	3.65E-08	2E-05	3E-09	9.13E-08	9.13E-09	2E-06	6E-10
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	3.43E-01	3.44E-01	1.37E-06	5.88E-08	7E-05	8E-10	1.47E-07	1.47E-08	7E-06	2E-10
Pesticides/PCBs												
4,4'-DDD	NA	2.4E-01	2.76E-03	2.61E-03		4.73E-10		1E-10		1.18E-10		3E-11
4,4'-DDE	NA	3.4E-01	8.57E-03	6.91E-03		1.47E-09		5E-10		3.67E-10		1E-10
4,4'-DDT	5.0E-04	3.4E-01	3.96E-03	3.55E-03	1.58E-08	6.79E-10	3E-05	2E-10	1.70E-09	1.70E-10	3E-06	6E-11
Aldrin	3.0E-05	1.7E+01	1.25E-03	1.20E-03	5.00E-09	2.14E-10	2E-04	4E-09	5.36E-10	5.36E-11	2E-05	9E-10
Aroclor-1254	2.0E-05	2.0E+00		2.39E-02								
Aroclor-1260	2.0E-05	2.0E+00	2.42E-02	2.33E-02	9.68E-08	4.15E-09	5E-03	8E-09	1.04E-08	1.04E-09	5E-04	2E-09
Dieldrin	5.0E-05	1.6E+01	6.01E-03	5.02E-03	2.40E-08	1.03E-09	5E-04	2E-08	2.58E-09	2.58E-10	5E-05	4E-09
Endosulfan I	6.0E-03	NA	2.72E-03	2.29E-03	1.09E-08		2E-06		1.17E-09		2E-07	
Endosulfan sulfate	6.0E-03	NA		2.32E-03								
Endrin	3.0E-04	NA	2.76E-03	2.60E-03	1.10E-08		4E-05		1.18E-09		4E-06	
Endrin ketone	NA	NA		2.73E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	1.05E-03	1.03E-03	4.20E-09	1.80E-10	3E-04	2E-09	4.50E-10	4.50E-11	3E-05	4E-10
alpha-Chlordane	6.0E-05	1.3E+00		1.03E-03								
beta-BHC	NA	1.8E+00		1.28E-03								
delta-BHC	NA	NA		1.21E-03								
Metals												
Antimony	4.0E-04	NA		9.89E+00								
Arsenic	3.0E-04	1.5E+00	6.44E+00	6.21E+00	2.58E-05	1.10E-06	9E-02	2E-06	2.76E-06	2.76E-07	9E-03	4E-07
Barium	7.0E-02	NA	1.67E+02	1.53E+02	6.68E-04		1E-02		7.16E-05		1E-03	
Cadmium	5.0E-04	NA	8.82E+00	6.61E+00	3.53E-05		7E-02		3.78E-06		8E-03	
Copper	4.0E-02	NA	2.21E+02	1.76E+02	8.84E-04		2E-02		9.47E-05		2E-03	
Lead	NA	NA	2.25E+03	2.46E+03								
Mercury	3.0E-04	NA	1.31E-01	1.15E-01	5.24E-07		2E-03		5.61E-08		2E-04	
Selenium	5.0E-03	NA	1.03E+00	6.98E-01	4.12E-06		8E-04		4.41E-07		9E-05	
Silver	5.0E-03	NA	2.06E+00	1.65E+00	8.24E-06		2E-03		8.83E-07		2E-04	
Thallium	8.0E-05	NA	6.38E-01	5.30E-01	2.55E-06		3E-02		2.73E-07		3E-03	
Zinc	3.0E-01	NA	3.57E+02	3.01E+02	1.43E-03		5E-03		1.53E-04		5E-04	
Herbicides												
MCPA	5.0E-04	NA	8.49E+00	6.26E+00	3.40E-05		7E-02		3.64E-06		7E-03	
Total Hazard Quotient and Cancer Risk:							**3E-01**	**3E-06**			**3E-02**	**6E-07**

Assumptions for Future Day Care Center Child

IR =	100	mg soil/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	219	days/year
ED =	3	years
BW =	15	kg
AT (Nc) =	1095	days
AT (Car) =	25550	days

Assumptions for Future Day Care Center Worker

IR =	50	mg soil/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	219	days/year
ED =	7	years
BW =	70	kg
AT (Nc) =	2555	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA = Information not available.

TABLE J-6
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor* (unitless)	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Current Site Worker Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker Absorbed Dose (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics													
Acetone	1.0E-01	NA	NA	7.52E-03	7.25E-03								
Benzene	2.9E-03	3.1E-02	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.9E-02	7.7E-03	NA	4.00E-03	4.00E-03								
Toluene	2.0E-01	NA	NA	6.55E-03	6.46E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	2.91E-01	2.71E-01								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	7.92E-02	7.66E-02								
2-Methylnaphthalene	NA	NA	NA	1.30E-01	1.30E-01								
2-Methylphenol	5.0E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.5E-01	NA	2.32E-01	2.25E-01								
3-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.0E-02	NA	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.0E-01	NA	NA	1.30E-01	1.30E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	2.86E-01	2.70E-01								
Benzo(a)pyrene	NA	1.8E+01	NA	2.91E-01	2.75E-01								
Benzo(b)fluoranthene	NA	7.3E-01	NA	3.03E-01	2.81E-01								
Benzo(g,h,i)perylene	NA	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	2.67E-01	2.54E-01								
Butylbenzylphthalate	2.0E-01	NA	NA	4.60E-02	4.60E-02								
Carbazole	NA	2.0E-02	NA	2.37E-01	2.29E-01								
Chrysene	NA	7.3E-03	NA	2.27E-01	2.33E-01								
Di-n-butylphthalate	9.0E-02	NA	NA	2.84E-01	2.65E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	2.55E-01	2.42E-01								
Dibenzofuran	NA	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.0E-02	NA	NA	2.11E-01	2.20E-01								
Fluorene	4.0E-02	NA	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.77E-01	2.60E-01								
N-Nitrosodiphenylamine (1)	NA	7.0E+00	NA	9.50E-02	9.50E-02								
Naphthalene	4.0E-02	NA	NA	3.70E-02	3.70E-02								
Pentachlorophenol	3.0E-02	1.2E-01	0.01	6.10E-01	5.83E-01	2.77E-08	9.89E-09	9E-07	1E-09	3.46E-07	1.24E-07	1E-05	1E-08
Phenanthrene	NA	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.0E-02	NA	NA	2.06E-01	2.14E-01								
bis(2-Chloroisopropyl) ether	4.0E-02	NA	NA	2.13E-01	2.13E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	3.43E-01	3.44E-01								
Pesticides/PCBs													
4,4'-DDD	NA	1.2E+00	NA	2.76E-03	2.61E-03								
4,4'-DDE	NA	1.7E+00	NA	8.57E-03	6.91E-03								
4,4'-DDT	1.0E-04	1.7E+00	NA	3.96E-03	3.55E-03								
Aldrin	1.5E-05	3.4E+01	NA	1.25E-03	1.20E-03								
Aroclor-1254	1.8E-05	2.2E+00	0.06		2.39E-02								
Aroclor-1260	1.8E-05	2.2E+00	0.06	2.42E-02	2.33E-02	6.59E-09	2.35E-09	4E-04	5E-09	8.24E-08	2.94E-08	5E-03	7E-08
Dieldrin	2.5E-05	3.2E+01	NA	6.01E-03	5.02E-03								
Endosulfan I	6.0E-03	NA	NA	2.72E-03	2.29E-03								
Endosulfan sulfate	6.0E-03	NA	NA	2.41E-03	2.32E-03								
Endrin	3.0E-04	NA	NA	2.76E-03	2.60E-03								
Endrin ketone	NA	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	1.05E-03	1.03E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	1.05E-03	1.03E-03								
beta-BHC	NA	1.8E+00	NA	1.35E-03	1.28E-03								
delta-BHC	NA	NA	NA	1.26E-03	1.21E-03								
Metals													
Antimony	4.0E-04	NA	NA	1.15E+01	9.89E+00								
Arsenic	2.4E-04	1.9E+00	0.001	6.44E+00	6.21E+00	2.92E-08	1.04E-08	1E-04	2E-08	3.65E-07	1.31E-07	2E-03	2E-07
Barium	3.5E-03	NA	NA	1.67E+02	1.53E+02								
Cadmium	5.0E-05	NA	0.01	8.82E+00	6.61E+00	4.00E-07		8E-03		5.01E-06		1E-01	
Copper	2.4E-02	NA	NA	2.21E+02	1.76E+02								
Lead	NA	NA	NA	2.25E+03	2.46E+03								
Mercury	3.0E-06	NA	NA	1.31E-01	1.15E-01								
Selenium	4.5E-03	NA	NA	1.03E+00	6.98E-01								
Silver	1.0E-03	NA	NA	2.06E+00	1.65E+00								
Thallium	8.0E-05	NA	NA	6.38E-01	5.30E-01								
Zinc	7.5E-02	NA	NA	3.57E+02	3.01E+02								
Herbicides													
MCPA	5.0E-04	NA	NA	8.49E+00	6.26E+00								
Total Hazard Quotient and Cancer Risk:								**5E-04**	**3E-08**			**6E-03**	**3E-07**

Assumptions for Current Site Worker

CF =	1.00E-06 kg/mg
SA =	5800 cm2
AF =	1 mg/cm2
EF =	20 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Assumptions for Future Industrial Worker

CF =	1.00E-06 kg/mg
SA =	5800 cm2
AF =	1 mg/cm2
EF =	250 days/year
ED =	25 years
BW =	70 kg
AT (Nc) =	9125 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE J-6
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD	Carc. Slope Dermal	Absorption Factor*	EPC from Surface Soil	EPC from Total Soils	Future Construction Worker				Future Tresspasser Child			
						Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(unitless)	(mg/kg)	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics													
Acetone	1.00E-01	NA	NA	7.52E-03	7.25E-03								
Benzene	2.85E-03	3.05E-02	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.88E-02	7.65E-03	NA	4.00E-03	4.00E-03								
Toluene	2.00E-01	NA	NA	6.55E-03	6.46E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.00E-03	6.80E-01	NA	2.91E-01	2.71E-01								
2,6-Dinitrotoluene	1.00E-03	6.80E-01	NA	7.92E-02	7.66E-02								
2-Methylnaphthalene	NA	NA	NA	1.30E-01	1.30E-01								
2-Methylphenol	5.00E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.50E-01	NA	2.32E-01	2.25E-01								
3-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.00E-02	NA	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.00E-01	NA	NA	1.30E-01	1.30E-01								
Benzo(a)anthracene	NA	7.30E-01	NA	2.86E-01	2.70E-01								
Benzo(a)pyrene	NA	1.83E+01	NA	2.91E-01	2.75E-01								
Benzo(b)fluoranthene	NA	7.30E-01	NA	3.03E-01	2.81E-01								
Benzo(g,h,i)perylene	NA	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.30E-02	NA	2.67E-01	2.54E-01								
Butylbenzylphthalate	2.00E-01	NA	NA	4.60E-02	4.60E-02								
Carbazole	NA	2.00E-02	NA	2.37E-01	2.29E-01								
Chrysene	NA	7.30E-03	NA	2.27E-01	2.33E-01								
Di-n-butylphthalate	9.00E-02	NA	NA	2.84E-01	2.65E-01								
Dibenz(a,h)anthracene	NA	7.30E+00	NA	2.55E-01	2.42E-01								
Dibenzofuran	NA	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.00E-02	NA	NA	2.11E-01	2.20E-01								
Fluorene	4.00E-02	NA	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.30E-01	NA	2.77E-01	2.60E-01								
N-Nitrosodiphenylamine (1)	NA	7.00E+00	NA	9.50E-02	9.50E-02								
Naphthalene	4.00E-02	NA	NA	3.70E-02	3.70E-02								
Pentachlorophenol	3.00E-02	1.20E-01	0.01	6.10E-01	5.83E-01	3.31E-07	4.73E-09	1E-05	6E-10	7.73E-08	5.52E-09	3E-06	7E-10
Phenanthrene	NA	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.00E-02	NA	NA	2.06E-01	2.14E-01								
bis(2-Chloroisopropyl) ether	4.00E-02	NA	NA	2.13E-01	2.13E-01								
bis(2-Ethylhexyl)phthalate	1.00E-02	2.80E-02	NA	3.43E-01	3.44E-01								
Pesticides/PCBs													
4,4'-DDD	NA	1.20E+00	NA	2.76E-03	2.61E-03								
4,4'-DDE	NA	1.70E+00	NA	8.57E-03	6.91E-03								
4,4'-DDT	1.00E-04	1.70E+00	NA	3.96E-03	3.55E-03								
Aldrin	1.50E-05	3.40E+01	NA	1.25E-03	1.20E-03								
Aroclor-1254	1.80E-05	2.22E+00	0.06		2.39E-02	8.14E-08	1.16E-09	5E-03	3E-09				
Aroclor-1260	1.80E-05	2.22E+00	0.06	2.42E-02	2.33E-02	7.93E-08	1.13E-09	4E-03	3E-09	1.84E-08	1.31E-09	1E-03	3E-09
Dieldrin	2.50E-05	3.20E+01	NA	6.01E-03	5.02E-03								
Endosulfan I	6.00E-03	NA	NA	2.72E-03	2.29E-03								
Endosulfan sulfate	6.00E-03	NA	NA	2.41E-03	2.32E-03								
Endrin	3.00E-04	NA	NA	2.76E-03	2.60E-03								
Endrin ketone	NA	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.30E-05	9.10E+00	NA	1.05E-03	1.03E-03								
alpha-Chlordane	6.00E-05	1.30E+00	NA	1.05E-03	1.03E-03								
beta-BHC	NA	1.80E+00	NA	1.35E-03	1.28E-03								
delta-BHC	NA	NA	NA	1.26E-03	1.21E-03								
Metals													
Antimony	4.00E-04	NA	NA	1.15E+01	9.89E+00								
Arsenic	2.40E-04	1.88E+00	0.001	6.44E+00	6.21E+00	3.52E-07	5.03E-09	1E-03	9E-09	8.16E-08	5.83E-09	3E-04	1E-08
Barium	3.50E-03	NA	NA	1.67E+02	1.53E+02								
Cadmium	5.00E-05	NA	0.01	8.82E+00	6.61E+00	3.75E-06		8E-02		1.12E-06		2E-02	
Copper	2.40E-02	NA	NA	2.21E+02	1.76E+02								
Lead	NA	NA	NA	2.25E+03	2.46E+03								
Mercury	3.00E-06	NA	NA	1.31E-01	1.15E-01								
Selenium	4.50E-03	NA	NA	1.03E+00	6.98E-01								
Silver	1.00E-03	NA	NA	2.06E+00	1.65E+00								
Thallium	8.00E-05	NA	NA	6.38E-01	5.30E-01								
Zinc	7.50E-02	NA	NA	3.57E+02	3.01E+02								
Herbicides													
MCPA	5.00E-04	NA	NA	8.49E+00	6.26E+00								
Total Hazard Quotient and Cancer Risk:								**1E-02**	**2E-08**			**1E-03**	**1E-08**

Assumptions for Future Construction Worker

CF =	1.00E-06 kg/mg
SA =	5800 cm2
AF =	1 mg/cm2
EF =	250 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CF =	1.00E-06 kg/mg
SA =	4625 cm2
AF =	1 mg/cm2
EF =	50 days/year
ED =	5 years
BW =	50 kg
AT (Nc) =	1825 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE J-6
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor* (unitless)	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Nc)	(Car)	Hazard Quotient	Cancer Risk	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Nc)	(Car)	Hazard Quotient	Cancer Risk
Volatile Organics													
Acetone	1.00E-01	NA	NA	7.52E-03	7.25E-03								
Benzene	2.85E-03	3.05E-02	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.88E-02	7.65E-03	NA	4.00E-03	4.00E-03								
Toluene	2.00E-01	NA	NA	6.55E-03	6.46E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.00E-03	6.80E-01	NA	2.91E-01	2.71E-01								
2,6-Dinitrotoluene	1.00E-03	6.80E-01	NA	7.92E-02	7.66E-02								
2-Methylnaphthalene	NA	NA	NA	1.30E-01	1.30E-01								
2-Methylphenol	5.00E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.50E-01	NA	2.32E-01	2.25E-01								
3-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.00E-02	NA	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.00E-01	NA	NA	1.30E-01	1.30E-01								
Benzo(a)anthracene	NA	7.30E-01	NA	2.86E-01	2.70E-01								
Benzo(a)pyrene	NA	1.83E+01	NA	2.91E-01	2.75E-01								
Benzo(b)fluoranthene	NA	7.30E-01	NA	3.03E-01	2.81E-01								
Benzo(g,h,i)perylene	NA	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.30E-02	NA	2.67E-01	2.54E-01								
Butylbenzylphthalate	2.00E-01	NA	NA	4.60E-02	4.60E-02								
Carbazole	NA	2.00E-02	NA	2.37E-01	2.29E-01								
Chrysene	NA	7.30E-03	NA	2.27E-01	2.33E-01								
Di-n-butylphthalate	9.00E-02	NA	NA	2.84E-01	2.65E-01								
Dibenz(a,h)anthracene	NA	7.30E+00	NA	2.55E-01	2.42E-01								
Dibenzofuran	NA	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.00E-02	NA	NA	2.11E-01	2.20E-01								
Fluorene	4.00E-02	NA	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.30E-01	NA	2.77E-01	2.60E-01								
N-Nitrosodiphenylamine (1)	NA	7.00E+00	NA	9.50E-02	9.50E-02								
Naphthalene	4.00E-02	NA	NA	3.70E-02	3.70E-02								
Pentachlorophenol	3.00E-02	1.20E-01	0.01	6.10E-01	5.83E-01	6.10E-07	5.23E-08	2E-05	6E-09	3.46E-07	1.24E-07	1E-05	1E-08
Phenanthrene	NA	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.00E-02	NA	NA	2.06E-01	2.14E-01								
bis(2-Chloroisopropyl) ether	4.00E-02	NA	NA	2.13E-01	2.13E-01								
bis(2-Ethylhexyl)phthalate	1.00E-02	2.80E-02	NA	3.43E-01	3.44E-01								
Pesticides/PCBs													
4,4'-DDD	NA	1.20E+00	NA	2.76E-03	2.61E-03								
4,4'-DDE	NA	1.70E+00	NA	8.57E-03	6.91E-03								
4,4'-DDT	1.00E-04	1.70E+00	NA	3.96E-03	3.55E-03								
Aldrin	1.50E-05	3.40E+01	NA	1.25E-03	1.20E-03								
Aroclor-1254	1.80E-05	2.22E+00	0.06	0.00E+00	2.39E-02								
Aroclor-1260	1.80E-05	2.22E+00	0.06	2.42E-02	2.33E-02	1.45E-07	1.24E-08	8E-03	3E-08	8.24E-08	2.94E-08	5E-03	7E-08
Dieldrin	2.50E-05	3.20E+01	NA	6.01E-03	5.02E-03								
Endosulfan I	6.00E-03	NA	NA	2.72E-03	2.29E-03								
Endosulfan sulfate	6.00E-03	NA	NA	2.41E-03	2.32E-03								
Endrin	3.00E-04	NA	NA	2.76E-03	2.60E-03								
Endrin ketone	NA	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.30E-05	9.10E+00	NA	1.05E-03	1.03E-03								
alpha-Chlordane	6.00E-05	1.30E+00	NA	1.05E-03	1.03E-03								
beta-BHC	NA	1.80E+00	NA	1.35E-03	1.28E-03								
delta-BHC	NA	NA	NA	1.26E-03	1.21E-03								
Metals													
Antimony	4.00E-04	NA	NA	1.15E+01	9.89E+00								
Arsenic	2.40E-04	1.88E+00	0.001	6.44E+00	6.21E+00	6.44E-07	5.52E-08	3E-03	1E-07	3.65E-07	1.31E-07	2E-03	2E-07
Barium	3.50E-03	NA	NA	1.67E+02	1.53E+02								
Cadmium	5.00E-05	NA	0.01	8.82E+00	6.61E+00	8.82E-06		2E-01		5.01E-06		1E-01	
Copper	2.40E-02	NA	NA	2.21E+02	1.76E+02								
Lead	NA	NA	NA	2.25E+03	2.46E+03								
Mercury	3.00E-06	NA	NA	1.31E-01	1.15E-01								
Selenium	4.50E-03	NA	NA	1.03E+00	6.98E-01								
Silver	1.00E-03	NA	NA	2.06E+00	1.65E+00								
Thallium	8.00E-05	NA	NA	6.38E-01	5.30E-01								
Zinc	7.50E-02	NA	NA	3.57E+02	3.01E+02								
Herbicides													
MCPA	5.00E-04	NA	NA	8.49E+00	6.26E+00								
Total Hazard Quotient and Cancer Risk:								**1E-02**	**1E-07**			**6E-03**	**3E-07**

Assumptions for Future Day Care Center Child		Assumptions for Future Day Care Center Adult	
CF =	1.00E-06 kg/mg	CF =	1.00E-06 kg/mg
SA =	2190 cm2	SA =	5800 cm2
AF =	1 mg/cm2	AF =	1 mg/cm2
EF =	250 days/year	EF =	250 days/year
ED =	6 years	ED =	25 years
BW =	15 kg	BW =	70 kg
AT (Nc) =	2190 days	AT (Nc) =	9125 days
AT (Car) =	25550 days	AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE J-7
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, Calculated from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor (unitless)	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Current Site Worker Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker Absorbed Dose (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics													
Acetone	1.00E-01	NA	NA	7.52E-03	7.25E-03								
Benzene	2.85E-03	3.05E-02	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.88E-02	7.65E-03	NA	4.00E-03	4.00E-03								
Toluene	2.00E-01	NA	NA	6.55E-03	6.46E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.00E-03	6.80E-01	NA	2.91E-01	2.71E-01								
2,6-Dinitrotoluene	1.00E-03	6.80E-01	NA	7.92E-02	7.66E-02								
2-Methylnaphthalene	NA	NA	NA	1.30E-01	1.30E-01								
2-Methylphenol	5.00E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.50E-01	NA	2.32E-01	2.25E-01								
3-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.00E-02	NA	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.00E-01	NA	NA	1.30E-01	1.30E-01								
Benzo(a)anthracene	NA	7.30E-01	NA	2.86E-01	2.70E-01								
Benzo(a)pyrene	NA	1.83E+01	NA	2.91E-01	2.75E-01								
Benzo(b)fluoranthene	NA	7.30E-01	NA	3.03E-01	2.81E-01								
Benzo(g,h,i)perylene	NA	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.30E-02	NA	2.67E-01	2.54E-01								
Butylbenzylphthalate	2.00E-01	NA	NA	4.60E-02	4.60E-02								
Carbazole	NA	2.00E-02	NA	2.37E-01	2.29E-01								
Chrysene	NA	7.30E-03	NA	2.27E-01	2.33E-01								
Di-n-butylphthalate	9.00E-02	NA	NA	2.84E-01	2.65E-01								
Dibenz(a,h)anthracene	NA	7.30E+00	NA	2.55E-01	2.42E-01								
Dibenzofuran	NA	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.00E-02	NA	NA	2.11E-01	2.20E-01								
Fluorene	4.00E-02	NA	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.30E-01	NA	2.77E-01	2.60E-01								
N-Nitrosodiphenylamine (1)	NA	7.00E+00	NA	9.50E-02	9.50E-02								
Naphthalene	4.00E-02	NA	NA	3.70E-02	3.70E-02								
Pentachlorophenol	3.00E-02	1.20E-01	0.01	6.10E-01	5.83E-01	2.39E-09	2.39E-10	8E-08	3E-11	5.23E-08	5.23E-09	2E-06	6E-10
Phenanthrene	NA	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.00E-02	NA	NA	2.06E-01	2.14E-01								
bis(2-Chloroisopropyl) ether	4.00E-02	NA	NA	2.13E-01	2.13E-01								
bis(2-Ethylhexyl)phthalate	1.00E-02	2.80E-02	NA	3.43E-01	3.44E-01								
Pesticides/PCBs													
4,4'-DDD	NA	1.20E+00	NA	2.76E-03	2.61E-03								
4,4'-DDE	NA	1.70E+00	NA	8.57E-03	6.91E-03								
4,4'-DDT	1.00E-04	1.70E+00	NA	3.96E-03	3.55E-03								
Aldrin	1.50E-05	3.40E+01	NA	1.25E-03	1.20E-03								
Aroclor-1254	1.80E-05	2.22E+00	0.06		2.39E-02								
Aroclor-1260	1.80E-05	2.22E+00	0.06	2.42E-02	2.33E-02	5.68E-10	5.68E-11	3E-05	1E-10	1.24E-08	1.24E-09	7E-04	3E-09
Dieldrin	2.50E-05	3.20E+01	NA	6.01E-03	5.02E-03								
Endosulfan I	6.00E-03	NA	NA	2.72E-03	2.29E-03								
Endosulfan sulfate	6.00E-03	NA	NA	2.41E-03	2.32E-03								
Endrin	3.00E-04	NA	NA	2.76E-03	2.60E-03								
Endrin ketone	NA	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.30E-05	9.10E+00	NA	1.05E-03	1.03E-03								
alpha-Chlordane	6.00E-05	1.30E+00	NA	1.05E-03	1.03E-03								
beta-BHC	NA	1.80E+00	NA	1.35E-03	1.28E-03								
delta-BHC	NA	NA	NA	1.26E-03	1.21E-03								
Metals													
Antimony	4.00E-04	NA	NA	1.15E+01	9.89E+00								
Arsenic	2.40E-04	1.88E+00	0.001	6.44E+00	6.21E+00	2.52E-09	2.52E-10	1E-05	5E-10	5.52E-08	5.52E-09	2E-04	1E-08
Barium	3.50E-03	NA	NA	1.67E+02	1.53E+02								
Cadmium	5.00E-05	NA	0.01	8.82E+00	6.61E+00	3.45E-08		7E-04		7.56E-07		2E-02	
Copper	2.40E-02	NA	NA	2.21E+02	1.76E+02								
Lead	NA	NA	NA	2.25E+03	2.46E+03								
Mercury	3.00E-06	NA	NA	1.31E-01	1.15E-01								
Selenium	4.50E-03	NA	NA	1.03E+00	6.98E-01								
Silver	1.00E-03	NA	NA	2.06E+00	1.65E+00								
Thallium	8.00E-05	NA	NA	6.38E-01	5.30E-01								
Zinc	7.50E-02	NA	NA	3.57E+02	3.01E+02								
Herbicides													
MCPA	5.00E-04	NA	NA	8.49E+00	6.26E+00								
Total Hazard Quotient and Cancer Risk:								**4E-05**	**6E-10**			**9E-04**	**1E-08**

