

April 9, 2009

Mr. John Nohrstedt
U.S. Army Corps of Engineers
Engineering and Support Center, Huntsville
Attn: CEHNC-ED-CS-P
4820 University Square
Huntsville, Alabama 35816-1822

SUBJECT: Signed Final Record of Decision for the Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71) at Seneca Army Depot Activity; Contract DACA87-02-D-0005, Delivery Order 0013

Dear Mr. Nohrstedt:

Parsons Infrastructure & Technology Group Inc. (Parsons) is pleased to submit the signed Final Record of Decision for the Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71) located at the Seneca Army Depot Activity (SEDA) in Seneca County, New York. This work was performed in accordance with the Scope of Work (SOW) for Delivery Order 0013 under Contract No. DACA87-02-D-0005.

Parsons appreciates the opportunity to provide you with the Record of Decision for this work. Should you have any questions, please do not hesitate to call me at (617) 449-1405 to discuss them.

Sincerely,



Todd Heino, P.E.
Project Manager

Enclosures

cc: S. Absolom, SEDA
K. Hoddinott, USACHPPM
R. Walton, USAEC
R. Battaglia, USACE, NY

April 9, 2009

Mr. Julio Vazquez
U.S. Environmental Protection Agency, Region II
Superfund Federal Facilities Section
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New York, NY 10007-1866

Mr. Kuldeep K. Gupta, P.E.
New York State Department of Environmental Conservation (NYSDEC)
Division of Environmental Remediation
Remedial Bureau A, Section C
625 Broadway
Albany, NY 12233-7015

Mr. Mark Sergott
Bureau of Environmental Exposure Investigation, Room 300
New York State Department of Health
547 River Street, Flanigan Square
Troy, New York 12180

**SUBJECT: Signed Final Record of Decision for the Fill Area West of Building 135 (SEAD-59)
and the Alleged Paint Disposal Area (SEAD-71) at Seneca Army Depot Activity
EPA Site ID# NY0213820830 and NY Site ID# 8-50-006**

Dear Mr. Vazquez/Mr. Gupta/Mr. Sergott:

Parsons Infrastructure & Technology Group Inc. (Parsons) is pleased to submit the signed Final Record of Decision for the Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71) located at the Seneca Army Depot Activity (SEDA) in Seneca County, New York (EPA Site ID# NY0213820830 and NY Site ID# 8-50-006).

Should you have any questions, please do not hesitate to call me at (617) 449-1405 to discuss them.

Sincerely,



Todd Heino, P.E.
Program Manager

Enclosures

cc: J. Nohrstedt, USACE, Huntsville
K. Hoddinott, USACHPPM
R. Battaglia, USACE, NY
S. Absolom, SEDA
R. Walton, USAEC
M. Heaney, TechLaw

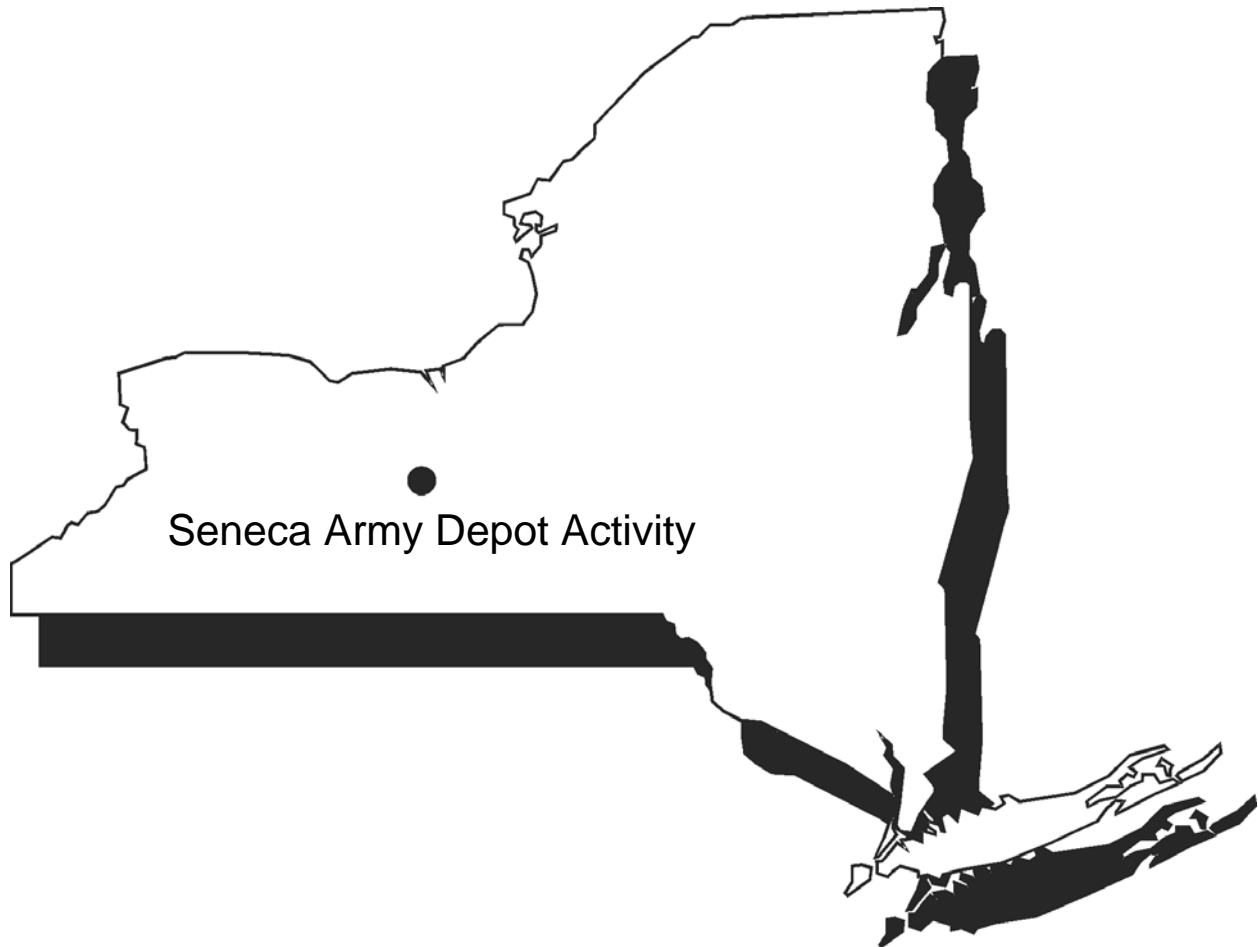


US Army, Engineering & Support Center
Huntsville, AL

01860



Seneca Army Depot Activity
Romulus, NY



Seneca Army Depot Activity

RECORD OF DECISION

FOR THE FILL AREA WEST OF BUILDING 135 (SEAD-59)
AND THE ALLEGED PAINT DISPOSAL AREA (SEAD-71)
SENECA ARMY DEPOT ACTIVITY

CONTRACT NO. DACA87-02-D-0005
DELIVERY ORDER NO. 0013
EPA Site ID# NY0213820830
NY Site ID# 8-50-006

PARSONS

March 2009

RECORD OF DECISION

FOR

**THE FILL AREA WEST OF BUILDING 135 (SEAD-59) AND
THE ALLEGED PAINT DISPOSAL AREA (SEAD-71)**

**SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK**

Prepared for:

**SENECA ARMY DEPOT ACTIVITY
5786 STATE ROUTE 96
ROMULUS, NEW YORK 14541**

and

**UNITED STATES ARMY CORPS OF ENGINEERS
4820 UNIVERSITY SQUARE
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Prepared By:

**Parsons
150 Federal St., 4th Floor
Boston, Massachusetts 02110**

**Contract Number: DACA87-02-D-0005
Delivery Orders: 0013
USEPA Site ID: NY0213820830
NY Site ID: 8-50-006**

March 2009

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1.0 DECLARATION OF THE RECORD OF DECISION

Areas of Concern Name and Location

The Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71)

Seneca Army Depot Activity

5786 State Route 96

Romulus, New York 14541

USEPA Site ID: NY0213820830; NY Site ID: 8-50-006

Statement of Basis and Purpose

This Record of Decision (ROD) documents the U.S. Army's (Army's) and the U.S. Environmental Protection Agency's (USEPA's) selected remedies for the Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71) located at the Seneca Army Depot Activity (SEDA or the Depot) in the Towns of Varick and Romulus, Seneca County, New York. The decisions for these two areas of concern (AOCs) were developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended, 42 U.S.C. Section 9601, *et seq.* and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300. The Base Realignment and Closure (BRAC) Environmental Coordinator, the Chief, Consolidations Branch, BRAC Division, and the USEPA Region II have been delegated the authority to approve this Record of Decision (ROD).

This ROD is based on the Administrative Record that has been developed in accordance with Section 113(k) of CERCLA. The Administrative Record is available for public review at the Seneca Army Depot Activity, 5786 State Route 96, Building 123, Romulus, NY 14541. The Administrative Record Index identifies each of the items considered during the selection of the remedial actions. This index is included in **Appendix A**.

The State of New York, through the New York State Department of Environmental Conservation (NYSDEC), has concurred with the selected remedies. The NYSDEC Declaration of Concurrence is provided in **Appendix B** of this ROD.

AOC Assessment

The response actions selected in this ROD are necessary to protect human health and the environment from actual or threatened releases of hazardous substances into the environment from SEAD-59 and SEAD-71 or from actual or threatened releases of pollutants or contaminants, which may present an imminent and substantial endangerment to public health or welfare.

Description of the Selected Remedies

The selected remedies for SEAD-59 and SEAD-71 address contaminated soil and groundwater. The selected remedies will result in the removal of soil and groundwater as exposure pathways for potential receptors.

The elements that compose the selected remedies at SEAD-59 and SEAD-71 include:

- Establish, monitor, and maintain land use controls (LUCs) that:
 - Prohibit access to or use of the groundwater until unrestricted use and unlimited exposure criteria are attained; and,
 - Prohibit the development or use of the property for residential housing, elementary and secondary schools, childcare facilities and playgrounds until unrestricted use and unlimited exposure criteria are attained at SEAD-59 and SEAD-71.

Soils excavated from SEAD-59 and SEAD-71 that remain staged in stockpiles in the vicinity of the two AOCs will be moved to SEAD-5 where they will continue to be managed by the Army. Although these soils contain measureable concentrations of hazardous substances, they are not hazardous by characteristic determinations (i.e., toxicity characteristic, ignitability, corrosivity, reactivity). It is possible that the stockpiled soil will subsequently be used as part of a multi-layered cap that may be constructed over SEAD-5 soil to address conditions that have been identified at that AOC.

SEAD-59 and SEAD-71 represent a small portion of a larger tract of land located in the east-central portion of the former SEDA that comprises the Planned Industrial / Office Development and Warehousing (PID) Area that has been transferred to the Seneca County Industrial Development Agency (SCIDA), exclusive of any Army retained property. Based on an agreement reached between the Army, the USEPA, and the NYSDEC, the entire PID Area, exclusive of Army retained property, is subject to equivalent LUCs (i.e., prohibit groundwater access/use; prohibit residential housing/elementary and secondary schools/childcare facilities/playgrounds) as are proposed for imposition at SEAD-59 and SEAD-71 in this ROD. The referenced LUCs were the remedy selected in a 2004 ROD [*Final ROD for Sites Requiring Institutional Controls in the Planned Industrial/Office Development or Warehousing Areas* (Parsons, 2004)] for SEAD 27, 64A, and 66, three other AOCs within the PID Area, due to levels of contaminants that were identified at those AOCs. At the time of the 2004 ROD, the Army, USEPA, and NYSDEC agreed that these LUCs should be applied to all land within the greater PID Area, pending the provision and evaluation of new data for specific sites within the PID Area if a future owner or occupant wished to apply for a variance from the specified LUCs. The PID Area LUCs were implemented when the PID Area was transferred to the SCIDA by the Army, but they are not applied to the land comprising SEAD-59 and SEAD-71, as these parcels were retained by the Army at the time of the greater PID Area's transfer, pending completion of necessary investigations and studies, the evaluation of potential remedial actions, and the selection of an approved remedy for SEAD-59 and SEAD-71.

The Army shall, through the on-site Commander's representative or other designated official, implement, inspect, report on, and enforce the remedy described in this ROD. This ROD selects as the remedy for SEAD-59 and SEAD-71 LUCs (i.e., groundwater access/use and land use limitations) to be imposed by an environmental easement at the time when land comprising SEAD-59 or SEAD-71 is transferred from Army ownership to another party, as well as the prohibition of any pre-transfer use inconsistent with the LUCs. Although the Army may later transfer these responsibilities to another party, the Army shall retain ultimate responsibility for remedy integrity.

To implement the remedies selected in this Record of Decision, which will include the imposition of LUCs at SEAD-59 and SEAD-71, a LUC Remedial Design will be prepared which will provide for the recording of an environmental easement which is consistent with Paragraphs (a) and (c) of the New York State Environmental Conservation Law (ECL) Article 27, Section 1318: Institutional and Engineering Controls. In addition, the Army will prepare an environmental easement for SEAD-59 and SEAD-71, consistent with Section 27-1318(b) and Article 71, Title 36 of ECL, in favor of the State of New York, which will be recorded at the time of the property's transfer from Federal ownership and which will require the owner and/or any person responsible for implementing the LUCs set forth in this ROD to periodically certify that such institutional controls are in place. The Army and the USEPA will be named as third-party beneficiaries on the environmental easement. A schedule for completion of the draft SEAD-59 and SEAD-71 LUC Remedial Design Plan (LUC RD) will be completed within 21 days of the ROD signature, consistent with Section 14.4 of the Federal Facilities Agreement (FFA). To implement the remedy prior to transfer, the Army, as the owner and operator of the property at SEAD-59 and SEAD-71, will through the on-site Commander's representative or other designated official, ensure that the LUCs are implemented by monitoring the property at SEAD 59 and SEAD 71 and restricting development or use on this property if inconsistent with the LUCs.

Once the selected remedies are applied, a review of the selected remedies will be made at least once every five years in accordance with Section 121(c) of the CERCLA. The periodic reviews of the remedies are required by CERCLA at sites where contamination remains in order to assure the protectiveness of the selected remedy.

The groundwater access/use restriction and the restriction prohibiting residential housing, elementary and secondary schools, childcare facilities and playgrounds may be eliminated, on a site-by-site basis, if data is provided to, and approved by, the Army, USEPA, and the NYSDEC that documents that groundwater quality achieves applicable groundwater standard levels and that soil data allows for unrestricted use and unlimited exposures.

The Army and USEPA expect that remedial action will be needed at SEAD-5 to address soils currently in the ground at that AOC that represent a potential risk to human health. One of the potential remedial actions that may be taken at SEAD-5 is to spread the stockpiled soils staged at SEAD-59 out over soils in SEAD-5 that pose the potential threat. The stockpiled soil would become part of a multi-layered cover that would be placed over the contaminated soil to prohibit access and exposure to future users or occupants. The SEAD-5 remedial action would be followed by the imposition of a LUC to restrict allowable activities at that AOC, and an imposition of a LUC to protect the soil cover and the demarcation fabric above such interred soils. The remedial action for SEAD-5 will be addressed in a separate Record of Decision to be issued pursuant to CERCLA for that AOC.

State Concurrence

NYSDEC forwarded to USEPA a letter of concurrence regarding the selection of a remedial action in the future. This letter of concurrence has been placed in **Appendix B**.

Declaration

As required by CERCLA and the NCP, the remedies selected in this ROD are protective of human health and the environment; are cost effective; comply, unless waived, with applicable or relevant and appropriate requirements, criteria or limitations promulgated under federal or state laws (ARARs); and use permanent solutions, alternative treatment technologies, and resource recovery options to the maximum extent possible. CERCLA and the NCP also state a preference for treatment as a principal element for the reduction of toxicity, mobility, or volume of the hazardous substances.

The remedies identified will result in hazardous substances and pollutants or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure for an indeterminate period. A review of the AOCs and the selected remedies will be conducted within five years after initiation of the remedial action at each AOC to ensure that the remedy is, or will be, protective of human health and the environment, with consideration given to each AOC's continuing and planned future use.

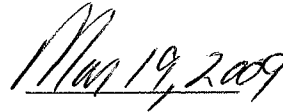
The estimated cost for implementing, monitoring, assessing and reporting on the continued suitability of the recommended land use restrictions is \$149,460 for SEAD-59 and \$74,460 for SEAD-71 over a 30-year period. The total combined estimated cost of the selected remedial actions at both areas of concern included in this ROD is \$223,920.

The foregoing represents the selection of a remedial action by the U.S. Department of the Army and the U.S. Environmental Protection Agency, with the concurrence of the New York State Department of Environmental Conservation.

Concur and recommend for immediate implementation:



STEPHEN M. ABSOLOM
BRAC Environmental Coordinator

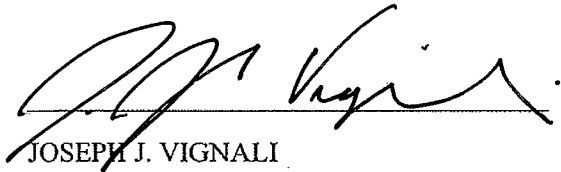


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The foregoing represents the selection of a remedial action by the U.S. Department of the Army and the U.S. Environmental Protection Agency, with the concurrence of the New York State Department of Environmental Conservation.

Concur and recommend for immediate implementation:



JOSEPH J. VIGNALI
Chief, Consolidations Branch
BRAC Division

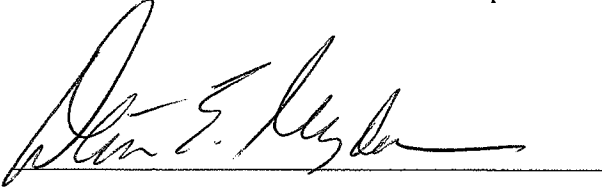
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The foregoing represents the selection of a remedial action by the U.S. Department of the Army and the U.S. Environmental Protection Agency, with the concurrence of the New York State Department of Environmental Conservation.

Concur and recommend for immediate implementation:



WALTER E. MUGDAN
Director, Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II

3/31/2009

Date

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2.0 AOC NAME, LOCATION, AND DESCRIPTION

The Seneca Army Depot previously occupied approximately 10,600 acres of land in Seneca County in the Towns of Romulus and Varick, New York. The property was acquired by the United States Government in 1941, and was operated by the Department of the Army from that time until approximately September 2000 when the installation closed. Prior to the acquisition of the land and the construction of the Depot, the land was used for agriculture, farming, and residential purposes.

A location map for SEDA is provided as **Figure 2-1**. **Figure 2-1** also shows that SEDA is bordered by New York State Highway 96 on the east and New York State Highway 96A on the west. SEDA is located in an uplands area, which forms a divide that separates two of New York's Finger Lakes; Cayuga Lake on the east and Seneca Lake on the west. Ground surface elevations are generally higher along the eastern and southern borders of the Depot, and lower along the northern and western borders. The approximate elevation at the southeastern corner of the SEDA site is 740 feet (ft., National Geodetic Vertical Datum [NGVD] 1929), while the approximate elevation at the southwestern and northeastern corners is 650 ft. (NGVD, 1929). The approximate elevation at the southwestern corner of the Depot is 590 ft. (NGVD, 1929). Much of the land surrounding the Depot is sparsely populated farmland.

The Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71) are located in the east-central portion of the former SEDA. Both of these AOCs are located in a portion of the former Depot that has been designated by the SCIDA as the PID Area where the future land use is designated as industrial and commercial purposes. Portions of the PID Area are currently occupied by private commercial and light industrial operations.

A site plan for SEAD-59 is shown as **Figure 2-2**. SEAD-59 (Fill Area West of Building 135) is approximately 6.2 acres in size and encompasses an area located along both sides of an unnamed east-west dirt road that provides access to Building 311 for the Depot's former Administration Area and terminates at Building 311. The entire western border of SEAD-59 is defined by a north-south trending drainage ditch. An east-west oriented drainage swale that parallels the SEDA railroad tracks forms the northern boundary of SEAD-59. Drainage ditches are also located on each side of the dirt access road to Building 311.

SEAD-59 was used for the disposal of construction debris and oily sludge. SEDA personnel have also indicated the area of SEAD-59 was used as the Army's version of a local Department of Public Works (DPW) yard where vehicles and materials were staged, and as a result a large quantity of miscellaneous "roads and grounds" debris remains, and has become intermixed with the native soils. Finally, results of test pitting operations (See Section 3.3 of Final SEAD-59 and 71 Phase I Remedial Investigation (RI) Report [Parsons, 2001]) completed during site investigation activities indicate that full and empty 15- and 55-gallon drums, one-, two- and five-gallon paint cans, 20-gallon waste cans, and chain-linked fence were also found buried at the site.

A site plan for SEAD-71 is shown as **Figure 2-3**. SEAD-71 (the Alleged Paint Disposal Area) is wedge shaped and is located west of 4th Avenue near Buildings 114 and 127. The entire AOC is approximately

2.4 acres in size and bounded on the north and south by railroad tracks serving Buildings 114 and 127. The topography is relatively flat with a gentle slope to the southwest.

The blunt end of the wedge-shaped AOC (i.e., eastern side) is surrounded by a chain-link fence and which is hereafter referred to as the “Fenced Area.” The Fenced Area is situated between Buildings 114 and 127 and is bisected by a single east-west railroad track. The Fenced Area is generally paved or covered with a mixture of crushed stone and broken asphalt. Pieces of asphalt and concrete can be observed on the ground surface within the Fenced Area. Additional east-west trending railroad tracks are located between the southern edge of Building 114 and the northern bound of the Fenced Area and between the northern edge of Building 127 and the southern bound of the Fenced Area. The sharp side of the wedge-shaped AOC (i.e., western side) is a grassy area that is interrupted by a gravel roadway that enters from the north, turns westerly, and then exits the AOC to the south. The storage areas north and east of SEAD-71 contain numerous white transformers, large spools of cable, and other assorted equipment.

Prior to the RI, rumors suggest that paints and/or solvents were disposed at SEAD-71 in burial pits. The results of the RI test pitting operations failed to confirm the paint and oil disposal rumors, but did indicate that the area had been used for the disposal of construction debris, including sheet metal, asphalt, chain link fencing, sand and stone, piping, railroad ties, wood and cinders. No dates of disposal are available nor is there any information on the number of suspected disposal pits that may have been used.

Habitat and Ecological Community Characterization

AOC-specific ecological evaluations of the plant and animal habitats and communities located at SEAD-59 and SEAD-71 were not conducted. The AOCs are generally void of characteristics and attributes that would make them an attractive habitat for most ecological receptors. As is indicated above, SEAD-59 encompasses an area along both sides of an unnamed access road. The area to the north was excavated and backfilled during the 2002 time-critical removal action (TCRA) (ENSR, 2002a)¹. The area to the south is covered with vegetation. Several areas to the south of the unnamed road were excavated and backfilled during the 2002 TCRA (ENSR, 2002a). There are several drainage swales on the western and northern border of the AOC and on each side of the access road.

SEAD-71 is bounded by railroad tracks and a chain-link fence. The Fenced Area situated between Buildings 114 and 127 is surrounded by a chain-link fence and the area is generally paved over or covered with crushed stone. The west portion of SEAD-71 is a grassy area that is interrupted by a gravel roadway.

Characterizations of the habitat and ecological communities present near, but exterior of, SEAD-59 and SEAD-71 are based on general observations made during the 1994 Expanded Site Inspections (ESIs), the 1997 Phase I RI, and the 2004 groundwater monitoring, and on the results of the ecological evaluations and assessment that have been conducted at other solid waste management units (SWMUs) at the SEDA [e.g., SEADs 4, 12, 16, 17, 25 and 26, and the Open Burning (OB) Grounds] as part of remedial investigations. SEADs 16, 17, 25 and 26 are also located within the greater PID Area, in close proximity

¹ Refer to *Final Draft – Removal Report, SEAD-59 and 71 Time Critical Removal Action, Seneca Army Depot Activity*, ENSR Corporation, December 2002 (ENSR, 2002). Additional discussion pertinent to the TCRA is provided in Section 3.1 and 6.1.2 of this Record of Decision.

to SEAD-59 and SEAD-71. Key aspects of these characterizations relevant to this risk assessment are presented below.

The methods used to characterize the ecological resources included AOC- and area-walkovers for the evaluation of existing wildlife and vegetative communities; interviews with local, state, and SEDA resource personnel; and review of environmental data obtained from previous Army reports. SEDA has a strong wildlife management program that is reviewed and approved by the New York State Division of Fish, Wildlife and Marine Resources. The Depot manages an annual white-tailed deer (*Odocoileus virginiana*) harvest and has constructed a large wetland called the "Duck Pond" in the northeastern portion of the facility to provide a habitat for migrating waterfowl.

The NYSDEC Natural Heritage Program Biological and Conservation Data System identifies no known occurrences of federal- or state-designated threatened or endangered plant or animal species within a 2-mile radius of SEAD-59 or SEAD-71. No species of special concern are documented within the Depot property.

The only significant terrestrial resource known to occur at SEDA is the population of white-pelaged white-tailed deer, which inhabits the fenced portion of the Depot, west of the PID area. Annual deer counting conducted at the Depot indicates that the size of the deer herd is approximately 600 animals of which approximately one-third (i.e., 200) are white-pelaged. Since the perimeter of the Depot is totally enclosed by fence, the white-pelaged deer is thought to result from inbreeding within the herd. The Depot maintains the herd through an annual hunting season to prevent overgrazing and starvation of the deer. The management plan of the herd is conducted by the New York State Division of Fish, Wildlife, and Marine Resources. The normal brown-pelaged deer are also common. White-tailed deer are not listed as a rare or endangered species.

Agricultural crops and deciduous forests comprise the vegetative resources used by humans near SEDA. Although no crops are grown at the Depot, farmland is the predominant land use of the surrounding private lands. Crops including corn, wheat, oats, beans and hay mixtures, are grown primarily for livestock feed. Deciduous forestland on the Depot and surrounding private lands is under active forest management. Timber and firewood are harvested from private woodlots that surround the Depot, but timber harvesting does not occur on the Depot.

Vegetation across the SEDA consists of successional old field, successional shrub, and successional hardwoods. The NYSDEC Natural Heritage Program Biological and Conservation Data System identifies no known occurrences of federal- or state-designated threatened or endangered plant. No species of special concern are documented within the Depot property. No rare or endangered species were observed during the site assessments.

Several wildlife species are hunted and trapped on private lands near SEDA. Game species hunted include the eastern cottontail, white-tailed deer, ruffed grouse, ring-necked pheasant, and various waterfowl. Gray squirrel and wild turkey are hunted to a lesser extent. At the Depot, deer, waterfowl, and small game hunting are allowed. Trapping is also permitted on the Depot.

Animals that have been identified at the Depot during various ecological surveys include the beaver, eastern coyote, deer, red and gray fox, eastern cottontail rabbit, muskrat, raccoon, gray squirrel, striped skunk, and the woodchuck. Bird species that have been identified include the blue jay, black-capped chickadee, American crow, mourning dove, northern flicker, ruffed grouse, ring-billed gull, red-tailed hawk, northern junco, American kestrel, white breasted nuthatch, ring-necked pheasant, American robin, eastern starling, turkey vulture, and pileated woodpecker.

There are no permanent lakes, ponds, streams or wetlands in either SEAD-59 or SEAD-71. Surface water only exists intermittently in drainage ditches; thus, it does not directly support aquatic life.

No signs of stressed or altered terrestrial biota (vegetation and wildlife species) were observed at either SEAD-59 or SEAD-71. There were no indications of unnatural die-off or stunted vegetation.

3.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

3.1 LAND USE

Prior to the acquisition of the land and construction of SEDA in 1941, the property was privately owned and was used principally as homesteads and for agriculture. Between 1941 and 2000, SEDA was owned by the United States Government and operated by the Department of the Army. The Depot began its primary mission of receipt, maintenance and supply of ammunition in 1943. After the end of World War II, the Depot's mission shifted from supply to storage, maintenance and disposal of ammunition. SEDA was selected for closure by the Department of Defense (DoD) in 1995, and SEDA's military mission terminated in September 1999 and the installation was closed in September 2000.

To address employment and economic impacts associated with the SEDA's closure, the Seneca County Board of Supervisors established the Seneca Army Depot Local Redevelopment Authority (LRA) in October 1995. The primary responsibility assigned to the LRA was to prepare a plan for redevelopment of the SEDA property. Following a comprehensive planning process, a *Reuse Plan and Implementation Strategy for Seneca Army Depot* (RKG Associates, 1996) was completed and adopted by the LRA on October 8, 1996. The Seneca County Board of Supervisors subsequently approved this *Reuse Plan* on October 22, 1996. In 2005, the Seneca County Industrial Development Authority (SCIDA) changed the planned use of land in many portions of the Depot. **Figure 3-1** depicts the intended future land uses for SEDA, as modified by the SCIDA. As indicated on **Figure 3-1**, the proposed future land use for SEAD-59 and SEAD-71 is for Planned Industrial/Office Development or Warehousing.

Land within the Planned Industrial/Office-Development and Warehousing (PID) area is subject to LUCs that prohibit the use of the land for residential activities and that prohibit access to, and use of, groundwater. These LUCs were implemented on the PID Area via a separate Proposed Plan and ROD, [*Final ROD for Sites Requiring Institutional Controls in the Planned Industrial/Office Development or Warehousing Areas* (Parsons, 2004) signed on September 30, 2004].

3.2 RESPONSE AND ENFORCEMENT HISTORY

SEDA was proposed for the National Priorities List (NPL) in July 1989. In August 1990, the listing of SEDA as a NPL site was finalized in Group 14 on the Federal Section. After SEDA was listed on the NPL, the Army, USEPA, and NYSDEC identified 57 SWMUs where data or information suggested, or evidence existed to support, that hazardous substances or hazardous wastes had been handled and where releases to the environment may have occurred. Additionally, the USEPA, NYSDEC, and the Army negotiated and finalized a Federal Facilities Agreement (FFA, USEPA, Army and NYSDEC, 1993) for the Site in 1993. The general purposes of the FFA were to:

- *“Ensure that the environmental impacts associated with past and present activities at the Site are thoroughly investigated and that appropriate remedial action is taken as necessary to protect human health and the environment;*
- *Establish a procedural framework and schedule for developing, implementing and monitoring appropriate response actions at the Site in accordance with CERCLA, the NCP, Superfund guidance and policy, RCRA, RCRA guidance and policy and applicable State law; and*

- *Facilitate cooperation, exchange of information and participation of the Parties in such actions.”²*

The number of SWMUs was subsequently expanded to include 72 AOCs once the Army finalized the *SWMU Classification Report* (Parsons, 1994) for the Depot in 1994.