Assumptions for Current Site Worker

CF =	1.00E-06 kg/mg
SA =	5000 cm2
AF =	0.2 mg/cm2
EF =	10 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Assumptions for Future Industrial Worker

CF =	1.00E-06 kg/mg
SA =	5000 cm2
AF =	0.2 mg/cm2
EF =	219 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE J-7
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, Calculated from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor (unitless)	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Construction Worker Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Absorbed Dose (mg/kg-day) (Nc)	Future Tresspasser Child Absorbed Dose (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics													
Acetone	1.00E-01	NA	NA	7.52E-03	7.25E-03								
Benzene	2.9E-03	3.1E-02	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.9E-02	7.7E-03	NA	4.00E-03	4.00E-03								
Toluene	2.0E-01	NA	NA	6.55E-03	6.46E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	2.91E-01	2.71E-01								
2,6-Dinitrotoluene	1.0E-03	6.8E-01	NA	7.92E-02	7.66E-02								
2-Methylnaphthalene	NA	NA	NA	1.30E-01	1.30E-01								
2-Methylphenol	5.0E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.5E-01	NA	2.32E-01	2.25E-01								
3-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.0E-02	NA	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.0E-01	NA	NA	1.30E-01	1.30E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	2.86E-01	2.70E-01								
Benzo(a)pyrene	NA	1.8E+01	NA	2.91E-01	2.75E-01								
Benzo(b)fluoranthene	NA	7.3E-01	NA	3.03E-01	2.81E-01								
Benzo(g,h,i)perylene	NA	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.3E-02	NA	2.67E-01	2.54E-01								
Butylbenzylphthalate	2.0E-01	NA	NA	4.60E-02	4.60E-02								
Carbazole	NA	2.0E-02	NA	2.37E-01	2.29E-01								
Chrysene	NA	7.3E-03	NA	2.27E-01	2.33E-01								
Di-n-butylphthalate	9.0E-02	NA	NA	2.84E-01	2.65E-01								
Dibenz(a,h)anthracene	NA	7.3E+00	NA	2.55E-01	2.42E-01								
Dibenzofuran	NA	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.0E-02	NA	NA	2.11E-01	2.20E-01								
Fluorene	4.0E-02	NA	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.77E-01	2.60E-01								
N-Nitrosodiphenylamine (1)	NA	7.0E+00	NA	9.50E-02	9.50E-02								
Naphthalene	4.0E-02	NA	NA	3.70E-02	3.70E-02								
Pentachlorophenol	3.0E-02	1.2E-01	0.01	6.10E-01	5.83E-01	5.00E-08	7.14E-10	2E-06	9E-11	6.23E-09	8.89E-11	2E-07	1E-11
Phenanthrene	NA	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.0E-02	NA	NA	2.06E-01	2.14E-01								
bis(2-Chloroisopropyl) ether	4.0E-02	NA	NA	2.13E-01	2.13E-01								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	3.43E-01	3.44E-01								
Pesticides/PCBs													
4,4'-DDD	NA	1.2E+00	NA	2.76E-03	2.61E-03								
4,4'-DDE	NA	1.7E+00	NA	8.57E-03	6.91E-03								
4,4'-DDT	1.0E-04	1.7E+00	NA	3.96E-03	3.55E-03								
Aldrin	1.5E-05	3.4E+01	NA	1.25E-03	1.20E-03								
Aroclor-1254	1.8E-05	2.2E+00	0.06		2.39E-02	1.23E-08	1.76E-10	7E-04	4E-10				
Aroclor-1260	1.8E-05	2.2E+00	0.06	2.42E-02	2.33E-02	1.20E-08	1.71E-10	7E-04	4E-10	1.48E-09	2.12E-11	8E-05	5E-11
Dieldrin	2.5E-05	3.2E+01	NA	6.01E-03	5.02E-03								
Endosulfan I	6.0E-03	NA	NA	2.72E-03	2.29E-03								
Endosulfan sulfate	6.0E-03	NA	NA	2.41E-03	2.32E-03								
Endrin	3.0E-04	NA	NA	2.76E-03	2.60E-03								
Endrin ketone	NA	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.3E-05	9.1E+00	NA	1.05E-03	1.03E-03								
alpha-Chlordane	6.0E-05	1.3E+00	NA	1.05E-03	1.03E-03								
beta-BHC	NA	1.8E+00	NA	1.35E-03	1.28E-03								
delta-BHC	NA	NA	NA	1.26E-03	1.21E-03								
Metals													
Antimony	4.0E-04	NA	NA	1.15E+01	9.89E+00								
Arsenic	2.4E-04	1.9E+00	0.001	6.44E+00	6.21E+00	5.32E-08	7.60E-10	2E-04	1E-09	6.57E-09	9.39E-11	3E-05	2E-10
Barium	3.5E-03	NA	NA	1.67E+02	1.53E+02								
Cadmium	5.0E-05	NA	0.01	8.82E+00	6.61E+00	5.67E-07		1E-02		9.00E-08		2E-03	
Copper	2.4E-02	NA	NA	2.21E+02	1.76E+02								
Lead	NA	NA	NA	2.25E+03	2.46E+03								
Mercury	3.0E-06	NA	NA	1.31E-01	1.15E-01								
Selenium	4.5E-03	NA	NA	1.03E+00	6.98E-01								
Silver	1.0E-03	NA	NA	2.06E+00	1.65E+00								
Thallium	8.0E-05	NA	NA	6.38E-01	5.30E-01								
Zinc	7.5E-02	NA	NA	3.57E+02	3.01E+02								
Herbicides													
MCPA	5.0E-04	NA	NA	8.49	6.26								
Total Hazard Quotient and Cancer Risk:								**2E-03**	**2E-09**			**1E-04**	**2E-10**

Assumptions for Future Construction Worker

CF =	1.00E-06 kg/mg
SA =	5000 cm2
AF =	0.2 mg/cm2
EF =	219 days/year
ED =	1 years
BW =	70 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Assumptions for Future Tresspasser Child

CF =	1.00E-06 kg/mg
SA =	3725 cm2
AF =	0.2 mg/cm2
EF =	25 days/year
ED =	1 years
BW =	50 kg
AT (Nc) =	365 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE J-7
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Soil, Calculated from Soil EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor (unitless)	EPC from Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child Hazard Quotient	Future Day Care Center Child Cancer Risk	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult Hazard Quotient	Future Day Care Center Adult Cancer Risk
Volatile Organics													
Acetone	1.00E-01	NA	NA	7.52E-03	7.25E-03								
Benzene	2.85E-03	3.05E-02	NA	2.00E-03	2.00E-03								
Methylene Chloride	5.88E-02	7.65E-03	NA	4.00E-03	4.00E-03								
Toluene	2.00E-01	NA	NA	6.55E-03	6.46E-03								
Semivolatile Organics													
2,4-Dinitrotoluene	2.00E-03	6.80E-01	NA	2.91E-01	2.71E-01								
2,6-Dinitrotoluene	1.00E-03	6.80E-01	NA	7.92E-02	7.66E-02								
2-Methylnaphthalene	NA	NA	NA	1.30E-01	1.30E-01								
2-Methylphenol	5.00E-02	NA	NA	1.20E-01	1.20E-01								
3,3'-Dichlorobenzidine	NA	4.50E-01	NA	2.32E-01	2.25E-01								
3-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
4-Nitroaniline	NA	NA	NA	5.62E-01	5.45E-01								
Acenaphthene	6.00E-02	NA	NA	3.30E-02	3.30E-02								
Acenaphthylene	NA	NA	NA	9.60E-02	9.60E-02								
Anthracene	3.00E-01	NA	NA	1.30E-01	1.30E-01								
Benzo(a)anthracene	NA	7.30E-01	NA	2.86E-01	2.70E-01								
Benzo(a)pyrene	NA	1.83E+01	NA	2.91E-01	2.75E-01								
Benzo(b)fluoranthene	NA	7.30E-01	NA	3.03E-01	2.81E-01								
Benzo(g,h,i)perylene	NA	NA	NA	2.64E-01	2.50E-01								
Benzo(k)fluoranthene	NA	7.30E-02	NA	2.67E-01	2.54E-01								
Butylbenzylphthalate	2.00E-01	NA	NA	4.60E-02	4.60E-02								
Carbazole	NA	2.00E-02	NA	2.37E-01	2.29E-01								
Chrysene	NA	7.30E-03	NA	2.27E-01	2.33E-01								
Di-n-butylphthalate	9.00E-02	NA	NA	2.84E-01	2.65E-01								
Dibenz(a,h)anthracene	NA	7.30E+00	NA	2.55E-01	2.42E-01								
Dibenzofuran	NA	NA	NA	3.60E-02	3.60E-02								
Fluoranthene	4.00E-02	NA	NA	2.11E-01	2.20E-01								
Fluorene	4.00E-02	NA	NA	3.80E-02	3.80E-02								
Indeno(1,2,3-cd)pyrene	NA	7.30E-01	NA	2.77E-01	2.60E-01								
N-Nitrosodiphenylamine (1)	NA	7.00E+00	NA	9.50E-02	9.50E-02								
Naphthalene	4.00E-02	NA	NA	3.70E-02	3.70E-02								
Pentachlorophenol	3.00E-02	1.20E-01	0.01	6.10E-01	5.83E-01	8.88E-08	3.81E-09	3E-06	5E-10	5.23E-08	5.23E-09	2E-06	6E-10
Phenanthrene	NA	NA	NA	2.55E-01	2.47E-01								
Pyrene	3.00E-02	NA	NA	2.06E-01	2.14E-01								
bis(2-Chloroisopropyl) ether	4.00E-02	NA	NA	2.13E-01	2.13E-01								
bis(2-Ethylhexyl)phthalate	1.00E-02	2.80E-02	NA	3.43E-01	3.44E-01								
Pesticides/PCBs													
4,4'-DDD	NA	1.20E+00	NA	2.76E-03	2.61E-03								
4,4'-DDE	NA	1.70E+00	NA	8.57E-03	6.91E-03								
4,4'-DDT	1.00E-04	1.70E+00	NA	3.96E-03	3.55E-03								
Aldrin	1.50E-05	3.40E+01	NA	1.25E-03	1.20E-03								
Aroclor-1254	1.80E-05	2.22E+00	0.06	0.00E+00	2.39E-02								
Aroclor-1260	1.80E-05	2.22E+00	0.06	2.42E-02	2.33E-02	2.11E-08	9.06E-10	1E-03	2E-09	1.24E-08	1.24E-09	7E-04	3E-09
Dieldrin	2.50E-05	3.20E+01	NA	6.01E-03	5.02E-03								
Endosulfan I	6.00E-03	NA	NA	2.72E-03	2.29E-03								
Endosulfan sulfate	6.00E-03	NA	NA	2.41E-03	2.32E-03								
Endrin	3.00E-04	NA	NA	2.76E-03	2.60E-03								
Endrin ketone	NA	NA	NA	2.93E-03	2.73E-03								
Heptachlor epoxide	1.30E-05	9.10E+00	NA	1.05E-03	1.03E-03								
alpha-Chlordane	6.00E-05	1.30E+00	NA	1.05E-03	1.03E-03								
beta-BHC	NA	1.80E+00	NA	1.35E-03	1.28E-03								
delta-BHC	NA	NA	NA	1.26E-03	1.21E-03								
Metals													
Antimony	4.00E-04	NA	NA	1.15E+01	9.89E+00								
Arsenic	2.40E-04	1.88E+00	0.001	6.44E+00	6.21E+00	9.38E-08	4.02E-09	4E-04	8E-09	5.52E-08	5.52E-09	2E-04	1E-08
Barium	3.50E-03	NA	NA	1.67E+02	1.53E+02								
Cadmium	5.00E-05	NA	0.01	8.82E+00	6.61E+00	1.28E-06		3E-02		7.56E-07		2E-02	
Copper	2.40E-02	NA	NA	2.21E+02	1.76E+02								
Lead	NA	NA	NA	2.25E+03	2.46E+03								
Mercury	3.00E-06	NA	NA	1.31E-01	1.15E-01								
Selenium	4.50E-03	NA	NA	1.03E+00	6.98E-01								
Silver	1.00E-03	NA	NA	2.06E+00	1.65E+00								
Thallium	8.00E-05	NA	NA	6.38E-01	5.30E-01								
Zinc	7.50E-02	NA	NA	3.57E+02	3.01E+02								
Herbicides													
MCPA	5.00E-04	NA	NA	8.49E+00	6.26E+00								
Total Hazard Quotient and Cancer Risk:								**2E-03**	**1E-08**			**9E-04**	**1E-08**

Assumptions for Future Day Care Center Child

CF =	1.00E-06 kg/mg
SA =	1820 cm2
AF =	0.2 mg/cm2
EF =	219 days/year
ED =	3 years
BW =	15 kg
AT (Nc) =	1095 days
AT (Car) =	25550 days

Assumptions for Future Day Care Center Adult

CF =	1.00E-06 kg/mg
SA =	5000 cm2
AF =	0.2 mg/cm2
EF =	219 days/year
ED =	7 years
BW =	70 kg
AT (Nc) =	2555 days
AT (Car) =	25550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE J-8
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficient
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Current Site Worker: Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker: Absorbed Dose (mg/kg-day) (Car)	Current Site Worker: Hazard Quotient	Current Site Worker: Cancer Risk	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker: Hazard Quotient	Future Industrial Worker: Cancer Risk
Semivolatile Organics													
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	2.00E-03	21	3.30E-02								
Metals													
Antimony	4.0E-04	NA	2.21E-02	NA	1.00E-03								
Arsenic	2.4E-04	1.9E+00	4.26E-03	NA	1.00E-03								
Barium	3.5E-03	NA	7.22E-02	NA	1.00E-03		Onsite Surface Water Dermal Contact Not Applicable for Current Site Worker				Onsite Surface Water Dermal Contact Not Applicable for Future Industrial Worker		
Cadmium	5.0E-05	NA	7.82E-04	NA	1.00E-03								
Calcium	NA	NA	6.32E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	6.31E-04	NA	2.00E-03								
Copper	2.4E-02	NA	1.93E-02	NA	1.00E-03								
Iron	3.0E-01	NA	1.93E-01	NA	1.00E-03								
Lead	NA	NA	3.71E-02	NA	4.00E-06								
Magnesium	NA	NA	8.90E+00	NA	1.00E-03								
Manganese	1.5E-03	NA	1.20E-02	NA	1.00E-03								
Nickel	8.0E-04	NA	1.03E-03	NA	1.00E-03								
Potassium	NA	NA	3.52E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	3.23E-03	NA	1.00E-03								
Sodium	NA	NA	7.03E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	9.00E-04	NA	1.00E-03								
Zinc	7.5E-02	NA	3.63E-02	NA	6.00E-04								
Total Hazard Quotient and Cancer Risk:													

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE .I-8
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficient
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker: Hazard Quotient	Future Construction Worker: Cancer Risk	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Nc)	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Car)	Future Tresspasser Child: Hazard Quotient	Future Tresspasser Child: Cancer Risk
Semivolatile Organics													
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	2.00E-03	21	3.30E-02					5.30E-06	3.78E-07	5E-04	1E-08
Metals													
Antimony	4.0E-04	NA	2.21E-02	NA	1.00E-03					1.40E-07		3E-04	
Arsenic	2.4E-04	1.9E+00	4.26E-03	NA	1.00E-03					2.70E-08	1.93E-09	1E-04	4E-09
Barium	3.5E-03	NA	7.22E-02	NA	1.00E-03		Onsite Surface Water			4.57E-07		1E-04	
Cadmium	5.0E-05	NA	7.82E-04	NA	1.00E-03		Dermal Contact			4.96E-09		1E-04	
Calcium	NA	NA	6.32E+01	NA	1.00E-03		Not Applicable						
Chromium	1.0E-04	NA	6.31E-04	NA	2.00E-03		for Future			7.99E-09		8E-05	
Copper	2.4E-02	NA	1.93E-02	NA	1.00E-03		Construction Worker			1.22E-07		5E-06	
Iron	3.0E-01	NA	1.93E-01	NA	1.00E-03					1.22E-06		4E-06	
Lead	NA	NA	3.71E-02	NA	4.00E-06								
Magnesium	NA	NA	8.90E+00	NA	1.00E-03								
Manganese	1.5E-03	NA	1.20E-02	NA	1.00E-03					7.59E-08		5E-05	
Nickel	8.0E-04	NA	1.03E-03	NA	1.00E-03					6.55E-09		8E-06	
Potassium	NA	NA	3.52E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	3.23E-03	NA	1.00E-03					2.05E-08		5E-06	
Sodium	NA	NA	7.03E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	9.00E-04	NA	1.00E-03					5.70E-09		8E-05	
Zinc	7.5E-02	NA	3.63E-02	NA	6.00E-04					1.38E-07		2E-06	
Total Hazard Quotient and Cancer Risk:												**1E-03**	**1E-08**

Assumptions for Future Tresspasser Child

SA =	4625	cm2
EF =	25	days/year
ED =	5	years
BW =	50	kg
AT (Nc) =	1825	days
AT (Car) =	25550	days
ET =	1	hour/day
CF =	1E-03	liter/cm3

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-8
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficient
CW = EPC Surface Water
ET = Exposure Time
Tau = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	Tau (hours)	Kp (cm/hr)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child: Hazard Quotient	Future Day Care Center Child: Cancer Risk	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult: Hazard Quotient	Future Day Care Center Adult: Cancer Risk
Semivolatile Organics													
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	2.00E-03	21	3.30E-02								
Metals													
Antimony	4.0E-04	NA	2.21E-02	NA	1.00E-03								
Arsenic	2.4E-04	1.9E+00	4.26E-03	NA	1.00E-03								
Barium	3.5E-03	NA	7.22E-02	NA	1.00E-03		Onsite Surface Water Dermal Contact Not Applicable for Future Day Care Center Child				Onsite Surface Water Dermal Contact Not Applicable for Future Day Care Center Adult		
Cadmium	5.0E-05	NA	7.82E-04	NA	1.00E-03								
Calcium	NA	NA	6.32E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	6.31E-04	NA	2.00E-03								
Copper	2.4E-02	NA	1.93E-02	NA	1.00E-03								
Iron	3.0E-01	NA	1.93E-01	NA	1.00E-03								
Lead	NA	NA	3.71E-02	NA	4.00E-06								
Magnesium	NA	NA	8.90E+00	NA	1.00E-03								
Manganese	1.5E-03	NA	1.20E-02	NA	1.00E-03								
Nickel	8.0E-04	NA	1.03E-03	NA	1.00E-03								
Potassium	NA	NA	3.52E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	3.23E-03	NA	1.00E-03								
Sodium	NA	NA	7.03E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	9.00E-04	NA	1.00E-03								
Zinc	7.5E-02	NA	3.63E-02	NA	6.00E-04								
Total Hazard Quotient and Cancer Risk:													

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-9
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficien
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient =
Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk =
Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Current Site Worker: Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker: Absorbed Dose (mg/kg-day) (Car)	Current Site Worker: Hazard Quotient	Current Site Worker: Cancer Risk	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker: Hazard Quotient	Future Industrial Worker: Cancer Risk
Semivolatile Organics													
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	2.00E-03	21	3.30E-02								
Metals													
Antimony	4.0E-04	NA	2.21E-02	NA	1.00E-03								
Arsenic	2.4E-04	1.9E+00	4.26E-03	NA	1.00E-03								
Barium	3.5E-03	NA	7.22E-02	NA	1.00E-03		Onsite Surface Water Dermal Contact Not Applicable for Current Site Worker				Onsite Surface Water Dermal Contact Not Applicable for Future Industrial Worker		
Cadmium	5.0E-05	NA	7.82E-04	NA	1.00E-03								
Calcium	NA	NA	6.32E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	6.31E-04	NA	2.00E-03								
Copper	2.4E-02	NA	1.93E-02	NA	1.00E-03								
Iron	3.0E-01	NA	1.93E-01	NA	1.00E-03								
Lead	NA	NA	3.71E-02	NA	4.00E-06								
Magnesium	NA	NA	8.90E+00	NA	1.00E-03								
Manganese	1.5E-03	NA	1.20E-02	NA	1.00E-03								
Nickel	8.0E-04	NA	1.03E-03	NA	1.00E-03								
Potassium	NA	NA	3.52E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	3.23E-03	NA	1.00E-03								
Sodium	NA	NA	7.03E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	9.00E-04	NA	1.00E-03								
Zinc	7.5E-02	NA	3.63E-02	NA	6.00E-04								
Total Hazard Quotient and Cancer Risk:													

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-9
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficien
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker: Hazard Quotient	Future Construction Worker: Cancer Risk	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Nc)	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Car)	Future Tresspasser Child: Hazard Quotient	Future Tresspasser Child: Cancer Risk
Semivolatile Organics													
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	2.00E-03	21	3.30E-02					2.22E-06	3.17E-08	2E-04	9E-10
Metals													
Antimony	4.0E-04	NA	2.21E-02	NA	1.00E-03					5.86E-08		1E-04	
Arsenic	2.4E-04	1.9E+00	4.26E-03	NA	1.00E-03					1.13E-08	1.62E-10	5E-05	3E-10
Barium	3.5E-03	NA	7.22E-02	NA	1.00E-03		Onsite Surface Water Dermal Contact Not Applicable for Future Construction Worker			1.92E-07		5E-05	
Cadmium	5.0E-05	NA	7.82E-04	NA	1.00E-03					2.08E-09		4E-05	
Calcium	NA	NA	6.32E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	6.31E-04	NA	2.00E-03					3.35E-09		3E-05	
Copper	2.4E-02	NA	1.93E-02	NA	1.00E-03					5.11E-08		2E-06	
Iron	3.0E-01	NA	1.93E-01	NA	1.00E-03					5.13E-07		2E-06	
Lead	NA	NA	3.71E-02	NA	4.00E-06								
Magnesium	NA	NA	8.90E+00	NA	1.00E-03								
Manganese	1.5E-03	NA	1.20E-02	NA	1.00E-03					3.18E-08		2E-05	
Nickel	8.0E-04	NA	1.03E-03	NA	1.00E-03					2.74E-09		3E-06	
Potassium	NA	NA	3.52E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	3.23E-03	NA	1.00E-03					8.57E-09		2E-06	
Sodium	NA	NA	7.03E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	9.00E-04	NA	1.00E-03					2.39E-09		3E-05	
Zinc	7.5E-02	NA	3.63E-02	NA	6.00E-04					5.77E-08		8E-07	
Total Hazard Quotient and Cancer Risk:												**6E-04**	**1E-09**

Assumptions for Future Tresspasser Child

SA =	3725	cm2
EF =	13	days/year
ED =	1	years
BW =	50	kg
AT (Nc) =	365	days
AT (Car) =	25550	days
ET =	1	hour/day
CF =	1E-03	liter/cm3

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-9
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SURFACE WATER
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{DA \times SA \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):

DA = Absorbed Dose per Event
SA = Surface Area Contact
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Absorbed Dose per Event (DA):

For organics: $DA = 2Kp \times CW \sqrt{\frac{6 \times \tau \times ET}{\pi}} \times CF$

For inorganics: $DA = Kp \times CW \times ET \times CF$

Kp = Permeability Coefficien
CW = EPC Surface Water
ET = Exposure Time
τ = Lag Time
CF = Conversion Factor

Equation for Hazard Quotient =
Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk =Equation for Cancer Risk =
Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	EPC Surface Water (mg/L)	τ (hours)	Kp (cm/hr)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child: Hazard Quotient	Future Day Care Center Child: Cancer Risk	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult: Hazard Quotient	Future Day Care Center Adult: Cancer Risk
Semivolatile Organics													
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	2.00E-03	21	3.30E-02								
Metals													
Antimony	4.0E-04	NA	2.21E-02	NA	1.00E-03								
Arsenic	2.4E-04	1.9E+00	4.26E-03	NA	1.00E-03								
Barium	3.5E-03	NA	7.22E-02	NA	1.00E-03		Onsite Surface Water Dermal Contact Not Applicable for Future Day Care Center Child				Onsite Surface Water Dermal Contact Not Applicable for Future Day Care Center Adult		
Cadmium	5.0E-05	NA	7.82E-04	NA	1.00E-03								
Calcium	NA	NA	6.32E+01	NA	1.00E-03								
Chromium	1.0E-04	NA	6.31E-04	NA	2.00E-03								
Copper	2.4E-02	NA	1.93E-02	NA	1.00E-03								
Iron	3.0E-01	NA	1.93E-01	NA	1.00E-03								
Lead	NA	NA	3.71E-02	NA	4.00E-06								
Magnesium	NA	NA	8.90E+00	NA	1.00E-03								
Manganese	1.5E-03	NA	1.20E-02	NA	1.00E-03								
Nickel	8.0E-04	NA	1.03E-03	NA	1.00E-03								
Potassium	NA	NA	3.52E+00	NA	1.00E-03								
Selenium	4.5E-03	NA	3.23E-03	NA	1.00E-03								
Sodium	NA	NA	7.03E+00	NA	1.00E-03								
Vanadium	7.0E-05	NA	9.00E-04	NA	1.00E-03								
Zinc	7.5E-02	NA	3.63E-02	NA	6.00E-04								
Total Hazard Quotient and Cancer Risk:													

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-10
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC Sediment	Current Site Worker				Future Industrial Worker			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics											
Acetone	1.0E-01	NA	1.44E-02								
Toluene	2.0E-01	NA	8.00E-03								
Semivolatile Organics											
2,4-Dimethylphenol	2.0E-02	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	2.50E-02		Ingestion of Onsite Sediment Not Applicable for Current Site Worker				Ingestion of Onsite Sediment Not Applicable for Future Industrial Worker		
Benzo(a)pyrene	NA	7.3E+00	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	3.30E-02								
Chrysene	NA	7.3E-03	4.80E-02								
Fluoranthene	4.0E-02	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.40E-02								
Phenanthrene	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	7.70E-02								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	6.46E-03								
4,4'-DDE	NA	3.4E-01	4.82E-02								
4,4'-DDT	5.0E-04	3.4E-01	4.90E-03								
Dieldrin	5.0E-05	1.6E+01	3.26E-03								
Endosulfan I	6.0E-03	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	3.05E-03								
Metals											
Aluminum	1.0E+00	NA	1.83E+04								
Antimony	4.0E-04	NA	5.50E+00								
Arsenic	3.0E-04	1.5E+00	6.10E+00								
Barium	7.0E-02	NA	1.32E+02								
Beryllium	5.0E-03	4.3E+00	7.64E-01								
Cadmium	5.0E-04	NA	2.40E+00								
Calcium	NA	NA	1.08E+04								
Chromium	5.0E-03	NA	2.47E+01								
Cobalt	NA	NA	1.26E+01								
Copper	4.0E-02	NA	1.33E+02								
Iron	3.0E-01	NA	2.94E+04								
Lead	NA	NA	6.83E+02								
Magnesium	NA	NA	5.54E+03								
Manganese	5.0E-02	NA	5.32E+02								
Mercury	3.0E-04	NA	8.11E-02								
Nickel	2.0E-02	NA	3.16E+01								
Potassium	NA	NA	2.18E+03								
Selenium	5.0E-03	NA	1.27E+00								
Sodium	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	8.24E-01								
Vanadium	7.0E-03	NA	2.97E+01								
Zinc	3.0E-01	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-10
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Sediment (mg/kg)	Future Construction Worker Intake (mg/kg-day) (Nc)	Future Construction Worker Intake (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Intake (mg/kg-day) (Nc)	Future Tresspasser Child Intake (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics											
Acetone	1.0E-01	NA	1.44E-02					3.94E-09		4E-08	
Toluene	2.0E-01	NA	8.00E-03					2.19E-09		1E-08	
Semivolatile Organics											
2,4-Dimethylphenol	2.0E-02	NA	3.20E-02					8.77E-09		4E-07	
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.14E-01					8.61E-08	6.15E-09	4E-05	4E-09
Benzo(a)anthracene	NA	7.3E-01	2.50E-02		Ingestion of Onsite Sediment Not Applicable for Future Construction Worker				4.89E-10		4E-10
Benzo(a)pyrene	NA	7.3E+00	3.00E-02						5.87E-10		4E-09
Benzo(b)fluoranthene	NA	7.3E-01	4.30E-02						8.41E-10		6E-10
Benzo(g,h,i)perylene	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	3.30E-02						6.46E-10		5E-11
Chrysene	NA	7.3E-03	4.80E-02						9.39E-10		7E-12
Fluoranthene	4.0E-02	NA	7.00E-02					1.92E-08		5E-07	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.40E-02						4.70E-10		3E-10
Phenanthrene	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	4.70E-02					1.29E-08		4E-07	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	7.70E-02					2.11E-08	1.51E-09	1E-06	2E-11
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	6.46E-03						1.26E-10		3E-11
4,4'-DDE	NA	3.4E-01	4.82E-02						9.43E-10		3E-10
4,4'-DDT	5.0E-04	3.4E-01	4.90E-03					1.34E-09	9.58E-11	3E-06	3E-11
Dieldrin	5.0E-05	1.6E+01	3.26E-03					8.92E-10	6.37E-11	2E-05	1E-09
Endosulfan I	6.0E-03	NA	1.43E-03					3.91E-10		7E-08	
Endosulfan II	6.0E-03	NA	3.05E-03					8.35E-10		1E-07	
Metals											
Aluminum	1.0E+00	NA	1.83E+04					5.00E-03		5E-03	
Antimony	4.0E-04	NA	5.50E+00					1.51E-06		4E-03	
Arsenic	3.0E-04	1.5E+00	6.10E+00					1.67E-06	1.19E-07	6E-03	2E-07
Barium	7.0E-02	NA	1.32E+02					3.60E-05		5E-04	
Beryllium	5.0E-03	4.3E+00	7.64E-01					2.09E-07	1.49E-08	4E-05	6E-08
Cadmium	5.0E-04	NA	2.40E+00					6.58E-07		1E-03	
Calcium	NA	NA	1.08E+04								
Chromium	5.0E-03	NA	2.47E+01					6.76E-06		1E-03	
Cobalt	NA	NA	1.26E+01								
Copper	4.0E-02	NA	1.33E+02					3.66E-05		9E-04	
Iron	3.0E-01	NA	2.94E+04					8.06E-03		3E-02	
Lead	NA	NA	6.83E+02								
Magnesium	NA	NA	5.54E+03								
Manganese	5.0E-02	NA	5.32E+02					1.46E-04		3E-03	
Mercury	3.0E-04	NA	8.11E-02					2.22E-08		7E-05	
Nickel	2.0E-02	NA	3.16E+01					8.66E-06		4E-04	
Potassium	NA	NA	2.18E+03								
Selenium	5.0E-03	NA	1.27E+00					3.47E-07		7E-05	
Sodium	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	8.24E-01					2.26E-07		3E-03	
Vanadium	7.0E-03	NA	2.97E+01					8.15E-06		1E-03	
Zinc	3.0E-01	NA	1.88E+02					5.16E-05		2E-04	
Total Hazard Quotient and Cancer Risk:										**5E-02**	**3E-07**

Assumptions for Future Tresspasser Child

IR =	200	mg sed/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	25	days/year
ED =	5	years
BW =	50	kg
AT (Nc) =	1825	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-10
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC Sediment	Future Day Care Center Child				Future Day Care Center Adult			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics											
Acetone	1.0E-01	NA	1.44E-02								
Toluene	2.0E-01	NA	8.00E-03								
Semivolatile Organics											
2,4-Dimethylphenol	2.0E-02	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	2.50E-02		Ingestion of Onsite Sediment Not Applicable for Future Day Care Center Child				Ingestion of Onsite Sediment Not Applicable for Future Day Care Center Worker		
Benzo(a)pyrene	NA	7.3E+00	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	3.30E-02								
Chrysene	NA	7.3E-03	4.80E-02								
Fluoranthene	4.0E-02	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.40E-02								
Phenanthrene	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	7.70E-02								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	6.46E-03								
4,4'-DDE	NA	3.4E-01	4.82E-02								
4,4'-DDT	5.0E-04	3.4E-01	4.90E-03								
Dieldrin	5.0E-05	1.6E+01	3.26E-03								
Endosulfan I	6.0E-03	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	3.05E-03								
Metals											
Aluminum	1.0E+00	NA	1.83E+04								
Antimony	4.0E-04	NA	5.50E+00								
Arsenic	3.0E-04	1.5E+00	6.10E+00								
Barium	7.0E-02	NA	1.32E+02								
Beryllium	5.0E-03	4.3E+00	7.64E-01								
Cadmium	5.0E-04	NA	2.40E+00								
Calcium	NA	NA	1.08E+04								
Chromium	5.0E-03	NA	2.47E+01								
Cobalt	NA	NA	1.26E+01								
Copper	4.0E-02	NA	1.33E+02								
Iron	3.0E-01	NA	2.94E+04								
Lead	NA	NA	6.83E+02								
Magnesium	NA	NA	5.54E+03								
Manganese	5.0E-02	NA	5.32E+02								
Mercury	3.0E-04	NA	8.11E-02								
Nickel	2.0E-02	NA	3.16E+01								
Potassium	NA	NA	2.18E+03								
Selenium	5.0E-03	NA	1.27E+00								
Sodium	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	8.24E-01								
Vanadium	7.0E-03	NA	2.97E+01								
Zinc	3.0E-01	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-11
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Sediment (mg/kg)	Current Site Worker Intake (mg/kg-day) (Nc)	Current Site Worker Intake (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Intake (mg/kg-day) (Nc)	Future Industrial Worker Intake (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics											
Acetone	1.0E-01	NA	1.44E-02								
Toluene	2.0E-01	NA	8.00E-03								
Semivolatile Organics											
2,4-Dimethylphenol	2.0E-02	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	2.50E-02		Ingestion of Onsite Sediment Not Applicable for Current Site Worker				Ingestion of Onsite Sediment Not Applicable for Future Industrial Worker		
Benzo(a)pyrene	NA	7.3E+00	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	3.30E-02								
Chrysene	NA	7.3E-03	4.80E-02								
Fluoranthene	4.0E-02	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.40E-02								
Phenanthrene	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	7.70E-02								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	6.46E-03								
4,4'-DDE	NA	3.4E-01	4.82E-02								
4,4'-DDT	5.0E-04	3.4E-01	4.90E-03								
Dieldrin	5.0E-05	1.6E+01	3.26E-03								
Endosulfan I	6.0E-03	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	3.05E-03								
Metals											
Aluminum	1.0E+00	NA	1.83E+04								
Antimony	4.0E-04	NA	5.50E+00								
Arsenic	3.0E-04	1.5E+00	6.10E+00								
Barium	7.0E-02	NA	1.32E+02								
Beryllium	5.0E-03	4.3E+00	7.64E-01								
Cadmium	5.0E-04	NA	2.40E+00								
Calcium	NA	NA	1.08E+04								
Chromium	5.0E-03	NA	2.47E+01								
Cobalt	NA	NA	1.26E+01								
Copper	4.0E-02	NA	1.33E+02								
Iron	3.0E-01	NA	2.94E+04								
Lead	NA	NA	6.83E+02								
Magnesium	NA	NA	5.54E+03								
Manganese	5.0E-02	NA	5.32E+02								
Mercury	3.0E-04	NA	8.11E-02								
Nickel	2.0E-02	NA	3.16E+01								
Potassium	NA	NA	2.18E+03								
Selenium	5.0E-03	NA	1.27E+00								
Sodium	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	8.24E-01								
Vanadium	7.0E-03	NA	2.97E+01								
Zinc	3.0E-01	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:											

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-11
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD	Carc. Slope Oral	EPC Sediment	Future Construction Worker				Future Tresspasser Child			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
	(mg/kg-day)	(mg/kg-day)-1	(mg/kg)	(Nc)	(Car)			(Nc)	(Car)		
Volatile Organics											
Acetone	1.0E-01	NA	1.44E-02					1.02E-09		1E-08	
Toluene	2.0E-01	NA	8.00E-03					5.70E-10		3E-09	
Semivolatile Organics											
2,4-Dimethylphenol	2.0E-02	NA	3.20E-02					2.28E-09		1E-07	
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.14E-01					2.24E-08	3.20E-10	1E-05	2E-10
Benzo(a)anthracene	NA	7.3E-01	2.50E-02		Ingestion of Onsite Sediment Not Applicable for Future Construction Worker				2.54E-11		2E-11
Benzo(a)pyrene	NA	7.3E+00	3.00E-02						3.05E-11		2E-10
Benzo(b)fluoranthene	NA	7.3E-01	4.30E-02						4.38E-11		3E-11
Benzo(g,h,i)perylene	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	3.30E-02						3.36E-11		2E-12
Chrysene	NA	7.3E-03	4.80E-02						4.88E-11		4E-13
Fluoranthene	4.0E-02	NA	7.00E-02					4.99E-09		1E-07	
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.40E-02						2.44E-11		2E-11
Phenanthrene	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	4.70E-02					3.35E-09		1E-07	
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	7.70E-02					5.48E-09	7.84E-11	3E-07	1E-12
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	6.46E-03						6.58E-12		2E-12
4,4'-DDE	NA	3.4E-01	4.82E-02						4.90E-11		2E-11
4,4'-DDT	5.0E-04	3.4E-01	4.90E-03					3.49E-10	4.98E-12	7E-07	2E-12
Dieldrin	5.0E-05	1.6E+01	3.26E-03					2.32E-10	3.31E-12	5E-06	5E-11
Endosulfan I	6.0E-03	NA	1.43E-03					1.02E-10		2E-08	
Endosulfan II	6.0E-03	NA	3.05E-03					2.17E-10		4E-08	
Metals											
Aluminum	1.0E+00	NA	1.83E+04					1.30E-03		1E-03	
Antimony	4.0E-04	NA	5.50E+00					3.92E-07		1E-03	
Arsenic	3.0E-04	1.5E+00	6.10E+00					4.34E-07	6.20E-09	1E-03	9E-09
Barium	7.0E-02	NA	1.32E+02					9.37E-06		1E-04	
Beryllium	5.0E-03	4.3E+00	7.64E-01					5.44E-08	7.77E-10	1E-05	3E-09
Cadmium	5.0E-04	NA	2.40E+00					1.71E-07		3E-04	
Calcium	NA	NA	1.08E+04								
Chromium	5.0E-03	NA	2.47E+01					1.76E-06		4E-04	
Cobalt	NA	NA	1.26E+01								
Copper	4.0E-02	NA	1.33E+02					9.50E-06		2E-04	
Iron	3.0E-01	NA	2.94E+04					2.10E-03		7E-03	
Lead	NA	NA	6.83E+02								
Magnesium	NA	NA	5.54E+03								
Manganese	5.0E-02	NA	5.32E+02					3.79E-05		8E-04	
Mercury	3.0E-04	NA	8.11E-02					5.77E-09		2E-05	
Nickel	2.0E-02	NA	3.16E+01					2.25E-06		1E-04	
Potassium	NA	NA	2.18E+03								
Selenium	5.0E-03	NA	1.27E+00					9.02E-08		2E-05	
Sodium	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	8.24E-01					5.87E-08		7E-04	
Vanadium	7.0E-03	NA	2.97E+01					2.12E-06		3E-04	
Zinc	3.0E-01	NA	1.88E+02					1.34E-05		4E-05	
Total Hazard Quotient and Cancer Risk:										**1E-02**	**1E-08**

Assumptions for Future Tresspasser Child

IR =	100	mg sed/day
CF =	1E-06	kg/mg
FI =	1	unitless
EF =	13	days/year
ED =	1	years
BW =	50	kg
AT (Nc) =	365	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-11
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times IR \times CF \times FI \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
IR = Ingestion Rate
CF = Conversion Factor
FI = Fraction Ingested
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Sediment (mg/kg)	Future Day Care Center Child				Future Day Care Center Adult			
				Intake (mg/kg-day) (Nc)	Intake (mg/kg-day) (Car)	Hazard Quotient	Cancer Risk	Intake (mg/kg-day) (Nc)	Intake (mg/kg-day) (Car)	Hazard Quotient	Cancer Risk
Volatile Organics											
Acetone	1.0E-01	NA	1.44E-02								
Toluene	2.0E-01	NA	8.00E-03								
Semivolatile Organics											
2,4-Dimethylphenol	2.0E-02	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	2.50E-02								
Benzo(a)pyrene	NA	7.3E+00	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	3.30E-02								
Chrysene	NA	7.3E-03	4.80E-02								
Fluoranthene	4.0E-02	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	2.40E-02								
Phenanthrene	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	2.0E-02	1.4E-02	7.70E-02								
Pesticides/PCBs											
4,4'-DDD	NA	2.4E-01	6.46E-03								
4,4'-DDE	NA	3.4E-01	4.82E-02								
4,4'-DDT	5.0E-04	3.4E-01	4.90E-03								
Dieldrin	5.0E-05	1.6E+01	3.26E-03								
Endosulfan I	6.0E-03	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	3.05E-03								
Metals											
Aluminum	1.0E+00	NA	1.83E+04								
Antimony	4.0E-04	NA	5.50E+00								
Arsenic	3.0E-04	1.5E+00	6.10E+00								
Barium	7.0E-02	NA	1.32E+02								
Beryllium	5.0E-03	4.3E+00	7.64E-01								
Cadmium	5.0E-04	NA	2.40E+00								
Calcium	NA	NA	1.08E+04								
Chromium	5.0E-03	NA	2.47E+01								
Cobalt	NA	NA	1.26E+01								
Copper	4.0E-02	NA	1.33E+02								
Iron	3.0E-01	NA	2.94E+04								
Lead	NA	NA	6.83E+02								
Magnesium	NA	NA	5.54E+03								
Manganese	5.0E-02	NA	5.32E+02								
Mercury	3.0E-04	NA	8.11E-02								
Nickel	2.0E-02	NA	3.16E+01								
Potassium	NA	NA	2.18E+03								
Selenium	5.0E-03	NA	1.27E+00								
Sodium	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	8.24E-01								
Vanadium	7.0E-03	NA	2.97E+01								
Zinc	3.0E-01	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:											

Ingestion of Onsite Sediment Not Applicable for Future Day Care Center Child

Ingestion of Onsite Sediment Not Applicable for Future Day Care Center Worker

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

TABLE J-12
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Inhalation Dermal (mg/kg-day)	Absorption Factor* (unitless)	EPC Sediment (mg/kg)	Current Site Worker: Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker: Absorbed Dose (mg/kg-day) (Car)	Current Site Worker: Hazard Quotient	Current Site Worker: Cancer Risk	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker: Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker: Hazard Quotient	Future Industrial Worker: Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	NA	1.44E-02								
Toluene	2.0E-01	NA	NA	8.00E-03								
Semivolatile Organics												
2,4-Dimethylphenol	2.0E-02	NA	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	2.50E-02								
Benzo(a)pyrene	NA	1.8E+01	NA	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	NA	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	NA	3.30E-02								
Chrysene	NA	7.3E-03	NA	4.80E-02								
Fluoranthene	4.0E-02	NA	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.40E-02								
Phenanthrene	NA	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	7.70E-02								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	6.46E-03								
4,4'-DDE	NA	1.7E+00	NA	4.82E-02								
4'-DDT	1.0E-04	1.7E+00	NA	4.90E-03								
ieldrin	2.5E-05	3.2E+01	NA	3.26E-03								
Endosulfan I	6.0E-03	NA	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	NA	3.05E-03								
Metals												
Aluminum	NA	NA	NA	1.83E+04								
Antimony	4.0E-04	NA	NA	5.50E+00								
Arsenic	2.4E-04	1.9E+00	0.001	6.10E+00								
Barium	3.5E-03	NA	NA	1.32E+02								
Beryllium	5.0E-05	4.3E+02	NA	7.64E-01								
Cadmium	5.0E-05	NA	0.01	2.40E+00								
Calcium	NA	NA	NA	1.08E+04								
Chromium	1.0E-04	NA	NA	2.47E+01								
Cobalt	NA	NA	NA	1.26E+01								
Copper	2.4E-02	NA	NA	1.33E+02								
Iron	3.0E-01	NA	NA	2.94E+04								
Lead	NA	NA	NA	6.83E+02								
Magnesium	NA	NA	NA	5.54E+03								
Manganese	1.5E-03	NA	NA	5.32E+02								
Mercury	3.0E-06	NA	NA	8.11E-02								
Nickel	8.0E-04	NA	NA	3.16E+01								
Potassium	NA	NA	NA	2.18E+03								
Selenium	4.5E-03	NA	NA	1.27E+00								
Sodium	NA	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	NA	8.24E-01								
Vanadium	7.0E-05	NA	NA	2.97E+01								
Zinc	7.5E-02	NA	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:												

Contact to Onsite Sediment Not Applicable for Current Site Worker

Contact to Onsite Sediment Not Applicable for Future Industrial Worker

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
'A= Information not available.
:SEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of co

TABLE J-12
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Inhalation Dermal (mg/kg-day)	Absorption Factor* (unitless)	EPC Sediment (mg/kg)	Future Construction Worker Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker Hazard Quotient	Future Construction Worker Cancer Risk	Future Tresspasser Child Absorbed Dose (mg/kg-day) (Nc)	Future Tresspasser Child Absorbed Dose (mg/kg-day) (Car)	Future Tresspasser Child Hazard Quotient	Future Tresspasser Child Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	NA	1.44E-02								
Toluene	2.0E-01	NA	NA	8.00E-03								
Semivolatile Organics												
2,4-Dimethylphenol	2.0E-02	NA	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	2.50E-02								
Benzo(a)pyrene	NA	1.8E+01	NA	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	NA	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	NA	3.30E-02								
Chrysene	NA	7.3E-03	NA	4.80E-02								
Fluoranthene	4.0E-02	NA	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.40E-02								
Phenanthrene	NA	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	7.70E-02								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	6.46E-03								
4,4'-DDE	NA	1.7E+00	NA	4.82E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.90E-03								
Dieldrin	2.5E-05	3.2E+01	NA	3.26E-03								
Endosulfan I	6.0E-03	NA	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	NA	3.05E-03								
Metals												
Aluminum	NA	NA	NA	1.83E+04								
Antimony	4.0E-04	NA	NA	5.50E+00								
Arsenic	2.4E-04	1.9E+00	0.001	6.10E+00					3.9E-08	2.8E-09	2E-04	5E-09
Barium	3.5E-03	NA	NA	1.32E+02								
Beryllium	5.0E-05	4.3E+02	NA	7.64E-01					1.5E-07		3E-03	
Cadmium	5.0E-05	NA	0.01	2.40E+00								
Calcium	NA	NA	NA	1.08E+04								
Chromium	1.0E-04	NA	NA	2.47E+01								
Cobalt	NA	NA	NA	1.26E+01								
Copper	2.4E-02	NA	NA	1.33E+02								
Iron	3.0E-01	NA	NA	2.94E+04								
Lead	NA	NA	NA	6.83E+02								
Magnesium	NA	NA	NA	5.54E+03								
Manganese	1.5E-03	NA	NA	5.32E+02								
Mercury	3.0E-06	NA	NA	8.11E-02								
Nickel	8.0E-04	NA	NA	3.16E+01								
Potassium	NA	NA	NA	2.18E+03								
Selenium	4.5E-03	NA	NA	1.27E+00								
Sodium	NA	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	NA	8.24E-01								
Vanadium	7.0E-05	NA	NA	2.97E+01								
Zinc	7.5E-02	NA	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:											**3E-03**	**5E-09**

Contact to Onsite Sediment Not Applicable for Future Construction Worker

Assumptions for Future Tresspasser Child

CF =	1E-06	kg/mg
SA =	4625	cm2
AF =	1	mg/cm2
EF =	25	days/year
ED =	5	years
BW =	50	kg
AT (Nc) =	1825	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of concern.