The SEDA was a generator and treatment, storage and disposal facility (TSDF) for hazardous wastes and thus, subject to regulation under the Resource Conservation and Recovery Act (RCRA). Under the RCRA permit system, corrective action is required at all SWMUs, as needed. Remedial goals are the same for CERCLA and RCRA; thus, once the 72 SWMUs were listed, the Army recommended that they be identified as either areas requiring No Action or as AOCs, where additional; investigation, study, or actions were needed. SWMUs listed as AOCs were then scheduled for investigations based upon data and potential risks to the environment.

In October 1995, the SEDA was designated for closure under the DoD’s 1995 Base Realignment and Closure (BRAC) process. In accordance with requirements of BRAC, the Army performed and summarized the findings of an Environmental Baseline Survey (EBS) for SEDA. Under the EBS, all areas at the Depot were evaluated and subdivided into one of seven standard environmental categories consistent with the Community Environmental Response Facilitation Act (CERFA – Public Law 102-426) guidance and the DoD’s *BRAC Cleanup Plan Guidebook* (DoD, 1993). Based on the findings and conclusions of the EBS, SEAD-59 and SEAD-71 were both designated as AOCs where additional information and data were required before the land could be offered for transfer and reuse.

Once SEDA was added to the 1995 BRAC list, the Army’s primary objective expanded from performing remedial investigations and completing necessary remedial actions to include the release of non-affected portions of the Depot to the surrounding community for their reuse for other, non-military purposes (i.e., industrial, municipal, and residential). The designated future use of land within the SEDA was first defined and approved by the Seneca County Local Redevelopment Authority in 1996. The planned use for portions of the SEDA was modified by SCIDA in 2005.

Prior investigations and interim remedial actions at SEAD-59 and SEAD-71 have consistently been conducted concurrently as separate components of larger contracts. Work performed at both AOCs includes the ESIs in 1994, Phase I RIs in 1997, Time Critical Removal Actions (TCRAs) conducted in 2002, and Phase II RIs completed in 2006.

The ESIs performed in 1994 included geophysical investigations, soil investigations (including soil boring and test pitting), and groundwater monitoring well installation and sampling. The 1997 Phase I RI conducted at SEAD-59 included a soil gas survey, a geophysical survey, a test pitting program, a soil boring investigation, and groundwater monitoring well installation; the Phase I RI conducted at SEAD-71 included a ground penetrating radar survey, a surface soil investigation, and a test pitting program. The TCRAs performed in 2002 included excavation and staging of impacted soils, sampling and analysis of excavated areas and stockpiled excavated soils, disposal of approximately 3,805 tons of contaminated soil at an approved off-site landfill, installation of groundwater monitoring wells, and backfilling and grading

² Federal Facility Agreement under CERCLA Section 120 in the Matter of Seneca Army Depot, Romulus, New York, Docket Number: II-CERCLA-FFA-00202, Section 3, Page 4, January 1993.

of open excavations with acceptable soil from the stockpiles. For both AOCs, the Phase II RIs included validating and evaluating the soil data generated during the 2002 TCRAs, conducting groundwater monitoring, and performing risk assessments to characterize potential residual risks to human health and the environment.

The previous work is described in detail in the following reports:

- *Expanded Site Inspection Seven Low Priority AOCs SEADs 60, 62, 63, 64 (A, B, C, and D), 67, 70, and 71*(Parsons, 1995a);
- *Expanded Site Inspection Eight Moderately Low Priority AOCs SEADs 5, 9, 12 (A and B), (43, 56, 69), 44 (A and B), 50, 58, and 59* (Parsons, 1995b);
- *Revised Final Phase I Remedial Investigation (RI) Report for SEAD-59 and SEAD-7* (Parsons 2002c)1;
- *Final Draft Removal Report, SEAD-59 and 71 Time Critical Removal Action* (ENSR, 2002); and
- *Draft Final Phase II Remedial Investigation Report for SEAD-59 and SEAD-71.*

4.0 COMMUNITY PARTICIPATION

The Army, EPA, and NYSDEC rely on public input to ensure that community concerns are considered in selecting an effective remedy for each Superfund site. To this end, the RI/FS Report, the Construction Completion Report, the Proposed Plan and the supporting documentation have been made available to the public for a public comment period, which began on December 10, 2007 and concluded on February 08, 2008. Copies of the RI/FS Reports, the Time-Critical Removal Action Report, the Proposed Plan, the Record of Decision, and supporting documentation are available at the following repository:

Seneca Army Depot Activity

Building 123

Romulus, NY 14541

(607) 869-1309

Hours are Mon-Thurs 8:30 am to 4:30 pm

A public meeting was held during the public comment period at the Seneca County Office Building on December 12, 2007 at 7 p.m. to present the conclusions of the RIs and the interim removal actions (i.e., TCRA) to elaborate further on the reasons for recommending the preferred remedial option, and to receive public comments. Comments received at the public meeting, as well as written comments, are documented in the Responsiveness Summary Section of the ROD, **Appendix C**.

The primary responsibility assigned to the LRA was the preparation of a plan for the redevelopment of the Depot. During the BRAC process, monthly presentations have been given to the LRA. In addition, the SEDA Restoration Advisory Board (RAB) was established to facilitate the exchange of information between SEDA and the community. RAB members include the representatives from the Army, USEPA, NYSDEC, NYSDOH, and the community. After a comprehensive planning process, a Reuse Plan and Implementation Strategy for Seneca Army Depot was completed and adopted by the LRA on October 8, 1996. The Reuse Plan was subsequently approved by the Seneca County Board of Supervisors on October 22, 1996. The planned uses for portions of the SEDA have been modified by the SCIDA since 1996. The identified use for the land including SEAD-59 and SEAD-71 remained unchanged, and is Planned Industrial / Office Development.

During the BRAC process there have been, and continue to be, periodic presentations to the RAB regarding the progress of SEAD-59 and SEAD-71 and other investigations related to the closure of SEDA.

5.0 SCOPE AND ROLE

The Army's ultimate goal for SEDA is to transfer the entire site to other private or public parties for beneficial reuse. Prior to the transfer of any property at the Depot, the Army is required to ensure that the property is suitable for release and reuse at a level that is consistent with its intended foreseeable future use. If information or evidence exists to indicate that hazardous substances may be present at any location slated for transfer, the Army is obligated to conduct investigations needed to verify the presence/absence of hazardous substances, and assess the potential risks that may exist due to the presence of hazardous substances at the site. These investigations and assessments are conducted under the oversight of, and subject to the review and approval of the USEPA and the NYSDEC. The findings, results, and the conclusions of the investigations and assessments, and the subsequent land use decisions that are made based on the Army's investigations and assessments are also made available to the public for review and comment.

If the results and conclusions of the investigations and assessments of property at the SEDA indicate that unacceptable risks to human health or the environment exist due to the continuing presence of hazardous substances, the Army is obligated to propose, design, implement, monitor, inspect and report on the remedial actions used to eliminate, mitigate or control the threat. The remedial actions are also subject to review and approval by all parties.

Once the Army is able to demonstrate, and gain oversight agency concurrence, that a site is suitable for transfer, such transfer may be approved and allowed.

SEAD-59, the Fill Area West of Building 135, and SEAD-71 are designated AOCs that are located in the PID Area at the former SEDA. The Army is currently leasing other property located in the PID Area to outside parties for reuse as warehousing, commercial use and light industrial operation property. It is the Army's goal to demonstrate that SEAD-59 and SEAD-71 are available for reuse, via transfer to other public or private parties for similar purposes.

Results of the human health risk assessment conducted for SEAD-59 indicate that carcinogenic risks resulting from potential exposure to in-situ (i.e., in place in the ground) soil, stockpiled soil, and groundwater are within USEPA's acceptable limit (i.e., lower than 1×10^{-4}). The total non-cancer hazard index for the adolescent trespasser is below the EPA target limit of 1. The non-cancer hazard indices initially computed for the industrial worker and construction worker are 1 and 9, respectively. For the industrial worker, groundwater intake contributes 72% to the total non-cancer hazard identified. For the construction worker, inhalation of dust in ambient air and groundwater intake contribute 84% and 9%, respectively, to the total non-cancer hazard determined.

Antimony, iron, and manganese are the primary COPCs in groundwater contributing to the elevated non-cancer hazards for the industrial worker and the construction worker. However, the concentrations of metals observed in SEAD-59 groundwater are consistent with the Seneca groundwater background levels. Therefore, the groundwater intake contribution is equivalent to background, and does not result due to the degradation of water quality resulting from activities performed at the site.

Comparably, aluminum and manganese in SEAD-59 soil are the only COPCs contributing to the non-cancer hazard determined for inhalation of dust in ambient air. Again, the aluminum and manganese concentrations in SEAD-59 soil are consistent with, and in fact lower than, comparable levels found in background soils. Therefore, the elevated threat associated with inhalation of dust at SEAD-59 in ambient air is typical of site background

For exposure to SEAD-59 remaining soil from the excavation and SEAD-59 groundwater, the cancer risks for all receptors are below the EPA upper limit of 1×10^{-4} . The total non-cancer hazard index for the adolescent trespasser is below the EPA target limit of 1. The non-cancer hazard indices for the industrial worker and construction worker are 1 and 2, respectively.

For the industrial worker and construction worker, the risks associated with groundwater intake contribute 73% and 56%, respectively to the total non-cancer risks. As previously discussed, the elevated risks associated with groundwater exposure are associated with site background. Therefore, SEAD-59 remaining soil from the excavation is not expected to pose unacceptable threats to potential industrial workers or construction workers. Additional details of the risk assessment are provided in the Supplemental Remedial Investigation Report and in Section 7 of this ROD.

Concentrations of selected chemicals have been identified in the SEAD-59 soil at levels that exceed the NYSDEC's Restricted Industrial Use soil cleanup objectives (SCOs) and in the groundwater at levels that exceed New York's GA groundwater standards, however. As is shown by the results of the human health risk assessment, these chemicals do not pose unacceptable levels of carcinogenic risk or non-carcinogenic hazards for the identified current or future commercial or industrial users of the AOC.

For exposure to SEAD-71 soil and groundwater, the non-cancer hazard indices for the industrial worker, construction worker, and child trespasser are at or above 1. The cancer risk is slightly above the EPA upper limit of 1×10^{-4} for the industrial worker. The risks associated with soil ingestion and soil dermal contact contribute 90% to the total cancer risk for the industrial worker. PAHs in SEAD-71 soil are the primary COPCs contributing to the cancer risks associated with SEAD-71 soil exposure. The highest PAH concentrations were detected in the Fenced Area located between Building 114 and Building 127, where a paved, hard-packed parking area comprised on asphalt and gravel.

To further evaluate risks associated with CERCLA release at SEAD-71, a risk assessment was conducted for exposure to SEAD-71 soil outside the Fenced Area and SEAD-71 groundwater. For exposure to SEAD-71 soil and groundwater outside the Fenced Area, the cancer risks for all receptors are below the EPA upper limit of 1×10^{-4} . The total non-cancer hazard index for the adolescent trespasser is below the EPA target limit of 1. The non-cancer hazard indices for the industrial worker and construction worker are 3 and 10, respectively.

For the industrial worker, the risk associated with groundwater intake contributes 91% to the total non-cancer risk. For the construction worker, the risks associated with inhalation of dust in ambient air, groundwater intake, and dermal contact to groundwater contribute 84%, 25%, and 4%, respectively, to the total non-cancer risk.

Aluminum, antimony, arsenic, chromium, iron, manganese, and thallium are the primary COPCs in groundwater contributing to the elevated non-cancer risks to the industrial worker and the construction worker. However, the concentrations observed in SEAD-71 groundwater for these metals were consistent with the Seneca groundwater background levels. The maximum manganese hit was detected in MW71-2, upgradient of the source area in SEAD-71. MW71-2 was dry most of the time during the groundwater sampling events. Therefore, the manganese concentration detected in MW71-2 might be overstated due to limited water volume and potentially elevated turbidity. In addition, the manganese concentrations detected in a monitoring well downgradient and within the suspected source areas at SEAD-71 (i.e., MW71-4) ranged from non-detect to below the average concentration of the SEDA background data set. In summary, the metal concentrations in SEAD-71 groundwater were consistent with SEDA background.

Aluminum, manganese, and naphthalene in SEAD-71 soil outside the Fenced Area are the only COPCs contributing to the non-cancer risks associated with inhalation of dust in ambient air and contribution from naphthalene is negligible (i.e., < 0.001%). Aluminum and manganese in SEAD-71 soil outside the Fenced Area are consistent with the Seneca background levels. Additional details of the risk assessment are provided in the Supplemental Remedial Investigation Report and in Section 7 of this ROD.

Based on these facts, it is the Army's and the USEPA's determination that the implementation and maintenance of LUCs that prohibit use of the land for residential housing, elementary and secondary schools, childcare facilities, and playgrounds and prohibit the access to and use of groundwater are appropriate means of ensuring that potential risks are managed at both of these AOCs.

The remedies selected for SEAD-59 and SEAD-71 are cost-effective, readily available alternatives that will provide effective and efficient solutions to environmental concerns identified at both AOCs. The selected remedies are discussed in greater detail in **Section 11**.

6.0 SUMMARY OF AOC CHARACTERISTICS

Previous site investigation activities conducted at SEAD-59 and SEAD-71 included the collection of samples from surface soil (top two feet of soil), subsurface soils (below two feet), and groundwater during the RI, and the collection of confirmatory/stockpile soil samples during the TCRA. Associated activities included geophysical investigations, a soil gas survey, and location surveys (including base map preparation). All post-TCRA soil data (i.e., all data collected during the ESIs, Phase I RIs, TCRAs, and Phase II RIs that were associated with soils remaining at the AOCs) were evaluated and are presented in this ROD. These data represent the current SEAD-59 SEAD-71 conditions. The results are summarized below.

Groundwater data collected during the 1994 ESIs using bailers are considered non-representative of the current AOC conditions, and have been excluded from this data summary. The 2004 groundwater samples were collected after the TCRA and were deemed representative of the current AOC conditions.

Analytical data collected during the site investigations and construction efforts were historically compared to prevailing State and Federal standards and reference values. State reference values and standards considered included New York's Technical and Guidance Memorandum (TAGM) No. 94-HRW-4046 Soil Cleanup Objectives (SCOs) and Title 6 New York Code of Rules and Regulations (6NYCRR) Subpart 375-6.8 Remedial Program SCOs for soil; and New York's Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (Technical and Operation Guidance Series [TOG] 1.1.1) for groundwater and surface water. The TAGM soil guidance values were recently replaced by New York's 6NYCRR Subpart 375-6.8 regulations, and data comparisons previously made to the TAGM values have been eliminated from all material presented in this ROD.

Federal reference values considered during the evaluation of analytical data included USEPA Region IX Preliminary Remediation Goals (PRGs) for residential and industrial soils and PRGs for tap water, as well as Maximum Contaminant Limits (MCLs) for Drinking Water.

Results obtained from the analysis of all of the samples and sample duplicates are provided in the appendices of this ROD. Summary tables presenting the comparison of sample data to regulatory reference values merges samples and their associated sample-duplicate results into a single value for each compound that is reflective of the average condition found at a sampling location. The combined analytical results of the ESI, the RI, and completed construction activities are summarized and discussed below.

6.1 SEAD-59: FILL AREA WEST OF BUILDING 135

6.1.1 Soil Gas Survey

A soil gas survey performed at the beginning of the RI at SEAD-59, and the real-time results were used as a preliminary screening tool to identify potential focus points for subsequent RI soil sampling characterization. The survey performed involved the installation, sampling and analysis of soil gas samples from 241 points for total volatile organic compounds (VOCs). The soil gas results are shown in **Figure 6-1**.

The highest soil gas concentrations reported were located within the boundaries of the fill area at SEAD-59. Several smaller areas of elevated soil gas concentrations, at or above 10 parts per million (ppm), were detected at locations to the west and south of the fill area. Based on these data, soil samples were subsequently collected from locations shown to contain elevated VOC content, and these samples were submitted for analysis of Target Analyte and Target Compound List (TAL and TCL, respectively) analytes

Although the soil gas survey results indicated potential VOC contamination at SEAD-59, the soil sample data collected from locations exhibiting high soil gas concentrations (i.e., with total VOC concentrations greater than 10 ppm) did not confirm that VOCs were present in the soil at the AOC.

All soil associated with soil gas results exhibiting concentrations greater than 20 ppm and most soil associated with soil gas results greater than 10 ppm was removed during the TCRA.

6.1.2 Soil Investigation

Due to the excavation of soil and debris during the TCRA at SEAD-59, soil associated with soil samples collected and reported during the Phase I RI has been disturbed, with some of the disturbed soil being staged in windrows within the operable unit, while other portions of the disturbed soil has been removed from the AOC and transported off-site for disposal at licensed landfills. The following discussion provides a summary evaluation of the quality of the soil that remains at the AOC. The Army's analysis indicates that data from 185 surface soil (0-2 feet [ft] below grade or ground surface [bgs]) samples are representative of the current SEAD-59 surface soil conditions. Similarly, data for 14 subsurface soil (2-15 ft bgs.) samples continue to be representative of SEAD-59 subsurface soil conditions, while results from 54 samples collected from residual piles of excavated soil continue to be representative of soil that is stage in SEAD-59.

During its assessment and evaluation of contaminants within soil at SEAD-59 and SEAD-71, the Army compared the pertinent soil data to SCOs for Unrestricted, Commercial, and Industrial Use presented under the New York Code of Rules and Regulations (6NYCRR) Subpart 375-6.8 and USEPA Region IX PRGs)for industrial soils. The 95% upper confidence limit concentrations of the arithmetic means³ recommended by the EPA ProUCL program (hereafter referred to as UCLs) for compounds with individual sample exceedances of the NYSDEC SCOs or the Region IX PRGs found in the SEAD-59 and SEAD-71 soils are also summarized in referenced tables.

The discussion of SEAD-59 soil is presented separately for in-situ (in place in the ground) soil and stockpiles soils.

³ Confidence limits for the mean ([Snedecor and Cochran, 1989](#)) are an interval estimate for the mean. Interval estimates are often desirable because the estimate of the mean varies from sample to sample. Instead of a single estimate for the mean, a confidence interval generates a lower and upper limit for the mean. The interval estimate gives an indication of how much uncertainty there is in our estimate of the true mean. The narrower the interval, the more precise is our estimate. The 95th upper confidence limit is the highest estimate for the mean that is expected to exist with 95 percent confidence for a particular set of data.

SEAD-59 In-Situ Soils (Total, surface and subsurface)

Summary results of chemical analyses performed on in-situ soils in SEAD-59 total soil, surface soil only, and subsurface soil only are presented in **Tables 6-1a** through **6-1c**, **6-2a** through **6-2c**, **6-3a** through **6-3c**, and **6-4a** through **6-4c**. **Table series 6-1** provides summary results and data comparisons to New York's Unrestricted Use SCOs; **Table series 6-2** provides comparable data presentations versus New York's Restricted Commercial Use SCOs; **Table series 6-3** provides comparable data presentations versus New York's Restricted Industrial Use SCOs; while **Table series 6-4** provides comparable data presentations versus USEPA Region IX's PRGs for Industrial soil guidance values. Summary information provided in each of these tables includes the number of samples collected by soil horizon (i.e., total soil, surface soil, subsurface soil); the number of times and the frequency with which a compound was detected in that soil horizon; the number of times a detected compound was found at a concentration that surpassed the comparative guidance levels evaluated; the maximum concentration of the compound that was detected in the soil horizon; and, for those compounds found at a concentration above a comparative guidance value, the 95th UCL of the dataset's mean for the compound and an indication if this value surpassed the comparative guidance value evaluated. The complete copy of the analytical data for the surface and subsurface soil evaluated during the investigation of SEAD-59 are provided in **Appendix Table D-1** (surface soil) and **Appendix Table D-2** (subsurface soil).

Volatile Organic Compounds (VOCs)

Acetone (12 times) and methyl ethyl ketone (1 time) were the only VOCs found in SEAD-59 at concentrations above their respective Unrestricted Use SCO levels, while acetone was the only VOC observed to exceed any of the other comparative guidance values considered (i.e., Restricted Commercial).

Acetone was also the VOC found at the highest overall concentration in soil samples characterized, present at a level of 500 µg/Kg in the surface soil samples.

Semivolatile Organic Compounds (SVOCs)

The seven cPAH compounds were the only SVOCs observed to exceed New York's Unrestricted Use SCO levels and this occurred in 37 or more of the 199 total samples characterized. Concentrations of indeno(1,2,3-cd)pyrene (51 times) and chrysene (50 times) were most frequently observed to exceed their respective Unrestricted Use SCOs, and the majority of these were found in surface soil samples. Further, the majority of all soil concentrations measured for cPAH compounds that were above their Unrestricted Use SCO levels were found in surface soils collected at SEAD-59. Only six of the cPAH compounds (i.e., exclusive of dibenz(a,h)anthracene) were found in subsurface soil samples collected from SEAD-59 at levels that exceeded their Unrestricted Use SCO levels, and this only occurred in one or two individual samples for each compound. Four [i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene] of the cPAH compounds were detected in in-situ soil samples collected from SEAD-59 that exceeded their Restricted Commercial Use SCO levels. Again, samples found to contain elevated levels of these cPAHs were primarily located in the surface soil samples and only benzo(a)pyrene was found in subsurface soils (2 times) at levels above New York's Restricted

Commercial level. Similarly, two cPAH compounds ([benzo(a)pyrene (47 times) and dibenz(a,h)anthracene (2 times)] were found in SEAD-59 in-situ soil samples at levels above New York's Restricted Industrial Use levels. The majority of these occurrences were limited to surface soil samples, as only one subsurface soil contained an elevated concentration of benzo(a)pyrene. Comparable trends are seen for the comparison of the cPAHs levels measured in SEAD-59 in-situ soils versus the USEPA's Region IX PRGs for Industrial soil.

Pesticides and Polychlorinated Biphenyls (PCBs)

Four pesticides (i.e., 4,4'-DDD, 4,4'-DDE, 4,4'-DDT and endrin) were detected in soil samples at concentrations in excess of one of the federal or state comparative levels. The pesticide 4,4'-DDT was the compound found in samples at the highest individual sample concentration; the pesticide 4,4'-DDE was found in the greatest number of samples at concentrations above New York's Unrestricted Use SCO levels. Similarly, the other two identified pesticides were found frequently at concentrations above New York's Unrestricted Use SCOs. The 95th UCL values computed for all three of the 4,4' pesticide species also exceeded the New York Unrestricted Use SCOs. Only one other pesticide, endrin, was found in any SEAD-59 in-situ soil sample at a level that exceeded its Unrestricted Use SCO level. Again the majority of the samples found to contain elevated levels of pesticides were located in the surface soils.

None of the pesticide or PCB compounds found in the SEAD-59 in-situ soil samples contained any levels of contaminant that exceeded either the New York Restricted Commercial or Industrial Use levels or the USEPA Region IX PRG for Industrial SCOs.

Metals

Nine metals (i.e., arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver and zinc) were found in one or more of the soils at levels that exceeded New York's Unrestricted Use SCO levels, and of these nickel was found most frequently at levels above its SCO value (37 times.). Four other metals (lead, 14 times; mercury, 15 times; silver, 19 times; and zinc, 19 times) were also found in soil samples above their respective Unrestricted Use SCO levels. Lead was the only other metal that was found at elevated levels in more than 10 of the soil samples characterized. None of the metals were seen at 95th UCL concentrations that exceeded their respective Unrestricted Use SCO levels.

Arsenic and copper were the only metals that were observed to exceed New York's Commercial Use SCO level, and this occurred in two and one sample respectively. In all cases these elevated levels were limited to the surface soil samples. Similarly only arsenic was observed in any individual sample at concentrations that exceeded New York's Industrial Use SCOs; this occurred twice in two surface soil samples. Arsenic was found at concentrations above the USEPA's Region IX PRG value for Industrial soil in every soil sample characterized, and the calculated 95th UCL value was also above this guidance value. Antimony was also found in one surface soil sample at a level that exceeded its USEPA Region IX PRG for Industrial soil. .

Stockpiled Soil in SEAD-59

Summary results of chemical analyses performed on stockpiled soils in SEAD-59 are presented in **Tables 6-5 through 6-8**. **Table 6-5** provides summary results and data comparisons to New York's Unrestricted Use SCOs; **Table 6-6** provides comparable data presentations versus New York's Restricted Commercial Use SCOs; **Table 6-7** provides comparable data presentations versus New York's Restricted Industrial Use SCOs; while **Table 6-8** provides comparable data presentations versus USEPA Region IX's PRGs for Industrial soil guidance values. Summary information provided in each of these tables includes the number of samples collected; the number of times and the frequency with which a compound was detected in the stockpiled soil; the number of times a detected compound was found at a concentration that surpassed the comparative guidance levels evaluated; the maximum concentration of the compound that was detected in the stockpiled soil; and, for those compounds found at a concentration above a comparative guidance value, the 95th upper confidence limit (95th UCL) of the dataset's mean for the compound and an indication if this value surpassed the comparative guidance value evaluated. The complete copy of the analytical data for the stockpiled soil evaluated during the investigation of SEAD-59 is provided in **Appendix Table D-3**.

VOCs

Acetone was the only VOC that was observed to exceed any of the comparative guidance values, surpassing New York's Unrestricted Use level in a single sample.

SVOCs

All seven of the cPAH compounds were observed to exceed New York's Unrestricted Use SCO levels in 45 or more of the samples characterized, with concentrations of indeno(1,2,3-cd)pyrene surpassing its Unrestricted Use level most frequently. The 95th UCL computed for all of these cPAHs were also above New York's Unrestricted Use SCO levels.

Five cPAHs [i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene] were detected in one or more of the samples at concentrations above New York's Commercial Use SCO levels, while three cPAHs [i.e., benzo(a)anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene] were observed to exceed New York Industrial Use SCOs in one or more samples. Five cPAHs [i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene] were detected in one or more of the samples characterized at levels that exceeded USEPA's Industrial soil PRG values.

Pesticides and PCBs

Three pesticides, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT were detected in individual samples of stockpiled soil at levels above one or more of their respective New York Unrestricted Use SCO levels. The 95th UCL values computed for all three of the 4,4' pesticide species also exceeded the New York Unrestricted Use cleanup levels. None of the pesticides detected in the stockpiled soils at SEAD-59 were detected at concentrations in individual samples or with 95th UCL values that surpassed New York's Commercial or Industrial Use or USEPA's Region IX Industrial Soil PRG levels.

Metals

Seven metals (i.e., chromium, copper, lead, mercury, nickel, silver and zinc) were found in one or more of the stockpiled soil samples at levels that exceeded New York's Unrestricted Use SCO levels, and of these nickel was found most frequently at levels above its cleanup value (20 times.). Lead was the only other metal that was found at elevated levels in more than 10 of the soil samples characterized. Similarly, lead and nickel were the only metal species seen at 95th UCL concentrations that exceeded their respective Unrestricted Use SCO levels.

Lead was observed to exceed New York's Commercial Use SCO level, and this occurred in only one sample. None of the detected metals were observed in individual samples at concentrations that exceeded New York's Industrial Use SCOs, and none of the metals were observed at 95th UCL concentrations that were above either New York's Commercial or Industrial Use SCO levels. Arsenic was found at concentrations above the USEPA's Region IX PRG value for Industrial soil in every sample, and the calculated 95th UCL value was also above this guidance value. Lead was found in a single sample at a concentration above its USEPA Region IX PRG for Industrial soil.

6.1.3 Groundwater Investigation

SEAD-59 groundwater samples were collected from seven monitoring wells during the two 2004 sampling events. The maximum concentrations were compared to federal and state criteria including New York State Class GA Groundwater Standards, the federal MCLs and the USEPA's Region IX PRGs for Tap Water. The SEAD-59 groundwater sample summary results are presented in **Table 6-9**. The complete groundwater data evaluated for SEAD-59 is provided in **Appendix Table D-4**.

Organic compounds (i.e., VOCs, SVOCs, or pesticide/PCBs) were not detected in groundwater samples at any level in excess of state or federal comparative values.

Metals

Antimony, iron, manganese, and sodium concentrations were each detected above their respective NYSDEC GA Standards in one or more of the SEAD-59 groundwater samples characterized. Antimony was the only metal found at concentrations that exceeded another of its comparative guidance values, as it exceeded its MCL value in three samples.

6.2 SEAD-71: THE ALLEGED PAINT DISPOSAL AREA

6.2.1 Soil Investigation

The investigation of soil within SEAD-71 included the analysis of 77 total samples, including 69 surface soil (0-2 ft bgs.) and eight subsurface soil samples (2-15 ft bgs.). Of the total number of soil samples collected and characterized, 58 were collected at locations exterior to the Fenced Area, including 54 surface samples and four subsurface samples.

Summary results of chemical analyses performed on all SEAD-71 soil samples (total soil, surface soil only, and subsurface summarized separately in a, b, and c) are presented in **Tables 6-10a** through **6-10c**, **6-11a** through **6-11c**, **6-12a** through **6-12c**, and **6-13a** through **6-13c**. **Table series 6-10** provides summary results and data comparisons to New York's Unrestricted Use SCOs; **Table series 6-11**

provides comparable data presentations versus New York's Restricted Commercial Use SCOs; **Table series 6-12** provides comparable data presentations versus New York's Restricted Industrial Use SCOs; while **Table series 6-13** provides comparable data presentations versus USEPA Region IX's PRGs for Industrial soil guidance values. Summary results of chemical analyses performed on the soil collected outside the Fenced Area of SEAD-71 (total soil, surface soil only, and subsurface summarized separately in a, b, and c) are presented in **Tables 6-14a** through **6-14c**, **6-15a** through **6-15c**, **6-16a** through **6-16c**, and **6-17a** through **6-17c**. **Table series 6-14** provides summary results and data comparisons to New York's Unrestricted Use SCOs; **Table series 6-15** provides comparable data presentations versus New York's Restricted Commercial Use SCOs; **Table series 6-16** provides comparable data presentations versus New York's Restricted Industrial Use SCOs; while **Table series 6-17** provides comparable data presentations versus USEPA Region IX's PRGs for Industrial soil guidance values.

Summary information provided in each of these tables includes the number of samples collected by soil horizon (i.e., total soil, surface soil, subsurface soil); the number of times and the frequency with which a compound was detected in that soil horizon; the number of times a detected compound was found at a concentration that surpassed the comparative guidance levels evaluated; the maximum concentration of the compound that was detected in the soil horizon; and, for those compounds found at a concentration above a comparative guidance value, the 95th upper confidence limit (95th UCL) of the dataset's mean for the compound and an indication if this value surpassed the comparative guidance value evaluated. The complete copy of the analytical data for the all SEAD-71 surface and subsurface soil evaluated during the investigation are provided in **Appendix Table D-5** (surface soil) and **Appendix Table D-6** (subsurface soil). The complete copy of the analytical data for soil samples collected outside the Fenced Area in SEAD-71 evaluated during the investigation are provided in **Appendix Table D-7** (surface soil) and **Appendix Table D-8** (subsurface soil).

VOCs

Acetone was the only VOC observed in any sample collected in SEAD-71 observed to exceed any of the comparative guidance values considered, and it was found in two surface soil samples collected exterior to the Fenced Area at concentrations that exceeded New York's Unrestricted Use SCOs.

SVOCs

PAH and cPAH compounds were generally the most frequently detected SVOCs observed in the SEAD-71 soils, and were also those that were detected at the highest concentrations. The cPAH compounds were the species that also had exhibited sample concentrations above New York's SCOs and the Region IX PRGs for Industrial soil. The maximum concentrations of cPAHs detected throughout SEAD-71 were typically found in surface soils, with the overall highest cPAHs found within the surface soils that were collected within the Fenced Area. Generally, the cPAH concentrations reported for samples within the Fenced Area were an order of magnitude higher than those found exterior of this segment of SEAD-71. cPAHs were found at concentrations above their respective New York SCO levels in both surface and subsurface soil samples within the Fenced Area, but they were not found above their respective New York Restricted Commercial or Industrial Use SCOs in the subsurface soils located exterior to the Fenced

Area.. Concentrations of selected cPAH compounds in samples collected inside in exterior of the Fenced Area also exceeded their USEPA Region IX Industrial PRGs.

The Fenced Area is paved in some locations and covered with crushed stone in other locations. Elevated PAH concentrations detected in surface soil within the Fenced Area result from the asphalt and hard fill that was used to construct the area. At the time of construction, the Army typically utilized hard fill consisting of oiled crushed stone to form a sturdy base for areas subjected to heavy vehicular traffic and storage operations. The oil was used to help in the compaction of the crushed stone and aided in dust suppression. The presence of asphalt is noted in the boring log of MW71-1 and field notes recorded while surface soil samples were collected within the Fenced Area. The crushed asphalt materials in the hard fill and the oil used in the construction of the storage area were likely the cause of the consistently elevated PAH concentrations throughout the Fenced Area.

Pesticides and PCBs

Concentrations measured for Aroclor-1260 in two samples exceeded its New York Unrestricted Use SCO level in the Fenced Area.

Three pesticides or one PCB compounds (i.e., 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and Aroclor-1260) were found at concentrations above New York's Unrestricted Use SCO guidance values in samples that were collected exterior to the Fenced Area, while these four plus endrin were found at concentrations above their Unrestricted Use SCO values in soil samples collected from inside the Fenced Area. 4,4'-DDD was the only pesticide or PCB compound that was observed at concentrations that exceeded any of the other comparative guidance values, and this was found in surface soil samples only collected within the Fenced Area at concentrations that exceeded New York's Restricted Commercial Use SCOs.

Metals

Seven metals (i.e., arsenic, chromium, copper, lead, mercury, nickel and zinc) were observed to exceed their respective Unrestricted Use SCOs in soil samples collected exterior of the Fenced Area, while six of these seven metals (i.e., exclusive of arsenic) plus cadmium and silver were observed to exceed their respective Unrestricted Use levels in soil samples collected in the Fenced Area. The metals most frequently detected at concentrations above Unrestricted Use levels were lead, zinc and nickel. Lead and cadmium were the only metals observed at concentrations in excess of New York's Restricted Commercial Use levels in samples collected from the Fence Area, while only lead was detected at a concentration above New York's Restricted Commercial value in soil samples outside of the Fenced Area. All metals detected in soil samples were detected at concentrations below their respective New York Restricted Industrial Use levels. Arsenic and lead were the only metals observed to exceed USEPA's Region IX PRGs for Industrial soil, in samples collected inside and outside of the Fenced Area in SEAD-71.

6.2.2 Groundwater Investigation

SEAD-71 groundwater samples were collected from four monitoring wells during the two 2004 sampling events. The maximum concentrations detected in SEAD-71 groundwater and the comparison with the

guidance values are presented in **Table 6-18**. The complete groundwater data evaluated for SEAD-71 is provided in **Appendix Table D-9**.

VOCs

No VOC was detected in any SEAD-71 groundwater sample at a level above any of its comparative values.

SVOCs

The concentration reported for 4-nitroaniline in one sample of SEAD-71 groundwater exceeded its New York GA standard, and its Region IX PRG for Tap Water.

Pesticides and PCBs

No pesticide or PCB was detected in any SEAD-71 groundwater sample at a level above any of its comparative values.

Metals

Antimony, iron, manganese, and sodium concentrations were detected in SEAD-71 groundwater above their respective NYSDEC GA standards, and of these metals sodium exceeded its GA standard most frequently (4 times). Antimony was observed at concentrations above its GA standard value and its federal MCL in three samples, while manganese was the only metal observed at a concentration in excess of its Region IX PRG value for Tap Water.

7.0 SUMMARY OF HUMAN HEALTH AND ECOLOGICAL RISKS

Human health and ecological risk assessments were performed for SEAD-59 and SEAD-71 using the analytical data developed during site investigations as discussed above. Full details of the human health and ecological risk assessments for SEAD-59 and SEAD-71 are presented in the Phase II RI report, which is available in the Administrative Record file. A summary of pertinent information is provided below.

7.1 HUMAN HEALTH RISK ASSESSMENT

A Superfund baseline human health risk assessment is an analysis of the potential adverse health effects caused by hazardous substance exposure at a site in the absence of any actions to control or mitigate them under current- and future-land uses. The baseline human health risk assessments performed for SEAD-59 and SEAD-71 were conducted in accordance with the USEPA's *Risk Assessment Guidance for Superfund (RAGS)* (USEPA, 1989) and the supplemental guidance and updates to the RAGS. Technical judgment, consultation with USEPA staff, and review of recent publications were used in the development of the risk assessment. The results of the risk assessment were used to identify whether a corrective action may be warranted at one, or both, of the AOCs.

The reasonable maximum exposure (RME) scenario was evaluated during the human health risk assessment. The human health risk assessment methodology is shown in **Figure 7-1**. A four-step process was used for assessing site-related human health risks for RME exposure scenarios:

- Hazard Identification – identified the contaminants of concern based on several factors such as toxicity, frequency of occurrence, and concentration;
- Exposure Assessment – estimated the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the pathways by which humans are potentially exposed;
- Toxicity Assessment – determined the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure (dose) and severity of adverse effects (response); and
- Risk Characterization – summarized and combined the outputs of the exposure and toxicity assessments to provide a quantitative assessment of site-related risks (for example, one-in-a-million excess cancer risk).

7.1.1 Hazard Identification

The contaminant sources at SEAD-59 were the construction debris and drums comprising the fill area and the debris and paint cans found elsewhere within the AOC. Additionally, spills or leaks from vehicles and other “building and grounds” type materials previously staged here could represent potential sources of contaminants that have been identified. The primary release mechanisms from the sources included soil particles resuspension and deposition, surface water runoff, and the infiltration of precipitation through the source areas. Potentially affected media at SEAD-59 were soil (including stockpile soils produced

during the 2002 TCRA) and groundwater. The source areas were excavated and removed during the 2002 TCRA by ENSR (2002).

The contaminant sources at SEAD-71 were waste materials, including debris such as sheet metal, asphalt, chain link fencing, sand and stone, piping, railroad ties, and wood and cinders, that were identified during test pit operations. In addition, unsubstantiated rumors suggested that paint and oil may have also been disposed at the site. The primary release mechanisms from the sources are soil particles resuspension and deposition, surface water runoff, which makes its way onto the areas to the southwest, and infiltration of precipitation through the suspected source areas. Potentially affected media at the site include soil and groundwater. Again, the former source areas were excavated and removed during the 2002 TCRA by ENSR (2002).

Contaminants of Concern

Volatile Organic Compounds (VOCs)

Volatile organic compounds were detected infrequently in soil and groundwater at SEAD-59 and SEAD-71 and the concentrations found were generally below the identified applicable or relevant and appropriate requirement (ARAR) and “to be considered” (TBC) guidance values (i.e., the NYSDEC Part 375 cleanup objective values for soil; and the NYSDEC GA Standards and Guidance, the Drinking Water MCLs for groundwater). Because of the low prevalence and low concentrations, the sites are not significantly impacted by VOCs and volatilization of VOCs was not considered significant in this assessment.

Semivolatile Organic Compounds (SVOCs)

The principal semi-volatile compounds found in SEAD-59 and SEAD-71 soil were PAHs including the seven cPAHs. Generally, these constituents are relatively persistent and immobile in the environment. Transport of PAHs is limited due to their low water solubility and strong soil affinity. TCLP analysis was conducted for SVOCs on several samples collected during the TCRA and the results indicated that none of the SVOCs were detected in the leachate. Therefore, leaching of SVOCs to groundwater is not expected to be a significant transport mechanism at the AOCs. Only a few SVOCs (4-nitroaniline, di-n-butylphthalate, and bis(2-ethylhexyl)phthalate) were detected in the groundwater, and these were all found infrequently. Groundwater at the AOCs is not expected to be significantly impacted by SVOCs.

Pesticides/Polychlorinated Biphenyls (PCBs)

Pesticides and one PCB, Aroclor-1260, were found in soil at both AOCs. Pesticides are immobile in soil as their affinity for absorption into the soil reduces their transport potential. Low concentrations of pesticides can dissolve into water but absorption to soil is the dominant partitioning route. Transport of suspended solids and sediment in groundwater is a potential transportation mechanism; however, groundwater flow through beneath the AOCs is low based on field notes from 2004 sampling events, thus reducing the rate of groundwater transport. Three pesticides were detected but no PCBs were detected in groundwater in the 2004 sampling events.

Metals

Multiple metals were found in groundwater and soil at SEAD-59 and SEAD-71. The behavior of metals in soil is unlike organic compounds in many aspects. For example, generally volatilization from soil is not considered a significant mechanism for metal migration and was not evaluated in this risk assessment. However, leaching and sorption of metals are considered potential mechanisms for transport. Leaching of metals from soil is controlled by numerous factors, the most important being its chemical form (base metal or cation) in the soil. The leaching of metals from soils is substantial if the metal exists as a soluble salt. Upon contact with surface water or precipitation, the metals, either as metal oxides or metal salts, can be solubilized, eventually leaching to the groundwater. TCLP analyses were performed for some samples collected during the TCRA. Based on the results obtained, leaching is not expected to be a significant transport mechanism at SEAD-59 and SEAD-71. Soil samples from both sites had exceedances of NYSDEC SCO values for many metals. Groundwater samples from both sites had exceedances of the identified ARARs or TBCs for the following metals: aluminum, antimony, iron, manganese, and sodium.

7.1.2 Exposure Assessment

As part of the Exposure Assessment component of the risk assessment, conceptual site models (CSMs) were developed for both AOCs which considered the contaminants of concern (COCs) identified at the AOCs, the media affected, the most probable future receptors, and the duration each receptor would be exposed to hazardous substances identified in the area.

Conceptual Site Model

Potential sources of contamination, exposure pathways, and receptors for SEAD-59 and SEAD-71 are depicted graphically in the CSM shown in **Figure 7-2**. The CSM provides an overall assessment of the primary and secondary sources of contamination found at the AOC, and the corresponding release mechanisms and the affected media. The CSM also identifies the potential human receptors and the associated pathways of exposure to the affected media.

Human Receptors and Exposure Pathways

The baseline risk assessment evaluated the potential health effects that may result from hazardous substance exposure for the following three receptor groups:

- Current/Future Construction Worker;
- Current/Future Industrial Worker; and,
- Current/Future Adolescent Trespasser/Visitor.

The following exposure pathways were considered:

1. Inhalation of dust from soil in ambient air (construction worker, adolescent trespasser / visitor, industrial worker);
2. Ingestion of soil (construction worker, adolescent trespasser / visitor, industrial worker);
3. Dermal contact to soil (construction worker, adolescent trespasser / visitor, industrial worker);

4. Ingestion of subsurface soils (construction worker);
5. Dermal contact to subsurface soils (construction worker);
6. Ingestion of groundwater (daily) (construction worker, adolescent trespasser / visitor, industrial worker);
7. Dermal contact to groundwater (construction worker);
8. Dermal contact to surface water (construction worker, adolescent trespasser / visitor).

7.1.3 Carcinogenic and Non-Carcinogenic Effects

Under current USEPA guidelines, the likelihood of carcinogenic and non-carcinogenic effects due to exposure to site-related chemicals is considered separately. Non-carcinogenic hazards were assessed by the calculation of a Hazard Index (HI), which is an expression of the chronic daily intake of a chemical divided by its safe or Reference Dose (RfD). An HI that exceeds 1.0 indicates a potential for non-carcinogenic effects to occur. Carcinogenic risks were evaluated using a cancer Slope Factor (SF), which is a measure of the cancer-causing potential of a chemical. Slope Factors are multiplied by daily intake estimates to generate an upper-bound estimate of excess lifetime cancer risk. For known or suspected carcinogens, USEPA has defined an acceptable cancer risk range of 10^{-4} to 10^{-6} (one-in-ten thousand to one-in-one million) or less.

7.1.4 Evaluation of Lead Exposure

Lead was identified as a COC in soil and groundwater at SEAD-71, and in stockpiled soil at SEAD-59. Risk associated with the identified lead were evaluated using the *Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil* (USEPA, 2003b). At SEAD-71, the evaluation of lead exposure was considered for the industrial worker and the construction worker, and for a child resident. The central tendency (CT) exposure factors for industrial workers and construction workers were used to evaluate potential risks associated with lead in soil. The industrial worker was assumed to accidentally intake 50 mg of soil each day while working at the SWMU for 219 days each year. This assumption is consistent with the default assumptions used in the adult lead model (USEPA, 2003b). There is no lead pathway for lead in groundwater for the adult receptor.

This model provides an assessment of non-residential exposure by relating soil lead intake to blood lead concentrations in women of childbearing age. The methodology focuses on estimating fetal blood lead levels in women exposed to site soils. It should be noted that the adult lead model is based on the assumption of continuing long-term exposure. As construction workers are expected to work at the site for only a short-term (i.e., approximately 1 year), risk associated with lead exposure is expected to be minor and therefore it was not evaluated in the risk assessment.

Risks associated with lead exposure in soil and groundwater were evaluated for a child resident using the Integrated Exposure Uptake Biokinetic Model for Lead in Children (IEUBK) developed by USEPA at SEAD-71 and at SEAD-59. The IEUBK model results, based on residential exposure assumptions, can only be used as a screening tool as the exposure frequency for the adolescent trespasser is much less than the residential child. In addition, a child receptor is considered more sensitive than an adolescent receptor. The IEUBK windows version software package was developed based on the *IEUBK Guidance Manual* (USEPA

1994). The model utilizes four interrelated modules (exposure, uptake, biokinetic, and probability distribution) to estimate blood lead (PbB) levels in children exposed to lead-contaminated media.

For the industrial worker and the adolescent trespasser, the AOC-specific exposure point concentrations (EPCs) and CT exposure factors were used along with the default assumptions presented in the models to derive the lead level estimation for the receptors. Risk characterization for lead exposure was conducted based on a comparison between the estimated blood lead level and the target PbB level of concern. Blood lead level was estimated based on the USEPA IEUBK model or the Adult Lead Model. The target PbB level of concern is 10.0 micrograms per deciliter ($\mu\text{g}/\text{dL}$) for a child (USEPA, 1994, 2003b).

7.1.5 Summary of Human Health Risks

The human health (Chapter 6) and screening level ecological risk assessments (chapter 7) for SEAD-59 and SEAD-71 are fully described and discussed in the Phase II Remedial Investigation Report for the AOCs (Parsons, 2006). The human health risk assessment included a quantitative uncertainty section analysis, and results derived and discussed in the uncertainty analysis are accepted as the final basis of pending future actions for the AOCs. Summary results of the human health risk assessments completed for exposure to contaminants identified in SEAD-59 in-situ soils (i.e., soils left in the ground) and groundwater; SEAD-59 stockpiled soil and groundwater; and, SEAD-71 soils and groundwater are provided in **Tables 7-1, 7-4, 7-6, and 7-7**, respectively. Data supporting the summary human health risk assessment results are provide in **Appendix E Tables 1 through 9C**. Results of the lead risk characterization for SEAD-59 stockpiled soil are presented in **Appendix E Tables 10, 11, and 12** and SEAD-71 soil and groundwater are presented in **Appendix E Tables 13, 14, and 15**.

SEAD-59 In-Situ Soil and Groundwater Exposure

Carcinogenic Risks and Non Carcinogenic Hazards

Table 7-1 summarizes the potential cancer risks and non-cancer hazards that may result due to future human receptors exposure to SEAD-59 in-situ (i.e., in ground) soil and groundwater. The results of the RME scenario are presented for an industrial worker, a construction worker, and an adolescent trespasser. The RME cancer risks for all receptors are below the USEPA upper limit of 1×10^{-4} ; cancer risks for the industrial worker, construction worker, and child trespasser are 2×10^{-5} , 2×10^{-6} , and 5×10^{-7} , respectively.

The total non-cancer hazard index for the adolescent trespasser is below the EPA target limit of 1. The non-cancer hazard indices determined for the industrial worker and construction worker are $1\text{E}+00$ ($\text{HI}=1.2$) and $9\text{E}+00$ ($\text{HI}=8.9$), respectively. For the industrial worker, the hazard index associated with SEAD-59 groundwater intake contributes 72% ($\text{HI} = 0.8$) to the total non-cancer hazard index reported. For the construction worker, inhalation of dust in ambient air and groundwater intake contribute 84% ($\text{HI} = 7.5$) and 9% ($\text{HI} = 0.8$), respectively, to the total non-cancer hazard index reported.

Antimony, iron, and manganese are the primary COPCs in SEAD-59 groundwater that contribute to the elevated non-cancer hazard index determined for the industrial worker and the construction worker. In each case, the maximum COPC concentration measured at SEAD-59 was used as the EPC in the risk assessment. **Table 7-2** summarizes the maximum and average metal COPC concentrations found in

SEAD-59 groundwater compared to SEDA background groundwater levels. Review of these data indicate that the maximum antimony, iron, and manganese concentrations recorded in SEAD-59 groundwater are lower than comparable maximums reported in the background groundwater monitoring wells at the Depot. Similarly, the average groundwater concentration recorded for the three COPC metals at SEAD-59 are also lower than comparable COPC averages found in the Depot's background groundwater set. Furthermore, the maximum concentrations reported for each of the SEAD-59 COPC metals was found in one of the two wells (i.e., MW59-3 and MW59-6) that are hydraulically upgradient of SEAD-59; the concentrations of the three COPC metals decrease as the groundwater flows through SEAD-59. Therefore, the elevated risks associated with exposure to metals in SEAD-59 groundwater result due to metals that are associated with the native soils and waters in the geologic formation at the Depot and are not associated with a release from the AOC.

With further reference to the construction worker's non-cancer hazard index (i.e., 9E+00), aluminum and manganese in SEAD-59 soil are the only COPCs that contribute to the non-cancer hazard levels that are associated with the inhalation of dust (HI = 7.5). Exposure to manganese inhaled as dusts represents nearly 81% of the overall hazard index. As is shown in **Table 7-3**, aluminum and manganese concentrations remaining in SEAD-59 soil are lower than Seneca background soils levels, and are less than federal and state guidance values that are defined as acceptable for more restricted types of future use (e.g., unrestricted use and residential). The future use of SEAD-59 is commercial or industrial.

In addition to the descriptive statistics comparison, both non-parametric (Mann-Whitney T test) and parametric (Student's T test) statistical test methods were used to determine if the SEAD-59 soil concentrations represented a statistically different population than those found in the SEDA background data set. The statistical test results are presented in **Appendix H** of the Phase II RI Report and are summarized in Section 6.8.5.2 of the Phase II RI Report. Both tests conclude that the aluminum and manganese concentrations observed in SEAD-59 soil are not statistically above the Seneca background levels.

As is indicated above, the largest component of the construction worker's overall non-cancer HI results from inhalation of dust that contains manganese. This HI is based on a reference concentration for chronic inhalation exposure (RfC) derived in a study that deals with the inhalation of manganese dioxide dust, and to which the EPA assigns an uncertainty factor of 1000, which indicates the EPA's low degree of confidence in its value. The exact composition of the manganese identified in the soil samples collected from SEAD-59 is unknown, but it is highly unlikely that all of the manganese in the soil exists as manganese dioxide. Manganese can exist in numerous forms, including various oxides, salts, carbonates, and silicates, and thus it is unlikely that it is only present as manganese dioxide in the soil at SEAD-59. Therefore, the use of an RfC that is derived solely from a study of industrial worker's exposure to manganese dioxide at a battery manufacturing facility is not fully accurate, and is likely to over-estimate impacts to outside workers at a location where other forms of manganese are likely to be present. However, since the exact composition of the manganese in the soil is unknown, no quantitative adjustments to the HI can be made. Further, it is important to note that the inhalation reference dose used as the basis of the inhalation portion of the risk assessment is 4000 times lower than the American

Conference of Governmental and Industrial Hygienists' threshold limit value⁴ (TLV) for manganese exposure in industrial situations, further emphasizing the very conservative nature of the RfC used in the calculation of risk at this site.

Therefore, the elevated risks associated with potential inhalation of ambient air containing dusts from SEAD-59 soil are believed to be overestimated and likely attributable to background soil concentrations that are not associated with a release at the AOC.

SEAD-59 Groundwater and Stockpiled Soil

Carcinogenic Risks and Non Carcinogenic Hazards

Table 7-4 summarizes the potential cancer risks and non-cancer hazard levels that may be encountered by future human receptors due to exposure to soil that remains in stockpiles and groundwater in SEAD-59. The risks/hazards anticipated due to exposure to SEAD-59 groundwater under this analysis are equivalent to those previously estimated under the SEAD-59 in-place (i.e., in the ground) and groundwater scenario discussed above.

The RME cancer risks for all receptors to SEAD-59 stockpiled soil and groundwater are below the USEPA upper limit of 1×10^{-4} . The cancer risks for the industrial worker, construction worker, and child trespasser are 6×10^{-5} , 6×10^{-6} , and 1×10^{-6} , respectively. The total non-cancer hazard index for the adolescent trespasser is below the EPA target limit of 1. The non-cancer hazard indices for the industrial worker and construction worker are 1E+00 (HI = 1.2) and 2E+00 (HI = 1.5), respectively.

For the industrial worker and construction worker, the risks associated with groundwater intake contribute 73% (HI = 0.8) and 56% (HI = 0.8), respectively to the total non-cancer hazard levels identified. As previously discussed above, the elevated hazards associated with groundwater exposure result from background levels of antimony, iron and manganese that are present in the groundwater at SEAD-59, and which are not associated with releases that have occurred at the AOC. Absent the hazard index contribution from SEAD-59 groundwater, the HI levels computed for the industrial worker and the construction worker both fall to less than 1.

Metals in soil also contribute to the industrial worker's and construction worker's hazard indices under the stockpiled soil/groundwater exposure scenario. Ingestion of soils containing metals is the primary soil exposure route that contributes to the potential effects, followed by inhalation of dusts. Seven metals (aluminum, antimony, arsenic, iron, manganese, thallium and vanadium) show indication of effects via ingestion, while only two, aluminum and manganese, show potential effects via inhalation. **Table 7-5** summarizes the levels of the seven metals in the stockpiled soils that contribute to the industrial worker's and construction worker's elevated non-cancer hazard indices, and compare these values to SEDA background soil concentrations and varying regulatory soil comparative levels.

The comparison of SEAD-59 stockpiled soil versus SEDA background soil metal concentrations indicates that the metals that remain in the stockpiled soils at SEAD-59 are generally consistent with, and typically lower than, the levels of metals found in background soils at SEDA. The maximum concentrations of

⁴ The concentration of a substance to which most workers can be exposed without adverse effects.

five of the seven COPC metals (all but antimony and vanadium) in SEAD-59 stockpiled soils are less than comparable metal concentrations in background soils. Additionally, five COPC metal average and 95th UCL: values (all but antimony and thallium) found in the SEAD-59 stockpiled soils are lower than SEDA background average and 95th UCL levels.

As is further shown in **Table 7-5**, the SEAD-59 stockpiled soil EPC concentrations (i.e., 95th UCL) of all identified metals, exclusive of arsenic, are less than EPA Region IX residential and industrial soil PRGs. Additionally, the SEAD-59 stockpiled soil maximum concentrations of five (aluminum, iron, manganese, thallium and vanadium) of the COPC metals are lower than the EPA Region IX residential soil PRGs, and six of the maximum COPC metal stockpiled soil concentrations (all except arsenic) are lower than the EPA's Region IX industrial soil PRGs. Finally, the SEAD-59 stockpiled soil maximum and 95th UCL concentrations for arsenic and manganese are both lower than New York's unrestricted use SCO.

Therefore, SEAD-59 remaining stockpiled soil from the excavation is not expected to cause unacceptable risks to future industrial workers or construction workers that may occupy or work in this AOC in the future.

Lead Risk Characterization

The lead risk characterization results for SEAD-59 Stockpile soil exposure are presented in **Appendix E Tables 10** and **11** for the industrial worker and construction worker, respectively. The 95th percentile PbB among fetuses of adult industrial workers are 4.7 and 7.1 µg/dL, assuming a homogeneous and a heterogeneous population, respectively. Both estimates are below the USEPA target PbB level of concern (i.e., 10 µg/dL). The 95th percentile PbB among fetuses of adult construction workers are 5.0 and 7.4 µg/dL, for a homogeneous and a heterogeneous population, respectively. Both estimates are below the USEPA target PbB level of concern (i.e., 10 µg/dL).

The lead risk characterization results for child with SEAD-59 Stockpile soil exposure are presented in **Appendix E Table 12**. It should be noted that a child resident was assumed by using the IEUBK model. As the exposure frequency for a child trespasser is much less than a child resident, the results were used as a screening tool to evaluate potential risk for the child receptor. As the 95th percentile PbB among child residents are below the USEPA target PbB level of concern (i.e., 10 µg/dL), it is concluded that lead level in SEAD-59 Stockpile soil does not pose a health risk to the child trespasser receptor.

SEAD-71 Soil and Groundwater Exposure

Carcinogenic Risks and Non Carcinogenic Hazards

Table 7-6 and **Table 7-7** summarize the cancer risks and non-cancer hazards for potential receptors due to SEAD-71 soil and groundwater exposures. Results for two RME scenarios are presented; one including all SEAD-71 soil (i.e., inside and outside of the Fenced Area, **Table 7-6**) and one considering only soil located exterior to the Fenced Area (**Table 7-7**). The risk calculation tables for all (inside and outside of the Fenced Area) SEAD-71 soil and groundwater samples are presented in **Appendix E**.

The potential cancer risks associated with all soil (i.e., inside and outside of Fenced Area) and groundwater at SEAD-71 are 1×10^{-5} for both the construction worker and the adolescent trespasser. The potential cancer risk determined for the industrial worker is 2×10^{-4} .

The cancer risks associated with soil ingestion (24%) and soil dermal contact (66%) contribute 90% to the total cancer risk determined for the industrial worker. Elevated cPAH concentrations were detected in the shallow soils collected from within the Fenced Area that is located between Building 114 and Building 127 and these compounds are the primary COPCs contributing to the cancer risk that is determined for the AOC. This area served as a secure, external storage area, and the storage pad was constructed of a combination of asphalt and crushed rock to create a firm base that could withstand vehicular traffic wear-and-tear during all kinds of meteorological conditions. Oil was applied to the crush stone portion of the base as a combination dust suppressant and soil stabilizing/compaction agent. The asphalt/crushed stone pavement is known to be as thick as 0.1 ft at several sample locations within the Fenced Area, and the surface soil samples collected from this portion of the AOC were collected either from locations beneath the pad, or from locations where breaches existed in the pad, at a depth of 0-0.2 ft bgs. Due to the location of the sample collection, it is likely that fragments of the asphalt/oil coated crushed rock became entrained in the samples and resulted in the presence of elevated levels of cPAHs.

Review of the sample data for samples collected within the Fenced Area indicate that the cPAH concentrations detected are generally elevated compared to comparable contaminant concentrations in shallow soil samples collected outside of the Fenced Area. As an example, the maximum benzo(a)pyrene concentration found within the Fenced Area is 120 mg/kg, while the maximum benzo(a)pyrene concentration detected in other portions of SEAD-71 is 22 mg/kg. Similarly, the arithmetic mean of all SEAD-71 surface soil samples (including samples interior and exterior of the Fenced Area) is 7.7 mg/kg, while the arithmetic mean of surface soil samples excluding samples within the Fenced Area is only 1.0 mg/kg.

Further analysis of the data from the Fenced Area indicates that only the surface soils are impacted by cPAHs. Using benzo(a)pyrene toxicity equivalence (BTE⁵) as a generic indicator of the level of cPAH compounds that are present in soil shows that all soil samples with BTE levels above 10 mg/kg were detected in surface soil (0-0.2 ft bgs.). The cPAH concentrations in the deeper soil samples (i.e., 1, 2.5 and 3 ft bgs) from test pit TP71-2 within the Fenced Area were at least one order of magnitude lower than the cPAH concentrations detected in surface soil samples.

Based on the above discussion, it is concluded that the elevated cPAH concentrations in surface soil within the Fenced Area at SEAD-71 are not associated with any release at the site, but are directly associated with the pavement and crushed rock pad that is still in place at the AOC. Therefore, a risk assessment was conducted for SEAD-71 in which all soil data from the Fenced Area was excluded from the risk evaluation.

⁵ BTE is used as an indicator parameter to estimate the combined toxicity of the seven carcinogenic PAHs [i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene] based on toxicity equivalency factors. Generally, the higher the BTE value the greater the potential toxicity. A 10 ppm benchmark value is usually used at Seneca to indicate potential concerns.

The results of the human health risk assessment performed for soil exterior to the Fenced Area of SEAD-71 are presented in **Table 7-7**. COPC screening, EPC evaluation, and risk calculation sheets are presented in **Appendix E** with the other risk assessment backup information.

For exposure to SEAD-71 soil and groundwater outside the Fenced Area, the cancer risks for all receptors are below the EPA upper limit of 1×10^{-4} . The total non-cancer hazard index for the adolescent trespasser is below the EPA target limit of 1. The non-cancer hazard indices for the industrial worker and construction worker are $3 \text{E}+00$ (HI = 3.5) and $1 \text{E}+01$ (13), respectively. For the industrial worker, the risk associated with groundwater intake contributes 91% (3.1) to the total non-cancer hazard index. For the construction worker, the risks associated with inhalation of dust in ambient air and groundwater intake contribute 68% (8.6) and 25% (3.1), respectively, to the total non-cancer hazard level.