TABLE J-12
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Inhalation Dermal (mg/kg-day)	Absorption Factor* (unitless)	EPC Sediment (mg/kg)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child: Hazard Quotient	Future Day Care Center Child: Cancer Risk	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult: Hazard Quotient	Future Day Care Center Adult: Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	NA	1.44E-02								
Toluene	2.0E-01	NA	NA	8.00E-03								
Semivolatile Organics												
2,4-Dimethylphenol	2.0E-02	NA	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	2.50E-02								
Benzo(a)pyrene	NA	1.8E+01	NA	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	NA	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	NA	3.30E-02								
Chrysene	NA	7.3E-03	NA	4.80E-02								
Fluoranthene	4.0E-02	NA	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.40E-02								
Phenanthrene	NA	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	7.70E-02								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	6.46E-03								
4,4'-DDE	NA	1.7E+00	NA	4.82E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.90E-03								
Dieldrin	2.5E-05	3.2E+01	NA	3.26E-03								
Endosulfan I	6.0E-03	NA	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	NA	3.05E-03								
Metals												
Aluminum	NA	NA	NA	1.83E+04								
Antimony	4.0E-04	NA	NA	5.50E+00								
Arsenic	2.4E-04	1.9E+00	0.001	6.10E+00								
Barium	3.5E-03	NA	NA	1.32E+02								
Beryllium	5.0E-05	4.3E+02	NA	7.64E-01								
Cadmium	5.0E-05	NA	0.01	2.40E+00								
Calcium	NA	NA	NA	1.08E+04								
Chromium	1.0E-04	NA	NA	2.47E+01								
Cobalt	NA	NA	NA	1.26E+01								
Copper	2.4E-02	NA	NA	1.33E+02								
Iron	3.0E-01	NA	NA	2.94E+04								
Lead	NA	NA	NA	6.83E+02								
Magnesium	NA	NA	NA	5.54E+03								
Manganese	1.5E-03	NA	NA	5.32E+02								
Mercury	3.0E-06	NA	NA	8.11E-02								
Nickel	8.0E-04	NA	NA	3.16E+01								
Potassium	NA	NA	NA	2.18E+03								
Selenium	4.5E-03	NA	NA	1.27E+00								
Sodium	NA	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	NA	8.24E-01								
Vanadium	7.0E-05	NA	NA	2.97E+01								
Zinc	7.5E-02	NA	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:												

Contact to Onsite Sediment Not Applicable for Future Day Care Center Child

Contact to Onsite Sediment Not Applicable for Future Day Care Center Worker

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of c

TABLE J-13
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Inhalation Dermal (mg/kg-day)	Absorption Factor* (unitless)	EPC Sediment (mg/kg)	Current Site Worker Absorbed Dose (mg/kg-day) (Nc)	Current Site Worker Absorbed Dose (mg/kg-day) (Car)	Current Site Worker Hazard Quotient	Current Site Worker Cancer Risk	Future Industrial Worker Absorbed Dose (mg/kg-day) (Nc)	Future Industrial Worker Absorbed Dose (mg/kg-day) (Car)	Future Industrial Worker Hazard Quotient	Future Industrial Worker Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	NA	1.44E-02								
Toluene	2.0E-01	NA	NA	8.00E-03								
Semivolatile Organics												
2,4-Dimethylphenol	2.0E-02	NA	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	2.50E-02		Contact to Onsite Sediment Not Applicable for Current Site Worker				Contact to Onsite Sediment Not Applicable for Future Industrial Worker		
Benzo(a)pyrene	NA	1.8E+01	NA	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	NA	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	NA	3.30E-02								
Chrysene	NA	7.3E-03	NA	4.80E-02								
Fluoranthene	4.0E-02	NA	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.40E-02								
Phenanthrene	NA	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	7.70E-02								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	6.46E-03								
4,4'-DDE	NA	1.7E+00	NA	4.82E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.90E-03								
Dieldrin	2.5E-05	3.2E+01	NA	3.26E-03								
Endosulfan I	6.0E-03	NA	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	NA	3.05E-03								
Metals												
Aluminum	NA	NA	NA	1.83E+04								
Antimony	4.0E-04	NA	NA	5.50E+00								
Arsenic	2.4E-04	1.9E+00	0.001	6.10E+00								
Barium	3.5E-03	NA	NA	1.32E+02								
Beryllium	5.0E-05	4.3E+02	NA	7.64E-01								
Cadmium	5.0E-05	NA	0.01	2.40E+00								
Calcium	NA	NA	NA	1.08E+04								
Chromium	1.0E-04	NA	NA	2.47E+01								
Cobalt	NA	NA	NA	1.26E+01								
Copper	2.4E-02	NA	NA	1.33E+02								
Iron	3.0E-01	NA	NA	2.94E+04								
Lead	NA	NA	NA	6.83E+02								
Magnesium	NA	NA	NA	5.54E+03								
Manganese	1.5E-03	NA	NA	5.32E+02								
Mercury	3.0E-06	NA	NA	8.11E-02								
Nickel	8.0E-04	NA	NA	3.16E+01								
Potassium	NA	NA	NA	2.18E+03								
Selenium	4.5E-03	NA	NA	1.27E+00								
Sodium	NA	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	NA	8.24E-01								
Vanadium	7.0E-05	NA	NA	2.97E+01								
Zinc	7.5E-02	NA	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of

TABLE J-13
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Inhalation Dermal (mg/kg-day)	Absorption Factor* (unitless)	EPC Sediment (mg/kg)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Nc)	Future Construction Worker: Absorbed Dose (mg/kg-day) (Car)	Future Construction Worker: Hazard Quotient	Future Construction Worker: Cancer Risk	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Nc)	Future Tresspasser Child: Absorbed Dose (mg/kg-day) (Car)	Future Tresspasser Child: Hazard Quotient	Future Tresspasser Child: Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	NA	1.44E-02								
Toluene	2.0E-01	NA	NA	8.00E-03								
Semivolatile Organics												
2,4-Dimethylphenol	2.0E-02	NA	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	2.50E-02		Contact to Onsite Sediment Not Applicable for Future Construction Worker						
Benzo(a)pyrene	NA	1.8E+01	NA	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	NA	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	NA	3.30E-02								
Chrysene	NA	7.3E-03	NA	4.80E-02								
Fluoranthene	4.0E-02	NA	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.40E-02								
Phenanthrene	NA	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	7.70E-02								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	6.46E-03								
4,4'-DDE	NA	1.7E+00	NA	4.82E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.90E-03								
Dieldrin	2.5E-05	3.2E+01	NA	3.26E-03								
Endosulfan I	6.0E-03	NA	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	NA	3.05E-03								
Metals												
Aluminum	NA	NA	NA	1.83E+04								
Antimony	4.0E-04	NA	NA	5.50E+00								
Arsenic	2.4E-04	1.9E+00	0.001	6.10E+00					3.2E-09	4.6E-11	1E-05	9E-11
Barium	3.5E-03	NA	NA	1.32E+02								
Beryllium	5.0E-05	4.3E+02	NA	7.64E-01								
Cadmium	5.0E-05	NA	0.01	2.40E+00					1.3E-08		3E-04	
Calcium	NA	NA	NA	1.08E+04								
Chromium	1.0E-04	NA	NA	2.47E+01								
Cobalt	NA	NA	NA	1.26E+01								
Copper	2.4E-02	NA	NA	1.33E+02								
Iron	3.0E-01	NA	NA	2.94E+04								
Lead	NA	NA	NA	6.83E+02								
Magnesium	NA	NA	NA	5.54E+03								
Manganese	1.5E-03	NA	NA	5.32E+02								
Mercury	3.0E-06	NA	NA	8.11E-02								
Nickel	8.0E-04	NA	NA	3.16E+01								
Potassium	NA	NA	NA	2.18E+03								
Selenium	4.5E-03	NA	NA	1.27E+00								
Sodium	NA	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	NA	8.24E-01								
Vanadium	7.0E-05	NA	NA	2.97E+01								
Zinc	7.5E-02	NA	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:											**3E-04**	**9E-11**

Assumptions for Future Tresspasser Child

CF =	1E-06	kg/mg
SA =	3725	cm2
AF =	0.2	mg/cm2
EF =	13	days/year
ED =	1	years
BW =	50	kg
AT (Nc) =	365	days
AT (Car) =	25550	days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of conce

TABLE J-13
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SEDIMENT
CENTRAL TENDENCY (CT)
SEAD-17 Remedial Investigation
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT}$

Variables (Assumptions for Each Receptor are Listed at the Bottom):
CS = Chemical Concentration in Sediment, from Sediment EPC Data
CF = Conversion Factor
SA = Surface Area Contact
AF = Adherence Factor
ABS = Absorption Factor
EF = Exposure Frequency
ED = Exposure Duration
BW = Bodyweight
AT = Averaging Time

Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose

Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor

Analyte	Dermal RfD (mg/kg-day)	Inhalation Dermal (mg/kg-day)	Absorption Factor* (unitless)	EPC Sediment (mg/kg)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Child: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Child: Hazard Quotient	Future Day Care Center Child: Cancer Risk	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Nc)	Future Day Care Center Adult: Absorbed Dose (mg/kg-day) (Car)	Future Day Care Center Adult: Hazard Quotient	Future Day Care Center Adult: Cancer Risk
Volatile Organics												
Acetone	1.0E-01	NA	NA	1.44E-02								
Toluene	2.0E-01	NA	NA	8.00E-03								
Semivolatile Organics												
2,4-Dimethylphenol	2.0E-02	NA	NA	3.20E-02								
2,4-Dinitrotoluene	2.0E-03	6.8E-01	NA	3.14E-01								
Benzo(a)anthracene	NA	7.3E-01	NA	2.50E-02		Contact to Onsite Sediment Not Applicable for Future Day Care Center Child				Contact to Onsite Sediment Not Applicable for Future Day Care Center Worker		
Benzo(a)pyrene	NA	1.8E+01	NA	3.00E-02								
Benzo(b)fluoranthene	NA	7.3E-01	NA	4.30E-02								
Benzo(g,h,i)perylene	NA	NA	NA	3.10E-02								
Benzo(k)fluoranthene	NA	7.3E-02	NA	3.30E-02								
Chrysene	NA	7.3E-03	NA	4.80E-02								
Fluoranthene	4.0E-02	NA	NA	7.00E-02								
Indeno(1,2,3-cd)pyrene	NA	7.3E-01	NA	2.40E-02								
Phenanthrene	NA	NA	NA	3.50E-02								
Pyrene	3.0E-02	NA	NA	4.70E-02								
bis(2-Ethylhexyl)phthalate	1.0E-02	2.8E-02	NA	7.70E-02								
Pesticides/PCBs												
4,4'-DDD	NA	1.2E+00	NA	6.46E-03								
4,4'-DDE	NA	1.7E+00	NA	4.82E-02								
4,4'-DDT	1.0E-04	1.7E+00	NA	4.90E-03								
Dieldrin	2.5E-05	3.2E+01	NA	3.26E-03								
Endosulfan I	6.0E-03	NA	NA	1.43E-03								
Endosulfan II	6.0E-03	NA	NA	3.05E-03								
Metals												
Aluminum	NA	NA	NA	1.83E+04								
Antimony	4.0E-04	NA	NA	5.50E+00								
Arsenic	2.4E-04	1.9E+00	0.001	6.10E+00								
Barium	3.5E-03	NA	NA	1.32E+02								
Beryllium	5.0E-05	4.3E+02	NA	7.64E-01								
Cadmium	5.0E-05	NA	0.01	2.40E+00								
Calcium	NA	NA	NA	1.08E+04								
Chromium	1.0E-04	NA	NA	2.47E+01								
Cobalt	NA	NA	NA	1.26E+01								
Copper	2.4E-02	NA	NA	1.33E+02								
Iron	3.0E-01	NA	NA	2.94E+04								
Lead	NA	NA	NA	6.83E+02								
Magnesium	NA	NA	NA	5.54E+03								
Manganese	1.5E-03	NA	NA	5.32E+02								
Mercury	3.0E-06	NA	NA	8.11E-02								
Nickel	8.0E-04	NA	NA	3.16E+01								
Potassium	NA	NA	NA	2.18E+03								
Selenium	4.5E-03	NA	NA	1.27E+00								
Sodium	NA	NA	NA	4.27E+02								
Thallium	8.0E-05	NA	NA	8.24E-01								
Vanadium	7.0E-05	NA	NA	2.97E+01								
Zinc	7.5E-02	NA	NA	1.88E+02								
Total Hazard Quotient and Cancer Risk:												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.
* USEPA Region 2 recommends quantifying dermal exposure only for cadmium, arsenic, PCBs, dioxins/furans and pentachlorophenol, since absorption factors are not available for other chemicals of c

TABLE K-1
IEUBK LEAD MODEL INPUT VALUES

Air Concentration	0.100 ug Pb/m^3 (default)
Other Inhalation Parameters	Standard Model defaults for all
Time Outdoors	value varies with age
Inhalation Rate	value varies with age
Lung Absorption	32%
Dietary Lead Intake	Std. Model Defaults: value varies with age
Soil Concentration	Site-specific (average concentration)
Dust Concentration	70% of soil concentration (default)
Soil Ingestion as percent of total soil and dust ingestion	45% (default)
Soil/dust Ingestion rates	5/7 x Std. default values (to represent time at day care center): value varies with age
Maternal blood concentration contribution (for infant)	2.5 ug Pb/dL (default)
Drinking Water Concentration	Site-specific (average concentration)
Drinking Water Ingestion Rate	Std. Model Defaults: value varies with age
Bioavailability Parameters for Ingestion Absorption	Std. Model defaults

IEUBK MODEL OUTPUT

SEAD 16 - DAY CARE SOIL AND GROUNDWATER INGESTION SCENARIO

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT

Indoor AIR Pb Conc: 30.0 percent of outdoor.

Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 6.40 ug Pb/L

WATER Consumption: DEFAULT

SOIL & DUST:

Soil: constant conc.

Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	3790.0	2653.0
1-2	3790.0	2653.0
2-3	3790.0	2653.0
3-4	3790.0	2653.0
4-5	3790.0	2653.0
5-6	3790.0	2653.0
6-7	3790.0	2653.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

MATERNAL CONTRIBUTION: Infant Model

Maternal Blood Conc: 2.50 ug Pb/dL

CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	19.5	38.60	36.58
1-2:	22.4	56.60	54.25
2-3:	21.3	59.87	57.12
3-4:	20.9	62.78	59.97
4-5:	18.0	52.92	49.82
5-6:	15.6	50.54	47.09
6-7:	14.0	49.84	46.02

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)
0.5-1:	1.75	0.25	0.00	0.02
1-2:	1.72	0.60	0.00	0.03
2-3:	2.03	0.65	0.00	0.06
3-4:	2.05	0.70	0.00	0.07
4-5:	2.22	0.81	0.00	0.07
5-6:	2.46	0.90	0.00	0.09
6-7:	2.78	0.94	0.00	0.09

IEUBK MODEL OUTPUT

SEAD 17 - DAY CARE SOIL INGESTION SCENARIO

LEAD MODEL Version 0.99d

AIR CONCENTRATION: 0.100 ug Pb/m3 DEFAULT

Indoor AIR Pb Conc: 30.0 percent of outdoor.

Other AIR Parameters:

Age	Time Outdoors (hr)	Vent. Rate (m3/day)	Lung Abs. (%)
0-1	1.0	2.0	32.0
1-2	2.0	3.0	32.0
2-3	3.0	5.0	32.0
3-4	4.0	5.0	32.0
4-5	4.0	5.0	32.0
5-6	4.0	7.0	32.0
6-7	4.0	7.0	32.0

DIET: DEFAULT

DRINKING WATER Conc: 4.00 ug Pb/L DEFAULT

WATER Consumption: DEFAULT

SOIL & DUST:

Soil: constant conc.

Dust: constant conc.

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
0-1	868.0	608.0
1-2	868.0	608.0
2-3	868.0	608.0
3-4	868.0	608.0
4-5	868.0	608.0
5-6	868.0	608.0
6-7	868.0	608.0

Additional Dust Sources: None DEFAULT

PAINT Intake: 0.00 ug Pb/day DEFAULT

MATERNAL CONTRIBUTION: Infant Model

Maternal Blood Conc: 2.50 ug Pb/dL

CALCULATED BLOOD Pb and Pb UPTAKES:

YEAR	Blood Level (ug/dL)	Total Uptake (ug/day)	Soil+Dust Uptake (ug/day)
0.5-1:	19.6	38.71	36.54
1-2:	22.5	56.83	54.13
2-3:	21.4	60.13	57.00
3-4:	21.0	63.08	59.85
4-5:	18.1	53.29	49.71
5-6:	15.7	50.97	46.99
6-7:	14.1	50.29	45.92

YEAR	Diet Uptake (ug/day)	Water Uptake (ug/day)	Paint Uptake (ug/day)	Air Uptake (ug/day)
0.5-1:	1.74	0.40	0.00	0.02
1-2:	1.72	0.95	0.00	0.03
2-3:	2.03	1.04	0.00	0.06
3-4:	2.05	1.11	0.00	0.07
4-5:	2.22	1.30	0.00	0.07
5-6:	2.45	1.44	0.00	0.09
6-7:	2.78	1.50	0.00	0.09

APPENDIX L

Toxicity Profiles For Compounds With Significant Contributions To Human Health Risk At Sead 16 And 17

1. Antimony
2. Cadmium
3. Copper
4. 2,4-Dinitrotoluene
5. Manganese
6. Mercury
7. Thallium

ANTIMONY

CAS NUMBER

7440-36-0

COMMON SYNONYMS

None.

ANALYTICAL CLASSIFICATION

Inorganic.

PHYSICAL AND CHEMICAL DATA

Water Solubility: Insoluble (elemental) [1]
Vapor Pressure: Insignificant at 25°C [1]
Henry's Law Constant: Not Applicable
Specific Gravity: Density: 6.68 at 20/4°C [1]
Organic Carbon Partition Coefficient: NA

BACKGROUND CONCENTRATION

Pure antimony is a silver-white, lustrous, hard brittle metal. Antimony was detected (in measurable quantities) in 66 of 354 soils samples from across the conterminous United States [2]. The concentration of antimony in minimally disturbed soils shows limited variations, with a range from <1 ppm up to a maximum of 8.8 ppm, and an overall geometric mean of 0.48. Of the samples collected, 81 percent showed antimony concentrations to be less than 1 ppm [2]. Antimony was not detected in measurable quantities within the State of Ohio.

FATE AND TRANSPORT

Elemental antimony is relatively short-lived in the natural environment undergoing oxidation reactions to form antimony oxides and trihalides. Although not demonstrated, antimony may undergo biological methylation (forming organometals) as do those compounds surrounding it in the periodic table. Antimony oxides and trihalides are expected to volatilize readily, with $SbCl_3$ releasing HCl gas to the atmosphere when in the presence of moisture [1]. Antimony oxides are also expected to undergo photoreduction in aqueous environments. Organic antimony compounds are relatively mobile in all environments, while inorganic antimony compounds tend to be only slightly soluble or decompose in water [1]. Antimony, is not expected to bioconcentrate appreciably in fish or aquatic organisms [1].

HUMAN TOXICITY

General. The major targets of antimony toxicity are the respiratory system, the heart, the gastrointestinal system and the skin [1]. Antimony exposure, however, has beneficial as well as adverse effects. Antimony is currently used to treat two parasitic diseases, schistosomiasis and leishmaniasis. Side effects following treatment include altered EKG, anemia, vomiting, diarrhea, joint and/or muscle pain and even death [1]. Information regarding the genotoxicity of antimony is equivocal. Metallic antimony has been classified as a Group B1 carcinogen by the USEPA [4].

Oral Exposure. A chronic oral RfD of 0.0004 mg Sb/kg/day is based on a LOAEL of 0.35 mg Sb/kg/day for longevity, decreased blood glucose levels and altered cholesterol levels in a chronic oral study in rats [3]. Antimony is poorly absorbed following oral exposure (<10%) [1]. Ingested antimony has not been reported to be fatal to humans, and acute oral LD_{50} values in animals are not available [1]. In humans, gastrointestinal effects have been reported following exposure to oral doses of 0.53 mg Sb/kg/day [1]. In animals, long-term oral exposure to > 0.07 mg Sb/kg/day resulted in effects similar to those reported in humans [1]. There is no evidence that ingested antimony results in developmental or reproductive effects or cancer in humans or animals [1]. An oral Slope Factor for cancer is not available for antimony [4].

Inhalation Exposure. An inhalation RfC for antimony is not available [3]. Antimony is absorbed following inhalation exposure, but the extent of absorption in humans is not known [1]. Inhaled antimony has not been reported to be fatal to humans, and acute inhalation LC_{50} values in animals are not available [1]. The effects of antimony in occupationally exposed workers include pneumoconiosis, altered EKG readings, increased blood pressure, abdominal distress, ulcers, dermatosis, and eye irritation [1]. These effects were generally observed following the inhalation of > 2 mg Sb/m^3 [3]. In animals, long-term inhalation exposure to concentrations > 0.05 mg Sb/m^3 resulted in effects similar to those reported in humans [1]. There is no conclusive evidence that inhaled antimony effects human reproduction or development, but problems with fertility were observed in animals exposed to high levels (209 mg Sb/m^3) of antimony for 9 weeks [1]. An association between inhaled antimony and the an increased incidence of lung cancer has been reported in antimony smelter workers [4] and studies in animals indicate that inhaled antimony may cause lung cancer [1]. An inhalation Unit Risk for cancer is not available for antimony [4].

Dermal Exposure. Dermal exposure to antimony has not been reported to be fatal to humans, and acute dermal LD_{50} values in animals are not available [1]. Antimony is not a skin sensitizer in humans, but animal studies have shown that antimony is a skin and eye irritant [1].

REFERENCES

1. ATSDR, 1990. Toxicological Profile for Antimony (Draft). Agency for Toxic Substances and Disease Registry. USPHS/USEPA. October 1990.
2. USGS, 1984. Elemental Concentrations in Soils and Other Surficial Material of the Conterminous United States. United States Geological Survey Professional Paper 1270, U.S. Department of the Interior. United States Government Printing Office, Washington, D.C. 105 pp.
3. USEPA, 1998a. Integrated Risk Information System (IRIS). Data base. Online. April, 1998.
4. USEPA, 1998b. Risk Assessment Issue Paper for: Cancer Weight-of-Evidence, Slope Factor, and Unit Risk for Antimony (CASRN 7440-36-0). Superfund Technical Support Center. February 5, 1998.

CADMIUM

CAS NUMBER

7440-43-9

COMMON SYNONYMS

None noted.

ANALYTICAL CLASSIFICATION

Inorganic.

PHYSICAL AND CHEMICAL DATA

Water Solubility: Insoluble [1]
Vapor Pressure: Neglibible [2]
Henry's Law Constant: ND
Specific Gravity: 8.65 at 25/4°C [1]
Organic Carbon Partition Coefficient: ND

BACKGROUND CONCENTRATIONS

Pure cadmium is a silver-white, blue-tinged, lustrous metal with a distorted hexagonal close-packed structure; cadmium is easily cut with a knife. Cadmium can be found in zinc ores, as greenockite (CdS), and as otavite ($CdCO_3$). The estimated occurrence of cadmium in the earth's crust is from 0.1 to 0.2 ppm [1]. No data on cadmium was gathered as part of the 1984 Department of the Interior survey of conterminous United States soils [3].

FATE AND TRANSPORT

Elemental cadmium is insoluble in water [1], while cadmium compounds show varying degrees of solubility depending on the nature of the compounds and the aquatic environment [2]. Cadmium in the environment may be found as cadmium salts, hydrated cations, or organic/inorganic cadmium complexes. As hydrated cations or complexes, cadmium may be considered fairly mobile in water (relative to other heavy metals). Cadmium in soils may leach into water, especially under acidic conditions. It does not volatilize from either waters or soils, but does exhibit a tendency to adsorb strongly to clays, muds, and humic/organic materials in soils and waters. Complexation and sorbing with organic materials are the most important factors in aquatic fate and transport. The evidence indicates that cadmium bioconcentrates in all levels of the food chain. Cadmium accumulation has been reported in many animal and plant species. Reported BCFs range

from 113 to 18,000 for invertebrates, and from 3 to 2,213 for fish. The pH and humus content of the water affect bioconcentration [2].

HUMAN TOXICITY

General. Breathing air with very high levels of cadmium severely damages the lungs and can cause death. High cadmium levels in the diet severely irritate the digestive tract, while lower levels consumed over a long period of time may cause kidney damage [2]. The USEPA has placed cadmium in weight-of-evidence Group B1, indicating that it is a probable human carcinogen [4].

Oral Exposure. A chronic oral RfD of 0.0005 mg/kg/day for water is based on a NOAEL of 0.005 mg/kg/day for proteinuria following chronic exposures in humans. A chronic oral RfD of 0.001 mg/kg/day for food is based on a NOAEL of 0.01 mg/kg/day for proteinuria following chronic exposures in humans [4]. It is estimated that humans absorb about 5 percent of ingested cadmium [2]. In rats and mice the acute oral LD_{50} values range from about 100 to 300 mg/kg. Two human deaths due to intentional ingestion of cadmium resulted from doses of 25 and 1,500 mg/kg [4]. Symptoms of acute toxic reaction to ingestion may include gastroenteritis, vomiting, diarrhea, abdominal pain, increased salivation, choking, anemia, hypotension, respiratory arrest, pulmonary edema, renal dysfunction, and death. Chronic oral overexposure symptoms may include renal dysfunction and/or failure, as well as anemia [1,2,5]. Cadmium has been implicated as a fetotoxin by the oral route in animal studies [2].

Inhalation Exposure. The USEPA does not currently provide an inhalation RfC for cadmium [4,6]. It is estimated that humans rapidly absorb about 25 percent of inhaled cadmium. The 15-minute LC_{50} for rats exposed to cadmium oxide fumes is approximately 33 mg/m^3. It has been estimated that exposure to 1 mg/m^3 for 8 hours might be sufficient to cause death in humans [2]. Symptoms associated with acute cadmium poisoning via inhalation may include fever, headache, dyspnea, pleuritic chest pain, conjuctivitis, rhinitis, sore throat, cough, pulmonary edema, extreme restlessness, respiratory failure, and death. Chronic inhalation overexposure symptoms may include renal dysfunction and/or failure, dyspnea, emphysema, bronchitis, and anemia [1,2,5]. Cadmium has been implicated as a developmental toxin by the inhalation route in animal studies [2]. An inhalation unit risk of 0.0018 $(ug/m^3)^{-1}$ is based on excess lung cancers observed in humans [4].

Dermal Exposure. Cadmium is poorly absorbed through the skin [2]. No other useful information regarding dermal exposure to cadmium was located.

ECOLOGICAL TOXICITY

General. Cadmium is considered nonessential for plants and animals. It is relatively mobile in the environment compared to most other heavy metals. Cadmium occurs naturally in close association with zinc, usually in concentrations directly related to zinc levels [7]. Its cumulative nature in organisms and its high toxicity makes it an extremely dangerous poison for most animals. Cadmium is accumulated through the food chain in sufficient quantities to be harmful to higher trophic levels. However, no evidence was found of biomagnification of this element through trophic levels [8].

Vegetation. The soil chemistry of bioavailable cadmium is controlled by pH. Brooks [9] reported that the general toxicity of cadmium to plants was moderate. Cadmium is usually more available in acidic, sandy soils than in neutral or alkaline soils with large amounts of clay and organic matter [7]. Absorption is strongly pH-dependent, increasing as conditions become more alkaline. It has been suggested that there is a 100-fold increase in cadmium absorption for each unit increase in pH [10]. Plants tissues normally contain <0.5 ppm cadmium, but many species may accumulate much higher concentrations (up to several hundred ppm) when they grow in soil with elevated cadmium concentrations. Cadmium levels in plant tissues may subsequently affect the balance of essential elements in the plant [7]. It has been noted that 3 mg/kg of cadmium in the tissues of plants depressed growth [11]. Tall fescue (*Festuca arundinacea*) had a reduced yield of 50 percent with a soil concentration of 320 mg/kg [10].

Aquatic Life. In aquatic systems, water hardness affects the biological toxicity of cadmium. The uptake of cadmium is faster in hard water than in soft water, but the total concentration of cadmium is greater in soft water [12]. Cadmium uptakes also increase with increasing water temperature and decreasing salinity [8]. The environmental mobility of cadmium is influenced by the pH levels in the water. Cadmium is less mobile in alkaline waters than in acid waters because it becomes chemically bound in alkaline waters [13]. Cadmium can be quite toxic to aquatic organisms, even in concentrations of less than 1 ppm [10]. Fish are quite susceptible to acute toxicity, with reported 4-day LC_{50} values ranging from 0.002 to 2.9 mg/L [8]. Cadmium has been reported to accumulate in the tissues of aquatic organisms at concentrations hundreds to thousands of times higher than in the water [12]. The federal chronic freshwater quality criterion for cadmium is 3.37 μg/L based on water hardness of 400 mg/L $CaCo_3$ [14].

Wildlife. Cadmium has been shown to have a toxic effect on a variety of mammals and birds. Mammals have no effective mechanism for the elimination of ingested cadmium; therefore, the cadmium tends to accumulate in the liver and kidneys. Its relative toxicity to mammals has been rated from moderate to high [15]. Toxic effects include decreased growth rates, anemia, infertility, fetus abnormalities, abortion, kidney disease, intestinal

disease, and hypertension [11]. The known effects for mallards are all sublethal, primarily affecting the kidneys, testes, and egg production [8]. In mallards chronically dosed with cadmium contaminated food, significant effects on energy metabolism were found at 450 mg/kg, but not at 150 mg/kg [11]. In general, cadmium levels in excess of 20 ppm may reduce reproductive output of nesting waterfowl. More direct effects on individual mallards may occur as cadmium levels approach 200 ppm [8].

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COPPER

CAS NUMBER

7440-50-8

COMMON SYNONYMS

None.

ANALYTICAL CLASSIFICATION

Inorganic.

PHYSICAL AND CHEMICAL DATA

Water Solubility: insoluble [1]
Vapor Pressure: insignificant at 25°C [1]
Henry's Law Constant: Not Applicable
Specific Gravity: 8.94 [2]
Organic Carbon Partition Coefficient: NA

BACKGROUND CONCENTRATIONS

Copper is a naturally-occurring element. The concentration of copper in minimally disturbed soils varies tremendously. A collection of 1,311 soil samples from across the conterminous U.S. determined that 85 percent were less than or equal to 30 ppm, with a geometric mean of 17 ppm, but with a maximum value as high as 700 ppm [3]. Copper concentrations in Ohio farm soils were found to range from 11 to 37 ppm, with a mean value of 19 ppm [4].

FATE AND TRANSPORT

Copper is dispersed throughout the atmosphere primarily as a result of anthropogenic activities. Environmental fate processes may transform one copper compound to another; however, copper itself is not degraded. Most of the copper in the atmosphere occurs in the aerosol form, and long-distance transport may occur. Wet or dry deposition is expected to be the primary fate process in air.

Several processes determine the fate of copper in aquatic environments: formation of complexes, especially with humic substances; sorption to hydrous metal oxides, clays, and organic materials; and bioaccumulation. Organic complexes of copper are more easily adsorbed on clay and other surfaces than the free form. The aquatic fate of copper is highly dependent on factors such as pH, oxidation-reduction potential,

concentration of organic matter, and the presence of other metals. In regard to the latter, it has been demonstrated that coprecipitation of copper with hydrous oxides of iron effectively scavenges copper from solution, although in most surface waters organic materials prevail over inorganic ions in complexing copper [5].

Generally, copper is considered to be among the more mobile of the heavy metals in surface environments. Seasonal fluctuations have been observed in surface water copper concentrations, with higher levels in fall and winter, and lower levels in the spring and summer. It is not expected to volatilize from water. Since copper is an essential nutrient, it is strongly accumulated by all plants and animals, but is probably not biomagnified [5].

The degree of persistence of copper in soil depends on the soil characteristics and the forms of copper present. For example, in soils of low organic content, soluble copper compounds may move into groundwater at a significant rate. On the other hand, the presence of organic complexing agents may restrict movement in soil, and copper may be immobilized in the form of various inorganic complexes. It is not expected to volatilize from soil.

HUMAN TOXICITY

General. Copper is an essential trace element; therefore, toxic effects can result if too much or too little is taken into the body. The Recommended Dietary Allowance (RDA) for copper is 2 to 3 mg/day (0.03 to 0.04 mg/kg/day) [6]. The major targets of copper toxicity are the gastrointestinal tract following oral exposure and the lungs following inhalation exposure [6]. Information regarding the genotoxicity of copper are equivocal. USEPA has placed copper in weight-of-evidence cancer Group D, indicating that it is not classifiable as to human carcinogenicity [7].

Oral Exposure. A chronic oral RfD of 1.3 mg/L (0.04 mg/kg/day) is based on a LOAEL of 5.3 mg/L for gastrointestinal irritation in humans [8]. Approximately 60% of an oral dose of copper is absorbed through the gastrointestinal tract [6]. Case studies of human suicides indicate that doses of 6 to 637 mg/kg have been fatal [6]. LD_{50} values are not available for animals. In humans, doses greater than 0.07 mg/kg have resulted in gastrointestinal effects including vomiting, diarrhea, nausea, abdominal pain and a metallic taste in the mouth [6]. Adverse effects were also noted in the liver (necrosis) and the kidneys (necrosis, tubular damage) of humans following oral exposure [6]. Chronic toxic effects due to copper are rarely seen except for individuals with Wilson's Disease. Wilson's Disease is a genetically determined condition in which the body absorbs and retains abnormally high copper concentrations [6]. It is not known whether exposure to copper will result in effects on reproduction

or development in humans, but animal studies indicate that copper exposure may increase fetal mortality [6]. There is no evidence that copper causes cancer in humans or animals, therefore, an oral slope factor for cancer is not available [7].

Inhalation Exposure. A chronic inhalation RfC is not available for copper [7]. The extent of copper absorption following inhalation exposure is not known. Information regarding the fatal dose of copper following inhalation exposure was not located for humans or animals. In humans, copper is a respiratory irritant. Short-term inhalation exposure to copper dust or fumes (0.075-0.12 mg/m^3) results in a condition known as "metal fume fever". This condition is a 24-48 hour illness characterized by chills, fever, aching muscles, dryness in the mouth and throat and headache [6]. Respiratory effects have also been noted in animals [6]. Information is not available regarding potential effects on reproduction and development in humans or animals following inhalation exposure. There is no evidence that copper exposure causes cancer in human or animals, therefore, an inhalation unit risk for cancer is not available [7].

Dermal Exposure. Dermal exposure to copper may result in allergic contact dermatitis [6]. Other information regarding the toxic effects of dermal exposure to copper are not available [6].

ECOLOGICAL TOXICITY

General. Copper is an essential trace element or micronutrient for plants and animals. However, excessive amounts of the element are toxic [9]. Copper is accumulated by all plants and animals, but it has very little if any potential for biomagnification through the food chain [10].

Vegetation. Copper retention in soils and bioavailability to plants are dependent on pH. Sorption of copper increases with increasing pH [11]. Copper is held most securely at a pH range of 7.0 to 8.0 [12]. Several researchers have reported a decrease in plant copper when large amounts of organic matter are present. Copper is strongly chelated in plant roots. Phytotoxic concentration of copper ranges from about 70 to 640 ppm in the soil for most plants [13]. In vascular plants, toxic levels of copper can cause reduced growth, chlorosis, and stunted root development. Toxic copper concentrations also interfere with the uptake of iron and other heavy metals [9]. Copper salts have been used effectively to control aquatic vegetation, algae, and terrestrial plants invading sewer lines for many years.

Aquatic. The toxicity of copper to aquatic life varies with hardness (increases with decreased hardness), pH (increases with decreased pH), and temperature (increase with higher temperatures) [14]. Many studies have been published on the toxicity of copper

to fish and other aquatic life forms. Relatively high concentrations of copper may be tolerated by adult fish for short periods of time. The critical effect appears to be its greater toxicity to young or juvenile fish [11]. Reproduction of fish is impaired at concentrations of 0.018 to 0.033 mg/L, growth is reduced at concentrations of 0.0025 to 0.0184 mg/L, and survival is reduced at 0.018 to 0.04 mg/L [9]. The maximum acceptable toxicant concentration for fathead minnows is 0.011 to 0.018 mg/L, as it affects embryo, larval, and early juvenile stages [14]. The 96-hour LC_{50} acute toxicity of copper sulfate in fathead minnows and bluegills was reported to be 1.4 mg/L and 10.2 mg/L, respectively, at a water hardness of 400 mg/L $CaCO_3$ and a pH of 8.2 [11]. The 96-hour LC_{50} acute toxicity of copper in fathead minnows and creek chub was 0.44 mg/L and 0.31 mg/L, respectively, with a water hardness of 200 mg/L $CaCO_3$ [11].

Concentrations of 0.015 mg/L produced sublethal effects in crayfish and a 4-day LC_{50} of 3.0 ppm [9]. The federal chronic freshwater quality criterion for copper is 38.7 μg/L based on a water hardness of 400 mg/L $CaCO_3$ [15]. The Ohio aquatic life habitat and water supply standard for copper is 42.0 μg/L based on a water hardness of 400 mg/L $CaCO_3$ [16].

Wildlife. Copper is an essential trace element for animals, with some species, such as sheep, being extremely sensitive to excessive concentrations of copper or to certain ratios of copper to molybdenum in their forage. Sheep have died after consuming plants and soils containing 15 ppm copper (dry weight) [17]. The maximum tolerable dietary level for turkey and chickens is 300 ppm [18]. However, copper toxicity in mammals and birds is of little significance because they possess barriers to copper absorption [19]. Mammals and birds are 100 to 1,000 times more resistance to toxic effects than aquatic biota.

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2,4-DINITROTOLUENE

CAS NUMBER

121-14-2

COMMON SYNONYMS

1-Methyl-2,4-dinitrobenzene; 2,4-DNT [1]

ANALYTICAL CLASSIFICATION

Semivolatile organic

PHYSICAL AND CHEMICAL DATA

Water Solubility: 300 mg/L at 22°C [1]
Vapor Pressure: 1.1 x 10^{-4} mm Hg at 20°C [1]
Henry's Law Constant: 8.67 x 10^{-7} atm-m^3/mole [1]
Specific Gravity: 1.521 at 15°C [2]
Organic Carbon Partition Coefficient: 282 [1]

FATE DATA: HALF-LIVES

Soil: 1 to 6 months [3]
Air: 23 to 72 hours [3]
Surface Water: 3 to 33 hours [3]
Groundwater: 2 days to 12 months [3]

NATURAL SOURCES

No known natural source [1].

ARTIFICIAL SOURCES

2,4-DNT will be released to the environment through its use in making 2,4-diaminotoluene for isocyanate production. The mixture of 2,4/2,6-DNT is produced in great quantities. Dinitrotoluenes are also used in organic synthesis, dyes, explosives and as a propellant additive [1].

FATE AND TRANSPORT

In soils, 2,4-DNT will be slightly mobile. Neither hydrolysis nor photolysis should be important fate processes in soils. Biodegradation may occur in both aerobic and anaerobic soils [1].

In water, 2,4-DNT will have a slight tendency to adsorb to sediments, suspended solids and biota. Volatilization of 2,4-DNT from water is not expected to be an important fate process. Photolysis will probably be the most important fate process in water. Biodegradation data are inconsistent. 2,4-DNT is not expected to bioaccumulate in aquatic organisms [1].

Information was not found regarding the fate of 2,4-DNT in air, although a half-life of 8 hours was estimated based upon vapor phase reaction of 2,4-DNT with photochemically produced hydroxyl radicals in the atmosphere [1].

TOXICITY

General. The blood, liver, the nervous system and the cardiovascular system appear to be the targets of 2,4-DNT toxicity [4,5]. Dinitrotoluene exposure produces anoxia resulting from the formation of methemoglobin in the blood. Cyanosis may result with headache, irritability, dizziness, weakness, nausea, vomiting, dyspnea, drowsiness and unconsciousness [5]. Death may occur if treatment is not provided. 2,4-DNT is expected to be absorbed rapidly into the body and its metabolites are excreted in the urine [4]. 2,4-DNT has not been classified in a carcinogenic group by the USEPA, but the mixture of 2,4/2,6-DNT has been classified as a Group B2 carcinogen, probable human carcinogen [4].

Oral Exposure. A chronic oral RfD of 0.002 mg/kg/day is based on a NOAEL of 0.2 mg/kg/day for neurotoxicity, Heinz bodies and biliary tract hyperplasia in a chronic study in dogs [4]. Oral studies in animals indicated that exposure to 2,4-DNT results in adverse effects on fertility, especially in males [4]. The mixture of 2,4/2,6-DNT has been shown to cause cancer in rodents. An oral slope factor of 0.68 $(mg/kg\text{-}day)^{-1}$ is based on the increased incidence of tumors of the liver and mammary gland in rats [4].

Inhalation Exposure. A chronic inhalation RfC is considered non-verifiable by the USEPA RfD/RfC Work Group [4,6]. In workers exposed to dinitrotoluenes via inhalation, major effects included methemoglobinemia, cyanosis, neurotoxicity and possible excess mortality from ischemic heart disease and residual circulatory system effects [4]. The neurotoxicity was characterized by vertigo, paresthesia, tremors, unconsciousness and paralysis [4]. An inhalation unit risk factor for cancer is not available for 2,4-DNT.

Dermal Exposure. Information regarding the effects of 2,4-DNT following dermal contact were not located.

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MANGANESE

CAS NUMBER

7439-96-5

COMMON SYNONYMS

None.

ANALYTICAL CLASSIFICATION

Inorganic.

PHYSICAL AND CHEMICAL DATA

Water Solubility: decomposes [1]
Vapor Pressure: insignificant at 25°C [1]
Henry's Law Constant: Not Applicable [1]
Specific Gravity: 7.20 at 20/4°C [1]
Organic Carbon Partition Coefficient: Not Applicable [1]

BACKGROUND CONCENTRATIONS

Manganese is a naturally-occurring element. The concentration of manganese in minimally disturbed soils varies tremendously. A collection of 1,317 soil samples from across the conterminous U.S. determined that 89 percent were less than or equal to 700 ppm, with a geometric mean of 330 ppm, but with a maximum value as high as 7,000 ppm [2].

FATE AND TRANSPORT

Environmental fate processes may transform one manganese compound to another; however, manganese itself is not degraded. Elemental manganese and inorganic manganese compounds may exist in air as suspended particulate matter. Such particles are removed from the atmosphere primarily by dry deposition, and, to a lesser extent, by washout. In water, the metal may exist in any of four oxidation states (2+, 3+, 4+, or 7+). Mn(+2) predominates in most waters, and usually combines with carbonate to form a compound of low solubility. In extremely reduced water, poorly soluble sulfides are formed. Manganese is often transported in rivers as suspended sediments. Manganese in water may be significantly bioconcentrated at lower trophic levels. Bioconcentration may not be significant in predatory fish; thus biomagnification may not be significant [1].

Adsorption of manganese to soils may be highly variable, increasing with higher organic content and anion-exchange capacity. At low concentrations, manganese may be "fixed"

by clays, and will not be readily released into solution. At higher concentrations, it may be desorbed by ion exchange. For example, the discharge of waste water into estuarine environments resulted in the mobilization of manganese from the bottom sediments. Also, microorganisms may increase the mobility of manganese under some circumstances [1].

HUMAN TOXICITY

General. The only adverse health effect identified following exposure to high levels of manganese is a condition known as "manganism," which results in psychomotor disturbances. Manganese in small amounts is believed to be an essential nutrient for humans [1]. The USEPA has placed manganese in weight-of-evidence Group D; that is, it is not classifiable as to human carcinogenicity [3].

Oral Exposure. The chronic RfD for the manganese is 0.14 mg/kg-day for ingestion of manganese in food [3]. For non-dietary intake (intake from environmental media such as soil and groundwater), a modifying factor of 3 is applied, resulting in an RfD of 0.05 mg/kg-day [3]. The RfD is based on a NOAEL for central nervous system effects determined from human chronic ingestion data [3]. The amount of manganese absorbed from the gastrointestinal tract typically averages 3 to 5%. Most animal studies indicate that manganese compounds have low acute oral toxicity. A NOAEL of 2,300 mg/kg/day in food for 6 months was determined for mice. On the other hand, single doses of highly concentrated solutions of various manganese compounds delivered to rats by gavage produced LD_{50} values ranging from 410 to 820 mg manganese/kg/day. Thus it was concluded that high doses delivered by gavage did not yield a model relevant for normal environmental exposure. Evidence for the onset of manganism in humans following oral exposure is inconclusive. In animals, changes in the brain have been observed following very high oral exposure [1].

Inhalation Exposure. An RfC of 0.00005 mg/m^3 is based on a LOAEL of 0.15 mg/m^3 for impairment of neurobehavioral function in occupationally exposed workers [3]. The rate and extent of absorption of manganese following inhalation is unknown. A significant fraction of inhaled manganese-containing particles are carried via mucociliary transport to the gastrointestinal tract. Exposure of humans to high levels of manganese dust in air for a prolonged period of time (1 month to several years) may cause mental and emotional disturbances, and the impairment of locomotion and dexterity, a condition known as manganism. However, this condition has only been documented for workers in mines and foundries. Manganism occurs because excessive manganese injures a part of the brain that helps control body movements. Some of the symptoms of manganism can be reduced by medical treatment, but the brain injury is permanent [1].

Dermal Exposure. No information was located on the dermal absorption of manganese or adverse health effects resulting therefrom. It is reasonable to assume that intake via this pathway under normal circumstances is minimal.

ECOLOGICAL TOXICITY

General. Manganese is an essential trace element or micronutrient for plants and animals. Manganese does not occur naturally as a metal, but is found in various salts and minerals, frequently in association with iron compounds [4]. Manganese readily bioaccumulates in plants and animals, but does not biomagnify in food chains.

Vegetation. At pH values of 5.0 or less, manganese is rendered very soluble and excessive accumulation in plants can result. At pH values of 8.0 or above, precipitation results in the removal of bioavailable manganese from the soil [5].

Wetland plants, such as cattails, tend to maintain higher tissue concentrations of manganese than upland plants, probably because of greater availability of soluble manganese in wet soils or sediments [6]. Cattails can take up 779 mg/kg dry weight without injury [4]. Plants having more than 400 to 3,000 mg/kg of manganese (dry weight) in their tissues may exhibit toxic symptoms depending on the plant species [6]. Manganese toxicity in young plants is indicated by brown spotting on leaves [5]. Vegetation phytotoxic concentrations in soils and sediments are species specific and range widely.

Aquatic Life. Manganese ions are rarely found at concentrations above 1 mg/L, so manganese is not considered to be a problem in freshwater [7]. Manganese is toxic to fish in concentrations ranging from 1.5 to 1000 mg/L. Most toxic thresholds for fish are probably less than 50 mg/L [4]. Toxicity of manganese increases with decreasing pH [8]. Manganese has been shown to bioaccumulate in freshwater invertebrates [4]. There are no USEPA or OEPA aquatic life water quality standards [9,10].

Wildlife. The divalent form of manganese has a low order of toxicity to biota, especially to vertebrate animals. The hexavalent form is highly toxic, but does not occur in nature. Toxic concentrations of divalent manganese is reported in the diets of the following species: birds, 4,800 ppm; rats greater than 2,000 ppm; and rabbits 1,250 to 6,000 ppm. Toxic levels of manganese in mammals can cause decreased feed intake, decrease growth, reduced hemoglobin, and even death [11]. Growing rats have had dietary intake as high as 1,000 to 2,000 mg/kg with no apparent ill effects [6]. Maximum tolerable levels of manganese recommended by the National Academy of Sciences was 15 mg/kg body weight for sheep and cattle, 16 mg/kg body weight for swine, and 250 mg/kg body weight for poultry [11].

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MERCURY

CAS NUMBER

7439-97-6

COMMON SYNONYMS

Hydragyrum; quicksilver

ANALYTICAL CLASSIFICATION

Inorganic.

PHYSICAL AND CHEMICAL DATA

Water Solubility: 0.56 mg/L [1]
Vapor Pressure: 2 x 10^{-3} mm Hg at 25°C [2]
Henry's Law Constant: ND
Specific Gravity: 13.534 at 25/4°C [2]
Organic Carbon Partition Coefficient: ND

BACKGROUND CONCENTRATIONS

Mercury is a naturally-occurring element. Elemental mercury is a silver-white, heavy, mobile, liquid metal exhibiting slight volatility at room temperature [2]. Concentrations of mercury at sampling points across the contiguous United States exhibit a limited, but varied range. A total of 1,267 soils samples were gathered by the United States Geological Survey for mercury concentration analysis. Of this total, 1,263 samples exhibited some concentration of mercury across a range of <0.01 ppm to a maximum of 4.6 ppm. Fourteen percent of the total samples gathered showed a mercury concentration of from less than 0.01 ppm up to 0.002 ppm; 16 percent showed concentrations between 0.002 ppm and 0.032 ppm, 33 percent between 0.032 and 0.051, 24 percent between 0.051 and 0.13, and 13 percent showed concentrations of mercury to be from 0.13 ppm up to a maximum value of 4.6 ppm; geometric mean concentration of mercury was 0.058 ppm [3].

FATE AND TRANSPORT

Mercury may exist as one of three forms: elemental mercury, inorganic mercury, and organic mercury. Elemental mercury will combine with sulfur at ordinary temperatures, and react with nitric acid and/or ammonia solutions in air (to form Hg_2NOH); it does not react with hydrochloric acid, sulfuric acid (when cold), or alkalies. Mercurous salt will be slowly degraded by sunlight [2]. Inorganic mercury compounds generally dissociate into the mercuric form (Hg^{2+}) rather than the mercurous form (Hg^{+}). Organic mercury compounds are generally divided into two broad classes: alkyl mercury (e.g., monomethyl mercury) and

phenyl mercury (e.g., phenylmercury acetate). Organic mercury compounds are more easily absorbed than elemental and/or inorganic forms, but will readily undergo biodegradation with the ultimate release of inorganic mercury. Organomercury compounds, especially alkyl mercury compounds, are viewed as posing the greatest toxicological danger [4]. Given their high specific gravity/density values, elemental and inorganic mercury compounds are generally susceptible to gravitational deposition in sediments of aqueous environments. Given the relative values of water solubility and vapor pressure, mercury should be expected to be a fairly mobile material. Mercury entering surface waters can be microbially converted to methylmercuric ion given favorable conditions. Methylmercury accumulates in carnivorous fish to levels 10,000 times those concentrations found in the ambient water [1].

HUMAN TOXICITY

General. Long-term exposure to either organic or inorganic mercury can permanently damage the brain, kidneys, and developing fetuses. Short-term exposure can also have adverse health effects, but full recovery is more likely. Methylmercury is a potent neurotoxin [1]. The USEPA has placed inorganic mercury in weight-of-evidence Group D, indicating that it is not classifiable as to human carcinogenicity [5].

Oral Exposure. The chronic RfD of 0.0003 mg/kg/day is based on kidney effects observed following oral administration in the rat [6]. Oral absorption of metallic mercury by humans has been estimated to be approximately 0.10%. Organic forms of mercury are readily absorbed by humans and animals via the oral route. For example, in one study approximately 95% of methylmercuric nitrate was absorbed. The oral LD_{50} for $HgCl_2$ ranged from 35 to 105 mg/kg in rats. The lethal dose of $HgCl_2$ in adult humans has been estimated to range from 10 to 42 mg/kg. Signs of acute mercury toxicity in humans and animals include gastrointestinal lesions and renal involvement. Death is usually caused by shock, cardiovascular collapse, acute renal failure, and severe gastrointestinal damage. A number of human deaths have resulted from organic mercury ingestion; the lethal dose is estimated to range between 10 and 60 mg/kg. A neurological syndrome in humans following the consumption of methylmercury-contaminated fish has been characterized by many symptoms including tingling in the extremities, impaired vision, hearing, taste, and smell, incoordination, weakness, slurred speech, irritability, memory loss, depression, and insomnia. Pregnant women who have ingested organic mercury have given birth to infants with severe brain damage. The evidence that the brain damage was caused by organic mercury is very strong [1].

Inhalation Exposure. The RfC of 0.0003 mg/m^3 is based on a NOAEL of 0.009 mg/m^3 determined for humans exposed by inhalation [6]. Metallic mercury diffuses rapidly across lung membranes into the blood. Studies have shown that about 74 to 80% of inhaled elemental mercury vapor is retained in human tissues. Exposure to a metallic mercury vapor concentration of 28.8 mg/m^3 for 1 to 30 hours reportedly caused death in rabbits. In humans,

death reportedly occurred following exposure to about 1.1 mg/m^3 diethylmercury vapor for 4 to 5 months. Symptoms of exposure to metallic mercury vapor in humans include chest pains, dyspnea, cough, hemoptysis, impairment of pulmonary function, tremors, insomnia, decreased motor function, headaches, decreased libido, and irritability. Some kidney damage in humans may occur at vapor concentrations of elemental mercury of 0.1 mg/m^3. Inorganic mercury vapor has been reported to cause menstrual disturbances and spontaneous abortions in women, and congenital malformations and resorptions in the offspring of exposed female rats [1].

Dermal Exposure. Both inorganic and organic forms of mercury are absorbed by the skin, although the extent of absorption was not reported. Children exposed to inorganic mercury salts dermally, exhibited the following symptoms: tremor of face or extremities, sudden jerky movements, a lack of muscle tone, impaired reflexes, seizures, light sensitivity, deafness, insomnia, and irritability. Symptoms in an adult human exposed dermally to metallic mercury were reported to include headache, tinnitus, and vertigo [1].

ECOLOGICAL TOXICITY

General. Biologically, mercury is considered nonessential and nonbeneficial for plants and animals. It is a highly toxic element that can both bioaccumulate in biota and readily biomagnify through biological food chains, increasing by a factor of three to five at each higher trophic level [7]. Organic forms of mercury such as methylmercury and dimethylmercury are readily bioavailable; are produced by anaerobic bacteria in aquatic sediments; and are more toxic than inorganic mercury. Substantial environmental research has been conducted for this metal.

Vegetation. Mercury is not readily taken up by plants. Most higher vascular plants are resistant to mercury poisoning, although they may accumulate it to a limited degree [8]. Symptoms of toxicity include stunting of seedling growth and root development, and an inhibition of photosynthesis causing yield reduction [9]. Mercury concentrations in plant leaves range from 0.001 to 0.01 ppm [10]. The phytotoxic concentration of mercury in the soil was reported to be greater than 10 ppm [10]. Phytotoxic levels reported from four studies range from 0.3 to 5 mg/kg (soil dry weight) [9].