A comparison of the iron and manganese concentrations in SEAD-71 groundwater with the corresponding concentrations in the Seneca groundwater background data set was conducted in accordance with the USEPA (2002b) *Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites*. According to USEPA (2002b), several methods are available for comparing background to site data. These can be divided into several major categories: data ranking and plotting, descriptive summaries, simple comparison, parametric tests, and nonparametric tests. As the data set size for SEAD-71 groundwater is small (total sample number is eight), the comparison with background was conducted by comparing the descriptive statistics between the SEAD-71 groundwater data set and the SEDA background data set (see *SEAD59/71 Draft Final Phase II Remedial Investigation Report*, Appendix B, Parsons 2006).

Table 7-8 shows that the 25th percentile and the median concentrations of iron and manganese in SEAD-71 groundwater are below the corresponding concentrations in SEDA background. For iron, the arithmetic mean, the 75th percentile, and the 90th percentile of the SEAD-71 data set are greater than, but within two times of the corresponding values for the SEDA background data set. For manganese, the arithmetic mean, the 75th percentile, and the 90th percentile of the SEAD-71 data set are greater than two times of the corresponding values for the SEDA background data set. The two highest manganese hits were detected in MW71-2 and MW71-1, upgradient of the source area in SEAD-71. Monitoring well MW71-2 was dry most of the time during the groundwater sampling events (i.e., 1994 and 2004 groundwater sampling). Therefore, the manganese concentration reported for MW71-2 may be overstated due to limited water volume and potentially elevated turbidity. In general, the amount of groundwater and the rate of groundwater re-charge present at SEAD-71 is limited compared to other SEDA sites. Three of the four groundwater monitoring wells (MW71-1, -2, and -3) have measured saturation thickness of less than 4 feet during the 2004 sampling events.

In addition, the iron and manganese concentrations detected in a monitoring well downgradient and within the suspected source areas at SEAD-71 (i.e., MW71-4) are 0.023 to approximately 0.148 $\mu\text{g/L}$ and non detect (ND, reporting limit = 0.296) to approximately 0.0081 $\mu\text{g/L}$ for iron and manganese, respectively. The concentrations are below the corresponding 25th percentiles of the SEDA background data set.

Additionally, it should further be noted that it is extremely unlikely that groundwater will be used as drinking water source at SEAD-71, since there is an alternative potable water supply readily available throughout the PID Area of the Depot. Furthermore, shallow aquifer underlying both SEAD-59 and SEAD-71 is not believed to be productive enough to supply the drinking water needs at the sites.

In summary, the iron and manganese concentrations in SEAD-71 groundwater are generally comparable with the SEDA background. Elevated manganese concentrations in upgradient wells may be overstated due to limited volume and potentially elevated turbidity. The iron and manganese concentrations detected in the downgradient monitoring well are consistent with the SEDA background. Therefore, iron and manganese in SEAD-71 groundwater are not identified as COCs.

Aluminum, manganese, and naphthalene in SEAD-71 soil outside the Fenced Area are the only COPCs contributing to the non-cancer risks associated with inhalation of dust in ambient air and contribution from naphthalene being negligible (i.e., < 0.001%). As is shown in **Table 7-9**, aluminum and manganese concentrations remaining in SEAD-71 soil exterior of the Fenced Area are lower than Seneca background soils levels, and are less than federal and state guidance values that are deemed acceptable for more restricted types use (e.g., unrestricted use and residential). Like SEAD-59, SEAD-71 is located in a portion of the Depot where the future land use is intended to be commercial or industrial.

In addition to the descriptive statistics comparison, both non-parametric (Mann-Whitney T test) and parametric (Student's T test) statistical test methods were used for the background comparison analysis. One-tailed (one-sided) Mann-Whitney tests and Student's T tests were conducted. Both tests assumed 0.05 as the significance level. The statistical test results are presented in **Appendix H** of the Phase II RI Report. As shown in **Appendix H** of the Phase II RI Report, the results from the Student's T tests are consistent with the Mann-Whitney test results. Both tests conclude that the aluminum and manganese concentrations observed in SEAD-71 soils outside the Fenced Area are not statistically above the Seneca background levels.

Lead Risk Characterization

The lead risk characterization results for SEAD-71 soil exposure are presented in **Appendix E Tables 13** and **14** for the industrial worker and construction worker, respectively. The 95th percentile PbB among fetuses of adult industrial workers are 5.0 and 7.4 ug/dL, assuming a homogeneous and a heterogeneous population, respectively. Both estimates are below the USEPA target PbB level of concern (i.e., 10 ug/dL). The 95th percentile PbB among fetuses of adult construction workers are 5.5 and 8.0 ug/dL, for a homogeneous and a heterogeneous population, respectively. Both estimates are below the USEPA target PbB level of concern (i.e., 10 ug/dL).

The lead risk characterization results for child with SEAD-71 soil and groundwater exposure are presented in **Appendix E Table 15**. It should be noted that a child resident was assumed by using the IEUBK model. As the exposure frequency for a child trespasser is much less than a child resident, the results were used as a screening tool to evaluate potential risk for the child receptor. As the 95th percentile PbB among child residents are below the USEPA target PbB level of concern (i.e., 10 ug/dL), it

is concluded that lead level in SEAD-71 soil and groundwater does not pose a health risk to the child trespasser receptor.

7.2 SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT (SLERA)

Screening-level ecological risk assessments (SLERAs) were also performed for SEAD-59 and SEAD-71 to evaluate whether hazardous substances found at either of the AOCs have the potential to cause adverse effects to ecological resources. The SLERAs were conducted in accordance with several USEPA and NYSDEC guidance documents including *Ecological Risk Assessment Guidance for Superfund (ERAGS): Process for Designing and Conducting Ecological Risk Assessments* (USEPA, 1997), *Guidelines for Ecological Risk Assessment* (USEPA, 1998), *Fish and Wildlife Impact Analysis* (NYSDEC, 1994b), and *The Role of Screening-Level Risk Assessments and Refining Contaminants of Concern in Baseline Ecological Risk Assessments* (USEPA, 2001b).

The current USEPA (1997) ecological risk assessment paradigm includes eight general steps:

1. Screening-Level Problem Formulation and Ecological Effects Evaluation;
2. Screening-Level Exposure Estimate and Risk Calculation;
3. Baseline Risk Assessment Problem Formulation;
4. Study Design and Data Quality Objective (DQO) Process;
5. Field Verification of Sampling Design;
6. Site Investigation and Analysis Phase;
7. Risk Characterization; and
8. Risk Management.

The ecological risk assessments completed for SEAD-59 and SEAD-71 included a screening-level ecological risk assessment (SLERA, Steps 1 and 2) and further refinement of chemicals of concern (COCs) (Step 3.2). Step 3.2, COC refinement, was performed in accordance with the USEPA's ERAGS (1997) and the supplemental guidance of ERAGS (USEPA, 2001b). The SLERA process is summarized in **Figure 7-3**.

Upon completion of screening-level Ecological Risk Assessment (ERA) Step 2, there is a Scientific Management Decision Point (SMDP) with four possible decisions according to the ERAGS (USEPA, 1997) and the supplemental guidance (USEPA, 2001b):

- There is adequate information to conclude that ecological risks are negligible and therefore there is no need for remediation on the basis of ecological risks;
- The information is not adequate to make a decision at this point and the ERA process should continue to a baseline ERA;
- The information indicates a potential for adverse ecological effects, and a more thorough assessment is warranted; or
- In cases where contamination has sharply defined borders or where the extent of contamination is limited, it may be preferable to cleanup the area to the screening values rather than spending time and resources determining a less conservative cleanup number.

The results of the SLERA indicate which contaminants found at the AOC can be eliminated from further consideration and which should be evaluated further. The refinement of COCs helps streamline the overall ERA process by considering additional components early in the baseline ERA. The results of the ecological risk assessment presented will be used to determine the need for further study. The baseline ERA, if conducted, will further evaluate potential or actual adverse ecological effects associated with site-related contaminants and results will be used to develop appropriate remedial measures, if required.

7.2.1 Ecological Conceptual Model

Preliminary CSMs were developed separately for both AOCs. Each CSM provided an overall assessment of the primary and secondary sources of contamination at the AOCs, and the corresponding release mechanisms and affected media. Potential sources of contamination; potentially complete exposure pathways; and, ecological receptors are depicted in the CSM.

A complete exposure pathway consists of a source and mechanism of contaminant release, a transport mechanism for the released contaminants, a point of contact, and a route of contaminant entry into the receptor. If any of these elements is missing, the pathway is incomplete. In addition, potential receptors were identified to allow evaluation of potentially complete pathways.

For most terrestrial receptors, soil exposure intervals are limited to the upper 2 feet of the soil column. For purposes of this SLERA, surface soil was defined as the 0-2 ft. below ground surface (bgs). Surface and subsurface soil (0-4 ft. bgs, hereafter referred to as total soil) may be uncovered during future excavation activities and therefore, may result in contaminants in the soil becoming available for contact. Therefore, exposure to deeper soil (0-4 ft. bgs depth range) was also evaluated in the SLERAs.

Ecological receptors are not directly exposed to contaminants in groundwater. Further, there are no permanent lakes, ponds, streams or wetlands in SEAD-59 or SEAD-71; therefore, aquatic receptors were not identified as potential receptors at either of the AOCs.

7.2.2 Identification of Ecological COPCs

Chemicals of potential concern (COPCs) were identified by comparing the maximum detected concentrations in each impacted medium at each AOC to ecological risk-based screening values. For each data set selected, the maximum detected concentration was compared to the ecological screening value. For soil, the maximum detected concentration of all results was used for the screening purposes, and the COPCs identified were used for both the surface soil and the deeper soil data sets. The following five data sets were used for the screening level ecological risk assessment.

- SEAD-59 surface soil (0 – 2ft bgs) data;
- SEAD-59 deeper soil (0 – 2ft bgs) data;
- SEAD-59 stockpile soil data;
- SEAD-71 surface soil (0 – 2ft bgs) data; and,
- SEAD-71 surface soil (0 – 2ft bgs) data;

The ecological screening values are based on conservative (i.e., environmentally protective) generic values derived by various agencies. In brief, the following sources (cited in order of preference) were consulted for screening value selection for soil:

- USEPA (2000a, 2003c, 2005) Ecological Soil Screening Levels;
- USEPA Region III (1995) Biological Technical Assistance Group (BTAG) Screening Levels;
- USEPA Region V (2003) Ecological Screening Levels;
- Oak Ridge National Laboratory (ORNL) Screening Benchmarks for Soil and Litter Invertebrates and Heterotrophic Process (Efroymson et al., 1997a), and Terrestrial Plants (Efroymson et al., 1997b);
- Canadian Environmental Quality Guidelines developed by the Canadian Council of Ministers of the Environment (2003); and
- Circular on Target Values and Intervention Values for Soil Remediation developed by the Netherlands (2000).

Constituents with maximum detected concentrations exceeding the corresponding screening values were retained as COPCs. With the exception of the nutrients (i.e., calcium, magnesium, potassium, and sodium), constituents with no screening values available were retained as COPCs. In addition, all bioaccumulative compounds identified in the report *Bioaccumulation Testing and Interpretation for the Purpose of Sediment Quality Assessment* (USEPA, 2000) as important bioaccumulative compounds were retained as COPCs as a conservative approach, which is consistent with the ecological risk assessment guidance set forth by USEPA for the Mid-Atlantic Hazardous Site Cleanup program.

7.2.3 Assessment Endpoints

The assessment endpoints selected for the SLERA were the survival and reproduction of wildlife populations (associated with suitable habitat) that may be affected by previous SEAD-59 and SEAD-71 site operations. Specifically, assessment endpoints were provided for populations at two trophic levels: small mammals and ground-feeding birds, and higher level predators. The assessment endpoints are addressed through the survival and reproduction of mammal and bird populations at the AOCs.

7.2.4 Receptors

The following species were selected as ecological receptors for SEAD-59 and SEAD-71. These species were selected because they either have been observed at, or are likely to be present in the vicinity of the AOCs and the Depot, given habitat conditions.

- Deer mouse (*Peromyscus maniculatus*);
- Short-tail shrew (*Blarina brevicauda*);
- Red fox (*Vulpes vulpes*); and,
- American robin (*Turdus migratorius*).

7.2.5 Characterization of Exposure Pathways

The identified ecological receptors are potentially exposed to COPCs in the soil via soil ingestion and biota intake. The most likely exposure interval for which characterization data were collected is shallow soils (0 to 2 ft. bgs), where receptor exposure could result from surface-foraging, shallow burrowing, and due to uptake by many forage plants (e.g., grasses and forbs). The 0 to 4 foot bgs soil interval was also assessed to assess potential future burrowing and deep-rooted plant site conditions. Animals may be exposed directly to site-related contaminants through ingestion, dermal contact and inhalation. In addition, animals may be indirectly exposed to site-related contaminants through ingestion of plants, invertebrates and other animals that have bioaccumulated chemicals.

7.2.6 Screening-Level Effects Evaluation

The SLERA for mammalian and avian receptors was conducted by comparing potential exposures to COPCs to screening ecotoxicity values (SEVs). SEVs for those analytes identified as COPCs were derived from studies reported in the literature, in the absence of site-specific data, by establishing data selection criteria such that SEVs would be as relevant as possible to assessment endpoints at the sites. In accordance with USEPA guidance (1997), the lowest available, appropriate toxicity values were used with modifying factors to ensure a conservative (i.e., health protective) screening-level evaluation.

7.2.7 Screening-Level Exposure Estimate

Estimates of contaminant exposures, expressed as daily dose ingested of contaminated food items (i.e., plants, invertebrates, and animals) and media, were calculated to compare potential wildlife exposures to adverse effect levels. COPC daily dose ingested (expressed as the mass of COPC ingested per kilogram body weight per day) depends on the COPC concentration in food items and media, the receptor's trophic level, the trophic level of food items, and the receptor's ingestion rate of each food item and media.

USEPA (1993b, 1999b, and 2005) has provided a variety of exposure information for numerous avian and mammalian species. Data are directly available for body weights of various species. Similarly, information regarding feeding rates, and dietary composition, including incidental soil ingestion, are also available for many species. Such exposure parameters were compiled for the selected receptor species (i.e., deer mouse, short-tailed shrew, red fox, and American robin). Feeding rates for receptors were based upon USEPA (1999b, 2005) or allometric equations presented in Nagy (1999). Literature values for diet fraction and body weights were taken from USEPA (1993b, 1999b, 2005).

For the screening-level exposure estimate, site foraging frequency factors for all receptors were assigned as 1, in accordance with the USEPA (1997) guidance. That is, all receptors were assumed to be exposed 100% of the time to the COPCs at the AOC. This is a very conservative assumption as most receptors will spend at least part of the time outside of the AOC boundaries, either by having a larger home range than the AOC area, seasonal migration patterns, and/or winter dormancy periods. For example, the red fox has a much larger foraging range than the size of either SEAD-59 or SEAD-71 (i.e., over 200 acres vs. approximately 6 and 2.5 acres, respectively), yet the SLERA assumes that the fox spends all of its time at SEAD-59 or SEAD-71.

The soil-to-plant uptake factors and soil-to-soil invertebrate uptake factors were obtained from the “*Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities*” (USEPA 1999b). Small mammal bioaccumulation factors were obtained from published literature or were calculated based on chemical-specific partitioning coefficients provided in the literature.

The exposure point concentration (EPC) evaluated for each soil COPC was determined based on the maximum detected concentration, in accordance with the USEPA (1997) guidance.

7.2.8 Screening-Level Risk Calculation

For wildlife receptors, the risk calculation step uses the results of the wildlife exposure and toxicity effects assessments to calculate a hazard quotient for each COPC. A hazard quotient (HQ) is a ratio of the estimated exposure dose (for mammal and bird receptors) of a contaminant to the SEV. Generally, the greater this ratio or quotient, the greater the likelihood of an effect. A HQ less than 1 indicates that the contaminant alone is unlikely to cause adverse ecological effects. Because conservative (i.e., health protective) estimates of potential chronic exposures and toxicity were used, screening-level HQs tend to overestimate actual risks. Cumulative effects of COPCs were not quantitatively evaluated in this SLERA.

For the screening level ERA, NOAEL toxicity values, the maximum detected COPC concentrations, and conservative exposure assumptions were used to calculate the screening level HQs. Each of these assumptions adds to the conservative nature of the HQ calculated.

7.2.9 Further Refinement of Chemicals of Concern

Due to the conservative nature of the assumptions used in the screening-level ecological risk assessment, additional evaluation was completed to refine the contaminants of concern. The refinement of COCs streamlines the overall ERA process to determine if further evaluation is warranted. Lines of evidence (COC refinement) evaluated include:

- COC detection frequency;
- Risk results based on reasonable site average concentration and/or LOAEL SEVs;
- Size of site relative to foraging area of receptors;
- Site risk relative to background risk;
- Relative uncertainties of SLERA results;
- Sufficiency and quality of literature toxicity data and experimental designs;
- Strength of cause/effect relationships; and
- Quality of habitat for receptors.

Alternative toxicity values and mean exposures based on mean concentrations of contaminants detected in a media at an AOC were considered for the refinement of COCs. Utilizing the mean concentration instead of the maximum concentration presents a more realistic approach to evaluate exposure for a receptor that comes into contact with a COPC. The receptor is likely to range over the entire site and not be continuously exposed to the maximum concentration at all times. Thus, the mean is more

representative of the actual exposure concentration for a receptor to contact on a continual basis. This additional risk characterization performed as part of the ERA Step 3, together with the other lines of evidence, can be used to refine the COCs and support a decision for either additional evaluation or no further evaluation of environmental risk.

In accordance with the USEPA ERAGs, this SLERA was conducted using very conservative assumptions. Therefore, as completed, the SLERA is likely to lead to a n overestimation of the risks posed to the ecosystem. The following briefly highlights three factors that may heavily impact the degree of conservatism that is built into the SLEAR.

Relative Bioavailability

The relative bioavailability of contaminants found at SEAD-59 and SEAD-71 were assumed to be 100% during the SLERA. However, contaminants in environmental media are generally less available to biological organisms compared with the same contaminants in the experimental medium (i.e., diet, water, etc.).

Site Foraging Frequency Factor

The site foraging frequency factors (or area-use factors) were assumed to be 1 for the mammalian receptors, and 100% for the avian receptors for the avian receptors at both AOCs. That is, the receptors were assumed to live within each AOC at all times, and not range or forage beyond the boundaries of the AOC being evaluated. Again, this is a very conservative assumption as most ecological receptors will spend at least part of the time outside of the AOC boundaries, either by having a larger home range than the AOC area, seasonal migration patterns, and/or winter dormancy periods.

A site foraging frequency factors of 0.03 would be more appropriate for the red fox for SEAD-59. Similarly, a site foraging frequency factor of 0.5 would be a more appropriate estimate for the American robin.

NOAEL/LOAEL Multiplier

A NOAEL is preferred to a LOAEL as a screening ecotoxicity value to ensure that risk is not underestimated (USEPA, 1997). However, NOAELs currently are not available for many groups of organisms and many chemicals. When a LOAEL value, but not a NOAEL value, is available from the literature, a standard practice is to multiply the LOAEL by a NOAEL/LOAEL multiplier (0.1) and to use the product as the NOAEL for the screening evaluation. Although a NOAEL/LOAEL multiplier of 0.1 was used, the true NOAEL may be only slightly lower than the experimental LOAEL, particularly if the observed effect is of low severity (Sample et al., 1996). The data review referred to in the ERAGS that is used to support the use of 0.1 as the NOAEL/LOAEL multiplier indicates that 96% of chemicals included in the review had a NOAEL/LOAEL multiplier no less than 0.2. Therefore, using a default NOAEL/LOAEL multiplier of 0.1 may result in an overestimation of the HQs. LOAEL values were used in Step 3.2 as alternative SEV values.

Maximum Detected Concentration

The use of the maximum detected concentration as the EPC may overestimate risk since the receptor is actually exposed to a broader range of contaminant concentrations rather than the maximum detected concentrations. Exposure would occur throughout the AOC at various levels, including the EPC. Thus, actual risks may be lower than those presented in the assessment.

7.2.10 Ecological Risk Assessment

Ecological communities identified at SEAD-59/71 include successional old field areas, successional shrub areas, and successional hardwoods areas. Animals that have been identified at the Depot during various ecological surveys include beaver, eastern coyote, deer, red and gray fox, eastern cottontail rabbit, muskrat, raccoon, gray squirrel, striped skunk, and the woodchuck. Bird species that have been identified include the blue jay, black-capped chickadee, American crow, mourning dove, northern flicker, ruffed grouse, ring-billed gull, red-tailed hawk, northern junco, American kestrel, white breasted nuthatch, ring-necked pheasant, American robin, eastern starling, turkey vulture, and pileated woodpecker.

The NYSDEC Natural Heritage Program Biological and Conservation Data System identifies no known occurrences of federal- or state-designated threatened or endangered plant or animal species within a 2-mile radius of the SEDA. No species of special concern are documented within the Depot property. No rare or endangered species have been observed during the site assessment.

A SLERA was conducted and the results indicate that soil at SEAD-59, SEAD-71, and in SEAD-59 stockpiled soil does not significantly impact ecological receptors in the area (i.e., deer mouse, American robin, short-tailed shrew, and red fox). No COCs were identified for SEAD-59 soil, SEAD-59 stockpiled soil, or SEAD-71 soil for ecological receptors.

7.3 SUMMARY OF HUMAN HEALTH AND ECOLOGICAL RISKS

The results of the risk assessment indicate that contaminants associated with releases at SEAD-59 and SEAD-71 do not pose unacceptable risks to the industrial receptors. However, there is a potential that risks would exist for residential users, if the land was subsequently reclassified for either residential or unrestricted use.

In-situ soil at SEAD-59 and SEAD-71, and stockpiled soil in SEAD-59 do not significantly impact ecological receptors in the areas.

7.4 BASIS FOR ACTION

Based upon the ecological evaluation, it is concluded that there is no significant risk identified for potential ecological receptors at SEAD-59 and SEAD-71. The human health risk assessment results indicate that contaminants associated with releases at SEAD-59 and SEAD-71 do not pose unacceptable risks to the industrial receptors; therefore, SEAD-59 and SEAD-71 are suitable for the continued use as a commercial or industrial area and stockpiled soil may be left at SEAD-59 because it poses no undo risk to future industrial receptors. There is a potential that unacceptable levels of human health risks could exist at SEAD-59 or 71 if this land were subsequently released for unrestricted use.

8.0 REMEDIAL ACTION OBJECTIVES

Remedial action objectives are specific goals to protect human health and the environment. These objectives are based on available information and standards such as ARARs and risk-based levels established in the risk assessment. These objectives are also based upon current and intended future land use, which is Planned Industrial/Office Development and Warehousing for SEAD-59 and SEAD-71.

Remedial action objectives have been developed that consist of media-specific objectives for protection of human health and the environment. NYSDEC's General Remedial Program goal is to restore a specific site to pre-disposal conditions, to the extent feasible. Unrestricted land use was considered at SEAD-59 and SEAD-71 to compare the costs of remediating the AOCs to this level of use versus the costs to implement a more restricted land use. Unrestricted use was also considered to comply with Army guidance, which states that alternatives consistent with property use without any restriction should be considered to compare life-cycle institutional control costs with more conservative cleanup alternatives (DAIM-BO, *Army Guidance for Using Institutional Controls in the CERCLA Process*).

Remedial action objectives are specific goals to protect human health and the environment; they specify the contaminant(s) of concern, the exposure route(s), receptor(s), and acceptable contaminant level(s) for each exposure route. These objectives are based on risk levels established in the risk assessment and should comply with ARARs, unless a waiver is obtained. A list of ARARs, TBCs, and other guidance is provided in **Appendix F**.

Select hazardous substances and other contaminants are still present in the soil that remains at SEAD-59 and SEAD-71 at concentrations that prohibit unrestricted use and unlimited exposures. Results of the risk assessments completed for the two AOCs indicate that the levels of contaminants that are present will allow for its continued use as a commercial or industrial site, which is consistent with SCIDA's current land use designation for the PID Area.. Further, hazardous substances and other contaminants are present in the groundwater at SEAD-71 at concentrations that are above the State of New York's GA groundwater standards. Additionally, results of the human health risk assessment indicates that the presence of these hazardous substances and contaminants in the groundwater at SEAD-71 poses an elevated non-cancer hazard. Therefore, the groundwater at SEAD-71 is not an appropriate source of potable water. The levels of certain hazardous substances and other contaminants found in the groundwater at SEAD-59 also exceed New York's GA groundwater standards, but are not at sufficient concentrations to suggest that elevated cancer risks or non-carcinogenic hazards would results from its use.

Given this information the remedial action objectives for SEAD-59 and SEAD-71 are as follows:

- Reduce or eliminate future user direct contact, ingestion and the inhalation threats to soils containing hazardous substances; and,
- Prevent exposures of future users to groundwater that may contain hazardous substances and other pollutants and contaminants.

9.0 DESCRIPTION OF ALTERNATIVES

CERCLA § 121(b)(1), 42 U.S.C. § 9621 (b)(1) and the NCP require that each selected remedy be protective of human health and the environment, be cost effective, comply with ARARs, and use permanent solutions, alternative treatment technologies, and resource recovery options to the maximum extent possible. Section 121(b)(1) also establishes a preference for remedial actions which employ, as a principal element, treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances, pollutants and contaminants at a site.

Two remedial alternatives were considered for groundwater at SEAD-59 and SEAD-71. These included:

- Groundwater Alternative 1: No Action
- Groundwater Alternative 2: Groundwater Access/Use Restriction

The concepts, provisions, requirements, and costs associated with both of the groundwater alternatives (GwAs) discussed for SEAD-59 and SEAD-71 are identical.

Three alternatives were considered for soil in each of the AOCs based on the USEPA and NYSDEC policies and based on conditions identified in the AOCs. The three soil remedial alternatives are listed below. Requirements, considerations, concepts and costs associated with the implementation of Soil Alternative 1 (SA 1) are identical for SEAD-59 and SEAD-71. There are slight differences in provisions of the other two soil alternatives (SAs 2, 3a, and 3b) defined for SEAD-59 and SEAD-71.

- Soil Alternative 1: No Action;
- Soil Alternative 2: Soil Excavation, Off-Site Treatment/Disposal and Soil Backfill to Achieve Unrestricted Use SCOs (discussions presented separately for SEAD-59 and SEAD-71);
- Soil Alternative 3a1: Implementing Land Use Controls that Prohibit Residential Housing, Elementary or Secondary Schools, Childcare Facilities or Playgrounds (SEAD-59 only); or
- Soil Alternative 3a2: Interring Residual Excavated Soil under a Protective Cover and Implementing Land Use Controls that Prohibit Unauthorized Excavation, and that Prohibit Residential Housing, Elementary or Secondary Schools, Childcare Facilities or Playgrounds (SEAD-59 only); or
- Soil Alternative 3b: Implementing Land Use Controls that Prohibit that Prohibit Residential Housing, Elementary or Secondary Schools, Childcare Facilities or Playgrounds (SEAD-71 only).

Detailed descriptions of the soil and groundwater remedial alternatives considered to address the contamination found associated with the individual AOCs are presented below. The construction time for each alternative reflects only the time required to construct or implement the remedy and does not include time required to design the remedy or procure contracts for design and construction. The costs of the alternatives are calculated using a discount rate of seven percent (7%) and a 30-year time interval.

Once all alternatives have been identified and described, each of the alternatives has been evaluated against the NCP's evaluation criteria which are:

- Overall protectiveness of the public health and the environment;
- Compliance with ARARs;
- Long-term effectiveness and permanence;
- Reduction in toxicity, mobility or volume of contamination through treatment;
- Short-term effectiveness;
- Implementability;
- Community acceptance;
- State acceptance; and
- Cost-effectiveness.

The comparative evaluation of the varying alternatives is summarized in **Section 10** of this Record of Decision.

9.1 GROUNDWATER ALTERNATIVES

9.1.1 Groundwater Alternative 1 (GwA 1) – No Action

The Superfund program requires that the “no-action” alternative be considered and serve as the baseline to which other alternatives evaluated are compared. The “no action” remedial alternative for groundwater does not include the design or implementation of any remedial measures to address types of groundwater contamination identified.

Application of the no action alternative at SEAD-59 and SEAD-71 will allow for contaminants, including hazardous substances, to remain in the groundwater at concentrations above levels that permit unrestricted use and unlimited exposures. As such, CERCLA requires that conditions at the AOCs be reviewed at least once every five years to assess whether changes are occurring, which require further consideration or action. If justified by the periodic reviews, subsequent remedial actions may be implemented to remove, treat, or contain the contaminated groundwater. The costs associated with the application of the “no action” alternative for groundwater are identified below.

SEAD-59 and SEAD-71, GwA 1 (No Action) Costs

Capital Cost:	\$0
Annual Operation, Maintenance, and Monitoring (OM&M) Costs (groundwater):	\$0
Present-Worth Costs:	\$0
Construction Time:	0 months
Completion Time	0 months

9.1.2 Groundwater Alternative 2 (GwA 2) – Groundwater Access/Use Restriction

This alternative is generally equivalent to GwA 1, except in this case the remedy will impose the groundwater access/use restriction that has been implemented over land in the PID Area that has been transferred to the SCIDA. The groundwater access/use restriction was not previously imposed on SEAD-59 and SEAD-71 because they were retained by the Army, pending completion of their CERCLA regulatory process. Given the results obtained for the two AOCs that define the groundwater quality present in SEAD-59 and SEAD-71, the groundwater access/use restriction should be formally imposed on both of the AOCs.

The decision to apply the PID Area-wide groundwater use/access restriction at SEAD-59 and SEAD-71 will not adversely affect the future usability of the AOCs because a municipal, potable water distribution system, which derives its raw water from a non-groundwater source, is available within the entire PID Area. The presence of this alternative supply of domestic water reduces the need to consider use of groundwater underlying the PID Area.

The existing PID Area-wide groundwater access/use restriction was implemented due to the groundwater quality conditions identified in SEADs 27, 64A, and 66, which are reported and summarized in the *Final ROD for Sites Requiring Institutional Controls in the Planned Industrial/Office Development or Warehousing Areas* (Parsons, 2004). Under the 2004 PID Area-wide ROD, the groundwater restriction will be implemented for those properties within the PID Area that are the subject of the 2004 PID ROD to prohibit access to and use of the groundwater. This restriction may be removed at specific AOCs or specific portions of the PID Area if, and when, groundwater constituent concentrations are reduced at such areas to levels that allow for unrestricted exposure and unrestricted use.

The application of this groundwater remedy at SEAD-59 and SEAD-71 will allow for certain chemicals, including CERCLA-regulated hazardous substances, to remain at concentrations above levels that permit unrestricted use and unlimited exposures at both of the AOCs. As such, CERCLA requires that the remedy for the AOCs be reviewed at least once every five years to assess whether changes have occurred, which require further consideration or action. If justified by the periodic reviews, subsequent remedial actions may be implemented to remove, treat or contain the contaminated groundwater. The likely costs associated with application of this alternative individually, for groundwater at each of the AOCs is summarized below.

SEAD-59 and SEAD-71, GwA 2 (Groundwater Restriction) Costs

Capital Cost:	\$0
Annual OM&M Costs (groundwater):	\$3,000
Present-Worth Costs:	\$37,230
Construction Time:	0 months
Completion Time	1 month

9.2 SOIL ALTERNATIVES

9.2.1 Soil Alternative 1 (SA 1) – “No Action”

Like is the case for groundwater, the “no action” remedial alternative for soil does not include the design or implementation of any physical remedial measures to address types of soil contamination that has been identified at the two AOCs. The “no-action” alternative (SA 1) is identical for work that might be considered at either SEAD-59 or SEAD-71.

Application of this alternative would allow for hazardous substances at concentrations above levels that permit unrestricted use and unlimited exposures to remain in the soils at both of the AOCs. As such, CERCLA requires that conditions at the AOCs be reviewed at least once every five years to assess whether changes are occurring at the AOCs. If justified by the periodic reviews, subsequent remedial actions may be implemented to remove, treat or contain the contaminated soils.

SEAD-59 and SEAD-71, SA 1 (No Action) Costs

Capital Cost:	\$0
OM&M Costs (soil)	\$0
Present-Worth Costs:	\$0
Construction Time:	0 months
Completion Time	0 months

9.2.2 Soil Alternative 2 (SA 2) – Excavation of Soil to Achieve Unrestricted Use Cleanup Objectives, Off-Site Treatment/Disposal, and Soil Backfill

SEAD-59 (SA 2a)

This alternative involves the excavation of soil containing hazardous substances at levels in excess of the New York’s Unrestricted Use SCO levels. A summary listing of contaminants identified in current soils at SEAD-59 at concentrations in excess of New York’s Unrestricted Use SCOs is provided in **Table 6-1a** for in-situ soils and **Table 6-5** for excavated soil that remains at the site in stockpiles.

Due to the elevated cPAH concentrations contained in the backfilled windrow samples, all the previous backfill areas at SEAD-59 will need to be re-excavated and the soil removed to meet the New York Unrestricted Use SCOs. Further, other areas at SEAD-59 would need to be excavated to meet the New York Unrestricted Use SCOs. The estimated volume of contaminated soil from backfilled and previously unexcavated locations is approximately 16,400 cubic yards (cy).

Carcinogenic PAHs, three pesticides (4,4’-DDT, 4,4’-DDE, and 4,4’-DDD), and two metals (lead and nickel) were found with the site-wide concentrations exceeding the corresponding NYSDEC Unrestricted Use SCOs in the stockpiled SEAD-59 soils. The Army anticipates that all of the stockpiled soil remaining from the TCRA excavation (i.e., 5,428 cy) would need to be disposed off-site to achieve the Unrestricted Use SCOs.

All of the excavated soil and the TCRA stockpiled soil (i.e., 16,400 cy and 5,428 cy) would be characterized and transported for disposal at off-site landfills. Water generated from the storm events that

flows into excavation areas would be captured and pre-treated on-site, as necessary. It would be discharged to the Seneca County Wastewater Treatment Facility in conformance with their requirements.

Once the excavation was completed and its extent confirmed by the collection and analysis of confirmatory samples, the area of the excavation would be backfilled, compacted, and graded.

Once this action was completed, the land excavated would be appropriate for unrestricted use and unlimited exposures.

SEAD-59 SA 2a (Unrestricted Use) Costs

Capital Cost	\$2,182,800
Annual OM&M Cost (soil)	\$0
Present-Worth Costs:	\$2,182,800
Construction Time	6 Months
Completion Time	12 Months

SEAD-71(SA 2b)

Again this alternative involves the excavation of soil containing substances at levels in excess of the New York's Unrestricted Use SCO levels. A summary listing of contaminants identified in current soils at SEAD-71 at concentrations in excess of New York's Unrestricted Use SCOs is provided in **Tables 6-10a** for all soils and in **Table 6-14a** for SEAD-71 soils that are exterior of the Fenced Area..

All of the previous areas backfilled with excavated soil from the TCRA at SEAD-71 would be re-excavated and the soil would be removed to meet New York's Unrestricted Use SCOs due to residual levels of cPAH compounds that are present in the backfill. Further three surface areas located in SEAD-71 would be excavated to a depth of one foot to achieve the New York Unrestricted Use SCOs: the Fenced Area (28,000 ft²) and two areas to the west of the Fenced Area – one to the north of the unnamed dirt road (1,500 ft²) and the other encompassing the dirt road (17,500 ft²). Soil associated with two test pit locations within these areas (TP71-1 and TP71-2) would be excavated to a greater depth (4 ft and 3.5 ft, respectively) to achieve the New York's Unrestricted Use SCOs. Based on these dimensions, the estimated volume of contaminated soil requiring excavation and removal from SEAD-71 is approximately 2,400 cy.

All excavated soil would be characterized and transported for disposal at off-site landfills. Water generated from the storm events that flows into excavation areas would be captured and treated on-site, as necessary. It would be discharged to the Seneca County Wastewater Treatment Facility in conformance with their requirements.

Once the excavation was completed and its extent confirmed by the collection and analysis of confirmatory samples, the area of the excavation would be backfilled, compacted, and graded.

Once this action was completed, the land excavated would be appropriate for unrestricted use and unlimited exposures.

SEAD-71 SA2b (Unrestricted Use) Costs

Capital Cost	\$240,000
Annual OM&M Cost (soil)	\$0
Present-Worth Costs:	\$240,000
Construction time	3 Months
Completion Time	12 Months

9.2.3. Soil Alternative 3 (SA 3) – Land Use Controls**9.2.3.1 SEAD-59 Soil Alternatives 3a1 (SA3a1) - Implementing Land Use Controls or Soil Alternative 3a2 - Interring Excavated Soil Beneath a Protective Cover and Implementing Land Use Controls**

The Army compared the analytical results obtained for soil left (i.e., non-stockpiled) in place at SEAD-59 to New York's Restricted Commercial and Industrial Use SCOs and conducted human health and ecological risk assessments based on sampling results for SEAD-59, in accordance with Superfund guidance. The comparison of AOC-wide 95th UCL values for all identified hazardous substances and contaminants, except benzo(a)pyrene, are below the State's SCOs. The AOC-wide 95th UCL value for benzo(a)pyrene is between the State's Commercial and Industrial Use SCOs. The AOC-wide 95th UCL for several hazardous substances exceeds the State's Residential and Unrestricted Use SCOs.

The results of the risk assessment performed in accordance with CERCLA guidance indicate that there are no significant risks identified for potential ecological receptors, and that SEAD-59 is suitable for continued use as commercial and industrial land. However, it is likely that there are potential risks and hazards present for other non-commercial/industrial populations due to contaminants identified in the soils and groundwater in SEAD-59. As a result, institutional controls in the form of land use restrictions that prohibit the use of the land for residential housing, elementary and secondary schools, childcare facilities and playgrounds will need to be implemented for the land comprising SEAD-59.

The results of the human health risk assessment also indicate that excavated soils from SEAD-59 and SEAD-71 remaining in stockpiles at SEAD-59 do not pose unacceptable risks to future commercial and industrial populations, and can therefore be left at the AOC, which will continue to be used for commercial or industrial uses.

Alternative SA3a1(Leave Soil Stockpiled and Land Use Controls)

Since the risk assessment indicates that the stockpiled soil at SEAD-59 does not pose elevated risk to current and future commercial or industrial populations, and the continuing planned use for the SEAD-59 area is as commercial or industrial land, the soil may be left in stockpiles and a land use control that prohibits the use of the land for residential housing, elementary and secondary schools, childcare facilities, and playgrounds will be implemented, monitored, and maintained on the land located within the bounds of SEAD-59.

It is estimated that alternative SA3a1 for SEAD-59 would take approximately one month to implement. Contaminants above levels that allow for unrestricted use and unlimited exposures will remain at the

AOC under this alternative. Therefore, CERCLA requires that the AOC be reviewed at least once every five years. If justified by the review, further remedial actions may be implemented to remove or treat the identified wastes.

Alternative 3a2 (Inter Stockpiled Soils under Multi-layered Cap and Land Use Controls)

In spite of the demonstration that the soil staged in stockpiles at SEAD-59 does not pose additional risks to future commercial and industrial uses of the AOC, the USEPA and the NYSDEC have asked that this soil be spread out over the ground at SEAD-59 and then over-covered with a layer of demarcation fabric and 12-inches of soil that meets New York's Commercial SCO levels. Under this alternative, the stockpiled soil remaining at SEAD-59 would be spread out over a portion of the AOC in a manner that would promote positive drainage, covered with a layer of demarcation fabric that extended beyond the bounds of the spread soils, and then over-covered with 12-inches of clean fill that meets New York's Restricted Commercial Use SCO levels. The entire area would then be compacted and graded to promote positive surface water run-off flow. Once this action was completed, the bounds of the area containing the spread stockpiled soils would be surveyed and recorded, and a LUC that prohibits unauthorized excavations or activities that are likely to disturb the soil cap and the demarcation fabric would be implemented, monitored, and maintained over the area where the stockpiled soils were interred. In addition, a second LUC that prohibits residential housing, elementary or secondary schools, childcare facilities, or playgrounds would be implemented, monitored, and maintained over the land located within the entire AOC.

It is estimated that alternative SA3a2 for SEAD-59 would take approximately two months to implement. Contaminants above levels that allow for unrestricted use and unlimited exposures will remain at the AOC under this alternative. Therefore, CERCLA requires that the AOC be reviewed at least once every five years. If justified by the review, further remedial actions may be implemented to remove or treat the identified wastes.

SEAD-59 SA 3a1 (Leave Soil Stockpiled and Land Use Controls) Costs

Capital Cost	\$0
Annual OM&M Cost (soil)	\$3,000
Present Worth Cost	\$37,230
Construction time	0 Month
Completion Time	1 Months

SEAD-59 SA 3a2 (Inter Stockpiled Soil and Land Use Controls) Costs

Capital Cost	\$35,000
Annual OM&M Cost (soil)	\$3,000
Present Worth Cost	\$72,230
Construction time	2 Months
Completion Time	6 Months

9.2.3.2 SEAD-71 Soil Alternative 3b (SA 3b) – Implementing Land Use Controls

The Army conducted human health and ecological risk assessments for SEAD-71 in accordance with Superfund guidance. There is no significant risk identified for potential ecological receptors at SEAD-71. The results of the human health risk assessment indicate that SEAD-71 is suitable for continued use as an industrial area. However, contaminants above levels that permit unrestricted use and unlimited exposures will still remain in the soil at the AOC. As such, LUCs that prohibit use of the property for residential housing, elementary and secondary schools, childcare facilities and playgrounds will be implemented on land comprising SEAD-71.

It is estimated that this alternative will take approximately one month to implement. Contaminants above levels that allow for unrestricted use and unlimited exposures will remain at the AOC under this alternative. Therefore, CERCLA requires that the AOCs be reviewed at least once every five years. If justified by the review, further remedial actions may be implemented to remove or treat the identified wastes.

SEAD-71 Soil Alternative 3b and Groundwater Alternative 1 Costs

Capital Cost:	\$0
OM&M Costs (soil)	\$3,000
Present-Worth Costs:	\$37,230
Construction Time:	0 months
Completion Time	1 month

10.0 COMPARATIVE ANALYSIS OF ALTERNATIVES

During the detailed evaluation of remedial alternatives, each alternative is assessed against nine evaluation criteria, namely, overall protection of human health and the environment, compliance with applicable or relevant and appropriate requirements, long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, short-term effectiveness, implementability, cost, and state and community acceptance. The evaluation criteria are described below.

- Overall protection of human health and the environment addresses whether or not a remedy provides adequate protection and describes how risks posed through each exposure pathway (based on a reasonable maximum exposure scenario) are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.
- Compliance with ARARs addresses whether or not a remedy would meet all of the applicable or relevant and appropriate requirements of other federal and state environmental statutes and requirements or provide grounds for invoking a waiver.
- Long-term effectiveness and permanence refers to the ability of a remedy to maintain reliable protection of human health and the environment overtime, once cleanup goals have been met. It also addresses the magnitude and effectiveness of the measures that may be required to manage the risk posed by treatment residuals and/or untreated wastes.
- Reduction of toxicity, mobility, or volume through treatment is the anticipated performance of the treatment technologies, with respect to these parameters, a remedy may employ.
- Short-term effectiveness addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved.
- Implementability is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.
- Cost includes estimated capital and OM&M costs, and net present-worth costs.
- State acceptance indicates if, based on its review of the RI/FS and Proposed Plan, the state concurs with the preferred remedy at the present time.
- Community acceptance will be assessed in the ROD and refers to the public's general response to the alternatives described in the Proposed Plan and the RI/FS reports.

A comparative analysis of these alternatives based upon the evaluation criteria noted above follows.

10.1 OVERALL PROTECTIVENESS OF HUMAN HEALTH AND THE ENVIRONMENT.

Soil Alternative (SA) 1 is not protective of human health or the environment since it does not address the soils found to contain hazardous substances at concentrations above those that allow for unrestricted use and unlimited exposures. SA 2 is protective of human health and the environment as its objective is to remove all soil that contains contaminants in excess of State levels that would allow for unrestricted use

and unlimited exposures. SA 3a1, 3a2, and 3b are protective of human health for the reasonably anticipated future land use of the two AOCs, which is industrial or commercial use.

Groundwater Alternative (GwA) 1 is not protective of human health or the environment since it does not address the contaminants identified in groundwater that have been found at concentrations above those that allow for unrestricted use and unlimited exposures. GwA 2 is protective of human health since it does acknowledge that contaminants are present at levels above those that allow for unrestricted use and unlimited exposures, and therefore, prohibits access to or use of the groundwater for all purposes.

10.2 COMPLIANCE WITH ARARS

There are currently no promulgated Federal standards for hazardous substance levels in soils, and risk-based decisions are used to determine if cleanup is warranted or necessary. New York has promulgated Remedial Program Requirements, which include numeric soil cleanup objectives for five categories of future land use (i.e., Unrestricted, Residential, Restricted-Residential, Commercial, and Industrial), as well as procedures for proposing alternative cleanup objectives for waste sites located within its bounds. These requirements were considered in connection with the selection of the remedy in this Record of Decision.

SA 1 does not address New York's Remedial Program Requirements SCOs or alternative procedures. SA 2 for both AOCs is intended to achieve New York's Unrestricted Use SCOs, and as such, it represents the alternative that would most likely allow for unrestricted use and unlimited exposures at both of the AOCs. SAs 3a1, 3a2, and 3b allow for restricted commercial/industrial uses and exposures at both SEAD-59 and SEAD-71.

New York designates all groundwater as a possible source of drinking water. Further, New York has promulgated standards for groundwater that is designated as GA levels. Several hazardous substances or contaminants were identified in the groundwater samples collected at SEAD-59 and SEAD-71 at levels that exceed New York's GA groundwater standards. Finally, the generally poor quality of the PID Area-wide groundwater has already been identified and acknowledged, and access to and use of the groundwater has been prohibited by remedial actions defined in a separate ROD that was finalized in 2004 [*Final ROD for Sites Requiring Institutional Controls in the Planned Industrial/Office Development or Warehousing Areas* (Parsons, 2004)].

GwA 1 does not address New York's groundwater standards, and does not place any restriction that prohibits the use of the groundwater at the AOCs. GwA 2 also does not address New York's GA groundwater standards, but it does recommend that the general PID Area-wide groundwater access/use restriction be formally placed on SEAD-59 and SEAD-71.

10.3 LONG-TERM EFFECTIVENESS AND PERMANENCE

SA 1 is not effective in eliminating the exposure to contaminants identified in soil at either SEAD-59 or SEAD-71. SA 2 demonstrates the highest degree of long-term effectiveness for soil, as all soil that contains contaminants in excess of New York's Unrestricted Use SCOs will be excavated and removed from the AOCs. SAs 3a1 (Leave Soil Stockpiled /Land Use Controls), 3a2 (Inter Stockpiled Soil/Land Use Controls) and 3b will impose LUCs at SEAD-59 and SEAD-71 to prohibit future residential housing,

elementary or secondary schools, childcare facilities, or playgrounds;; which will provide some level of long-term protection against likely exposures, but does not provide a permanent solution. SA 3a2 (Inter Stockpiled Soils) will impose two soil LUCs at SEAD-59, one to prohibit unauthorized excavations or activities that disturb the interred stockpiled soils and the other to prohibit future residential housing, elementary or secondary schools, childcare facilities, or playgrounds. Again, both of these LUCs will provide some level of long-term protection against likely exposures, but they do not provide a permanent solution.

GwA 1 is expected to have minimal long-term effectiveness on groundwater quality since it prescribes “no action” to restore groundwater quality. GwA 2 acknowledges the presence of hazardous substances in the groundwater at both of the AOCs, and prohibits access to/use of it. Since an alternative potable water supply that does not rely on local groundwater exists within the PID Area, GwA 2 provides a remedy that should be effective for the long term and represent a permanent solution.

10.4 REDUCTION IN TOXICITY, MOBILITY, OR VOLUME THROUGH TREATMENT

SA 1 would provide no reduction in the toxicity, mobility or volume of hazardous substances found in soil at either of the AOCs. Under SA 2, soils containing hazardous substances in excess of the State’s Unrestricted Use SCOs will be excavated and transported off-site for disposal. This would reduce the toxicity and mobility of hazardous substances left at the AOCs. SAs #a1 (Leave Soil Stockpiled), 3a2 (Inter Stockpiled Soil) and 3b for SEAD-59 and SEAD-71 provide no reduction in the toxicity, mobility or volume of hazardous substances found in soil at either of the AOCs.

Comparably, neither GwA 1 nor GwA 2 would provide any reduction in the toxicity, mobility or volume of hazardous substances that are contained in groundwater at the AOCs.

10.5 SHORT-TERM EFFECTIVENESS

SA 1 would not pose any additional short-term hazards to workers at the AOCs or the community as construction is not included in the remedy proposed for either of the AOCs. SA 2 would pose some additional short-term hazards to neighboring site workers and the community through dermal contact, ingestion, or inhalation of contaminants during the excavation, loading, transporting, and unloading operations that are needed to complete the construction efforts. Further, noise from the heavy equipment used for excavation, loading, and hauling could also affect employees of neighboring industries and companies. In addition, interim and post remediation sampling activities would pose potential risks to field workers. Potential risks to nearby employees of local companies and site workers could be controlled by developing and implementing sound engineering controls, health and safety procedures, and monitoring practices.

Since soil will also be transported off-site under SA 2, there will be an increase in traffic on the roads within and surrounding the Depot and the receiving landfills. This would translate into an increased likelihood of vehicular accidents, and potential releases of soil and debris containing hazardous constituents at other locations along the driving routes. SA 2 also involves varying amounts of soil disturbance that could affect the surface water hydrology in the areas being excavated.

SA 2's disturbance of soil across larger surfaces at both AOCs also increases the likelihood of soil erosion and transport, both via surface water flow and as fugitive dusts. Therefore, appropriate silt and dust containment measures will be implemented and monitored during the excavation, loading, and hauling activities.

SA 3a1 (Leave Soil Stockpiled) poses no additional short-term hazards to neighboring site workers or the surrounding community.

SA 3a2 (SEAD-59) could pose some additional short-term hazards to neighboring site workers and the community through dermal contact, ingestion, or inhalation of contaminants due to the spreading of stockpiled soils during the construction efforts. Further, noise from the heavy equipment could also impact nearby employees of neighboring industries and companies. Potential risks to nearby employees of local companies and site workers could be controlled by developing and implementing sound engineering controls, health and safety procedures, and monitoring practices.

SA 3a2's disturbance of soil stockpiles and spreading of the soil and cover material also increases the likelihood of soil erosion and transport, both via surface water flow and as fugitive dusts. Therefore, appropriate silt and dust containment measures will be implemented and monitored during the spreading and covering activities.

SA 3b would not pose any additional short-term hazards to workers at the AOCs or the community as construction is not included in the remedy proposed for either of the AOCs.

Neither GwA 1 nor 2 are expected to cause any short-term effectiveness concerns, as neither require any physical action and there are no anticipated disturbances to the activities or operations performed within or around SEAD-59 or SEAD-71.

10.6 IMPLEMENTABILITY

SA 1, the "no action" alternative for both AOCs (SEAD-59 and SEAD-71), and SA 3a1 (Leave Soil Stockpiled / Land Use Controls for SEAD-59), would be the easiest alternative to implement, since none of them involve construction actions. SA 1 for both sites is administratively easiest because there are also no other actions necessary, while SA 3a1 requires the implementation, maintenance, and monitoring of LUCs for the soil matrix left at the AOCs.

SA 3a2 (SEAD-59 Inter Stockpiled Soils) will be slightly more difficult to implement than Alternative 1 because it requires the relocation of the SEAD-59 soil stockpiles and their interment under a protective cover at the SEAD. However, technologies required to complete this remedial action are mature and readily available, pose no inordinate obstacle to the completion of the action. Additionally, SAs 3a1, 3a2 and 3b all require implementation, maintenance, oversight, and annual reporting of the continuing effectiveness of LUCs and the preparation, submittal, and approval of a LUC implementation plan. This requirement does not pose any inordinate level of complexity, and should not prevent the implementation of these actions at the two AOCs.

SA 2 at both SEAD-59 and SEAD-71 will be the most difficult alternatives to implement because they requires the excavation and removal of varying levels of soil from the two AOCs, further characterization,

potential stabilization if hazardous waste characteristics are identified, transport to off-site Subtitle D Landfills, and subsequent disposal as cover material or fill. However, technologies required to complete this remedial action are mature and readily available, pose no inordinate obstacle to the completion of the action. Additionally, the both SA alternative (SEAD-59 and SEAD-71) require implementation, maintenance, oversight, and annual reporting of the continuing effectiveness of LUCs and the preparation, submittal, and approval of a LUC implementation plan. This requirement does not pose any inordinate level of complexity, and should not prevent the implementation of these actions at the two AOCs.

GwA 1, the “no action” alternative would be the easiest to implement since there are no actions to undertake. GwA 2 will only be slightly more difficult to implement because it only requires the implementation, maintenance, oversight, and annual reporting of the continuing effectiveness of the groundwater access/use restriction and the preparation, submittal and approval of the restriction implementation plan.

10.7 COST

The present worth cost associated with all alternatives is calculated using a discount rate of seven percent (7%) and a 30-year time interval. The estimated capital, operation, maintenance, and monitoring, and the present-worth costs are summarized below.

Alternative	Capital Cost (\$)	Annual OM&M Costs (\$/yr)	Total Present-Worth Costs (\$)
SEAD-59, the Fill Area West of Building 135			
GwA 1 & SA 1	\$0	\$0	\$0
GwA 2 & SA 1	\$0	\$3,000	\$37,230
GwA 1 & SA 2	\$2,182,800	\$0	\$2,182,800
GwA 2 & SA 2	\$2,182,800	\$3,000	\$2,220,030
GwA 1 & SA 3a1(Stockpile)	\$0	\$3,000	\$37,230
GwA 1 & SA 3a2 (Inter)	\$35,000	\$3,000	\$72,230
GwA 2 & SA 3a1(Stockpile)	\$0	\$6,000	\$74,460
GwA 2 & SA 3a2 (Inter)	\$35,000	\$6,000	\$109,460
SEAD-71, the Alleged Paint Disposal Area			
GwA 1 & SA 1	\$0	\$0	\$0
GwA 2 & SA 1	\$0	\$3,000	\$37,230
GwA 1 & SA 2	\$240,000	\$0	\$240,000
GwA 2 & SA 2	\$240,000	\$3,000	\$277,230
GwA 1 & SA 3b	\$0	\$3,000	\$37,230
GwA 2 & SA 3b	\$0	\$6,000	\$74,460

Alternative combination SA1 and GwA1 are the least expensive remedial alternatives at SEAD-59 and SEAD-71 with expected costs of \$0. Alternative combinations SA2 and GwA2 are the most expensive remedial action alternatives with respective costs of \$2,220,030 for SEAD-59 and \$277,230 for SEAD-71.

10.8 STATE ACCEPTANCE

NYSDEC concurs with the preferred remedial alternative.

10.9 COMMUNITY ACCEPTANCE

Appendix C “Public Comments and Responsiveness Summary,” addresses community involvement during the remedy selection process. No formal comments were received at the public meeting. During the public comment period, one letter, supportive of the preferred alternative, was received from a local resident and a copy of that letter is included in Appendix C of the ROD.

11.0 SELECTED REMEDY

Based upon consideration of the requirements of CERCLA, the detailed analysis of the alternatives and public comments, the Army and USEPA have selected Soil Alternative 3a1 and Groundwater Alternative 2 (SA 3a1 / GwA 2) for SEAD-59 and Soil Alternative 3b and Groundwater Alternative 2 (SA 3b / GwA 2) for SEAD-71. These alternative combinations best satisfy the requirements of CERCLA Section 121, 42 U.S.C. Section 9621, and provide the best balance of tradeoffs among the remedial alternatives with respect to the NCR's evaluation criteria, 40 CFR Section 300.430(e)(9). The selected groundwater alternative (GwA 2) requires the implementation, maintenance and monitoring of LUCs for groundwater at both AOCs. Soil Alternative 3a1 for SEAD-59 and Soil Alternative 3b for SEAD-71 require the implementation, monitoring and maintenance of LUCs for soil remaining at both AOCs. Specifically, the elements that comprise the selected remedies for SEAD-59 and SEAD-71 include:

- Establish, maintain, and monitor land use control (LUCs) at SEAD-59 and SEAD-71 that:
 - Prohibit access to or use of the groundwater until unrestricted use and unlimited exposure criteria are attained ; and,
 - Prohibit the development or use of the property for residential housing, elementary and secondary schools, childcare facilities and playgrounds until unrestricted use and unlimited exposure criteria are attained at SEAD-59 and SEAD-71.

In addition, once the land use restrictions are implemented at SEAD-59 and SEAD-71, the Army or its successor will be required to complete a review of the selected remedies at least one every five years, in accordance with Section 121(c) of the CERCLA.

Results of the site investigations and risk assessment performed using data developed from SEAD-59 and SEAD-71 indicate that hazardous substances have been identified to exist at, or in the vicinity of, the AOCs. Levels found are higher than NYS guidance values and above levels that allow for unrestricted use, and it is likely that the identified concentrations would prevent unlimited exposures to other non-commercial/industrial populations.

While, remaining concentrations of contaminants in the some of the soil at SEAD-59 and SEAD-71 exceed NYSDEC's Restricted Commercial and Industrial Use SCO level, the identified concentrations of hazardous substances found in the soil do not pose unacceptable levels of potential risk to the human receptors that are considered most likely to use the land (i.e., industrial worker, construction worker, adolescent trespasser) for the foreseeable future at SEAD-59 and SEAD-71. Further, while hazardous substances were identified in the groundwater at concentrations above NYS AWQSSs, an alternative potable water distribution supply exists throughout the PID Area, which minimizes the potential risks represented by contact or ingestion with this media.

The Army shall, through the on-site Commander's representative or other designated official, implement, inspect, report on, and enforce the remedy described in this ROD. This ROD selects as the remedy for SEAD-59 and SEAD-71 LUCs (i.e., groundwater access/use and land use limitations) to be imposed by an environmental easement at the time when land comprising SEAD-59 or SEAD-71 is transferred from Army ownership to another party, as well as the prohibition of any pre-transfer use inconsistent with the

LUCs. Although the Army may later transfer these responsibilities to another party, the Army shall retain ultimate responsibility for remedy integrity.

To implement the remedies selected in this Record of Decision, which will include the imposition of LUCs at SEAD-59 and SEAD-71, a LUC Remedial Design will be prepared which will provide for the recording of an environmental easement which is consistent with Paragraphs (a) and (c) of the New York State Environmental Conservation Law (ECL) Article 27, Section 1318: Institutional and Engineering Controls. In addition, the Army will prepare an environmental easement for SEAD-59 and SEAD-71, consistent with Section 27-1318(b) and Article 71, Title 36 of ECL, in favor of the State of New York, which will be recorded at the time of the property's transfer from Federal ownership and which will require the owner and/or any person responsible for implementing the LUCs set forth in this ROD to periodically certify that such institutional controls are in place. The Army and the USEPA will be named as third-party beneficiaries on the environmental easement. A schedule for completion of the draft SEAD-59 and SEAD-71 LUC Remedial Design Plan (LUC RD) will be completed within 21 days of the ROD signature, consistent with Section 14.4 of the Federal Facilities Agreement (FFA). To implement the remedy prior to transfer, the Army, as the owner and operator of the property at SEAD-59 and SEAD-71, will through the on site Commander's representative or other designated official, ensure that the LUCs are implemented by monitoring the property at SEAD 59 and SEAD 71 and restricting development or use on this property if inconsistent with the LUCs.

12.0 DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan presented to the public for SEAD-59 during the comment period and public meeting in December 2007 and January 2008 indicated that soil found at SEAD-59, in the ground and staged in stockpiles, contained concentrations of hazardous substances that were at levels that exceeded New York State SCO (e.g., Restricted Commercial and Restricted Industrial) values. However, in spite of the presence of these concentrations of hazardous substances, a human health risk assessment indicated that future use by commercial and industrial type users was permissible, as no unacceptable human health effects or impacts were indicated.

Despite this finding and determination, the Proposed Plan presented to the public in December 2007 recommended a remedial action for SEAD-59 soils that indicated that stockpiled soil present at, and in the vicinity of, SEAD-59 would be spread out over a portion of the AOC, over covered with a layer of demarcation fabric and 12-inches of cover material that met NYS Restricted Commercial SCO levels. Further, once the multi-layered cover was installed, it would be graded to promote positive storm-event water flow, re-vegetated with native growth to limit potential erosion, and a LUC would be implemented, monitored, and maintained to prohibit unauthorized excavations or other activities that would disturb the soil cap or the demarcation fabric where stockpiled soils were interred. Finally, a LUC that prohibited use of SEAD-59 land for residential housing, elementary and secondary schools, childcare facilities, and playgrounds would also be implemented, monitored, and maintained at SEAD-59 until levels of hazardous substances present in the soil permitted unrestricted uses and unlimited exposures.

Since the SEAD-59 and SEAD-71 Proposed Plan was issued, the Army has identified another former SWMU in close proximity to SEAD-59 within the PID Area at the former Depot where residual levels of hazardous substances that remain in the soil pose a human health risk and require a remedial action. One of the potential actions being considered for this other SEAD (SEAD-5) is the construction of a multi-layered protective cap, consisting of soil and demarcation fabric, which would provide a barrier between the contaminated soils found at the AOC and future users of the site.