Aquatic Life. The most serious mercury contamination in the aquatic food chain occurs with methyl mercury. Methylmercury is very soluble in water, which means it is readily accumulated by aquatic organisms. Freshwater plants appear to be less sensitive than freshwater fish or invertebrates to methyl mercury. Bioaccumulation of mercury was markedly enhanced at elevated water temperatures, reduced water salinity or hardness, reduced water pH, increased age of the organism, and reduced organic matter content of the medium; in the presence of zinc, cadmium, or selenium in the solution; and after increased duration of exposure [11]. Mercury toxicity varies among species, with concentrations in water of 0.1 to 2.0 μg/L fatal to sensitive aquatic species and concentrations of 0.03 to 0.1

µg/L associated with significant sublethal effects [11]. Spawning in fathead minnows was inhibited by 0.00012 mg/L mercury, and the entire test population was killed by 0.0008 mg/L in 3 months [7]. Other studies with the same species, however, found only detrimental effects at 0.12 mg/L and no toxic effects at 0.07 mg/L [7]. Fish toxicity from mercury ranges from 30 µg/L (guppy) to 1,000 µg/L (*Mozambique tilapia*) [9]. In fish, the biological half-life of mercury is between 1 and 3 years [7]. Bioconcentration factors range from 5,000 for mercury to 4,000 to 85,000 for methylmercury [9]. For aquatic life protection, mercury water levels should not exceed 0.012 µg/L (4-day average) or 2.4 µg/L on an hourly average [11]. The federal chronic freshwater quality criterion for mercury is 0.012 µg/L [12]. The Ohio chronic aquatic life habitat and water supply standard for mercury is 0.2 µg/L for warmwater and modified warm water habitat [13].

Wildlife. Mercury in birds and mammals can adversely affect reproduction, growth and development, behavior, blood chemistry, coordination, vision, hearing, and metabolism [9]. Environmental concentrations of 0.1 ppm or greater would have significant detrimental effects on waterfowl population dynamics [7]. Intensive studies have been conducted on mallards. Studies of over three generations of mallards have shown that methylmercury fed in concentrations as low as 0.5 ppm resulted in reduced reproductive output and altered behavior in young ducklings. This concentration is calculated to be equivalent to 0.1 ppm in a wild diet [7]. Acute oral LD_{50} based on tests with five other bird species ranged from 2.2 to 37.8 mg/kg for methylmercury and 11.5 to 75.5 mg/kg for ethylmercury. The LD_{50} in mule deer for organomercury is 17.88 mg/kg [9]. Bowen [14] reported that a dietary intake of 800 ppm mercury (as HG^{+2}) was lethal to rats (study duration not provided). The biological half-life for mercury is 20 to 70 days in most species. The biological half-life of methylmercury in mammals is 70 to 80 days [7].

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THALLIUM

CAS NUMBER

7440-28-0

COMMON SYNONYMS

None.

ANALYTICAL CLASSIFICATION

Inorganic.

PHYSICAL AND CHEMICAL DATA

Water Solubility: Insoluble [1]
Vapor Pressure: Negligible at 25°C [2]
Henry's Law Constant: ND
Specific Gravity: 11.85 [1]
Organic Carbon Partition Coefficient: ND

BACKGROUND CONCENTRATIONS

Thallium is a naturally-occurring element. It can be found as crookesite in Sweden, as lorandite in Greece, and as hutchinsonite in Switzerland. The estimated occurrence of thallium within the Earth's crust is 0.7 ppm [1]. No data on thallium were gathered as part of the 1984 Department of the Interior survey of conterminous United States soils [3]. Therefore, no reference point other than the 0.7 ppm world-wide average is available for Ohio soils.

FATE AND TRANSPORT

Elemental thallium is a bluish-white, very soft, inelastic, easily fusible, heavy metal. It will oxidize superficially in air forming a coat of thallium oxide. It will react with nitric and/or sulfuric acids, but only slightly so with hydrochloric acid [1]. Thallium exists in either monovalent (thallous) or trivalent (thallic) forms; thallous being much more common. Thallic salts are readily reduced to thallous salts; virtually all are chemically reactive with air and moisture. Volatilization of thallium and its salts is not expected to occur at ambient temperatures and pressures. Elemental thallium is insoluble in water; thallium salts show a moderate to high degree of solubility (i.e.: thallium sulfide exhibiting solubility to 200 mg/L; and thallium fluoride exhibiting solubility to 780 g/L) [2]. Therefore, thallium is expected to be relatively mobile in aquatic environments and/or

moist-to-wet soils. Thallium shows some tendency to bioconcentrate in aquatic organisms [4].

HUMAN TOXICITY

General. In humans, ingestion of large amounts of thallium can affect the nervous system, lung, heart, liver, and kidney [4]. The USEPA currently provides no toxicity values for metallic thallium [5,6]. Oral RfD values are available, however, for many thallium compounds and are based on the oral RfD of 0.00008 mg/kg-day for thallium sulfate [5]. This RfD is based on a NOAEL of 0.25 mg/kg-day for no adverse effects in a subchronic study in rats [5].

Oral Exposure. Animal studies indicate that thallium is completely absorbed when ingested. Evidence also suggests that thallium is well absorbed in humans. Estimates of the oral LD_{50} for rats vary from 32 to 39 mg/kg. A NOAEL (for death) of 0.2 mg/kg/day for 90 days was determined in rats. Male rats receiving 0.7 mg/kg/day (the LOAEL) for 60 days experienced adverse reproductive effects. The most likely route of human exposure is via direct ingestion. Indirect ingestion of dust may occur following inhalation [4].

Numerous human deaths have occurred following oral exposure to thallium. Damage to several systems have been reported, including the nervous system, cardiovascular system, liver, kidney, and muscles [4]. At physiological pH, thallium is soluble. The exact mechanism of toxicity is unclear; inhibition of enzymatic reactions and/or oxidative phosphorylation are the most likely toxic actions. Thallium poisoning in humans is insidious with four generalized stages. They are as follows:

(1) Immediate (3-4 hours): nausea, vomiting, diarrhea, and possibly hematemesis.

(2) Intermediate (hours to days): central nervous system dysfunction, peripheral nervous system dysfunction, autonomic nervous system dysfunction, ophthalmologic effects, and dermal effects.

(3) Late (2-4 weeks): dry and scaly skin, white stripes across nails, and scalp/facial hair loss;

(4) Residual (months): central/peripheral nervous system abnormalities (ataxia, tremor, foot drop, memory loss).

Thallium is an acknowledged cumulative poison. It has an average lethal adult dose of 1 g of soluble thallium salts [4,7]. Elemental thallium has shown lethality at a dosage of 4.4 mg/kg [8].

Inhalation Exposure. No reliable information was located on pulmonary absorption of thallium [4]. Occupational studies indicate that thallium may adversely affect the human nervous system following inhalation [4].

Dermal Exposure. No reliable information was located on the dermal absorption or adverse health effects of thallium following dermal contact [4].

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Response to Comments for

Draft RI for the Deactivation Furnaces (SEAD 16 & 17)

by The New York State Department of Environmental Conservation

GENERAL COMMENTS

Comment #1

The Army has indicated in this document that based on the Local Redevelopment Authority's recommendations to develop the area including and surrounding SEADs 16 and 17 for commercial /industrial uses and the presence of a public water supply it will not evaluate exposure to groundwater under any scenario at either site. It should be recognized that there are two phases of risk analysis: the objective, scientific, and analytical process of "risk assessment" and the more subjective, value-oriented "risk management" process. The risk assessment asks "what is possible?". The risk management process asks "what is likely and acceptable?".

In addition to the results of a complete human health risk assessment, a risk management strategy must also weigh factors such as the practicality, cost, permanence, and effectiveness of a remedy against potential future uses of the site and compliance to New York State standards, criteria, and guidelines. While it may be completely appropriate to state that there will be no use of groundwater in the future at these sites, the determination that this is not an exposure pathway of concern should be made during the risk management process. Due to the ease with which exposure pathways can be evaluated and the resulting risks calculated, the risk assessment should include a residential groundwater user scenario for a most conservative point of comparison. (In some cases an evaluation of this most conservative exposure scenario may indicate a level of risk which is judged to be acceptable thus eliminating the need to evalute less conservative scenarios).

Response #1

Since future use of groundwater cannot be absolutely ruled out, exposure to groundwater from the shallow aquifer by future receptors will be assessed in the risk assessment. These receptors include workers and children attending a future day care center at the site. The Land Reuse Plan for SEDA designated the future land use for SEADs 16 and 17 as "Office/Planned Industrial Development". This designation effectively precludes residential development in these areas. Therefore, future residential exposure to groundwater is not considered possible and risks from this incomplete pathway are not assessed.

Comment #2

The risk assessments for SEADs 16 and 17 should also include an evaluation of the risk posed to children under a day care exposure scenario. As has been pointed out by our colleague Ms. Struble from the USEPA, the Seneca Army Depot has been the home for two child care

facilities over the course of its history. It is reasonable to assume that a successful reuse plan for the Depot could result in a large number of people workingon what is now Depot property which will create the need for child care.

Response #2 Agreed. A day care scenario will be added.

Comment #3 It is important to limit the size of Remedial Investigation documents where possible and where appropriate. The combined length of the two volumes of this report are in excess of 1200 pages long. Although Section 3.1.1 points out that SEADs 16 and 17 are only 800 feet from each other, several pages, tables and figures are devoted to separate yet identical discussions of regional climate and vegetative cover type for each site. In order to make these documents more manageable, the consultant should try to avoid duplications wherever possible.

Response #3 Acknowledged. In the past there has been confusion between sites discussed in the same report. We felt the separate discussion was necessary to avoid other comments from the EPA or NYSDEC due to confusion between sites. The Draft Final RI will be printed double sided and the risk assessment tables will be condensed and moved into Appendices.

SPECIFIC COMMENTS

Table 1-2: It appears that calculation of "background" comcentrations of metals in soil included results from chemical analysis of soils impacted by site operations. Lead concentrations from samples SS16-1 (269 ppm) and SB17-1.1(266 ppm), taken from the RI study area, are an order of magnitude higher than any othe sample on this table, and are certainly not reflective of background/pre-release conditions. A correction is in order.

Response: Agree. The four samples associated with SS16-1 and SB17-1 have been removed from Table 1-2 and the calculation of background concentrations.

Section 2.3.5.3 - Surface Soils: The first sentence in this section states that surface soils are collected from a depth of 0 to 20 inches. Please correct this typographical error.

Response: Samples collected for the ESI from 0 to 20 inches in depth were, at the time of collection, designated as surface samples. However, when the RI was written, only samples collected from 0-2 inches were included as "surface samples" as such in Section 4 and Tables 4-9 and 4-31. The text will be revised for clarity, but the analysis of the data is correct and will not be revised. The first paragraph of Section 2.3.5.3 will be revised to state "Although at the time the ESI was performed, the samples collected from 0 to 20 inches in depth were considered surface samples, the analytical data in this RI reported for surface samples only include sample results for 0-2 inches below ground surface from the ESI. The remainder

of the samples collected during the ESI are discussed and considered as subsurface samples". (See reponse #8 to EPA comments).

Section 3.1.6.2 - Groundwater Flow Directions: The discussion on the groundwater contour map generated from August 27, 1996 data set (shown on Figure 3-6) should mention that there is an apparent shoutheasterly component of groundwater flow near the southeastern corner of Building 311. This should be noted with reference to the contamination released from the underground storage tank in this area (since removed) and the absence of any down gradient monitoring well in this flow direction.

Response: Acknowledged. See response to EPA comment #17. On Figure 3-6, the groundwater elevation at MW16-4 will be corrected to be "729.10". The contours on Figure 3-6 will be corrected accordingly. The text should then state for the August event that the lowest groundwater elevation occurs at MW16-6 and at MW16-7 for the December event. In either case, the lowest point is near Building S-311.

The text in paragraph 1 is correct. The text is paragraphs 2 will be revised to state "This map indicates that groundwater flow directions are generally toward Building S-311 in the central portion of the site at this time of year... the lowest elevation is believed to occur near MW16-6 at the northwest side of Buidling S-311.

Section 4.1.2.2 - Semivolatile Organic Components: A sample result of 3,600,000 ug/kg of 2,4-Dinitrotoluene (sample BS-10) warrants mention in the discussion of semivolatile organic compound detections. Also, a careful reveiw should be made throughout the document of each discussion regarding this substance. At times, a maximum value listed in the text is in error due to the author's failure to consider that results are listed for 2,4-Dinitrotoluene in both the semivolatile organic and nitroaromatic sections.

Response: Agree. The following text has been added to Section 4.1.2.2: "2,4-Dinitrotoluene was detected in three samples and at a maximum concentration of 3,000,000 J ug/kg."

Table 4-2: The significance of the shaded areas should be footnoted on these and other tables, as applicable.

Response: The shaded concentrations are those exceeding the applicable soil, groundwater, surface water, or sediment criteria. A footnote has been added to Table 4-2 as well as the other summary tables.

A spot check of the discussions of 2,4-Dinitrotoluene did not indicate incorrect maximum values. The compound was discussed both in the results for semivolatiles and nitroaromatics.

Section 4.2.3.2 - Semivolatile Organic Compounds: The second paragraph of this section incorrectly refers to a TAGM for benzo(a)pyrene in groundwater. There is no TAMG level for this compound in groundwater, and its acceptable

level of "non-detect" is listed in the New York State Class GA groundwater standards.

Response: Agree. See responses to EPA comments #34-36 and #46. There are several locations in the groundwater sections that should refer to NYS Class GA groundwater standards or Federal MCLs. These changes have been made as follows:

The text on page 4-114 will be changed to state "The NYS Class GA standard for 4-chloroaniline (5 ug/L) was exceeded by the detection limit for all samples."

The text in the third paragraph on Page 4-117 will be changed to state "The NYS Class GA standard for the compound 2,4-dinitrotoluene (5 ug/L) was exceeded by the detection limit for five samples."

The text in the second paragraph on Page 4-118 will be changed to state "The metals antimony and thallium had detection limits above the respective EPA MCLs. For antimony, the EPA MCL of 6 ug/L was exceeded in four samples. Three of the four samples were from the ESI program. For thallium, the EPA MCL of 2 ug/L was exceeded in four samples. Three of the samples were from Round 1 of the RI."

The text of the last paragraph on Page 4-118 will also be revised to state "The metals antimony and thallium had detection limits above the respective EPA MCLs. For antimony, the EPA MCL of 6 ug/L was exceeded in six samples. Three of the six samples were from the ESI program. For thallium, the EPA MCL of 2 ug/L was exceeded in 12 samples."

The text in the last paragraph on Page 4-136 will be revised to state "NYS Class C standards for selenium and silver were exceeded by the detection limits. For selenium, the NYS Class C standard of 1 ug/L was slightly exceeded by the detection limit of 2.4 ug/L. For silver, the NYS Class C standard of 0.1 ug/L was exceeded by the detection limit of 1.3 ug/L."The text in paragraph 1 of Page 4-250 will be changed to state "No detection limits exceeded the respective EPA MCLs or NYS Class GA standards for the metals." in the 5th and 7th paragraphs of Page 4-250. The first paragraph will be revised to state "Detection limits for the compound tetryl were below the NYS Class GA standard."

The text in the second paragraph on Page 4-248 will be revised to state "The EPA MCL for the compound benzo(a)pyrene (2 ug/L) was exceeded by the detection limits for most of the samples".

The text in the second paragraph on Page 4-266 will be revised to state "The detection limit for selenium (2.4 ug/L) exceeded the NYS Class C standard of 1 ug/L."

The text in the fourth paragraph on Page 4-280 will be revised to state

"Detection limits for the compounds....exceeded the NYS HHB criteria value for the six compounds (15.99 ug/kg)."

The text in the 7th paragraph on Page 4-280 will be revised to state "The detection limits for all six compounds exceeded their respective NYS HHB or BALCT criteria values, which were low values of 1.23 ug/kg or less."

The text in the fourth paragraph on Page 4-282 will be revised to state "The detection limits for all metals were below the respective NYS LEL values."

Table 4-17: The title and content of this table relative to Table 4-16 and the text causes confusion. The title of Table 4-17 indicates that the table summarized groundwater sampling results for the Remedial Investigation, and Table 4-17 includes sample results from the 1993 sampling event. However, Table 4-16 and the text do not recognize the numerical results of the 1993 sampling. This causes conflicts for the reader when studying the maximum detected concentrations of some analytes. Please clarify.

Response: Tables 4-16 and 4-38 should reflect summary statistics for the entire data set. They have been updated.

Section 6.1.3 - General Sampling Locations and Media: In this and other sections of this document reference is made to the "local BRAC Reuse Advisory Board" being responsible for the determination of future development of the Depot. In fact, the Local Redevelopment Authority (LRA) is the group formed by the Base Realignment and Closure process which is responsible for this activity. In order to avoid confusion please make the appropriate corrections.

Response: Agreed. The sentence which refers to the Reuse Advisory Board will be deleted.

Section 6.3.3.2 - Potential Future Land Use: We disagree that "...the decision to perform a remedial action will be based upon an intended current land use scenario." The decision to perform a remedial action should be based upon an evaluation of the technical and economical feasibility of a range of response actions, with recognition given to the state's goal of returning each contaminated site to pre-release conditions. The Draft Environmental Impact Statement for BRAC 95 Disposal and Reuse of Property at the Seneca Army Depot Activity, December 1997, Executive Summary Forward, correctly refers to the reuse planning process as "dynamic". The intended use of this property as commercial/industrial, therefore, should not be considered as "worst-case", nor should it be considered to gauge the maximum desired level of remediation needed, at this point.

Response: Acknowleged. The reference to commercial industrial use as "worst-case" will be deleted.

Section 6.5.8.4 - Uncertainty in Risk Assessment: The terms synergism and antagonism as they refer to metabolic mechanisms should be defined when they first appear in this document.

Response: Agree. Appropriate definitions will be added.

Section 7.5.7 - Risk Characteristics for Lead: The last sentence of the fourth paragraph incorrectly refers to SEAD-16 and should instead refer to SEAD-17.

Response: Agree. The typographic error will be corrected.

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Response to Comments for
Draft RI for the Deactivation Furnaces (SEAD 16 & 17)
by The United States Environmental Protection Agency (USEPA)

GENERAL COMMENTS

Comment #1 The most significant issue is a summary dismissal of groundwater as an exposure medium at both SEADs. This is particularly germane given the historical knowledge (see RI Report page 1-8) of groundwater contamination at the site. The exposure pathways identified in the Expanded Site Inspection Report were not the same as the pathways analyzed in the RI Report. Since the groundwater pathway was identified in the Expanded Site Inspection Report and the Draft Final Generic Installation Remedial Investigation/Feasibility Study (RI/FS) Work Plan, potable use of the groundwater in the future should be evaluated.

Response #1 Acknowleged. Drinking water is currently delivered to all of SEDA by pressure pipe from an offsite surface water supply. Therefore, it is unlikely that groundwater will be used in the future for drinking water. If groundwater were to be drawn in the future, the deep aquifer would most likely be used as opposed to the shallow aquifer studied during the RI. Nonetheless, since future use of groundwater cannot be absolutely ruled out, exposure to groundwater from the shallow aquifer by future receptors will be assessed in the risk assessment.

Comment #2 The overall approach and content of the Baseline Risk Assessments were compared to that outlined in the Draft Final Generic Installation Remedial Investigation/ Feasibility (RI/FS) Work Plan. To conform to the Work Plan, the following items should be included in the Baseline Risk Assessments:

a) An indication of whether "a risk assessment work plan and a pathway analysis was submitted to the USEPA, Region II for review before proceeding with quantitative aspects of the evaluation.

b) Evaluation of the potential for inhalation of contaminated respirable particulates by construction workers during intrusive soil activities.

c) "Summary toxicity profiles which summarize pertinent information regarding the chemicals".

d) "Comparison of exposure concentrations to ARARs" in the Risk Characterization.

Response #2

(a) Agree. The risk assessment work plan and EPA's review will be cited in the risk assessment report.

(b) Agree. This exposure pathway will be included.

(c) Agree. Toxicity profiles will be provided in an Appendix to the risk assessment for chemicals that contribute significantly to risk.

(d) Disagree. ARARs are appropriately compared with all site chemical measurements in Section 4. Comparison with EPCs in Section 6 is therefore redundant, and unnecessary. In light of this, the ARAR comparison has not been repeated in Section 6.

Comment #3

Previously at SEDA, there had been two child care facilities. The facility at the North End property had up to 75 children, preschool through 12 years of age. Building 126, within the Planned Industrial Development Area, was the location of the "Latch-Key Program" for children after school. With successful property reuse at SEDA and increased jobs the demand for a child care facility is likely. The risk assessments for SEADs 16 & 17 should include a child care center exposure scenario: ingestion of soil by children.

Response #3

Agree. Ingestion of soil by children at a future child care center at SEADs 16 & 17 will be evaluated.

Comment #4

The text should be revised to include more complete descriptions of the samples included in each data set for each environmental medium. For instance, it is not clear from the text or from Table 6-2A which 56 samples were used to characterize surface soil at SEAD 16. It appears that downwind surface soil samples as well as duplicate samples were included in the data set. The rationale for including the downwind sample data should be provided. Data from duplicate samples should not be treated as separate analyses in any data set; data from duplicate samples should be "composited" or averaged. Similarly, background samples should not be included in the data sets. The analyses should be revised accordingly. For SEAD 16, consideration should be given to substituting "indoor dirt/dust" for "solids" as "solids' implies building material (e.g., chip) samples.

Response #4

a) The downwind surface soil samples were included in the data set because they are considered to be part of the site data. The downwind locations were sampled to determine if contaminants were carried from the stack to locations downwind.

b) The data from duplicate samples were averaged.

c) Background samples were not included in the data set. This is already discussed in the text.

d) The term "solids" is a reasonable label for these samples. "Indoor dirt/dust" would not accurately describe these samples since they contained other solid material besides dirt and dust.

Comment #5 Since the baseline risk assessment is intended to characterize risks associated with contamination at or migrating from SEAD 16 and SEAD 17, surface water and sediment data from upstream locations should be used to distinguish site-related contamination from contamination that could have originated from off-site sources and to select site-related chemicals of potential concern.

Response #5 Disagree. Background for drainage ditches throughout SEDA has not been defined. Therefore, to be conservative, all samples found in the drainage ditches have been considered in this risk assessment. It should be noted that the upstream surface water and sediment data for SEAD 25 show similar compounds and concentrations to that at the site. Runoff from non-point sources (e.g.; roadways) are the likely source of conditions in the drainage ditches surrounding SEAD 25.

Comment #6 USEPA Region II typically recommends using a much simpler technique for comparing site data to background data than the Wilcoxon Rank Sum test: selecting as chemicals of potential concern those inorganic chemicals detected in site samples with an average concentration (of the detected values) greater than two times the average concentration (of the detected values) in the background samples. It appears that using this technique would have achieved essentially the same results as the statistical treatments conducted here, without the uncertainty of the validity of the statistical treatments used.

Response #6 Acknowleged.

Comment #7 In deriving exposure point concentrations, the underlying distribution of the data for each chemical of potential concern in each data set should be determined statistically and the appropriate equation should be used to calculate the 95% UCL concentration. The USEPA's Supplemental Guidance to RAGS: Calculating the Concentration Term indicates that it is the USEPA's experience that most large environmental contaminant data sets from soil sampling are lognormally distributed rather than normally distributed and that in most cases it is reasonable to assume that soil sampling data are lognormally distributed. In cases where there is a question about the distribution of the data set, they recommend that a statistical test should be used to identify the best distributional assumption

for the data set. The USEPA guidance should be consulted and the analyses should be revised accordingly. Gilbert (1987) should be consulted for the appropriate statistical tests. No basis (e.g., USEPA guidance, statistical validity, etc.) is provided for the use of the "Three RME and CT selection guidelines" or for the statement that these guidelines ". . . assure the use of conservative (i.e., health-protective) exposure point values . . .".

Response #7 Agree. The text will be revised to describe a different method to calculate exposure point concentrations (EPCs) in keeping with USEPA's "Calculating the Concentration Term Guidance". Appropriate statistical tests (i.e., Shapiro-Wilk) will be performed for each chemical in each media-specific data set. These tests will be used to determine if the data distribution is either normal or lognormal. If the data appear to be normally distributed based on these tests, then the 95% UCL of the normal mean will be selected as the EPC. Otherwise, the 95% UCL of the mean based on a lognormal distribution will be calculated (with the H-statistic) and used as the EPC or another reasonable upper-bound estimate such as the maximum detected concentration, may be used. Frequency of detection is no longer used is a basis to select the EPC.

Comment #8 USEPA Region II guidance for conducting exposure assessments is to estimate 90th-95th percentile exposure point concentration for the RME analyses and 50th percentile exposure parameters for the central tendency analyses, but not vary the exposure point concentrations in the two analyses. The central tendency analyses should be revised accordingly.

Response #8 Agree. All CT analyses and tables will be revised to incorporate the same EPC used in the RME analyses.

Comment #9 There is a difference between a 95% upper confidence limit and a 95th percentile value. The USEPA's Supplemental Guidance to RAGS: Calculating the Concentration Term should be consulted and the text and tables revised accordingly.

Response #9 Agree. The text and tables will be corrected to use only the 95% upper confidence limit (UCL) of the mean.

Comment #10 As discussed below, it is questionable whether the most up-to-date toxicity information from IRIS and HEAST is being used. In addition, it was stated in the Draft Final Generic Installation Remedial Investigation/Feasibility Study Work Plan that the "USEPA ECAO in Cincinnati, Ohio" would be consulted for toxicity values other than those found in IRIS or HEAST. It does not appear that the USEPA Environmental Criteria Assessment Office, now National Center for Environmental Assessment, was consulted for additional toxicity values. HEAST 1993 is referenced, however a more

current HEAST (1995) exists. The oral reference dose for mercury, for instance, has been withdrawn in HEAST 1995. The oral reference dose for cadmium of 5E-04 mg/kg-day should be used with exposure to water and the oral reference dose for cadmium of 1E-03 mg/kg-day should be used for exposure to soil/sediment. Current guidance for manganese and PCBs also exists on IRIS and does not appear to have been used in this risk assessment.

Response #10 Agree. Provisional criteria have been obtained from the Superfund Technical Support Center. These and the 1995 HEAST Tables have been reviewed to update the toxicity value table and all risk calculations.