Stockpiled soil currently located at SEAD-59 could be used as a component of this multi-layered protective cap at the neighboring SWMU. Analytical results for samples of the stockpiled soil indicate that it is not a hazardous waste by characteristic, and that hazardous substance concentrations present in the soil do not pose unacceptable levels of risk to commercial or industrial future users. As such, the stockpiled soil could be used as a base course within the multi-layered cover, and provide additional separation between the underlying contaminated soils and the final soil cover material placed over the contaminated areas within the other SWMU. Another advantage of this reuse of stockpiled soil is that stockpile sites within SEAD-59 would be eliminated allowing for more possible commercial or industrial reuses of the land within SEAD-59. Further, by using the SEAD-59 stockpiled soils as a base course of the protective cap proposed at the other SWMU, the size of the land area where interred soils would be located would be reduced, and the amount of Restricted Commercial grade cover soil that was necessary to cover the underlying soils would be reduced.

Based on these determinations, the Army is pursuing the use of the stockpiled soils that remain at SEAD-59 as one component layer of the multi-layered cover at the neighboring SWMU, and is preparing a separate Proposed Plan and Record of Decision for that AOC (SEAD-5) that recommends such an action. Under the parallel plan and remedial action, the SEAD-59 soil would be used as a base layer overlying the more heavily contaminated underlying in-situ soils, and then the covered area would be over-covered with a layer of demarcation fabric, and 12-inches of soil that meets NYS Restricted Commercial Use SCO levels. The entire covered area would then be graded to promote positive storm-event runoff flow. A LUC that prohibits unauthorized excavation or activities that would disturb the multi-layered cover would then be implemented, monitored, and maintained at the neighboring SWMU. Finally, a second LUC that prohibits residential housing, elementary and secondary schools, childcare facilities, and playgrounds would also be implemented,

Once the stockpiles at SEAD-59 were removed and committed for use in this manner, the land at SEAD-59 would not require the implementation of a LUC that prohibited unauthorized excavations or activities that disturbed the soil and demarcation fabric cap placed over soils that might be interred within SEAD-59. However, the LUC that prohibited the use of the land at SEAD-59 for residential housing, elementary and secondary schools, childcare facilities and playgrounds would still be required at SEAD-59, as would the LUC that prohibited access to and use of groundwater.

13.0 STATE ROLE

The State of New York, through the New York State Department of Environmental Conservation (NYSDEC), has concurred with the selected remedies documented in this ROD. The NYSDEC Declaration of Concurrence is provided in **Appendix B** of this ROD.

LIST OF TABLES

<u>NUMBER</u>	<u>TITLE</u>
6-1a	SEAD-59 Summary Results - Total Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
6-1b	SEAD-59 Summary Results - Surface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
6-1c	SEAD-59 Summary Results - Subsurface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
6-2a	SEAD-59 Summary Results - Total Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
6-2b	SEAD-59 Summary Results - Surface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
6-2c	SEAD-59 Summary Results - Subsurface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
6-3a	SEAD-59 Summary Results - Total Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
6-3b	SEAD-59 Summary Results - Surface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
6-3c	SEAD-59 Summary Results - Subsurface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
6-4a	SEAD-59 Summary Results - Total Soil versus USEPA's Region IX Industrial Soil Cleanup Objectives
6-4b	SEAD-59 Summary Results - Surface Soil versus USEPA's Region IX Industrial Soil Cleanup Objectives
6-4c	SEAD-59 Summary Results - Subsurface Soil versus USEPA's Region for Industrial Soil Cleanup Objectives
6-5	SEAD-59 Stockpile Summary Results – Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
6-6	SEAD-59 Stockpile Summary Results – Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
6-7	SEAD-59 Stockpile Summary Results – Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives

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- 6-8 SEAD-59 Stockpile Summary Results – Soil versus USEPA’s Region IX Industrial Soil
- 6-9 Summary of SEAD-59 Groundwater Compared to Varying Regulatory Guidance Values – Remedial Investigation
- 6-10a SEAD-71 Summary Results - Total Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
- 6-10b SEAD-71 Summary Results - Surface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
- 6-10c SEAD-71 Summary Results - Subsurface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
- 6-11a SEAD-71 Summary Results - Total Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
- 6-11b SEAD-71 Summary Results - Surface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
- 6-11c SEAD-71 Summary Results - Subsurface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
- 6-12a SEAD-71 Summary Results - Total Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
- 6-12b SEAD-71 Summary Results - Surface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
- 6-12c SEAD-71 Summary Results - Subsurface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
- 6-13a SEAD-71 Summary Results - Total Soil versus USEPA’s Region IX Industrial Soil Cleanup Objectives
- 6-13b SEAD-71 Summary Results - Surface Soil versus USEPA’s Region IX Industrial Soil Cleanup Objectives
- 6-13c SEAD-71 Summary Results - Subsurface Soil versus USEPA’s Region IX Industrial Soil Cleanup Objectives
- 6-14a SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
- 6-14b SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives

LIST OF TABLES**(continued)**

- 6-14c SEAD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
- 6-15a SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
- 6-15b SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
- 6-15c SEAD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
- 6-16a SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
- 6-16b SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
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Table 6-1A
SEAD-59 Summary Results - Total Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	TOTAL SOIL			Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
					Number of Analyses ³	Number of Times Detected				
Volatile Organic Compounds										
1,1-Dichloroethene	UG/KG	8	2.255	2%	184	3	330	0	NO	
Acetone	UG/KG	550	24.41	24%	198	47	50	12	NO	
Benzene	UG/KG	5.75	1.355	4%	198	8	60	0	NO	
Carbon disulfide	UG/KG	4		3%	184	6		0		
Cyclohexane	UG/KG	3		8%	98	8		0		
Ethyl benzene	UG/KG	110	4.488	2%	198	4	1000	0	NO	
Meta/Para Xylene	UG/KG	8.4		4%	70	3		0		
Methyle chloride	UG/KG	1		7%	14	1		0		
Methyl Acetate	UG/KG	2		3%	98	3		0		
Methyl cyclohexane	UG/KG	5		10%	98	10		0		
Methyl ethyl ketone	UG/KG	190	6.987	13%	198	25	120	1	NO	
Methyl isobutyl ketone	UG/KG	1.9		1%	184	1		0		
Methylene chloride	UG/KG	4.9	2.225	19%	199	37	50	0	NO	
Ortho Xylene	UG/KG	3.6		4%	70	3		0		
Tetrachloroethene	UG/KG	6.4	2.752	3%	184	5	1300	0	NO	
Toluene	UG/KG	10.75	2.904	9%	198	17	700	0	NO	
Total BTEX	MG/KG	9.5		89%	18	16		0		
Total Xylenes	UG/KG	72.75	3.769	7%	123	8	260	0	NO	
Trichloroethene	UG/KG	4.5	2.768	4%	184	8	470	0	NO	
Trichlorofluoromethane	UG/KG	6		1%	98	1		0		
Semivolatile Organic Compounds										
1,1'-Biphenyl	UG/KG	147		2%	99	2		0		
2-Methylnaphthalene	UG/KG	10000		23%	199	46		0		
4-Chloroaniline	UG/KG	1200		1%	185	2		0		
4-Methylphenol	UG/KG	150	70.76	4%	199	7	330	0	NO	
Acenaphthene	UG/KG	2680	226	27%	199	54	20000	0	NO	
Acenaphthylene	UG/KG	1700	283.5	38%	199	76	100000	0	NO	
Anthracene	UG/KG	4395	389.3	44%	199	87	100000	0	NO	
Atrazine	UG/KG	120		1%	99	1		0		
Benzaldehyde	UG/KG	50		1%	99	1		0		
Benzo(a)anthracene	UG/KG	8900	916.6	52%	199	104	1000	48	NO	
Benzo(a)pyrene	UG/KG	8050	978.7	53%	199	105	1000	48	NO	
Benzo(b)fluoranthene	UG/KG	6800	834.2	54%	199	108	1000	47	NO	
Benzo(ghi)perylene	UG/KG	5200	618.8	48%	199	95	100000	0	NO	
Benzo(k)fluoranthene	UG/KG	7350	765.5	51%	199	101	800	48	NO	
Bis(2-Ethylhexyl)phthalate	UG/KG	515		25%	199	49		0		
Butylbenzylphthalate	UG/KG	1000		1%	199	2		0		
Carbazole	UG/KG	1500		24%	129	31		0		
Chrysene	UG/KG	8900	925.4	53%	199	106	1000	50	NO	
Di-n-butylphthalate	UG/KG	490		7%	199	13		0		
Di-n-octylphthalate	UG/KG	11		1%	199	2		0		
Dibenz(a,h)anthracene	UG/KG	1665	254.8	38%	199	76	330	37	NO	
Dibenzofuran	UG/KG	1875	164.2	19%	199	38	7000	0	NO	
Diethyl phthalate	UG/KG	12		5%	199	9		0		
Fluoranthene	UG/KG	23500	1797	56%	199	112	100000	0	NO	
Fluorene	UG/KG	3000	254.5	30%	199	60	30000	0	NO	
Indeno(1,2,3-cd)pyrene	UG/KG	4950	589.5	49%	199	97	500	51	YES	
N-Nitrosodiphenylamine	UG/KG	100		1%	129	1		0		
Naphthalene	UG/KG	1325	167.8	22%	199	44	12000	0	NO	
Phenanthrene	UG/KG	21300	1164	54%	199	107	100000	0	NO	
Phenol	UG/KG	17		1%	199	1		0		
Pyrene	UG/KG	19200	1615	58%	198	114	100000	0	NO	
Pesticides and PCBs										
4,4'-DDD	UG/KG	740	29.11	28%	199	55	3.3	54	YES	
4,4'-DDE	UG/KG	2600	64.3	38%	199	75	3.3	72	YES	
4,4'-DDT	UG/KG	3700	85.74	33%	199	66	3.3	65	YES	
Aldrin	UG/KG	1.2	1.2	1%	185	1	5	0	NO	
Alpha-BHC	UG/KG	9.9	9.019	1%	199	2	20	0	NO	
Alpha-Chlordane	UG/KG	34	2.225	5%	199	9	94	0	NO	
Beta-BHC	UG/KG	3.6	2.45	3%	199	6	36	0	NO	
Delta-BHC	UG/KG	1.4	1.318	2%	199	4	40	0	NO	
Dieldrin	UG/KG	1.8	1.8	1%	185	1	5	0	NO	
Endosulfan I	UG/KG	16	4.561	1%	199	2	2400	0	NO	
Endosulfan sulfate	UG/KG	6.2	4.352	1%	199	2	2400	0	NO	
Endrin	UG/KG	16	4.17	2%	185	4	14	1	NO	
Endrin aldehyde	UG/KG	6.3		3%	199	5		0		
Endrin ketone	UG/KG	38		3%	185	5		0		
Gamma-Chlordane	UG/KG	24		8%	199	16		0		
Heptachlor epoxide	UG/KG	5.7		3%	199	5		0		
Aroclor-1260	UG/KG	79	77.03	1%	185	2	100	0	NO	

Table 6-1A
SEAD-59 Summary Results - Total Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	TOTAL SOIL							
		Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18300		100%	199	199		0	
Antimony	MG/KG	424		54%	199	107		0	
Arsenic	MG/KG	32.2	5.645	100%	199	199	13	2	NO
Barium	MG/KG	304	98.18	100%	199	199	350	0	NO
Beryllium	MG/KG	2.6	0.494	99%	199	197	7.2	0	NO
Cadmium	MG/KG	3.2	0.493	79%	199	158	2.5	1	NO
Calcium	MG/KG	214000		100%	199	199		0	
Chromium	MG/KG	39.3	17.88	100%	199	199	30	2	NO
Cobalt	MG/KG	47.8		100%	199	199		0	
Copper	MG/KG	305	31.28	100%	199	199	50	6	NO
Iron	MG/KG	64000		100%	199	199		0	
Lead	MG/KG	164	35.03	100%	199	199	63	15	NO
Magnesium	MG/KG	34400		100%	199	199		0	
Manganese	MG/KG	1290	526.9	100%	199	199	1600	0	NO
Mercury	MG/KG	0.95	0.101	90%	198	179	0.18	15	NO
Nickel	MG/KG	88.3	27.63	100%	199	199	30	39	NO
Potassium	MG/KG	2520		100%	199	199		0	
Selenium	MG/KG	1.5	0.378	11%	199	21	3.9	0	NO
Silver	MG/KG	2.9	0.744	48%	185	88	2	19	NO
Sodium	MG/KG	4060		97%	199	194		0	
Thallium	MG/KG	1.8		28%	185	51		0	
Vanadium	MG/KG	28.5		100%	199	199		0	
Zinc	MG/KG	341	84.66	100%	199	199	109	21	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.

Table 6-1B
SEAD-59 Summary Results - Surface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	SURFACE SOIL							
		Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	8	2.255	2%	184	3	330	0	NO
Acetone	UG/KG	550	24.78	25%	184	46	50	12	NO
Benzene	UG/KG	1.75	1.284	4%	184	7	60	0	NO
Carbon disulfide	UG/KG	4		3%	184	6		0	
Cyclohexane	UG/KG	3		8%	98	8		0	
Ethyl benzene	UG/KG	3.15	3.428	1%	184	2	1000	0	NO
Meta/Para Xylene	UG/KG	8.4		4%	70	3		0	
Methyle chloride	UG/KG	0		0%	0	0		0	
Methyl Acetate	UG/KG	2		3%	98	3		0	
Methyl cyclohexane	UG/KG	5		10%	98	10		0	
Methyl ethyl ketone	UG/KG	190	6.78	12%	184	22	120	1	NO
Methyl isobutyl ketone	UG/KG	1.9		1%	184	1		0	
Methylene chloride	UG/KG	4.9	2.255	19%	185	36	50	0	NO
Ortho Xylene	UG/KG	3.6		4%	70	3		0	
Tetrachloroethene	UG/KG	6.4	2.752	3%	184	5	1300	0	NO
Toluene	UG/KG	8	2.905	8%	184	15	700	0	NO
Total BTEX	MG/KG	6.5		90%	10	9		0	
Total Xylenes	UG/KG	3	2.29	6%	109	7	260	0	NO
Trichloroethene	UG/KG	4.5	2.768	4%	184	8	470	0	NO
Trichlorofluoromethane	UG/KG	6		1%	98	1		0	
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	147		2%	99	2		0	
2-Methylnaphthalene	UG/KG	970		21%	185	38		0	
4-Chloroaniline	UG/KG	1200		1%	185	2		0	
4-Methylphenol	UG/KG	150	92.99	3%	185	5	330	0	NO
Acenaphthene	UG/KG	2680	236.8	25%	185	46	20000	0	NO
Acenaphthylene	UG/KG	1700	310	38%	185	70	100000	0	NO
Anthracene	UG/KG	4395	404.7	44%	185	81	100000	0	NO
Atrazine	UG/KG	120		1%	99	1		0	
Benzaldehyde	UG/KG	50		1%	99	1		0	
Benzo(a)anthracene	UG/KG	8900	937.3	52%	185	96	1000	46	NO
Benzo(a)pyrene	UG/KG	8050	1004	52%	185	97	1000	46	YES
Benzo(b)fluoranthene	UG/KG	6800	874.5	54%	185	99	1000	46	NO
Benzo(ghi)perylene	UG/KG	5200	654.2	48%	185	88	100000	0	NO
Benzo(k)fluoranthene	UG/KG	7350	797.7	50%	185	93	800	46	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	515		21%	185	38		0	
Butylbenzylphthalate	UG/KG	1000		1%	185	1		0	
Carbazole	UG/KG	755		22%	115	25		0	
Chrysene	UG/KG	8900	954.1	52%	185	97	1000	48	NO
Di-n-butylphthalate	UG/KG	490		4%	185	8		0	
Di-n-octylphthalate	UG/KG	11		1%	185	1		0	
Dibenz(a,h)anthracene	UG/KG	1665	276	39%	185	72	330	37	NO
Dibenzofuran	UG/KG	1875	178.2	17%	185	32	7000	0	NO
Diethyl phthalate	UG/KG	12		2%	185	4		0	
Fluoranthene	UG/KG	23500	1871	56%	185	103	100000	0	NO
Fluorene	UG/KG	2640	242.2	29%	185	53	30000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	4950	621.6	49%	185	90	500	49	YES
N-Nitrosodiphenylamine	UG/KG	100		1%	115	1		0	
Naphthalene	UG/KG	1325	185.6	20%	185	37	12000	0	NO
Phenanthrene	UG/KG	21300	1141	52%	185	96	100000	0	NO
Phenol	UG/KG	0		0%	185	0		0	
Pyrene	UG/KG	19200	1649	56%	185	104	100000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	740	32.1	27%	185	50	3.3	49	YES
4,4'-DDE	UG/KG	2600	67	37%	185	68	3.3	66	YES
4,4'-DDT	UG/KG	3700	88.81	34%	185	62	3.3	61	YES
Aldrin	UG/KG	1.2	1.2	1%	185	1	5	0	NO
Alpha-BHC	UG/KG	9	9	1%	185	1	20	0	NO
Alpha-Chlordane	UG/KG	34	2.204	4%	185	8	94	0	NO
Beta-BHC	UG/KG	3.6	2.442	2%	185	3	36	0	NO
Delta-BHC	UG/KG	1.4	1.498	1%	185	2	40	0	NO
Dieldrin	UG/KG	1.8	1.8	1%	185	1	5	0	NO
Endosulfan I	UG/KG	16	16	1%	185	1	2400	0	NO
Endosulfan sulfate	UG/KG	6.2	6.2	1%	185	1	2400	0	NO
Endrin	UG/KG	16	4.213	2%	185	4	14	1	NO
Endrin aldehyde	UG/KG	3.825		2%	185	3		0	
Endrin ketone	UG/KG	38		3%	185	5		0	
Gamma-Chlordane	UG/KG	24		8%	185	15		0	
Heptachlor epoxide	UG/KG	3		2%	185	3		0	
Aroclor-1260	UG/KG	79	77.04	1%	185	2	100	0	NO

Table 6-1B
SEAD-59 Summary Results - Surface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	SURFACE SOIL							
		Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18300		100%	185	185		0	
Antimony	MG/KG	424		56%	185	104		0	
Arsenic	MG/KG	32.2	5.737	100%	185	185	13	2	NO
Barium	MG/KG	304	101	100%	185	185	350	0	NO
Beryllium	MG/KG	2.6	0.505	99%	185	183	7.2	0	NO
Cadmium	MG/KG	3.2	0.517	83%	185	153	2.5	1	NO
Calcium	MG/KG	214000		100%	185	185		0	
Chromium	MG/KG	39.3	18.05	100%	185	185	30	2	NO
Cobalt	MG/KG	47.8		100%	185	185		0	
Copper	MG/KG	305	32.12	100%	185	185	50	6	NO
Iron	MG/KG	64000		100%	185	185		0	
Lead	MG/KG	164	36.25	100%	185	185	63	14	NO
Magnesium	MG/KG	30200		100%	185	185		0	
Manganese	MG/KG	1290	532.3	100%	185	185	1600	0	NO
Mercury	MG/KG	0.95	0.104	94%	185	174	0.18	15	NO
Nickel	MG/KG	88.3	27.72	100%	185	185	30	37	NO
Potassium	MG/KG	2290		100%	185	185		0	
Selenium	MG/KG	1.5	0.389	10%	185	19	3.9	0	NO
Silver	MG/KG	2.9	0.797	48%	185	88	2	19	NO
Sodium	MG/KG	4060		97%	185	180		0	
Thallium	MG/KG	1.8		28%	185	51		0	
Vanadium	MG/KG	28.5		100%	185	185		0	
Zinc	MG/KG	341	85.14	100%	185	185	109	19	NO

Notes:

- Parameters that were detected in surface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discrete sample and presented in this table.
- NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-1C
SEAD-59 Summary Results - Subsurface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Value	SUBSURFACE SOIL							
		Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	0		0%	0	0	330	0	
Acetone	UG/KG	30	30	7%	14	1	50	0	NO
Benzene	UG/KG	5.75	5.75	7%	14	1	60	0	NO
Carbon disulfide	UG/KG	0		0%	0	0		0	
Cyclohexane	UG/KG	0		0%	0	0		0	
Ethyl benzene	UG/KG	110	77.85	14%	14	2	1000	0	NO
Meta/Para Xylene	UG/KG	0		0%	0	0		0	
Methyle chloride	UG/KG	1		7%	14	1		0	
Methyl Acetate	UG/KG	0		0%	0	0		0	
Methyl cyclohexane	UG/KG	0		0%	0	0		0	
Methyl ethyl ketone	UG/KG	36	20.78	21%	14	3	120	0	NO
Methyl isobutyl ketone	UG/KG	0		0%	0	0		0	
Methylene chloride	UG/KG	1	1	7%	14	1	50	0	NO
Ortho Xylene	UG/KG	0		0%	0	0		0	
Tetrachloroethene	UG/KG	0		0%	0	0	1300	0	
Toluene	UG/KG	10.75	10.75	14%	14	2	700	0	NO
Total BTEX	MG/KG	9.5		88%	8	7		0	
Total Xylenes	UG/KG	72.75	72.75	7%	14	1	260	0	NO
Trichloroethene	UG/KG	0		0%	0	0	470	0	
Trichlorofluoromethane	UG/KG	0		0%	0	0		0	
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	0		0%	0	0		0	
2-Methylnaphthalene	UG/KG	10000		57%	14	8		0	
4-Chloroaniline	UG/KG	0		0%	0	0		0	
4-Methylphenol	UG/KG	83	50.98	14%	14	2	330	0	NO
Acenaphthene	UG/KG	1600	431.4	57%	14	8	20000	0	NO
Acenaphthylene	UG/KG	460	123	43%	14	6	100000	0	NO
Anthracene	UG/KG	2100	549.9	43%	14	6	100000	0	NO
Atrazine	UG/KG	0		0%	0	0		0	
Benzaldehyde	UG/KG	0		0%	0	0		0	
Benzo(a)anthracene	UG/KG	4200	1045	57%	14	8	1000	2	YES
Benzo(a)pyrene	UG/KG	4600	1139	57%	14	8	1000	2	YES
Benzo(b)fluoranthene	UG/KG	4400	1107	64%	14	9	1000	1	YES
Benzo(ghi)perylene	UG/KG	1400	404.8	50%	14	7	100000	0	NO
Benzo(k)fluoranthene	UG/KG	4900	1346	57%	14	8	800	2	YES
Bis(2-Ethylhexyl)phthalate	UG/KG	260		79%	14	11		0	
Butylbenzylphthalate	UG/KG	4.2		7%	14	1		0	
Carbazole	UG/KG	1500		43%	14	6		0	
Chrysene	UG/KG	4400	1210	64%	14	9	1000	2	YES
Di-n-butylphthalate	UG/KG	29		36%	14	5		0	
Di-n-octylphthalate	UG/KG	5.6		7%	14	1		0	
Dibenz(a,h)anthracene	UG/KG	84	84	29%	14	4	330	0	NO
Dibenzofuran	UG/KG	1400	342.4	43%	14	6	7000	0	NO
Diethyl phthalate	UG/KG	11		36%	14	5		0	
Fluoranthene	UG/KG	10000	2442	64%	14	9	100000	0	NO
Fluorene	UG/KG	3000	789.6	50%	14	7	30000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	1500	428.7	50%	14	7	500	2	NO
N-Nitrosodiphenylamine	UG/KG			0%	14	0		0	
Naphthalene	UG/KG	290	121.2	50%	14	7	12000	0	NO
Phenanthrene	UG/KG	8300	4125	79%	14	11	100000	0	NO
Phenol	UG/KG	17		7%	14	1		0	
Pyrene	UG/KG	12000	5279	77%	13	10	100000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	70	21.52	36%	14	5	3.3	5	YES
4,4'-DDE	UG/KG	48	15.01	50%	14	7	3.3	6	YES
4,4'-DDT	UG/KG	59	18.55	29%	14	4	3.3	4	YES
Aldrin	UG/KG	0		0%	0	0	5	0	
Alpha-BHC	UG/KG	9.9	9.9	7%	14	1	20	0	NO
Alpha-Chlordane	UG/KG	17	17	7%	14	1	94	0	NO
Beta-BHC	UG/KG	3.4	2.653	21%	14	3	36	0	NO
Delta-BHC	UG/KG	1.2	1.296	14%	14	2	40	0	NO
Dieldrin	UG/KG	0		0%	0	0	5	0	
Endosulfan I	UG/KG	4.1	4.1	7%	14	1	2400	0	NO
Endosulfan sulfate	UG/KG	4.3	4.3	7%	14	1	2400	0	NO
Endrin	UG/KG	0		0%	0	0	14	0	
Endrin aldehyde	UG/KG	6.3		14%	14	2		0	
Endrin ketone	UG/KG	0		0%	0	0		0	
Gamma-Chlordane	UG/KG	18		7%	14	1		0	
Heptachlor epoxide	UG/KG	5.7		14%	14	2		0	
Aroclor-1260	UG/KG	0		0%	0	0	100	0	

Table 6-1C
SEAD-59 Summary Results - Subsurface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Value	SUBSURFACE SOIL							
		Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	12600		100%	14	14		0	
Antimony	MG/KG	0.47		21%	14	3		0	
Arsenic	MG/KG	6	4.782	100%	14	14	13	0	NO
Barium	MG/KG	101	67.52	100%	14	14	350	0	NO
Beryllium	MG/KG	0.52	0.414	100%	14	14	7.2	0	NO
Cadmium	MG/KG	0.61	0.288	36%	14	5	2.5	0	NO
Calcium	MG/KG	123000		100%	14	14		0	
Chromium	MG/KG	18.9	16.92	100%	14	14	30	0	NO
Cobalt	MG/KG	14.2		100%	14	14		0	
Copper	MG/KG	27	21.91	100%	14	14	50	0	NO
Iron	MG/KG	28900		100%	14	14		0	
Lead	MG/KG	65.5	34.29	100%	14	14	63	1	NO
Magnesium	MG/KG	34400		100%	14	14		0	
Manganese	MG/KG	836	522.9	100%	14	14	1600	0	NO
Mercury	MG/KG	0.15	0.0612	38%	13	5	0.18	0	NO
Nickel	MG/KG	35.5	28.63	100%	14	14	30	2	NO
Potassium	MG/KG	2520		100%	14	14		0	
Selenium	MG/KG	0.49	0.475	14%	14	2	3.9	0	NO
Silver	MG/KG	0		0%	0	0	2	0	
Sodium	MG/KG	1150		100%	14	14		0	
Thallium	MG/KG	0		0%	0	0		0	
Vanadium	MG/KG	22		100%	14	14		0	
Zinc	MG/KG	133	88.59	100%	14	14	109	2	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.