Comment #11 While it appears from the ecological assessment that SEAD-16 and SEAD-17 do not provide important habitat, it is not clear why ecological receptors downstream of these areas were not considered in the ecological risk assessment. Pages 6-243 and 7-236 state that "The aquatic study included intermittent and perennial drainage ditches...." Pages 7-257 and 6-266 state that "Kendaia Creek drains the central portion of the site westward to Seneca Lake" and both SEAD-16 and SEAD-17 are located in the headwaters of the Kenaida Creek watershed. Page 6-313 notes that there is a potential for risk to the creek chub and Page 6-304 notes that "Further investigation of sediment toxicity and bioavailability of these COC's is recommended." The ERA preparer should provide a rationale why receptors in these downstream areas were not considered in the ERA.

Response #11 Aquatic receptors were considered among the assessment endpoints for both sites. At the screening step, aquatic life and water quality criteria were used as screening benchmarks. The COPCs that were identified in surface water and sediment at the sites were then carried forward in the ERA process. Toxicity reference values (TRVs) appropriate for the aquatic receptors were used in the hazard quotient calculation for both surface water and sediment. If site-related contaminants affect downstream water bodies, it is unlikely that this effect would be carried very far downstream, as discussed in the fate and transport section of the document. Consequently, the receptors found at the site, i.e., populations of small fish, are appropriate for the near downstream reaches of the water bodies.

Comment #12 A conclusions/recommendations section should be included in the report which presents what future work is needed at each of these SEADs.

Response #12 Disagree. A conclusions and recommendations section may be added per the example table of contents in the RI/FS EPA guidance document. However, the conclusions and recommendations for further action are stated in the FS. There is no need to repeat this information in the RI. All the findings are summarized in Section 8.

SPECIFIC COMMENTS

SECTION 1.0

Comment #1 Page 1-4, P2: The figure referenced here is incorrect, the correct reference is Figure 1-3.

Response #1 Agree. Text will be revised to reference Figure 1-3.

Comment #2 Page 1-37, P3: The text states"...no strong downward vertical gradients are believed to occur..." This statement should be supported by site data.

Response #2 Acknowledged. The statement is based on site data collected at other Seneca sites that are similar to SEAD 16 and 17. The text will be revised to state "Based on the results from vertical connection tests conducted at the Ash Landfill and SEAD 26 and 26, low degrees of downward movement may be possible from the till/weathered shale aquifer to the competent shale aquifer, however, no strong downward vertical gradients are believed to occur on site. Therefore, downward flow is also believed to be miniimal compared to evaporative losses.

SECTION 2.0

Comment #3 Page 2-28, Section 2.2.8.1: No reference is made to the EPA guidance on ecological assessments. The text should be corrected.

Response #3 Disagree. Page 2-27 cites the FWIA developed for New York State. The EPA guidance is listed in the references at the front of the report, and was followed where appropriate. The context of Section 2.2.8.1, Site Description, does not require a reference. The EPA should provide clarification as to what section of the EPA guidance document it has in mind for Section 2.2.8.1.

Comment #4 Page 2-29, P3: Action-specific criteria should also be added to the list of criteria in paragraph.

Response #4 Agree. The text of the last sentence will be revised to state "included site-specific, contaminant-specific, and action-specific criteria.

Comment #5 Figure 2-5: What is the purpose of the arrow at the left hand side of the building?

Response #5 The arrow will be removed from the figure.

Comment #6 Figure 2-6: The locations of the former USTs should be shown on this figure.

Response #6 Agree. This figure and other figures for SEAD-16 that do not show the location will be revised to show the two former underground storage tanks for #2 fuel oil.

Comment #7 Page 2-43, Section 2.3.5.2, P1: The location of the confirmation borings discussed in the text should be shown on Figure 2-6.

Response #7 Disagree. The locations of the borings discussed in Section 2.3.5.2 are shown on Figure 2-6. The text will be revised to state "The locations of these borings are shown on Figure 2-6.

Comment #8 Page 2-43, Section 2.3.5.3, P1: The text states that "...16 surface soil samples were collected (0 to 20 inches in depth)...". By the definition provided by the Army, samples collected below six inches (two inches for this project) are not considered to be surface soil samples. The text should be corrected and the analysis of the data should be reviewed to ensure that samples greater than six inches are not considered surface soils.

Response #8 Samples collected for the ESI from 0 to 20 inches in depth were, at the time of collection, designated as surface samples. However, when the RI was written, only samples collected from 0-2 inches were included as "surface samples" as such in Section 4 and Tables 4-9 and 4-31. The text will be revised for clarity, but the analysis of the data is correct and will not be revised. The first paragraph of Section 2.3.5.3 will be revised to state "Although at the time the ESI was performed, the samples collected from 0 to 20 inches in depth were considered surface samples, the analytical data in this RI reported for surface samples only include sample results for 0-2 inches below ground surface from the ESI. The remainder of the samples collected during the ESI are discussed and considered as subsurface samples".

Comment #9 Page 2-51, Section 2.3.6.4/Table 2-6: Was well MW16-5 developed prior to the collection of groundwater samples in December 1996?

Response #9 This well was dry at the time it was drilled, as indicated on the well installation diagrams in Appendix C, and during Round I of well sampling. Field records do not indicate whether the well was developed before

Round II groundwater sampling was performed three months later, when the well had enough yield for sampling.

There are several reasons for well development. First, drilling reduces hydraulic conductivity near the bore hole and normally cannot be prevented. This damage to the geologic formation results in reduced production, which can be increased by well development. Second, especially in clay soils, the auger can leave a mud cake around the borehole which can prevent inflow of groundwater from the surrounding formation into the well. Well development can somewhat remove some of this mud cake formation, thereby increasing hydraulic conductivity. These two factors, however, do not affect groundwater chemistry, only yield in the well.

However, filter pack installation is often imperfect and may result in elevated turbidity which can be corrected by well development. High turbidity in groundwater samples (high solids content) can affect analytical results. Turbidity effects on groundwater samples can be avoided by proper purging procedures, so that well development is not as important when proper purging of the well has been performed.

Finally, drilling fluids are introduced into the subsurface formation during drilling, which can mix with the groundwater and may affect the groundwater chemistry. However, these fluids tend to have elevated pH values and specific conductances. Because sampling procedures include measurement of pH and specific conductance several times during purging of the well until these parameters are stable, it is unlikely that the groundwater chemistry at this well is affected by residual drilling fluids.

Therefore, because proper sampling procedures were followed, well development at this well is not critical. It is normally performed after well installation as an added precaution to mitigate the factors mentioned above. In addition, the analytical results from MW16-5 are consistent with the groundwater chemistry results from the other wells.

Comment #10 Page 2-58, P1: Samples SW/SD16-5 through SW/SD16-8 are located to the south and not southwest of Building 311, as stated in the text.

Response #10 Agree. Text will be revised to state "collected in the drainage ditches south of Building S-311".

Comment #11 Page 2-62, Section 2.4.4.2, P1: See the previous comment on the depth of surface soil sample collection.

Response #11 See previous response for same comment. The text will be revised to state "At each location, one soil sample was collected from the top 2 feet of soil".

Comment #12 Page 2-66, Section 2.4.4.3, P2: Why were samples SS17-32 and SS17-33 not collected? The reason for not collecting these samples should be provided in the text.

Response #12 Acknowledged. The table skips sample number SS17-32 and SS17-33. This is not significant if the number of samples collected is representative of the surface soil contaminants, which it is. The sample numbering scheme may be a reflection that there were two field teams collecting surface samples. It is more important that the sample numbers do not overlap than for the numbers to be perfectly consecutive. The text will be revised to state "As a note, sample numbers SS17-32 and SS17-33 were not used and do not show up on Table 2-11".

Comment #13 Page 2-69, Section 2.4.5.1, P3: The text states here that the wells are screened in the weathered bedrock/till aquifer, the previous paragraph states the wells are screened in the till, this discrepancy should be corrected.

Response #13 Agree. The hydrogeology description in Section 1 does not clearly define the three aquifers. Section 1.5.3 on page 1-35 has been revised to state:

"A review of this information suggests that three geologic units have been used to produce water for both domestic and agricultural purposes. These units, in stratigraphic order from the ground surface, include: 1) an unconfined overburden aquifer consisting of Pleistocene deposits of till and weathered shale, 2) a confined bedrock aquifer consisting of competent shale, and 3) a deep confined aquifer within beds of limestone underlying the competent shale. As of 1957, six wells tapped the overburden aquifer, twenty-five wells utilized water from the competent shale aquifer, and one used the deep limestone as a source of water.

For the six wells that utilized groundwater extracted from the overburden, the average yield was approximately 7.5 gpm. The average depth of these wells was thirty-six feet. The geologic material which comprises this aquifer is generally Plesitocene till, with the exception of one well located northeast of the site. This well penetrates a localized outwash sand and gravel deposit. The yields from the five wells in the overburden range from 4 to 15 gpm. The one well located in the outwash sand and gravel deposit, drilled to 60 feet, yields only 5 gpm. A 20-foot hand dug well, located to the southeast of the outwash well, yields 10 gpm.

The geologic information reviewed indicates that the upper portions of the shale formation would be expected to yield small, yet adequate, supplies of water for domestic use. For mid-Devonian shales such as those of the Hamilton Group, the average yields (which are less than 15 gpm) are consistent with what would be expected for shales (LaSala, 1968). Accordingly, the majority of the wells in the area tap the competent shale aquifer.

The limestone aquifer is between 100 and 700 feet deep. The deeper portions of this bedrock (i.e. at depths greater thatn 235 feet) have provided yields up to 150 gpm. Although the occurrence of water derived from limestone is considered to be unusual for this area and is more commonplace to the north, these high well yields may be attributable to the effects of solutioning on the Onondaga limestone, which is at the base of the Hamilton Group. Solution effects on limestones (and shales that contain gypsum) in the Erie-Niagara have been reported by LaSala (1968). Based on well yield data, the degree of solutioning is affected by the type and thickness of the overlying material (Mozola, 1951). The limestone aquifer is considered to comprise a separate source of water for the area compared to water derived from the upper aquifers. Despite the high yields, however, very few wells in the region adjacent to SEDA utilize the limestone as a source of water, which may be due to the drilling depths required to intercept this water."

In addition, the text in paragraph 2 in Section 2.4.5.1 on page 2-69 will be revised to state "These monitoring wells were screened in the saturated till/weathered shale overburden aquifer". The text in paragraph 3 on this same page is correct.

Comment #14 Table 2-13: An explanation should be given in the text for the elevated temperature of the groundwater at MW17-5 during development, the text in the foot notes of the table should also explain what "NA" represents.

Response #14 The EPA should clarify what is considered "elevated" temperatures. While it is possible to mis-read a temperature in the field by allowing the sample to sit in sunlight too long or by faulty equipment, Parsons' reports temperature values measured in the field as accurately as possible. It is not unusual for groundwater to be warm. Thermal springs and natural convection in aquifers, for example, two mechanisms that explain warm temperatures, have been observed and documented in standard groundwater hydrology texts.

In reference to the "NA" comment, Table 2-6 has been revised to state that NA refers to not applicable and NR refers to unavailable data.

Comment #15 Table 2-14: An explanation should be given for the elevated temperature readings for the samples collected from MW17-1 and MW17-5.

Response #15 See Response for Comment #14.

SECTION 3.0

Comment #16 Page 3-15: A better understanding of groundwater flow at this SEAD and the adjacent SEAD (SEAD 17) would be given if both sites were presented on a single map and the data contoured together.

Response #16 Disagree. The sites are too far apart to show a meaningful groundwater contour map. There are no wells between the sites and no measurements for groundwater depth. The groundwater contours are localized for the specific sites.

Comment #17 Page 3-15, P2: The text states that groundwater flow is generally towards Building 366 in the central portion of the site. However, a review of Figure 3-7 shows that flow is generally towards Building S-311. Later in this same paragraph the text states that the lowest groundwater elevations are at Building 366, again the lowest elevations are near Building S-311.

Response #17 Acknowledged. The text should be consistent with what is shown on the figures. However, on Figure 3-6, the groundwater elevation at MW16-4 will be corrected to be "729.10". The contours on Figure 3-6 will be corrected accordingly. The text should then state for the August event that the lowest groundwater elevation occurs at MW16-6 and at MW16-7 for the December event. In either case, the lowest point is near Building S-311.

The text in paragraph 1 is correct. The text is paragraphs 2 will be revised to state "This map indicates that groundwater flow directions are generally toward Building S-311 in the central portion of the site at this time of year... the lowest elevation is believed to occur near MW16-6 at the northwest side of Buidling S-311.

Comment #18 Figure 3-12: The competent bedrock data presented in this figure should be reviewed and recontoured using all data available. Recontouring this figure will show that the competent bedrock surface is not"...uniformly sloped ..." as stated on Page 3-46, P2.

Response #18 Acknowledged. The figure in the current version of Parsons' copy of the RI shows a slightly steeper grade on the west side of the site than on the east side. However, Review of the boring log data does show slight disagreement. The figure will be corrected to match the data shown in the

boring logs and well construction data (Appendices). Although the new contours will show a slightly steeper grade on the east side rather than on the west side of the site, the bedrock is relatively uniform. Additional borings are needed if the EPA requires a precise illustration of the bedrock contours. The text on page 3-46 will be revised to state "...the surface of the shale is generally sloped to the southwest with a slightly steeper grade on the east side of the site. In addition, there is a local bedrock high...".

Comment #19 Figures 3-15 & 3-16: In both of these figures the data collected from MW17-4 has not been contoured. Based on a review of the logs for this well it appears that the water level data is representative of water table conditions at this location, and therefore it should be contoured on these figures.

Response #19 Disagree. The figure shows an anomalous high at MW17-4 which may represent either perched conditions or localized mounding.

Comment #20 Page 3-21, P2: Why does 1.0 ft/day convert to 378 ft/year?, on page 3-57 1.0 ft/day converts to 365 ft/year.

Response #20 Agree. The text will be revised to show the correct values.

SECTION 4.0

Comment #21 Page 4-2: Please include a list of the Tentatively Identified Compounds (TICs) mentioned on page 4-2 as a table within the document.

Response #21 Disagree. A list of TICs is provided in Appendix G after the analytical results tables. The text on page 4-2 will be revised to state "...the identification and quantification of tentatively identified compounds (TICs) (Refer to Appendix G).

Comment #22 Table 4-2: The results of the floor samples presented in this table should be compared directly against the TAGM numbers and not site background concentrations, since these samples are not strictly soil or sediment samples. If the sample results are compared against the TAGM values in place of the site background results several of the analytes would be considered of potential concern at the site.

Response #22 Agree. The results presented in Parsons' copy of the RI report are compared to NYSDEC TAGM levels, as listed in the 2nd and 3rd columns of the table. The indoor air samples are compared to background samples collected outside and away from the building.

Comment #23 Page 4-17, P1: Additional text should be added to the document describing all the concentration exceedances of the NYSDEC TAGM and not only those compounds which are considered carcinogenic. The TAGM value for PCBs, for the samples listed in this table should be 1,000 ug/kg since these are surface soil samples, therefore sample FS16-8 will have an exceedance for Aroclor-1254.

Response #23 Agree. The TAGM for surface soil is 1,000 ug/kg. In this case, Table 4-2 presents results for the building materials. Because the action levels for the building materials are based on surface soil regulations that address similar routes of exposure as for building materials, the surface soil TAGM should be used for this table and the table will be revised accordingly. The text on page 4-17 will be revised to state "All the compounds were detected at concentrations below their respective TAGM values at each location except one. Sample FS16-8 exceeds its TAGM value for Arorclor-1254 by 400 ug/kg. The remaining PCB detections were below the TAGM value of 1,000 ug/kg."

Comment #24 Page 4-30, Section 4.1.4.1: What is the basis for stating that acetone, carbon disulfide, chloroform, and methylene chloride are laboratory contaminants and not site related. If this is based on a review of laboratory blank/trip blank data or data validation it should be stated in the text.

Response #24 Agree. The conclusion is based on results from laboratory blanks and data validation. The text will be revised to state "....were detected in some of the surface soil samples at low concentrations. However, since these compounds appear in laboratory blanks, they are not believed to be respresentative of the true soil chemistry."

Comment #25 Page 4-80, Section 4.1.4.2: The text in this section and other sections which discuss semi-volatile organics should not only present carcinogenic PAH results. The results of the individual PAHs should also be related to TAGM values and their exceedances of the TAGMs.

Response #25 Disagree. A separate discussion of carcinogenic PAHs was added to this section for SEAD 16 and 17 to avoid duplicating comments from NY State that were received for SEAD 25 and 26 that requested this discussion. The remainder of the SVOCs, including the non-carcinogenic PAHs and their TAGM exceedences, are already included in Section 4.1.4.2. However, the PAH concentration at SS16-33 was reported incorrectly and the text has been revised to state "The third highest concentration of total carcinogenic PAHs was 11,000 ug/kg detected at SS16-33...".

Comment #26 Page 4-91, P1: The occurance of phthalates as a laboratory contaminant should be related to the presence of phthalates in laboratory control samples and supported by data validation.

Response #26 Agree. The conclusion is based on results from laboratory blanks and data validation. The text will be revised to state "This phthalate appears in laboratory blanks and is likely a laboratory contaminant. It is not believed to be representative of the true soil chemistry at SEAD-16."

Comment #27 Table 4-9: The TAGM value for PCBs in surface soils is 1,000 ug/kg and in subsurface soils is 10,000 ug/kg, this table should be corrected accordingly along with the appropriate text.

Response #27 Agree. The table will be revised to show the correct TAGM of 1,000 ug/kg for surface soil samples. The text of the first paragraph on Page 4-95 will be revised to state: "Two PCBs, Aroclor-1254 and Aroclor-1260, were detected in the surface soil samples at concentrations below their respective TAGM criteria for all samples except one. Aroclor-1254 was detected at 1,100 ug/kg at SS16-24, which is 100 ug/kg above its TAGM value of 1,000 ug/kg."

Comment #28 Figure 4-2: What contour interval is being used for the generation of this figure? Since no regular contour interval has been used, it is unclear what the contour line surrounding sample SS16-26 represents.

Response #28 Agree. Contour interval is variable. A note will be added to the figure stating that the contour intervals are variable. The questionable contour will be properly labelled.

Comment #29 Page 4-97, P2: The maximum concentration detected for barium was from sample location SS16-26 (as shown on Figure 4-2) and not SS16-27 as stated in the text.

Response #29 Agree. The text will be revised to state "Barium's maximum concentration of 9340 mg/Kg was found in SS16-26."

Comment #30 Figure 4-2 & 4-3: The sample locations for SS16-26 and SS16-27 are reversed in these figures. The discrepancy should be corrected and the text reviewed and changed as needed.

Response #30 Disagree. Parsons' copy of the document show the sample locations correctly on Figures 4-2 and 4-3, and the text correct as written.

Comment #31 Figure 4-3: The contours should be reviewed since in several areas there are errors in the contouring. For example, the 100 contour should be dashed in several areas since there is no control for the contour line.

Response #31 Agree. The contours will be revised appropriately. See the previous response.

Comment #32 Figure 4-4: See the previous comments on Figure 4-3.

Response #32 Agree. The contours will be revised appropriately. See the previous response.

Comment #33 Figure 4-5: See the previous comments on Figure 4-3.

Response #33 Agree. The contours will be revised appropriately. See the previous response.

Comment #34 Page 4-110, P6: The text incorrectly refers to TAGMs as the groundwater standard against which data are being compared.

Response #34 Page 4-110 is part of Table 4-17. The text on page 4-114, however, will be changed to state "The NYS Class GA standard for 4-chloroaniline (5 ug/L) was exceeded by the detection limit for all samples."

Comment #35 Page 4-117, P3: See the previous comment on the incorrect use of the term TAGM for groundwater standards.

Response #35 Agree. The text will be changed to state "The NYS Class GA standard for the compound 2,4-dinitrotoluene (5 ug/L) was exceeded by the detection limit for five samples."

Comment #36 Page 4-118, P2: See the previous comment on the incorrect use of the term TAGM for groundwater standards.

Response #36 Agree. The text in the second paragraph will be changed to state "The metals antimony and thallium had detection limits above the respective EPA MCLs. For antimony, the EPA MCL of 6 ug/L was exceeded in four samples. Three of the four samples were from the ESI program. For thallium, the EPA MCL of 2 ug/L was exceeded in four samples. Three of the samples were from Round 1 of the RI."

The text of the last paragraph on Page 4-118 will also be revised to state "The metals antimony and thallium had detection limits above the respective EPA MCLs. For antimony, the EPA MCL of 6 ug/L was exceeded in six samples. Three of the six samples were from the ESI

program. For thallium, the EPA MCL of 2 ug/L was exceeded in 12 samples."

In addition, the text in the last paragraph on Page 4-136 will be revised to state "NYS Class C standards for selenium and silver were exceeded by the detection limits. For selenium, the NYS Class C standard of 1 ug/L was slightly exceeded by the detection limit of 2.4 ug/L. For silver, the NYS Class C standard of 0.1 ug/L was exceeded by the detection limit of 1.3 ug/L."

Comment #37 Page 4-136, P1: Based on a review of Figure 4-6 and the previous figure (Figure 3-1) showing surface water flow direction at SEAD - 16, it appears as if SW/SD16-10 is located downgradient of Building S-311.

Response #37 Disagree. Figure 3-1 shows the direction of surface water flow. The location of SW/SD16-10 receives surface water from the opposite direction of the site.

Comment #38 Page 4-138, P4: The statement that the detected VOCs are laboratory artifacts should be supported by the presence of these compounds in the laboratory control samples. If such data exists it should be stated in the text.

Response #38 Agree. Per previous responses, the conclusion is based on results from laboratory blanks and data validation. The text will be revised to state "Becuase 2-butanone and acetone appear in laboratory blanks, they are likely laboratory contaminants. These compounds were detected a low concentrations (between 12 ug/kg and 36 ug/kg) and are not believed to be representative of the true sediment chemistry at SEAD-16."

Comment #39 Page 4-157: The text which discusses semi-volatile compounds should be expanded to discuss all semi-volatiles detected/exceeding guidance levels.

Response #39 Disagree. The only detected semi-volatiles that exceed guidance levels are PAHs, which are already discussed. The text in the first paragraph on Page 4-157 will be revised to state "No other detected semi-volatile compounds exceeded their guidance level."

Comment #40 Page 4-125, P4: The text in this paragraph states that the highest concentration of carcinogenic PAH compounds was detected at SS17-1. However, Figure 4-9, shows SS17-20 having the maximum concentration, 2,940 ug/kg. This discrepancy should be corrected.

Response #40 Parsons believes the EPA is referring to page 4-215, not page 4-125, which is part of Table 4-21. Figure 4-9 is incorrect and should show a maximum

carcinogenic PAH concentration at SS17-1 of 426 ug/kg. The value at SS17-20 will be revised to show that no PAHs were detected at that location. The text is correct.

Comment #41 Table 4-31: An incorrect TAGM value of 10,000 ug/kg has been used for PCBs when comparing to surface soil data. The correct value is 1,000 ug/kg.

Response #41 Agree. The table will be revised to show the correct TAGM of 1,000 ug/kg for surface soil samples and any text referring to this TAGM will be revised. However, no samples exceed this TAGM. The text on page 4-228 will be revised to state "One PCB, Aroclor-1260, was detected in three samples at concentrations well below the NYSDEC TAGM value of 1,000 ug/kg."

The text in the fourth paragraph on Page 2-228 will be revised to state "The NYSDEC TAGM criteria for Aroclor-1254 is 1,000 ug/kg."

Comment #42 Figure 4-10: Several portions of the 5 ug/kg contour line should be dashed since there is no control for its construction. This figure should also be checked to ensure that the data has been correctly contoured, i.e. the 10 ug/kg contour should encompass sampling data point SS17-23, and the 5 ug/kg contour should encompass sampling data point SS17-26.

Response #42 Agree. The figure will be revised to show the correct contouring.

Comment #43 Figure 4-11: See the previous comments on Figure 4-10.

Response #43 Agree. The figure will be revised to show the correct contouring.

Comment #44 Figure 4-12: See the previous comments on Figure 4-10.

Response #44 Agree. The figure will be revised to show the correct contouring.

Comment #45 Figure 4-13: See the previous comments on Figure 4-10.

Response #45 Agree. The figure will be revised to show the correct contouring.

Comment #46 Page 4-250, P1: See previous comments on the use of the term TAGM when discussing groundwater results.

Response #46 Agree. The text will be changed to state "No detection limits exceeded the respective EPA MCLs or NYS Class GA standards for the metals." in the 5th and 7th paragraphs of Page 4-250. The first paragraph will be revised

to state "Detection limits for the compound tetryl were below the NYS Class GA standard."

The following additional changes will be made:

The text in the second paragraph on Page 4-248 will be revised to state "The EPA MCL for the compound benzo(a)pyrene (2 ug/L) was exceeded by the detection limits for most of the samples".

The text in the second paragraph on Page 4-266 will be revised to state "The detection limit for selenium (2.4 ug/L) exceeded the NYS Class C standard of 1 ug/L."

The text in the fourth paragraph on Page 4-280 will be revised to state "Detection limits for the compounds....exceeded the NYS HHB criteria value for the six compounds (15.99 ug/kg)."

The text in the 7th paragraph on Page 4-280 will be revised to state "The detection limits for all six compounds exceeded their respective NYS HHB or BALCT criteria values, which were low values of 1.23 ug/kg or less."

The text in the fourth paragraph on Page 4-282 will be revised to state "The detection limits for all metals were below the respective NYS LEL values."

Comment #47 Page 4-264, P6: See the previous comment on the use of SW/SD16-10 as a background sample location.

Response #47 Disagree. See previous response.

Comment #48 Page 4-266, Section 4.2.5.1: See the previous comments on the interpretation that certain compounds are laboratory contaminants.

Response #48 See previous responses. The text will be revised to state "However, because these compounds appear in laboratory blanks, they are likely laboratory contaminants and are not believed to be representative of the true sediment chemistry at SEAD-17."

The following additonal changes will also be made:

The second paragraph on page 4-226 will be revised to state "This phthalate compound appears in laboratory blanks and is likely a laboratory contaminant. It is not believed to be representative of the soil chemistry at SEAD-17."

Comment #49 Page 4-284, P4: The text should state which sediment samples exhibited the elevated concentrations of SVOCs in the northeast corner of the site.

Response #49 Agree. The text will be revised to state "Impacts from SVOCs were most significant at SW/SD17-8 in the drainage ditch in the northeastern corner of the site."

SECTION 5.0

Comment #50 Page 5-2, P1: The text in this section should reference precipitation rather than rainfall. Since during the winter months, January and February, snowfall would be expected instead of rainfall, therefore reducing the amount of rainfall in these months when compared to other months.

Response #50 Agree. The text will be revised so that the word "rainfall" is replaced by the word "precipitation".

Comment #51 Page 5-5, P2: See the previous comment on the use of the term "rainfall" when discussing weather data.

Response #51 Agree. The text will be revised so that the word "rainfall" is replaced by the word "precipitation".

Comment #52 Page 5-7, P1: The table which is referenced is not provided, the reference should be changed from Table X.X to the correct reference.

Response #52 Agree. The table will be provided and properly reference in the text as Table 5-1. The other table references will be adjusted accordingly.

Comment #53 Page 5-11, P3: The state of the chromium is incorrectly written as Cr (IV), this should be changed to Cr (VI).

Response #53 Agree. The text will be corrected to read "Cr(VI)".

SECTION 6.0 & 7.0

Comment #54 Page 6-4: As mentioned in the General Comments, the risk assessment does not evaluate groundwater exposure pathways. Future commercial/industrial development is given as part of the rationale for not including a future-use groundwater pathway. Commercial/industrial land use should not, in and of itself, preclude a groundwater exposure pathway. This comment also pertains to the SEAD 17 risk assessment in Section 7 of the document.

Response #54 Acknowledged. Future groundwater exposure will be assessed (see response to General Comment #1.

Comment #55 Page 6-4, P2: The soil data sets were to be "used as input to a model to estimate ambient air EPCs of volatile organics from soil". This was not the case, although the soil data sets were used to estimate chemical concentrations on particulates. The text should be revised accordingly.

Response #55 Agreed. The text will be revised to reflect the exposure analyses performed.

Comment #56 Page 6-6: The discussion of toxicity information should mention provisional toxicity values developed by EPA's National Criteria and Exposure Assessment Office (NCEA). This comment also pertains to the SEAD 17 risk assessment in Section 7 of the document.

Response #56 Agreed. Provisional toxicity criteria obtained from the Superfund Technical Support Center will be included in this discussion.

Comment #57 Page 6-29, P4: The discussion of the Wilcoxon Rank Sum test should be revised to include (per Gilbert, 1987) that the two data sets need not be drawn from normal distributions and that the test can handle a moderate number of non-detected values by treating them as ties. The methodology for handling ties should also be briefly presented, assuming they were handled as described in Gilbert (1987).

Response #57 Agreed. The points regarding the type of distribution and ties have been added. The method for handling ties recommended by Gilbert (1987) was followed, and this method has been so referenced in the 4th paragraph on page 6-29.

Comment #58 Page 6-57, P4: If the intended future use of SEAD 16 is commercial/industrial it is inappropriate to describe the future use scenarios evaluated in the risk assessment as "worst case". The text should be revised accordingly.

Response #58 Agreed. The "worst case" language will be deleted.

Comment #59 Page 6-58: The text lists the central tendency value for duration of time at a workplace as 5 years. The Exposure Factors Handbook lists 7 years. This comment also pertains to the SEAD 17 risk assessment in Section 7 of the document.

Response #59 Agreed. Page 6-58 and relevant tables will be revised to use 7 years as the average duration of employment, and cite the August 1996 Draft Exposure Factors Handbook as the source of this new information.

Comment #60 Page 6-72, Section 6.3.5.3: It appears from Table 6-6 that suspended particulate concentrations were measured over a 4-month period, April 1 to July 31, 1995. As a result, it is not clear how or why a 3-month average concentration was calculated. A rationale should be provided for basing the RME and central tendency analyses on the 3-month average TSP concentration.

Response #60 Agreed. The table and text will be corrected to a "4-month" average.

Comment #61 Page 6-130: The text should be revised to include the dermal absorption factor for cadmium since it was selected as a chemicals of potential concern in indoor surface dust.

Response #61 Agreed. The dermal absorption factor for cadmium will be added to the discussion of surface dust.

Comment #62 Page 6-165: There is a problem with the discussion of administered verses absorbed doses. The text incorrectly states that assuming an oral absorption efficiency of 100%, when adjusting toxicity values (i.e., Slope Factors and Reference Doses) for the dermal pathway, results in an overestimate of risk. In fact, the converse is true: assuming 100% oral absorption when adjusting toxicity factors to account for difference between administered and absorbed dose will underestimate risk by a factor inversely proportional to the actual oral absorption efficiency in the critical study that forms the basis of the toxicity factor. This comment also pertains to the SEAD 17 risk assessment in Section 7 of the document.

Response #62 Agreed. This text will be corrected.

Comment #63 Page 6-199: Re: the future construction worker scenario that has a Hazard Index greater than one (which indicates a potential for noncarcinogenic health effects), the text states " future construction workers may require personal protection to minimize exposure at this site." This statement is clearly in the realm of risk management rather than risk assessment. This comment also pertains to the SEAD 17 risk assessment in Section 7 of the document.

Response #63 Acknowleged. The sentence will be deleted.

Comment #64 Page 6-238: The discussion of the risk assessment methodology for lead is somewhat dated and inaccurate. The text proposes future non-residential

development for SEADs 16 & 17 yet references outdated guidance (soil clean-up goal 500-1,000 ppm, Sept 1989) that, aside from being updated (soil screening level of 400 ppm, July, 1994) was intended to apply to residential settings. In December, 1996, EPA's Technical Review Workgroup for Lead released a document titled "Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil." The default model parameters would result in a clean-up goal of 750 - 1,750 ppm. This comment also pertains to the SEAD 17 risk assessment in Section 7 of the document.

Response #64 Agreed. The December 1996 document will be reviewed and appropriate soil guideline concentrations will be derived. The text on page 6-238 will be revised accordingly.

Comment #65 Table 6-3A: It is inappropriate to calculate 95% UCL concentrations for a data set with three samples. The USEPA's "Supplemental Guidance to RAGS: Calculating the Concentration Term" recommends calculating 95% UCL concentrations on data sets with sample sizes equal to or greater than ten.

Response #65 Acknowledged. The maximum measured values will be used instead of the 95% UCLs. The table and text will be revised accordingly.

Comment #66 Table 6-3 B, C, D, and F: 2,4-Dinitrotoluene and 2,6-dinitrotoluene appear twice in one or more of the tables, presumably due to different analytical methods. The text should be revised to include an explanation and an indication of the analytical result used to derive the EPCs.

Response #66 Agreed. A footnote will be added to these tables to explain how EPCs were determined for these compounds.

Comment #67 Table 6-3D: EPCs were derived for only a subset of the inorganic chemicals identified as chemicals of potential concern in Table 6-4. The analyses should be revised accordingly.

Response #67 Agree. The tables will be corrected.

Comment #68 Table 6-4: The chemicals of potential concern should be double-checked and the table revised accordingly. For instance, while xylenes in surface soil are listed in Table 6-4 they are not included in Table 6-3B.

Response #68 Agree. The tables will be corrected.

Comment #69 Table 6-7A: The detection limits for antimony, thallium, and zinc should be deleted from the table.

Response #69 Agreed. The detection limit values for non-detected compounds will be replaced with an "ND" designation in Table 6-7A. This change will apply to the nine non-detected semivolatile organics in addition to the three metals named in the comment.

Comment #70 Tables 6-18 and 6-19: The EPCs seem to be off by a line with the concentration for 4,4'-DDD and an entry for delta-BHC missing. The table and associated calculations should be revised accordingly.

Response #70 Acknowledged. The tables will be reviewed and revised as appropriate.

Comment #71 Tables 6-20, 6-21, and 6-32 thru 6-39: The exposure frequencies for the future child trespasser are presented as 50 days per year (RME) and 25 days per year (CT) on Page 6-66 and in Table 6-5. These values are presented inconsistently in Tables 6-20 and 6-21 and are not presented in Tables 6-32 thru 6-39. The tables should be revised and the associated calculations checked and revised accordingly.

Response #71 Disagree. The text on page 6-72 explains that for child tresspasser surface water exposure pathways, exposure frequency is assumed to be half that assumed for inhalation and soil pathways. Tables 6-32 through 6-39 use the correct exposure frequency consistent with this assumption. However, Table 6-5 show incorrect exposure frequencies for "Dermal Contact - Surface Water" which will be corrected. Also, two errant exposure frequency entries each in Tables 6-20 and 6-21 will be corrected.

Comment #72 Table 6-30: The table should be revised to read "Future Industrial Site Worker".

Response #72 Agreed. The table title will be revised.

Comment #73 Page 7-3, P4: As inhalation of particulate matter in indoor air was not evaluated at SEAD-17, it should be removed from the list of exposure routes.

Response #73 Agreed.

Comment #74 Page 7-4, P2: The text should be revised to indicate which soil data set is to be used for the future scenario industrial worker and to include mention of the surface water and sediment data sets to be used for the future scenario trespasser.

Response #74 Agreed. The first sentence of this paragraph will be revised to include the future industrial worker. Surface water and sediment are already mentioned in the previous paragraph, beginning at the bottom of page 7-3. This text will be revised to specify the future tresspasser.

Comment #75 Page 7-6, P2: The receptors should be characterized as potentially exposed.

Response #75 Agreed.

Comment #76 Page 7-6, P4: As "literature-derived calculations"were not used, the term should be removed from the list of data sources of toxicity values.

Response #76 Agreed. "...literature-derived calculations..." will be replaced with "...EPA Risk Assessment Issue Papers...".

Comment #77 Page 7-8, P St.: Section 7.2.3 Site-specific Data Evaluation and Tables 7-2A thru 7C, which contain the results of the Wilcoxon Rank Sum Test, should be referenced.

Response #77 Agree. The reference will be added.

Comment #78 Page 7-9, P3: A brief discussion should be provided to indicate how the split sample results were used and to indicate that the split sample results were not used in the risk assessment. A brief discussion of the split sample results should be added to Section 7.2.2.9 Comparability. As a trip blank is not used to determine if samples were contaminated during sample collection, the statement should be revised.

Response #78 Disagree. The results of the split samples analyses have not been provided by the COE laboratory for inclusion in this assessment. The reference to sample collection has been deleted in the trip blank discussion in Section 7.2.1.4.

Comment #79 Page 7-11, P4: The discrepancy in the number of databases in the first two sentences should be corrected.

Response #79 Agreed. "Seven" in the first sentence will be changed to "six".

Comment #80 This comment is blank in the document received from EPA.

Comment #81 Page 7-27, P2 and Page 6-29, P3: The term "solids" should be clarified or deleted. If "solids" refers to building materials only then it does not apply to SEAD-17. Since the Wilcoxon Rank Sum Test was not performed for sediment and all inorganic chemicals detected in sediment were chosen as

Chemicals of potential concern, it does not appear that "solids" refers to sediment.

Response #81 Agreed. Solids will be deleted from the first sentence of each of these paragraphs.

Comment #82 Page 7-28, P St.: The text should be reworded, to be better understood by a lay reader. A Type I error, stated more simply, is when H_O is rejected when it is true. The term "maximum allowed probability" is confusing and should be clarified or restated.

Response #82 Agreed. The first two sentences of the first complete paragraph on page 7-28 will be revised as follows:

"The critical value $Z_{1-\alpha}$ defines the probability that the WRS test will correctly indicate that the site and background datasets are drawn from the same population. The possibility that the WRS test will yield a false result (i.e. reject the null hypothesis when it is true) is defined by α. This type of error is called a Type I error.

Comment #83 Page 7-33, P2: Although indicated in the text, the results for zero to four foot soils and air are not provided in Table 7-3. Either missing tables should be provided or the text should be revised. Tables 7-3A to 7-3D should be referenced.

Response #83 Agreed. The text will be revised to remove the reference to 0-4' soils and air.

Comment #84 Page 7-46, P4: As no such sections are provided, the sentence indicating that "The following sections describe the vegetation and ecological community types . . ." should be revised or deleted.

Response #84 Agreed. This sentence will be deleted.

Comment #85 Page 7-49, P5: The term "intended current land use" should be clarified or revised.

Response #85 Agreed. The phrase has been changed to "anticipated future land use".

Comment #86 Page 7-50, P St.: The age of the child trespasser should be specified.

Response #86 Agreed. The age of the child will be specified.

Comment #87 Page 7-51, P3: The parenthetical reference "(< 15 µg/kg)" should be deleted as there is no basis for using this value to define "low concentrations".

Response #87 Agreed. The numerical reference will be deleted.

Comment #88 Page 7-52, P3: The text should be revised as 13 and not 16 exposure pathways were evaluated.

Response #88 We disagree with EPA's count of exposure pathways. However, to avoid unnecessary confusion, the enumeration of pathways will be deleted from the sentence in question.

Comment #89 Page 7-54, P3: Inhalation of respirable particulates made airborne by mechanical erosion during construction of an excavation should be evaluated for the future construction worker.

Response #89 Agreed. This exposure pathway will be included.

Comment #90 Page 7-55, P4: Consideration could be given to eliminating surface water ingestion as a pathway of concern, as such exposure during wading activities seems unlikely.

Response #90 Agreed. The surface water ingestion pathway will be eliminated.

Comment #91 Page 7-56, P3: Since potential exposure of future construction workers over a 1-year period and future trespassers over a 6-year period are evaluated, the statement that acute and subchronic exposures were not evaluated." is incorrect and should be revised accordingly. Use of chronic RfDs and RfCs to evaluate subchronic exposures, as done in this risk assessment, is appropriate given the relatively few subchronic toxicity criteria available and the fact that the chronic toxicity are generally lower than the subchronic toxicity criteria. However, use of chronic toxicity criteria to evaluate subchronic exposure should be discussed in Section 7.4 Toxicity Assessment.

Response #91 Agreed. The last sentence of the 3rd paragraph on page 7-56 has been changed to: "Short-term (i.e., subchronic) exposures were evaluated only for a construction worker tresspasser and daycare child, whose exposure durations range from one to six years."

Comment #92 Page 7-57, P5: Reference is made to the USEPA Exposure Factors Handbook (1990). A Draft Exposure Factors Handbook dated 1996 is available. Although the document is still in draft form, it can be cited.

Response #92 Agreed. The date reference will be changed to 1996.

Comment #93 Page 7-63, P4: Since it is assumed for the construction worker that direct exposure would be to surface and subsurface soil, exposure to particulates in ambient air via inhalation should also be based on surface and subsurface soil data and not just surface soil data as conducted. The exposure and risk estimates should be revised accordingly.

Response #93 Agreed. Inhalation of respirable particulates will be based on surface and subsurface soils. The following sentence will be added: "Also, inhalation of respirable particulates consisting of surface and subsurface soil was assumed".

Comment #94 Page 7-64, top and Page 7-144, P4: As exposure to sediment does not "require standing water to be present", either a better justification should be provided for limiting the frequency of exposure to sediment or sediment exposure should be reevaluated based on the frequency of exposure to the other environmental media.

Response #94 Agreed. The paragraph will be edited and the following text will be inserted: "Ingestion of sediment is assumed to occur when the drainage ditches are dry, when the sediment could potentially be ingested by children in the same manner as soil. This pathway is assumed to have the same exposure frequency (EF) and exposure duration (ED) used for the surface water pathway, since ingestion of dry sediment is expected to be about as infrequent as wading in the wet drainage ditches".

Comment #95 Page 7-112, P6: A description of the body surfaces (e.g., hands, hands and forearms, etc.) represented by the assumed body surface areas should be provided for each receptor.

Response #95 Agreed. The specific body surfaces assumed to be exposed for each receptor will be explained.

Comment #96 Page 7-137, Section 7.3.5.8: Reference to the USEPA's Dermal Assessment Guidance: Principles and Applications should be made consistent throughout the text. The USEPA's caveat on pages 5-51 and 5-52 of their Dermal Assessment Guidance, that use of this approach is unverified and perhaps overly conservative, should be included in the text.

Response #96 Agreed. The following paragraph will be added, based on caveats in the USEPA guidance document:

In the guidance document Dermal Exposure Assessment: Principles and Applications (USEPA 1992), EPA cautions that "dermal exposure is the

least well understood of the major exposure routes. Very little chemical-specific data are available, especially for soils, and the predicitive techniques have not been well validated." EPA further states that dermal exposure/risk estimates have considerable uncertainty, and in some cases may be overly conservative.

Comment #97 Page 7-140, P2: For the units to balance, the conversion factor (CF) should be included in the calculation for absorbed dose per event. Also, it appears that in Table 7-34 the permeability constant used in the absorbed dose per event calculation is incorrectly used again in the absorbed dose calculation. The analyses should be revised accordingly.

Response #97 Agreed. The conversion factor (CF) will be incorporated in the absorbed dose per event calculation in Tables 7-34 and 7-35, and in the text on page 7-143. Tables 7-34 and 7-35 will be revised to correct errors associated with CF and the permeability constant.

Comment #98 Page 7-143, P2: The last sentence should be reworded as lag times, not chemicals, were derived.

Response #98 Agreed. The sentence will be reworded as "Lag times for chemicals not having values in Table 5-18 were then derived using the following equation:".

Comment #99 Page 7-144, P3: It appears that the word "groundwater" can be deleted from the phrase "groundwater recreation" in the last sentence.

Response #99 Agreed.

Comment #100 Page 7-154, P5: As correctly discussed elsewhere in the text, with the exception of dermal contact exposure, all other exposure evaluation result in expressions of "intake" and not "dose". Incorrect use of the term "dose" should be corrected here and as appropriate throughout the text.

Response #100 Agreed. The text will be rewritten as: "The purpose of the RfD/RfC is to provide a benchmark against which intakes (or an absorbed dose in the case of dermal contact) from human exposure to various environmental conditions might be compared. Intakes or doses that are significantly higher ...".

Comment #101 Page 7-159: The list of oral absorption efficiencies and the associated text should be revised to indicate that the oral absorption efficiency for benzo(a)pyrene will be used for the other carcinogenic PAHs.

Response #101 Agree. Oral absorption efficiencies will be moved to the Toxicity Value table, with appropriate explanatory footnotes.

Comment #102 Page 7-159, P St.: The statement that "Assuming 100 percent absorption . . . could overestimate risk . . ." is incorrect and should be revised or deleted. Adjusting an oral RfD by multiplying it by an oral absorption efficiency less than 1.0 results in a lower, and hence more conservative, adjusted oral RfD.

Response #102 Agreed. This text will be corrected. (Note: this comment is essentially the same as Comment #9 for Sections 6.0 and 7.0.)

Comment #103 Page 7-163, P2: Inhalation slope factor units are $(mg/kg\text{-}day)^{-1}$. The text should be so corrected.

Response #104 Agreed. The text will be corrected.

Comment #104 Page 7-164: The relative potency approach recommended by the USEPA (1993) to estimate cancer risks from exposure to the carcinogenic PAHs does not appear to have been followed for benzo(k)fluoranthene and chrysene. The risk characterization should be revised accordingly.

Response #104 Agreed. The relative potencies for benzo(k)fluoranthene and chrysene will be changed as requested.

Comment #105 Page 7-164, Section 7.5 Risk Characterization: Since USEPA risk assessment methodologies result in order-of-magnitude approximations of risk, hazard indices and estimated cancer risks should be presented with one significant figure. To do otherwise implies false precision. It is not necessary to identify "predominant" chemicals where the hazard indices and/or estimated cancer risks are less than or within the acceptable range. As discussed earlier, distinctions should be made as to the data set (e.g., surface soil) evaluated.

Response #105 Agreed. All cancer and noncancer risk estimates have been presented to one significant figure in scientific notation.

Comment #106 Page 7-182, P St.: For the first time in Section 7.0, exposure of the future industrial worker is presented in the context of indoor air and indoor surface dust. This appears in error since all of the previous and subsequent text and tables refer to ambient air and soil. The text or, as appropriate, the analyses should be revised accordingly.

Response #106 Agreed. The typographic errors in the first sentence of the first paragraph of Section 7.5.4 will be revised to read: "... exposures via inhalation of ambient air, ingestion of soil and dermal contact with soil".

Comment #107 Page 7-208, Section 7.5.6: The text should be revised to include reference to surface soil, not merely "soil".

Response #107 Agreed. References to "soil" in this section will be changed to "surface soil".

Comment #108 Page 7-230, P5: The text should be revised to reference SEAD-17.

Response #108 Agreed. The typographic error will be corrected.

Comment #109 Page 7-231, P St.: The text should be revised to include justification for the statement that "The most susceptible receptors would be the future construction worker."

Response #109 Agreed. This statement will be reviewed in light of the updated lead guidance and revised as appropriate.

Comment #110 Page 7-232, top: The discussion should be reworded. The use of 95%UCL concentrations has no relevance to the statement that ". . . it is very unlikely that any chemicals were present . . . and not detected in a least one sample."

Response #110 Agreed. The clause "and the 95th UCLs were used for the assessment," will be deleted from the first complete sentence on page 7-232.

Comment #111 Page 7-233, Section 7.5.8.3: Brief toxicological profiles should be provided for Chemicals of potential concern (e.g., acenaphthylene) not evaluated quantitatively due to a lack of toxicological criteria.

Response #111 Disagree. The group of compounds with no toxicological criteria, after inclusion of provisional criteria, are already discussed in the Uncertainty section (Section 7.5.8.3).

Comment #112 Page 7-301, 7.7 Summary: The summary paragraph indicates "the potential to be exposed to chemicals of concern at levels above those defined by the USEPA" while the 2nd paragraph of Section 7.7.1 indicates that cancer risks are below or within the target risk range and noncancer hazard index values are below the target value. This apparent discrepancy in the discussions that should be corrected. The text should be revised to include discussion of potential health risks posed by lead concentrations in soil above USEPA criteria.

Response #112 Agreed. The discrepancy between the two paragraphs will be corrected (the correct information is that cancer risks are below or within the target risk range and noncancer hazard index values are below the target value).

Comment #113 Table 7-4: It appears that toluene should be a chemical of potential concern in sediment and not benzene. The table should be revised accordingly.

Response #113 Agreed. The table has been revised.

Comment #114 Table 7-5: The inhalation rate provided for the future trespasser, 2 m^3/day should be clarified or corrected. Rather than a young child (ages 6-9), the future trespasser, particularly to an industrial site, should be characterized as an adolescent (e.g., ages 12-18). The exposure factors for ingestion of surface water by a future trespasser is missing an entry for exposure time - 1 hour/day. The table and all associated calculations should be revised accordingly.

Response #114 Agreed. The future tresspasser will be characterized as an adolescent, and all exposure factors, including inhalation rate, will be adjusted accordingly. The ingestion of surface water pathway will be deleted as recommended in Comment #10. All other affected tables and calculations will be corrected.

Comment #115 Tables 7-18, 7-19, 7-26, 7-27, 7-34, and 7-35: The exposure frequencies presented in these tables do not match those presented in Table 7-5. The exposure and risk estimates should be revised accordingly.

Response #115 Agreed. The incorrect exposure frequencies for the industrial worker in Tables 7-18, 7-19, 7-26 and 7-27 will be corrected to match Table 7-5. The correct exposure frequencies are 250 days (RME) and 234 days (CT). The exposure frequencies for tresspasser contact with surface water will be corrected in Table 7-5 to match the correct values in Tables 7-34 and 7-35. The correct exposure frequencies are 25 days (RME) and 13 days (CT).

Comment #116 Table 7-20: Since an oral RfD is available, intake (Nc) should be calculated for methylene chloride. Since toluene is not regarded as a known or suspected carcinogen, intake (Car) should not have been calculated for toluene. The intakes and associated should risks should be revised in Table 7-57 and the text should be revised accordingly.

Response #116 Agreed. Tables 7-20 and 7-57 will be corrected.

Comment #117 Pages 7-264 and 6-274: <u>Section 7.6.2.2.8 Habitat Assessment, Resource Values to Wildlife</u>. These sections are exact for each location - word for

Response #1 Disagree. The requirements of Section 404 of the Clean Water Act/Executive Order 11990 (Protection of Wetlands) and the Endangered Species Act refer to wetlands protection. As stated in the RI and the FS, there are no wetlands nearby the sites. These regulations are certainly addressed for sites where they apply, but that is not the case for SEAD 16 and 17.

Comment #2 Consistent with our comments on earlier documents related to this base, we recommend that the FS address the applicability of the requirements of the National Historic Preservation Act (NHPA) to actions at these sites, to help ensure that remedial actions comply with NHPA requirements.

Response #2 Disagree. The applicability of the requirements of NHPA are being addressed for the entire depot under a separate contract.

Comment #3 In a related matter, in June 1995, we reviewed (and found acceptable) two scopes of work (SOW) for archeological investigations related to ensuring that remedial actions at this base comply with the requirements of the NHPA, and indicated that we would like to receive the results of these studies when they became available. A review of our records indicates that we have not yet received the requested materials.

Response #3 Acknowledged. The archeaological investigations have not been completed, therefore there are no results available. The results will be sent to the appropriate parties when the study is complete.

Comment #4 This facility is on the base closure list established pursuant to the Base Realignment and Closure Act (BRAC). We understand that the Army is planning to prepare an Environmental Impact Statement (EIS) evaluating the environmental consequences of disposal and reuse of the property, pursuant to its National Environmental Policy Act (NEPA) responsibilities. We would appreciate a current copy of the Army's schedule for completion of its NEPA process pursuant to BRAC.

Response #4 The EIS is currently underway under separate contract. The Army intends to close the Depot and eliminate all functions by 2002 pursuant to BRAC.

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