Table 6-2A
SEAD-59 Summary Results - Total Soil versus NYSDC Restricted Commercial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	8	2.255	2%	184	3	500000	0	NO
Acetone	UG/KG	550	24.41	24%	198	47	500000	0	NO
Benzene	UG/KG	5.75	1.355	4%	198	8	44000	0	NO
Carbon disulfide	UG/KG	4		3%	184	6		0	
Cyclohexane	UG/KG	3		8%	98	8		0	
Ethyl benzene	UG/KG	110	4.488	2%	198	4	390000	0	NO
Meta/Para Xylene	UG/KG	8.4		4%	70	3		0	
Methyl chloride	UG/KG	1		7%	14	1		0	
Methyl Acetate	UG/KG	2		3%	98	3		0	
Methyl cyclohexane	UG/KG	5		10%	98	10		0	
Methyl ethyl ketone	UG/KG	190	6.987	13%	198	25	500000	0	NO
Methyl isobutyl ketone	UG/KG	1.9		1%	184	1		0	
Methylene chloride	UG/KG	4.9	2.225	19%	199	37	500000	0	NO
Ortho Xylene	UG/KG	3.6		4%	70	3		0	
Tetrachloroethene	UG/KG	6.4	2.752	3%	184	5	150000	0	NO
Toluene	UG/KG	10.75	2.904	9%	198	17	500000	0	NO
Total BTEX	MG/KG	9.5		89%	18	16		0	
Total Xylenes	UG/KG	72.75	3.769	7%	123	8	500000	0	NO
Trichloroethene	UG/KG	4.5	2.768	4%	184	8	200000	0	NO
Trichlorofluoromethane	UG/KG	6		1%	98	1		0	
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	147		2%	99	2		0	
2-Methylnaphthalene	UG/KG	10000		23%	199	46		0	
4-Chloroaniline	UG/KG	1200		1%	185	2		0	
4-Methylphenol	UG/KG	150	70.76	4%	199	7	500000	0	NO
Acenaphthene	UG/KG	2680	226	27%	199	54	500000	0	NO
Acenaphthylene	UG/KG	1700	283.5	38%	199	76	500000	0	NO
Anthracene	UG/KG	4395	389.3	44%	199	87	500000	0	NO
Atrazine	UG/KG	120		1%	99	1		0	
Benzaldehyde	UG/KG	50		1%	99	1		0	
Benzo(a)anthracene	UG/KG	8900	916.6	52%	199	104	5600	2	NO
Benzo(a)pyrene	UG/KG	8050	978.7	53%	199	105	1000	48	NO
Benzo(b)fluoranthene	UG/KG	6800	834.2	54%	199	108	5600	1	NO
Benzo(ghi)perylene	UG/KG	5200	618.8	48%	199	95	500000	0	NO
Benzo(k)fluoranthene	UG/KG	7350	765.5	51%	199	101	56000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	515		25%	199	49		0	
Butylbenzylphthalate	UG/KG	1000		1%	199	2		0	
Carbazole	UG/KG	1500		24%	129	31		0	
Chrysene	UG/KG	8900	925.4	53%	199	106	56000	0	NO
Di-n-butylphthalate	UG/KG	490		7%	199	13		0	
Di-n-octylphthalate	UG/KG	11		1%	199	2		0	
Dibenz(a,h)anthracene	UG/KG	1665	254.8	38%	199	76	560	18	NO
Dibenzofuran	UG/KG	1875	164.2	19%	199	38	350000	0	NO
Diethyl phthalate	UG/KG	12		5%	199	9		0	
Fluoranthene	UG/KG	23500	1797	56%	199	112	500000	0	NO
Fluorene	UG/KG	3000	254.5	30%	199	60	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	4950	589.5	49%	199	97	5600	0	NO
N-Nitrosodiphenylamine	UG/KG	100		1%	129	1		0	
Naphthalene	UG/KG	1325	167.8	22%	199	44	500000	0	NO
Phenanthrene	UG/KG	21300	1164	52%	199	103	500000	0	NO
Phenanthrene	UG/KG	17		1%	199	1		0	
Pyrene	UG/KG	19200	1615	58%	198	114	500000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	740	29.11	28%	199	55	92000	0	NO
4,4'-DDE	UG/KG	2600	64.3	38%	199	75	62000	0	NO
4,4'-DDT	UG/KG	3700	85.74	33%	199	66	47000	0	NO
Aldrin	UG/KG	1.2	1.2	1%	185	1	680	0	NO
Alpha-BHC	UG/KG	9.9	9.019	1%	199	2	3400	0	NO
Alpha-Chlordane	UG/KG	34	2.225	5%	199	9	24000	0	NO
Beta-BHC	UG/KG	3.6	2.45	3%	199	6	3000	0	NO
Delta-BHC	UG/KG	1.4	1.318	2%	199	4	500000	0	NO
Dieldrin	UG/KG	1.8		1%	185	1	1400	0	
Endosulfan I	UG/KG	16	4.561	1%	199	2	200000	0	NO
Endosulfan sulfate	UG/KG	6.2	4.352	1%	199	2	200000	0	NO
Endrin	UG/KG	16	4.17	2%	185	4	89000	0	NO
Endrin aldehyde	UG/KG	6.3		3%	199	5		0	
Endrin ketone	UG/KG	38		3%	185	5		0	
Gamma-Chlordane	UG/KG	24		8%	199	16		0	
Heptachlor epoxide	UG/KG	5.7		3%	199	5		0	
Aroclor-1260	UG/KG	79	77.03	1%	185	2	1000	0	NO

Table 6-2A
SEAD-59 Summary Results - Total Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18300		100%	199	199		0	
Antimony	MG/KG	424		54%	199	107		0	
Arsenic	MG/KG	32.2	5.645	100%	199	199	16	2	NO
Barium	MG/KG	304	98.18	100%	199	199	400	0	NO
Beryllium	MG/KG	2.6	0.494	99%	199	197	590	0	NO
Cadmium	MG/KG	3.2	0.493	79%	199	158	9.3	0	NO
Calcium	MG/KG	214000		100%	199	199		0	
Chromium	MG/KG	39.3	17.88	100%	199	199	1500	0	NO
Cobalt	MG/KG	47.8		100%	199	199		0	
Copper	MG/KG	305	31.28	100%	199	199	270	1	NO
Iron	MG/KG	64000		100%	199	199		0	
Lead	MG/KG	164	35.03	100%	199	199	1000	0	NO
Magnesium	MG/KG	34400		100%	199	199		0	
Manganese	MG/KG	1290	526.9	100%	199	199	10000	0	NO
Mercury	MG/KG	0.95	0.101	90%	198	179	2.8	0	NO
Nickel	MG/KG	88.3	27.63	100%	199	199	310	0	NO
Potassium	MG/KG	2520		100%	199	199		0	
Selenium	MG/KG	1.5	0.378	11%	199	21	1500	0	NO
Silver	MG/KG	2.9	0.744	48%	185	88	1500	0	NO
Sodium	MG/KG	4060		97%	199	194		0	
Thallium	MG/KG	1.8		28%	185	51		0	
Vanadium	MG/KG	28.5		100%	199	199		0	
Zinc	MG/KG	341	84.66	100%	199	199	10000	0	NO
Notes:									
1. Parameters that were detected in either surface or subsurface soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discreet sample and presented in this table.									
4. NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									

Table 6-2B
SEAD-59 Summary Results - Surface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	8	2.255	2%	184	3	500000	0	NO
Acetone	UG/KG	550	24.78	25%	184	46	500000	0	NO
Benzene	UG/KG	1.75	1.284	4%	184	7	44000	0	NO
Carbon disulfide	UG/KG	4		3%	184	6		0	
Cyclohexane	UG/KG	3		8%	98	8		0	
Ethyl benzene	UG/KG	3.15	3.428	1%	184	2	390000	0	NO
Meta/Para Xylene	UG/KG	8.4		4%	70	3		0	
Methyl chloride	UG/KG	0		0%	0	0		0	
Methyl Acetate	UG/KG	2		3%	98	3		0	
Methyl cyclohexane	UG/KG	5		10%	98	10		0	
Methyl ethyl ketone	UG/KG	190	6.78	12%	184	22	500000	0	NO
Methyl isobutyl ketone	UG/KG	1.9		1%	184	1		0	
Methylene chloride	UG/KG	4.9	2.255	19%	185	36	500000	0	NO
Ortho Xylene	UG/KG	3.6		4%	70	3		0	
Tetrachloroethene	UG/KG	6.4	2.752	3%	184	5	150000	0	NO
Toluene	UG/KG	8	2.905	8%	184	15	500000	0	NO
Total BTEX	MG/KG	6.5		90%	10	9		0	
Total Xylenes	UG/KG	3	2.29	6%	109	7	500000	0	NO
Trichloroethene	UG/KG	4.5	2.768	4%	184	8	200000	0	NO
Trichlorofluoromethane	UG/KG	6		1%	98	1		0	
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	147		2%	99	2		0	
2-Methylnaphthalene	UG/KG	970		21%	185	38		0	
4-Chloroaniline	UG/KG	1200		1%	185	2		0	
4-Methylphenol	UG/KG	150	92.99	3%	185	5	500000	0	NO
Acenaphthene	UG/KG	2680	236.8	25%	185	46	500000	0	NO
Acenaphthylene	UG/KG	1700	310	38%	185	70	500000	0	NO
Anthracene	UG/KG	4395	404.7	44%	185	81	500000	0	NO
Atrazine	UG/KG	120		1%	99	1		0	
Benzaldehyde	UG/KG	50		1%	99	1		0	
Benzo(a)anthracene	UG/KG	8900	937.3	52%	185	96	5600	2	NO
Benzo(a)pyrene	UG/KG	8050	1004	52%	185	97	1000	46	YES
Benzo(b)fluoranthene	UG/KG	6800	874.5	54%	185	99	56000	1	NO
Benzo(ghi)perylene	UG/KG	5200	654.2	48%	185	88	500000	0	NO
Benzo(k)fluoranthene	UG/KG	7350	797.7	50%	185	93	56000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	515		21%	185	38		0	
Butylbenzylphthalate	UG/KG	1000		1%	185	1		0	
Carbazole	UG/KG	755		22%	115	25		0	
Chrysene	UG/KG	8900	954.1	52%	185	97	56000	0	NO
Di-n-butylphthalate	UG/KG	490		4%	185	8		0	
Di-n-octylphthalate	UG/KG	11		1%	185	1		0	
Dibenz(a,h)anthracene	UG/KG	1665	276	39%	185	72	560	18	NO
Dibenzofuran	UG/KG	1875	178.2	17%	185	32	350000	0	NO
Diethyl phthalate	UG/KG	12		2%	185	4		0	
Fluoranthene	UG/KG	23500	1871	56%	185	103	500000	0	NO
Fluorene	UG/KG	2640	242.2	29%	185	53	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	4950	621.6	49%	185	90	5600	0	NO
N-Nitrosodiphenylamine	UG/KG	100		1%	115	1		0	
Naphthalene	UG/KG	1325	185.6	20%	185	37	500000	0	NO
Phenanthrene	UG/KG	21300	1141	52%	185	96	500000	0	NO
Phenol	UG/KG	0		0%	185	0		0	
Pyrene	UG/KG	19200	1649	56%	185	104	500000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	740	32.1	27%	185	50	92000	0	NO
4,4'-DDE	UG/KG	2600	67	37%	185	68	62000	0	NO
4,4'-DDT	UG/KG	3700	88.81	34%	185	62	47000	0	NO
Aldrin	UG/KG	1.2	1.2	1%	185	1	680	0	NO
Alpha-BHC	UG/KG	9	9	1%	185	1	3400	0	NO
Alpha-Chlordane	UG/KG	34	2.204	4%	185	8	24000	0	NO
Beta-BHC	UG/KG	3.6	2.442	2%	185	3	3000	0	NO
Delta-BHC	UG/KG	1.4	1.498	1%	185	2	500000	0	NO
Dieldrin	UG/KG	1.8	1.8	1%	185	1	1400	0	NO
Endosulfan I	UG/KG	16	16	1%	185	1	200000	0	NO
Endosulfan sulfate	UG/KG	6.2	6.2	1%	185	1	200000	0	NO
Endrin	UG/KG	16	4.213	2%	185	4	89000	0	NO
Endrin aldehyde	UG/KG	3.825		2%	185	3		0	
Endrin ketone	UG/KG	38		3%	185	5		0	
Gamma-Chlordane	UG/KG	24		8%	185	15		0	
Heptachlor epoxide	UG/KG	3		2%	185	3		0	
Aroclor-1260	UG/KG	79	77.04	1%	185	2	1000	0	NO

Table 6-2B
SEAD-59 Summary Results - Surface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18300		100%	185	185		0	
Antimony	MG/KG	424		56%	185	104		0	
Arsenic	MG/KG	32.2	5.737	100%	185	185	16	2	NO
Barium	MG/KG	304	101	100%	185	185	400	0	NO
Beryllium	MG/KG	2.6	0.505	99%	185	183	590	0	NO
Cadmium	MG/KG	3.2	0.517	83%	185	153	9.3	0	NO
Calcium	MG/KG	214000		100%	185	185		0	
Chromium	MG/KG	39.3	18.05	100%	185	185	1500	0	NO
Cobalt	MG/KG	47.8		100%	185	185		0	
Copper	MG/KG	305	32.12	100%	185	185	270	1	NO
Iron	MG/KG	64000		100%	185	185		0	
Lead	MG/KG	164	36.25	100%	185	185	1000	0	NO
Magnesium	MG/KG	30200		100%	185	185		0	
Manganese	MG/KG	1290	532.3	100%	185	185	10000	0	NO
Mercury	MG/KG	0.95	0.104	94%	185	174	2.8	0	NO
Nickel	MG/KG	88.3	27.72	100%	185	185	310	0	NO
Potassium	MG/KG	2290		100%	185	185		0	
Selenium	MG/KG	1.5	0.389	10%	185	19	1500	0	NO
Silver	MG/KG	2.9	0.797	48%	185	88	1500	0	NO
Sodium	MG/KG	4060		97%	185	180		0	
Thallium	MG/KG	1.8		28%	185	51		0	
Vanadium	MG/KG	28.5		100%	185	185		0	
Zinc	MG/KG	341	85.14	100%	185	185	10000	0	NO
Notes:									
1. Parameters that were detected in surface soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discreet sample and presented in this table.									
4. NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									
6. Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.									

Table 6-2C
SEAD-59 Summary Results - Subsurface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Value	SUBSURFACE SOIL							
		Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	0		0%	0	0	500000	0	
Acetone	UG/KG	30	30	7%	14	1	500000	0	NO
Benzene	UG/KG	5.75	5.75	7%	14	1	44000	0	NO
Carbon disulfide	UG/KG	0		0%	0	0		0	
Cyclohexane	UG/KG	0		0%	0	0		0	
Ethyl benzene	UG/KG	110	77.85	14%	14	2	390000	0	NO
Meta/Para Xylene	UG/KG	0		0%	0	0		0	
Methyl chloride	UG/KG	1		7%	14	1		0	
Methyl Acetate	UG/KG	0		0%	0	0		0	
Methyl cyclohexane	UG/KG	0		0%	0	0		0	
Methyl ethyl ketone	UG/KG	36	20.78	21%	14	3	500000	0	NO
Methyl isobutyl ketone	UG/KG	0		0%	0	0		0	
Methylene chloride	UG/KG	1	1	7%	14	1	500000	0	NO
Ortho Xylene	UG/KG	0		0%	0	0		0	
Tetrachloroethene	UG/KG	0		0%	0	0	150000	0	
Toluene	UG/KG	10.75	10.75	14%	14	2	500000	0	NO
Total BTEX	MG/KG	9.5		88%	8	7		0	
Total Xylenes	UG/KG	72.75	72.75	7%	14	1	500000	0	NO
Trichloroethene	UG/KG	0		0%	0	0	200000	0	
Trichlorofluoromethane	UG/KG	0		0%	0	0		0	
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	0		0%	0	0		0	
2-Methylnaphthalene	UG/KG	10000		57%	14	8		0	
4-Chloroaniline	UG/KG	0		0%	0	0		0	
4-Methylphenol	UG/KG	83	50.98	14%	14	2	500000	0	NO
Acenaphthene	UG/KG	1600	431.4	57%	14	8	500000	0	NO
Acenaphthylene	UG/KG	460	123	43%	14	6	500000	0	NO
Anthracene	UG/KG	2100	549.9	43%	14	6	500000	0	NO
Atrazine	UG/KG	0		0%	0	0		0	
Benzaldehyde	UG/KG	0		0%	0	0		0	
Benzo(a)anthracene	UG/KG	4200	1045	57%	14	8	5600	0	NO
Benzo(a)pyrene	UG/KG	4600	1139	57%	14	8	1000	2	YES
Benzo(b)fluoranthene	UG/KG	4400	1107	64%	14	9	5600	0	NO
Benzo(ghi)perylene	UG/KG	1400	404.8	50%	14	7	500000	0	NO
Benzo(k)fluoranthene	UG/KG	4900	1346	57%	14	8	56000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	260		79%	14	11		0	
Butylbenzylphthalate	UG/KG	4.2		7%	14	1		0	
Carbazole	UG/KG	1500		43%	14	6		0	
Chrysene	UG/KG	4400	1210	64%	14	9	56000	0	NO
Di-n-butylphthalate	UG/KG	29		36%	14	5		0	
Di-n-octylphthalate	UG/KG	5.6		7%	14	1		0	
Dibenz(a,h)anthracene	UG/KG	84	84	29%	14	4	560	0	NO
Dibenzofuran	UG/KG	1400	342.4	43%	14	6	350000	0	NO
Diethyl phthalate	UG/KG	11		36%	14	5		0	
Fluoranthene	UG/KG	10000	2442	64%	14	9	500000	0	NO
Fluorene	UG/KG	3000	789.6	50%	14	7	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	1500	428.7	50%	14	7	5600	0	NO
N-Nitrosodiphenylamine	UG/KG			0%	14	0		0	
Naphthalene	UG/KG	290	121.2	50%	14	7	500000	0	NO
Phenanthrene	UG/KG	8300	4125	79%	14	7	500000	0	NO
Phenol	UG/KG	17		7%	14	1		0	
Pyrene	UG/KG	12000	5279	77%	13	10	500000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	70	21.52	36%	14	5	92000	0	NO
4,4'-DDE	UG/KG	48	15.01	50%	14	7	62000	0	NO
4,4'-DDT	UG/KG	59	18.55	29%	14	4	47000	0	NO
Aldrin	UG/KG	0		0%	0	0	680	0	
Alpha-BHC	UG/KG	9.9	9.9	7%	14	1	3400	0	NO
Alpha-Chlordane	UG/KG	17	17	7%	14	1	24000	0	NO
Beta-BHC	UG/KG	3.4	2.653	21%	14	3	3000	0	NO
Delta-BHC	UG/KG	1.2	1.296	14%	14	2	500000	0	NO
Dieldrin	UG/KG	0		0%	0	0	1400	0	
Endosulfan I	UG/KG	4.1	4.1	7%	14	1	200000	0	NO
Endosulfan sulfate	UG/KG	4.3	4.3	7%	14	1	200000	0	NO
Endrin	UG/KG	0		0%	0	0	89000	0	
Endrin aldehyde	UG/KG	6.3		14%	14	2		0	
Endrin ketone	UG/KG	0		0%	0	0		0	
Gamma-Chlordane	UG/KG	18		7%	14	1		0	
Heptachlor epoxide	UG/KG	5.7		14%	14	2		0	
Aroclor-1260	UG/KG	0		0%	0	0	1000	0	

Table 6-2C
SEAD-59 Summary Results - Subsurface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Value	SUBSURFACE SOIL							
		Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	12600		100%	14	14		0	
Antimony	MG/KG	0.47		21%	14	3		0	
Arsenic	MG/KG	6	4.782	100%	14	14	16	0	NO
Barium	MG/KG	101	67.52	100%	14	14	400	0	NO
Beryllium	MG/KG	0.52	0.414	100%	14	14	590	0	NO
Cadmium	MG/KG	0.61	0.288	36%	14	5	9.3	0	NO
Calcium	MG/KG	123000		100%	14	14		0	
Chromium	MG/KG	18.9	16.92	100%	14	14	1500	0	NO
Cobalt	MG/KG	14.2		100%	14	14		0	
Copper	MG/KG	27	21.91	100%	14	14	270	0	NO
Iron	MG/KG	28900		100%	14	14		0	
Lead	MG/KG	65.5	34.29	100%	14	14	1000	0	NO
Magnesium	MG/KG	34400		100%	14	14		0	
Manganese	MG/KG	836	522.9	100%	14	14	10000	0	NO
Mercury	MG/KG	0.15	0.0612	38%	13	5	2.8	0	NO
Nickel	MG/KG	35.5	28.63	100%	14	14	310	0	NO
Potassium	MG/KG	2520		100%	14	14		0	
Selenium	MG/KG	0.49	0.475	14%	14	2	1500	0	NO
Silver	MG/KG	0		0%	0	0	1500	0	
Sodium	MG/KG	1150		100%	14	14		0	
Thallium	MG/KG	0		0%	0	0		0	
Vanadium	MG/KG	22		100%	14	14		0	
Zinc	MG/KG	133	88.59	100%	14	14	10000	0	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.

Table 6-3A
SEAD-59 Summary Results - Total Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	8	2.255	2%	184	3	1000000	0	NO
Acetone	UG/KG	550	24.41	24%	198	47	1000000	0	NO
Benzene	UG/KG	5.75	1.355	4%	198	8	89000	0	NO
Carbon disulfide	UG/KG	4		3%	184	6		0	
Cyclohexane	UG/KG	3		8%	98	8		0	
Ethyl benzene	UG/KG	110	4.488	2%	198	4	780000	0	NO
Meta/Para Xylene	UG/KG	8.4		4%	70	3		0	
Methyl chloride	UG/KG	1		7%	14	1		0	
Methyl Acetate	UG/KG	2		3%	98	3		0	
Methyl cyclohexane	UG/KG	5		10%	98	10		0	
Methyl ethyl ketone	UG/KG	190	6.987	13%	198	25	1000000	0	NO
Methyl isobutyl ketone	UG/KG	1.9		1%	184	1		0	
Methylene chloride	UG/KG	4.9	2.225	19%	199	37	1000000	0	NO
Ortho Xylene	UG/KG	3.6		4%	70	3		0	
Tetrachloroethene	UG/KG	6.4	2.752	3%	184	5	300000	0	NO
Toluene	UG/KG	10.75	2.904	9%	198	17	1000000	0	NO
Total BTEX	MG/KG	9.5		89%	18	16		0	
Total Xylenes	UG/KG	72.75	3.769	7%	123	8	1000000	0	NO
Trichloroethene	UG/KG	4.5	2.768	4%	184	8	400000	0	NO
Trichlorofluoromethane	UG/KG	6		1%	98	1		0	
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	147		2%	99	2		0	
2-Methylnaphthalene	UG/KG	10000		23%	199	46		0	
4-Chloroaniline	UG/KG	1200		1%	185	2		0	
4-Methylphenol	UG/KG	150	70.76	4%	199	7	1000000	0	NO
Acenaphthene	UG/KG	2680	226	27%	199	54	1000000	0	NO
Acenaphthylene	UG/KG	1700	283.5	38%	199	76	1000000	0	NO
Anthracene	UG/KG	4395	389.3	44%	199	87	1000000	0	NO
Atrazine	UG/KG	120		1%	99	1		0	
Benzaldehyde	UG/KG	50		1%	99	1		0	
Benzo(a)anthracene	UG/KG	8900	916.6	52%	199	104	11000	0	NO
Benzo(a)pyrene	UG/KG	8050	978.7	53%	199	105	1100	47	NO
Benzo(b)fluoranthene	UG/KG	6800	834.2	54%	199	108	11000	0	NO
Benzo(ghi)perylene	UG/KG	5200	618.8	48%	199	95	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	7350	765.5	51%	199	101	110000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	515		25%	199	49		0	
Butylbenzylphthalate	UG/KG	1000		1%	199	2		0	
Carbazole	UG/KG	1500		24%	129	31		0	
Chrysene	UG/KG	8900	925.4	53%	199	106	110000	0	NO
Di-n-butylphthalate	UG/KG	490		7%	199	13		0	
Di-n-octylphthalate	UG/KG	11		1%	199	2		0	
Dibenz(a,h)anthracene	UG/KG	1665	254.8	38%	199	76	1100	2	NO
Dibenzofuran	UG/KG	1875	164.2	19%	199	38	1000000	0	NO
Diethyl phthalate	UG/KG	12		5%	199	9		0	
Fluoranthene	UG/KG	23500	1797	56%	199	112	1000000	0	NO
Fluorene	UG/KG	3000	254.5	30%	199	60	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	4950	589.5	49%	199	97	11000	0	NO
N-Nitrosodiphenylamine	UG/KG	100		1%	129	1		0	
Naphthalene	UG/KG	1325	167.8	22%	199	44	1000000	0	NO
Phenanthrene	UG/KG	21300	1164	52%	199	103	1000000	0	NO
Phenol	UG/KG	17		1%	199	1		0	
Pyrene	UG/KG	19200	1615	58%	198	114	1000000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	740	29.11	28%	199	55	180000	0	NO
4,4'-DDE	UG/KG	2600	64.3	38%	199	75	120000	0	NO
4,4'-DDT	UG/KG	3700	85.74	33%	199	66	94000	0	NO
Aldrin	UG/KG	1.2	1.2	1%	185	1	1400	0	NO
Alpha-BHC	UG/KG	9.9	9.019	1%	199	2	6800	0	NO
Alpha-Chlordane	UG/KG	34	2.225	5%	199	9	47000	0	NO
Beta-BHC	UG/KG	3.6	2.45	3%	199	6	14000	0	NO
Delta-BHC	UG/KG	1.4	1.318	2%	199	4	1000000	0	NO
Dieldrin	UG/KG	1.8		1%	185	1	2800	0	
Endosulfan I	UG/KG	16	4.561	1%	199	2	920000	0	NO
Endosulfan sulfate	UG/KG	6.2	4.352	1%	199	2	920000	0	NO
Endrin	UG/KG	16	4.17	2%	185	4	410000	0	NO
Endrin aldehyde	UG/KG	6.3		3%	199	5		0	
Endrin ketone	UG/KG	38		3%	185	5		0	
Gamma-Chlordane	UG/KG	24		8%	199	16		0	
Heptachlor epoxide	UG/KG	5.7		3%	199	5		0	
Aroclor-1260	UG/KG	79	77.03	1%	185	2	25000	0	NO

Table 6-3A
SEAD-59 Summary Results - Total Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18300		100%	199	199		0	
Antimony	MG/KG	424		54%	199	107		0	
Arsenic	MG/KG	32.2	5.645	100%	199	199	16	2	NO
Barium	MG/KG	304	98.18	100%	199	199	10000	0	NO
Beryllium	MG/KG	2.6	0.494	99%	199	197	2700	0	NO
Cadmium	MG/KG	3.2	0.493	79%	199	158	60	0	NO
Calcium	MG/KG	214000		100%	199	199		0	
Chromium	MG/KG	39.3	17.88	100%	199	199	6800	0	NO
Cobalt	MG/KG	47.8		100%	199	199		0	
Copper	MG/KG	305	31.28	100%	199	199	10000	0	NO
Iron	MG/KG	64000		100%	199	199		0	
Lead	MG/KG	164	35.03	100%	199	199	3900	0	NO
Magnesium	MG/KG	34400		100%	199	199		0	
Manganese	MG/KG	1290	526.9	100%	199	199	10000	0	NO
Mercury	MG/KG	0.95	0.101	90%	198	179	5.7	0	NO
Nickel	MG/KG	88.3	27.63	100%	199	199	10000	0	NO
Potassium	MG/KG	2520		100%	199	199		0	
Selenium	MG/KG	1.5	0.378	11%	199	21	6800	0	NO
Silver	MG/KG	2.9	0.744	48%	185	88	6800	0	NO
Sodium	MG/KG	4060		97%	199	194		0	
Thallium	MG/KG	1.8		28%	185	51		0	
Vanadium	MG/KG	28.5		100%	199	199		0	
Zinc	MG/KG	341	84.66	100%	199	199	10000	0	NO
Notes:									
1. Parameters that were detected in either surface or subsurface soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discreet sample and presented in this table.									
4. NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									

Table 6-3B
SEAD-59 Summary Results - Surface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	8	2.255	2%	184	3	1000000	0	NO
Acetone	UG/KG	550	24.780	25%	184	46	1000000	0	NO
Benzene	UG/KG	1.75	1.284	4%	184	7	89000	0	NO
Carbon disulfide	UG/KG	4		3%	184	6		0	
Cyclohexane	UG/KG	3		8%	98	8		0	
Ethyl benzene	UG/KG	3.15	3.428	1%	184	2	780000	0	NO
Meta/Para Xylene	UG/KG	8.4		4%	70	3		0	
Methyl chloride	UG/KG	0		0%	0	0		0	
Methyl Acetate	UG/KG	2		3%	98	3		0	
Methyl cyclohexane	UG/KG	5		10%	98	10		0	
Methyl ethyl ketone	UG/KG	190	6.780	12%	184	22	1000000	0	NO
Methyl isobutyl ketone	UG/KG	1.9		1%	184	1		0	
Methylene chloride	UG/KG	4.9	2.255	19%	185	36	1000000	0	NO
Ortho Xylene	UG/KG	3.6		4%	70	3		0	
Tetrachloroethene	UG/KG	6.4	2.752	3%	184	5	300000	0	NO
Toluene	UG/KG	8	2.905	8%	184	15	1000000	0	NO
Total BTEX	MG/KG	6.5		90%	10	9		0	
Total Xylenes	UG/KG	3	2.290	6%	109	7	1000000	0	NO
Trichloroethene	UG/KG	4.5	2.768	4%	184	8	400000	0	NO
Trichlorofluoromethane	UG/KG	6		1%	98	1		0	
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	147		2%	99	2		0	
2-Methylnaphthalene	UG/KG	970		21%	185	38		0	
4-Chloroaniline	UG/KG	1200		1%	185	2		0	
4-Methylphenol	UG/KG	150	92.990	3%	185	5	1000000	0	NO
Acenaphthene	UG/KG	2680	236.800	25%	185	46	1000000	0	NO
Acenaphthylene	UG/KG	1700	310.000	38%	185	70	1000000	0	NO
Anthracene	UG/KG	4395	404.700	44%	185	81	1000000	0	NO
Atrazine	UG/KG	120		1%	99	1		0	
Benzaldehyde	UG/KG	50		1%	99	1		0	
Benzo(a)anthracene	UG/KG	8900	937.300	52%	185	96	11000	0	NO
Benzo(a)pyrene	UG/KG	8050	1004.000	52%	185	97	1100	46	NO
Benzo(b)fluoranthene	UG/KG	6800	874.500	54%	185	99	11000	0	NO
Benzo(ghi)perylene	UG/KG	5200	654.200	48%	185	88	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	7350	797.700	50%	185	93	110000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	515		21%	185	38		0	
Butylbenzylphthalate	UG/KG	1000		1%	185	1		0	
Carbazole	UG/KG	755		22%	115	25		0	
Chrysene	UG/KG	8900	954.100	52%	185	97	110000	0	NO
Di-n-butylphthalate	UG/KG	490		4%	185	8		0	
Di-n-octylphthalate	UG/KG	11		1%	185	1		0	
Dibenz(a,h)anthracene	UG/KG	1665	276.000	39%	185	72	1100	2	NO
Dibenzofuran	UG/KG	1875	178.200	17%	185	32	1000000	0	NO
Diethyl phthalate	UG/KG	12		2%	185	4		0	
Fluoranthene	UG/KG	23500	1871.000	56%	185	103	1000000	0	NO
Fluorene	UG/KG	2640	242.200	29%	185	53	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	4950	621.600	49%	185	90	11000	0	NO
N-Nitrosodiphenylamine	UG/KG	100		1%	115	1		0	
Naphthalene	UG/KG	1325	185.600	20%	185	37	1000000	0	NO
Phenanthrene	UG/KG	21300	1141.000	52%	185	96	1000000	0	NO
Phenol	UG/KG	0		0%	185	0		0	
Pyrene	UG/KG	19200	1649.000	56%	185	104	1000000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	740	32.1	27%	185	50	180000	0	NO
4,4'-DDE	UG/KG	2600	67	37%	185	68	120000	0	NO
4,4'-DDT	UG/KG	3700	88.81	34%	185	62	94000	0	NO
Aldrin	UG/KG	1.2	1.2	1%	185	1	1400	0	NO
Alpha-BHC	UG/KG	9	9	1%	185	1	6800	0	NO
Alpha-Chlordane	UG/KG	34	2.204	4%	185	8	47000	0	NO
Beta-BHC	UG/KG	3.6	2.442	2%	185	3	14000	0	NO
Delta-BHC	UG/KG	1.4	1.498	1%	185	2	1000000	0	NO
Dieldrin	UG/KG	1.8	1.8	1%	185	1	2800	0	NO
Endosulfan I	UG/KG	16	16	1%	185	1	920000	0	NO
Endosulfan sulfate	UG/KG	6.2	6.2	1%	185	1	920000	0	NO
Endrin	UG/KG	16	4.213	2%	185	4	410000	0	NO
Endrin aldehyde	UG/KG	3.825		2%	185	3		0	
Endrin ketone	UG/KG	38		3%	185	5		0	
Gamma-Chlordane	UG/KG	24		8%	185	15		0	
Heptachlor epoxide	UG/KG	3		2%	185	3		0	
Aroclor-1260	UG/KG	79	77.04	1%	185	2	25000	0	NO

Table 6-3B
SEAD-59 Summary Results - Surface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18300		100%	185	185		0	
Antimony	MG/KG	424		56%	185	104		0	
Arsenic	MG/KG	32.2	5.737	100%	185	185	16	2	NO
Barium	MG/KG	304	101	100%	185	185	10000	0	NO
Beryllium	MG/KG	2.6	0.505	99%	185	183	2700	0	NO
Cadmium	MG/KG	3.2	0.517	83%	185	153	60	0	NO
Calcium	MG/KG	214000		100%	185	185		0	
Chromium	MG/KG	39.3	18.05	100%	185	185	6800	0	NO
Cobalt	MG/KG	47.8		100%	185	185		0	
Copper	MG/KG	305	32.12	100%	185	185	10000	0	NO
Iron	MG/KG	64000		100%	185	185		0	
Lead	MG/KG	164	36.25	100%	185	185	3900	0	NO
Magnesium	MG/KG	30200		100%	185	185		0	
Manganese	MG/KG	1290	532.3	100%	185	185	10000	0	NO
Mercury	MG/KG	0.95	0.104	94%	185	174	5.7	0	NO
Nickel	MG/KG	88.3	27.72	100%	185	185	10000	0	NO
Potassium	MG/KG	2290		100%	185	185		0	
Selenium	MG/KG	1.5	0.389	10%	185	19	6800	0	NO
Silver	MG/KG	2.9	0.797	48%	185	88	6800	0	NO
Sodium	MG/KG	4060		97%	185	180		0	
Thallium	MG/KG	1.8		28%	185	51		0	
Vanadium	MG/KG	28.5		100%	185	185		0	
Zinc	MG/KG	341	85.14	100%	185	185	10000	0	NO
Notes:									
1. Parameters that were detected in surface soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discreet sample and presented in this table.									
4. NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									
6. Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.									

Table 6-3C
SEAD-59 Summary Results - Subsurface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL									
Parameter ¹	Value	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	0		0%	0	0	1000000	0	
Acetone	UG/KG	30	30	7%	14	1	1000000	0	NO
Benzene	UG/KG	5.75	5.75	7%	14	1	89000	0	NO
Carbon disulfide	UG/KG	0		0%	0	0		0	
Cyclohexane	UG/KG	0		0%	0	0		0	
Ethyl benzene	UG/KG	110	77.85	14%	14	2	780000	0	NO
Meta/Para Xylene	UG/KG	0		0%	0	0		0	
Methyl chloride	UG/KG	1		7%	14	1		0	
Methyl Acetate	UG/KG	0		0%	0	0		0	
Methyl cyclohexane	UG/KG	0		0%	0	0		0	
Methyl ethyl ketone	UG/KG	36	20.78	21%	14	3	1000000	0	NO
Methyl isobutyl ketone	UG/KG	0		0%	0	0		0	
Methylene chloride	UG/KG	1	1	7%	14	1	1000000	0	NO
Ortho Xylene	UG/KG	0		0%	0	0		0	
Tetrachloroethene	UG/KG	0		0%	0	0	300000	0	
Toluene	UG/KG	10.75	10.75	14%	14	2	1000000	0	NO
Total BTEX	MG/KG	9.5		88%	8	7		0	
Total Xylenes	UG/KG	72.75	72.75	7%	14	1	1000000	0	NO
Trichloroethene	UG/KG	0		0%	0	0	400000	0	
Trichlorofluoromethane	UG/KG	0		0%	0	0		0	
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	0		0%	0	0		0	
2-Methylnaphthalene	UG/KG	10000		57%	14	8		0	
4-Chloroaniline	UG/KG	0		0%	0	0		0	
4-Methylphenol	UG/KG	83	50.98	14%	14	2	1000000	0	NO
Acenaphthene	UG/KG	1600	431.4	57%	14	8	1000000	0	NO
Acenaphthylene	UG/KG	460	123	43%	14	6	1000000	0	NO
Anthracene	UG/KG	2100	549.9	43%	14	6	1000000	0	NO
Atrazine	UG/KG	0		0%	0	0		0	
Benzaldehyde	UG/KG	0		0%	0	0		0	
Benzo(a)anthracene	UG/KG	4200	1045	57%	14	8	11000	0	NO
Benzo(a)pyrene	UG/KG	4600	1139	57%	14	8	1100	1	YES
Benzo(b)fluoranthene	UG/KG	4400	1107	64%	14	9	11000	0	NO
Benzo(ghi)perylene	UG/KG	1400	404.8	50%	14	7	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	4900	1346	57%	14	8	110000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	260		79%	14	11		0	
Butylbenzylphthalate	UG/KG	4.2		7%	14	1		0	
Carbazole	UG/KG	1500		43%	14	6		0	
Chrysene	UG/KG	4400	1210	64%	14	9	110000	0	NO
Di-n-butylphthalate	UG/KG	29		36%	14	5		0	
Di-n-octylphthalate	UG/KG	5.6		7%	14	1		0	
Dibenz(a,h)anthracene	UG/KG	84	84	29%	14	4	1100	0	NO
Dibenzofuran	UG/KG	1400	342.4	43%	14	6	1000000	0	NO
Diethyl phthalate	UG/KG	11		36%	14	5		0	
Fluoranthene	UG/KG	10000	2442	64%	14	9	1000000	0	NO
Fluorene	UG/KG	3000	789.6	50%	14	7	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	1500	428.7	50%	14	7	11000	0	NO
N-Nitrosodiphenylamine	UG/KG			0%	14	0		0	
Naphthalene	UG/KG	290	121.2	50%	14	7	1000000	0	NO
Phenanthrene	UG/KG	8300	4125	79%	14	7	1000000	0	NO
Phenol	UG/KG	17		7%	14	1		0	
Pyrene	UG/KG	12000	5279	77%	13	10	1000000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	70	21.52	36%	14	5	180000	0	NO
4,4'-DDE	UG/KG	48	15.01	50%	14	7	120000	0	NO
4,4'-DDT	UG/KG	59	18.55	29%	14	4	94000	0	NO
Aldrin	UG/KG	0		0%	0	0	1400	0	
Alpha-BHC	UG/KG	9.9	9.9	7%	14	1	6800	0	NO
Alpha-Chlordane	UG/KG	17	17	7%	14	1	47000	0	NO
Beta-BHC	UG/KG	3.4	2.653	21%	14	3	14000	0	NO
Delta-BHC	UG/KG	1.2	1.296	14%	14	2	1000000	0	NO
Dieldrin	UG/KG	0		0%	0	0	2800	0	
Endosulfan I	UG/KG	4.1	4.1	7%	14	1	920000	0	NO
Endosulfan sulfate	UG/KG	4.3	4.3	7%	14	1	920000	0	NO
Endrin	UG/KG	0		0%	0	0	410000	0	
Endrin aldehyde	UG/KG	6.3		14%	14	2		0	
Endrin ketone	UG/KG	0		0%	0	0		0	
Gamma-Chlordane	UG/KG	18		7%	14	1		0	
Heptachlor epoxide	UG/KG	5.7		14%	14	2		0	
Aroclor-1260	UG/KG	0		0%	0	0	25000	0	

Table 6-3C
SEAD-59 Summary Results - Subsurface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL									
Parameter ¹	Value	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	12600		100%	14	14		0	
Antimony	MG/KG	0.47		21%	14	3		0	
Arsenic	MG/KG	6	4.782	100%	14	14	16	0	NO
Barium	MG/KG	101	67.52	100%	14	14	10000	0	NO
Beryllium	MG/KG	0.52	0.414	100%	14	14	2700	0	NO
Cadmium	MG/KG	0.61	0.288	36%	14	5	60	0	NO
Calcium	MG/KG	123000		100%	14	14		0	
Chromium	MG/KG	18.9	16.92	100%	14	14	6800	0	NO
Cobalt	MG/KG	14.2		100%	14	14		0	
Copper	MG/KG	27	21.91	100%	14	14	10000	0	NO
Iron	MG/KG	28900		100%	14	14		0	
Lead	MG/KG	65.5	34.29	100%	14	14	3900	0	NO
Magnesium	MG/KG	34400		100%	14	14		0	
Manganese	MG/KG	836	522.9	100%	14	14	10000	0	NO
Mercury	MG/KG	0.15	0.0612	38%	13	5	5.7	0	NO
Nickel	MG/KG	35.5	28.63	100%	14	14	10000	0	NO
Potassium	MG/KG	2520		100%	14	14		0	
Selenium	MG/KG	0.49	0.475	14%	14	2	6800	0	NO
Silver	MG/KG	0		0%	0	0	6800	0	
Sodium	MG/KG	1150		100%	14	14		0	
Thallium	MG/KG	0		0%	0	0		0	
Vanadium	MG/KG	22		100%	14	14		0	
Zinc	MG/KG	133	88.59	100%	14	14	10000	0	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.

Table 6-4A
SEAD-59 Summary Results - Total Soil versus EPA Region IX Industrial Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	8	2.255	2%	184	3	4.13E+05	0	NO
Acetone	UG/KG	550	24.41	24%	198	47	5.43E+07	0	NO
Benzene	UG/KG	5.75	1.355	4%	198	8	1409	0	NO
Carbon disulfide	UG/KG	4	2.447	3%	184	6	7.20E+05	0	NO
Cyclohexane	UG/KG	3	3.062	8%	98	8	1.40E+05	0	NO
Ethyl benzene	UG/KG	110	4.488	2%	198	4	3.95E+05	0	NO
Meta/Para Xylene	UG/KG	8.4		4%	70	3		0	
Methyl chloride	UG/KG	3	3	7%	14	1	1.56E+05	0	NO
Methyl Acetate	UG/KG	2	1.887	3%	98	3	9.15E+07	0	NO
Methyl cyclohexane	UG/KG	5	3.597	10%	98	10	8.72E+06	0	NO
Methyl ethyl ketone	UG/KG	190	6.987	13%	198	25	1.13E+08	0	NO
Methyl isobutyl ketone	UG/KG	1.9	1.9	1%	184	1	4.70E+07	0	NO
Methylene chloride	UG/KG	4.9	2.225	19%	199	37	2.05E+04	0	NO
Ortho Xylene	UG/KG	3.6		4%	70	3		0	
Tetrachloroethene	UG/KG	6.4	2.752	3%	184	5	1309	0	NO
Toluene	UG/KG	10.75	2.904	9%	198	17	5.20E+05	0	NO
Total BTEX	MG/KG	9.5		89%	18	16		0	
Total Xylenes	UG/KG	72.75	3.769	7%	123	8	4.20E+05	0	NO
Trichloroethene	UG/KG	4.5	2.768	4%	184	8	115	0	NO
Trichlorofluoromethane	UG/KG	6	6	1%	98	1	2.00E+06	0	NO
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	147	176.1	2%	99	2	2.33E+07	0	NO
2-Methylnaphthalene	UG/KG	10000		23%	199	46		0	
4-Chloroaniline	UG/KG	1200	175.5	1%	185	2	2.46E+06	0	NO
4-Methylphenol	UG/KG	150	70.76	4%	199	7	3.08E+06	0	NO
Acenaphthene	UG/KG	2680	226	27%	199	54	2.92E+07	0	NO
Acenaphthylene	UG/KG	1700		38%	199	76		0	
Anthracene	UG/KG	4395	389.3	44%	199	87	1.00E+08	0	NO
Atrazine	UG/KG	120	120	1%	99	1	7764	0	NO
Benzaldehyde	UG/KG	50	50	1%	99	1	6.16E+07	0	NO
Benzo(a)anthracene	UG/KG	8900	916.6	52%	199	104	2110	24	NO
Benzo(a)pyrene	UG/KG	8050	978.7	53%	199	105	211	78	YES
Benzo(b)fluoranthene	UG/KG	6800	834.2	54%	199	108	2110	20	NO
Benzo(ghi)perylene	UG/KG	5200		48%	199	95		0	
Benzo(k)fluoranthene	UG/KG	7350	765.5	51%	199	101	2.11E+04	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	515	79.06	25%	199	49	1.23E+05	0	NO
Butylbenzylphthalate	UG/KG	1000	68	1%	199	2	1.00E+08	0	NO
Carbazole	UG/KG	1500	166.7	24%	129	31	8.62E+04	0	NO
Chrysene	UG/KG	8900	925.4	53%	199	106	2.11E+05	0	NO
Di-n-butylphthalate	UG/KG	490	41.91	7%	199	13	6.16E+07	0	NO
Di-n-octylphthalate	UG/KG	11	12.76	1%	199	2	2.46E+07	0	NO
Dibenz(a,h)anthracene	UG/KG	1665	254.8	38%	199	76	211	44	YES
Dibenzofuran	UG/KG	1875	164.2	19%	199	38	1.56E+06	0	NO
Diethyl phthalate	UG/KG	12	9.738	5%	199	9	1.00E+08	0	NO
Fluoranthene	UG/KG	23500	1797	56%	199	112	2.20E+07	0	NO
Fluorene	UG/KG	3000	254.5	30%	199	60	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	4950	589.5	49%	199	97	2110	5	NO
N-Nitrosodiphenylamine	UG/KG	100	100	1%	129	1	3.52E+05	0	NO
Naphthalene	UG/KG	1325	167.8	22%	199	44	1.88E+05	0	NO
Phenanthrene	UG/KG	21300	1164	54%	199	107		0	YES
Phenol	UG/KG	17		1%	199	1		0	
Pyrene	UG/KG	19200	1615	58%	198	114	2.91E+07	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	740	29.11	28%	199	55	9951	0	NO
4,4'-DDE	UG/KG	2600	64.3	38%	199	75	7025	0	NO
4,4'-DDT	UG/KG	3700	85.74	33%	199	66	7025	0	NO
Aldrin	UG/KG	1.2	1.2	1%	185	1	101	0	NO
Alpha-BHC	UG/KG	9.9	9.019	1%	199	2	359	0	NO
Alpha-Chlordane	UG/KG	34		5%	199	9		0	
Beta-BHC	UG/KG	3.6	2.45	3%	199	6	1258	0	NO
Delta-BHC	UG/KG	1.4		2%	199	4		0	
Dieldrin	UG/KG	1.8	1.8	1%	185	1	108	0	NO
Endosulfan I	UG/KG	16		1%	199	2		0	
Endosulfan sulfate	UG/KG	6.2		1%	199	2		0	
Endrin	UG/KG	16	4.17	2%	185	4	1.85E+05	0	NO
Endrin aldehyde	UG/KG	6.3		3%	199	5		0	
Endrin ketone	UG/KG	38		3%	185	5		0	
Gamma-Chlordane	UG/KG	24		8%	199	16		0	

Table 6-4A
SEAD-59 Summary Results - Total Soil versus EPA Region IX Industrial Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Heptachlor epoxide	UG/KG	5.7	1.745	3%	199	5	189	0	NO
Aroclor-1260	UG/KG	79		1%	185	2		0	
Metals									
Aluminum	MG/KG	18300	11184	100%	199	199	1.00E+05	0	NO
Antimony	MG/KG	424	7.047	54%	199	107	409	1	NO
Arsenic	MG/KG	32.2	5.645	100%	199	199	1.59	199	YES
Barium	MG/KG	304	98.18	100%	199	199	6.66E+04	0	NO
Beryllium	MG/KG	2.6	0.494	99%	199	197	1940.690344	0	NO
Cadmium	MG/KG	3.2	0.493	79%	199	158	451	0	NO
Calcium	MG/KG	214000		100%	199	199		0	
Chromium	MG/KG	39.3		100%	199	199		0	
Cobalt	MG/KG	47.8	9.995	100%	199	199	1921	0	NO
Copper	MG/KG	305	31.28	100%	199	199	4.09E+04	0	NO
Iron	MG/KG	64000	21741	100%	199	199	1.00E+05	0	NO
Lead	MG/KG	164	35.03	100%	199	199	800	0	NO
Magnesium	MG/KG	34400		100%	199	199		0	
Manganese	MG/KG	1290	526.9	100%	199	199	1.95E+04	0	NO
Mercury	MG/KG	0.95	0.101	90%	198	179	307	0	NO
Nickel	MG/KG	88.3	27.63	100%	199	199	2.04E+04	0	NO
Potassium	MG/KG	2520		100%	199	199		0	
Selenium	MG/KG	1.5	0.378	11%	199	21	5110	0	NO
Silver	MG/KG	2.9	0.744	48%	185	88	5110	0	NO
Sodium	MG/KG	4060		97%	199	194		0	
Thallium	MG/KG	1.8	0.314	28%	185	51	67	0	NO
Vanadium	MG/KG	28.5	19.49	100%	199	199	1022	0	NO
Zinc	MG/KG	341	84.66	100%	199	199	1.00E+05	0	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discrete sample and presented in this table.
- USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-4B
SEAD-59 Summary Results - Surface Soil versus EPA Region IX Industrial Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	8	2.255	2%	184	3	4.13E+05	0	NO
Acetone	UG/KG	550	24.78	25%	184	46	5.43E+07	0	NO
Benzene	UG/KG	1.75	1.284	4%	184	7	1409	0	NO
Carbon disulfide	UG/KG	4	2.447	3%	184	6	7.20E+05	0	NO
Cyclohexane	UG/KG	3	3.062	8%	98	8	1.40E+05	0	NO
Ethyl benzene	UG/KG	3.15	3.428	1%	184	2	3.95E+05	0	NO
Meta/Para Xylene	UG/KG	8.4		4%	70	3		0	
Methyl chloride	UG/KG	0		0%	0	0	1.56E+05	0	
Methyl Acetate	UG/KG	2	1.887	3%	98	3	9.15E+07	0	NO
Methyl cyclohexane	UG/KG	5	3.597	10%	98	10	8.72E+06	0	NO
Methyl ethyl ketone	UG/KG	190	6.78	12%	184	22	1.13E+08	0	NO
Methyl isobutyl ketone	UG/KG	1.9	1.9	1%	184	1	4.70E+07	0	NO
Methylene chloride	UG/KG	4.9	2.255	19%	185	36	2.05E+04	0	NO
Ortho Xylene	UG/KG	3.6		4%	70	3		0	
Tetrachloroethene	UG/KG	6.4	2.752	3%	184	5	1309	0	NO
Toluene	UG/KG	8	2.905	8%	184	15	5.20E+05	0	NO
Total BTEX	MG/KG	6.5		90%	10	9		0	
Total Xylenes	UG/KG	3	2.29	6%	109	7	4.20E+05	0	NO
Trichloroethene	UG/KG	4.5	2.768	4%	184	8	115	0	NO
Trichlorofluoromethane	UG/KG	6	6	1%	98	1	2.00E+06	0	NO
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	147	176.1	2%	99	2	2.33E+07	0	NO
2-Methylnaphthalene	UG/KG	970		21%	185	38		0	
4-Chloroaniline	UG/KG	1200	179	1%	185	2	2.46E+06	0	NO
4-Methylphenol	UG/KG	150	92.99	3%	185	5	3.08E+06	0	NO
Acenaphthene	UG/KG	2680	236.8	25%	185	46	2.92E+07	0	NO
Acenaphthylene	UG/KG	1700		38%	185	70		0	
Anthracene	UG/KG	4395	404.7	44%	185	81	1.00E+08	0	NO
Atrazine	UG/KG	120	120	1%	99	1	7764	0	NO
Benzaldehyde	UG/KG	50	50	1%	99	1	6.16E+07	0	NO
Benzo(a)anthracene	UG/KG	8900	937.3	52%	185	96	2110	23	NO
Benzo(a)pyrene	UG/KG	8050	1004	52%	185	97	211	73	YES
Benzo(b)fluoranthene	UG/KG	6800	874.5	54%	185	99	2110	19	NO
Benzo(ghi)perylene	UG/KG	5200		48%	185	88		0	
Benzo(k)fluoranthene	UG/KG	7350	797.7	50%	185	93	2.11E+04	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	515	84.98	21%	185	38	1.23E+05	0	NO
Butylbenzylphthalate	UG/KG	1000	1000	1%	185	1	1.00E+08	0	NO
Carbazole	UG/KG	755	172.3	22%	115	25	8.62E+04	0	NO
Chrysene	UG/KG	8900	954.1	52%	185	97	2.11E+05	0	NO
Di-n-butylphthalate	UG/KG	490	114.4	4%	185	8	6.16E+07	0	NO
Di-n-octylphthalate	UG/KG	11	11	1%	185	1	2.46E+07	0	NO
Dibenz(a,h)anthracene	UG/KG	1665	276	39%	185	72	211	44	YES
Dibenzofuran	UG/KG	1875	178.2	17%	185	32	1.56E+06	0	NO
Diethyl phthalate	UG/KG	12	11.34	2%	185	4	1.00E+08	0	NO
Fluoranthene	UG/KG	23500	1871	56%	185	103	2.20E+07	0	NO
Fluorene	UG/KG	2640	242.2	29%	185	53	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	4950	621.6	49%	185	90	2110	5	NO
N-Nitrosodiphenylamine	UG/KG	100	100	1%	115	1	3.52E+05	0	NO
Naphthalene	UG/KG	1325	185.6	20%	185	37	1.88E+05	0	NO
Phenanthrene	UG/KG	21300		52%	185	96		0	
Phenol	UG/KG	0		0%	185	0	100000000	0	
Pyrene	UG/KG	19200	1649	56%	185	104	2.91E+07	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	740	32.1	27%	185	50	9951	0	NO
4,4'-DDE	UG/KG	2600	67	37%	185	68	7025	0	NO
4,4'-DDT	UG/KG	3700	88.81	34%	185	62	7025	0	NO
Aldrin	UG/KG	1.2	1.2	1%	185	1	101	0	NO
Alpha-BHC	UG/KG	9	9	1%	185	1	359	0	NO
Alpha-Chlordane	UG/KG	34		4%	185	8		0	
Beta-BHC	UG/KG	3.6	2.442	2%	185	3	1258	0	NO
Delta-BHC	UG/KG	1.4		1%	185	2		0	
Dieldrin	UG/KG	1.8	1.8	1%	185	1	108	0	NO
Endosulfan I	UG/KG	16		1%	185	1		0	
Endosulfan sulfate	UG/KG	6.2		1%	185	1		0	
Endrin	UG/KG	16	4.213	2%	185	4	1.85E+05	0	NO
Endrin aldehyde	UG/KG	3.825		2%	185	3		0	
Endrin ketone	UG/KG	38		3%	185	5		0	
Gamma-Chlordane	UG/KG	24		8%	185	15		0	

Table 6-4B
SEAD-59 Summary Results - Surface Soil versus EPA Region IX Industrial Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Heptachlor epoxide	UG/KG	3	1.742	2%	185	3	189	0	NO
Aroclor-1260	UG/KG	79		1%	185	2		0	
Metals									
Aluminum	MG/KG	18300	11309	100%	185	185	1.00E+05	0	NO
Antimony	MG/KG	424	7.648	56%	185	104	409	1	NO
Arsenic	MG/KG	32.2	5.737	100%	185	185	1.59	185	YES
Barium	MG/KG	304	101	100%	185	185	6.66E+04	0	NO
Beryllium	MG/KG	2.6	0.505	99%	185	183	1940.690344	0	NO
Cadmium	MG/KG	3.2	0.517	83%	185	153	451	0	NO
Calcium	MG/KG	214000		100%	185	185		0	
Chromium	MG/KG	39.3		100%	185	185		0	
Cobalt	MG/KG	47.8	10.03	100%	185	185	1921	0	NO
Copper	MG/KG	305	32.12	100%	185	185	4.09E+04	0	NO
Iron	MG/KG	64000	21830	100%	185	185	1.00E+05	0	NO
Lead	MG/KG	164	36.25	100%	185	185	800	0	NO
Magnesium	MG/KG	30200		100%	185	185		0	
Manganese	MG/KG	1290	532.3	100%	185	185	1.95E+04	0	NO
Mercury	MG/KG	0.95	0.104	94%	185	174	307	0	NO
Nickel	MG/KG	88.3	27.72	100%	185	185	2.04E+04	0	NO
Potassium	MG/KG	2290		100%	185	185		0	
Selenium	MG/KG	1.5	0.389	10%	185	19	5110	0	NO
Silver	MG/KG	2.9	0.797	48%	185	88	5110	0	NO
Sodium	MG/KG	4060		97%	185	180		0	
Thallium	MG/KG	1.8	0.321	28%	185	51	67	0	NO
Vanadium	MG/KG	28.5	19.74	100%	185	185	1022	0	NO
Zinc	MG/KG	341	85.14	100%	185	185	1.00E+05	0	NO
Notes:									
1. Parameters that were detected in surface soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discreet sample and presented in this table.									
4. USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									
6. Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.									

Table 6-4C
SEAD-59 Summary Results - Subsurface Soil versus EPA Region IX Industrial Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1-Dichloroethene	UG/KG	0		0%	0	0	4.13E+05	0	
Acetone	UG/KG	30	30	7%	14	1	5.43E+07	0	NO
Benzene	UG/KG	5.75	5.75	7%	14	1	1409	0	NO
Carbon disulfide	UG/KG	0		0%	0	0	7.20E+05	0	
Cyclohexane	UG/KG	0		0%	0	0	1.40E+05	0	
Ethyl benzene	UG/KG	110	77.85	14%	14	2	3.95E+05	0	NO
Meta/Para Xylene	UG/KG	0		0%	0	0		0	
Methyl chloride	UG/KG	3	3	7%	14	1	1.56E+05	0	NO
Methyl Acetate	UG/KG	0		0%	0	0	9.15E+07	0	
Methyl cyclohexane	UG/KG	0		0%	0	0	8.72E+06	0	
Methyl ethyl ketone	UG/KG	36	20.78	21%	14	3	1.13E+08	0	NO
Methyl isobutyl ketone	UG/KG	0		0%	0	0	4.70E+07	0	
Methylene chloride	UG/KG	1	1	7%	14	1	2.05E+04	0	NO
Ortho Xylene	UG/KG	0		0%	0	0		0	
Tetrachloroethene	UG/KG	0		0%	0	0	1309	0	
Toluene	UG/KG	10.75	10.75	14%	14	2	5.20E+05	0	NO
Total BTEX	MG/KG	9.5		88%	8	7		0	
Total Xylenes	UG/KG	72.75	72.75	7%	14	1	4.20E+05	0	NO
Trichloroethene	UG/KG	0		0%	0	0	115	0	
Trichlorofluoromethane	UG/KG	0		0%	0	0	2.00E+06	0	
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	0		0%	0	0	2.33E+07	0	
2-Methylnaphthalene	UG/KG	10000		57%	14	8		0	
4-Chloroaniline	UG/KG	0		0%	0	0	2.46E+06	0	
4-Methylphenol	UG/KG	83	50.98	14%	14	2	3.08E+06	0	NO
Acenaphthene	UG/KG	1600	431.4	57%	14	8	2.92E+07	0	NO
Acenaphthylene	UG/KG	460		43%	14	6		0	
Anthracene	UG/KG	2100	549.9	43%	14	6	1.00E+08	0	NO
Atrazine	UG/KG	0		0%	0	0	7764	0	
Benzaldehyde	UG/KG	0		0%	0	0	6.16E+07	0	
Benzo(a)anthracene	UG/KG	4200	1045	57%	14	8	2110	1	NO
Benzo(a)pyrene	UG/KG	4600	1139	57%	14	8	211	5	YES
Benzo(b)fluoranthene	UG/KG	4400	1107	64%	14	9	2110	1	NO
Benzo(ghi)perylene	UG/KG	1400		50%	14	7		0	
Benzo(k)fluoranthene	UG/KG	4900	1346	57%	14	8	2.11E+04	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	260	139.4	79%	14	11	1.23E+05	0	NO
Butylbenzylphthalate	UG/KG	4.2	4.2	7%	14	1	1.00E+08	0	NO
Carbazole	UG/KG	1500	386.2	43%	14	6	8.62E+04	0	NO
Chrysene	UG/KG	4400	1210	64%	14	9	2.11E+05	0	NO
Di-n-butylphthalate	UG/KG	29	19.42	36%	14	5	6.16E+07	0	NO
Di-n-octylphthalate	UG/KG	5.6	5.6	7%	14	1	2.46E+07	0	NO
Dibenz(a,h)anthracene	UG/KG	84	84	29%	14	4	211	0	NO
Dibenzofuran	UG/KG	1400	342.4	43%	14	6	1.56E+06	0	NO
Diethyl phthalate	UG/KG	11	8.915	36%	14	5	1.00E+08	0	NO
Fluoranthene	UG/KG	10000	2442	64%	14	9	2.20E+07	0	NO
Fluorene	UG/KG	3000	789.6	50%	14	7	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	1500	428.7	50%	14	7	2110	0	NO
N-Nitrosodiphenylamine	UG/KG	0		0%	14	0	3.52E+05	0	
Naphthalene	UG/KG	290	121.2	50%	14	7	1.88E+05	0	NO
Phenanthrene	UG/KG	8300		79%	14	11		0	
Phenol	UG/KG	17	17	7%	14	1	10000000	0	
Pyrene	UG/KG	12000	5279	77%	13	10	2.91E+07	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	70	21.52	36%	14	5	9951	0	NO
4,4'-DDE	UG/KG	48	15.01	50%	14	7	7025	0	NO
4,4'-DDT	UG/KG	59	18.55	29%	14	4	7025	0	NO
Aldrin	UG/KG	0		0%	0	0	101	0	
Alpha-BHC	UG/KG	9.9	9.9	7%	14	1	359	0	NO
Alpha-Chlordane	UG/KG	17		7%	14	1		0	
Beta-BHC	UG/KG	3.4	2.653	21%	14	3	1258	0	NO
Delta-BHC	UG/KG	1.2		14%	14	2		0	
Dieldrin	UG/KG	0		0%	0	0	108	0	
Endosulfan I	UG/KG	4.1		7%	14	1		0	
Endosulfan sulfate	UG/KG	4.3		7%	14	1		0	
Endrin	UG/KG	0		0%	0	0	1.85E+05	0	
Endrin aldehyde	UG/KG	6.3		14%	14	2		0	
Endrin ketone	UG/KG	0		0%	0	0		0	
Gamma-Chlordane	UG/KG	18		7%	14	1		0	

Table 6-4C
SEAD-59 Summary Results - Subsurface Soil versus EPA Region IX Industrial Soil Cleanup Objectives
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Heptachlor epoxide	UG/KG	5.7	3.053	14%	14	2	189	0	NO
Aroclor-1260	UG/KG	0		0%	0	0		0	
Metals									
Aluminum	MG/KG	12600	10406	100%	14	14	1.00E+05	0	NO
Antimony	MG/KG	0.47	0.378	21%	14	3	409	0	NO
Arsenic	MG/KG	6	4.782	100%	14	14	1.59	14	YES
Barium	MG/KG	101	67.52	100%	14	14	6.66E+04	0	NO
Beryllium	MG/KG	0.52	0.414	100%	14	14	1940.690344	0	NO
Cadmium	MG/KG	0.61	0.288	36%	14	5	451	0	NO
Calcium	MG/KG	123000		100%	14	14		0	
Chromium	MG/KG	18.9		100%	14	14		0	
Cobalt	MG/KG	14.2	10.59	100%	14	14	1921	0	NO
Copper	MG/KG	27	21.91	100%	14	14	4.09E+04	0	NO
Iron	MG/KG	28900	22383	100%	14	14	1.00E+05	0	NO
Lead	MG/KG	65.5	34.29	100%	14	14	800	0	NO
Magnesium	MG/KG	34400		100%	14	14		0	
Manganese	MG/KG	836	522.9	100%	14	14	1.95E+04	0	NO
Mercury	MG/KG	0.15	0.0612	38%	13	5	307	0	NO
Nickel	MG/KG	35.5	28.63	100%	14	14	2.04E+04	0	NO
Potassium	MG/KG	2520		100%	14	14		0	
Selenium	MG/KG	0.49	0.475	14%	14	2	5110	0	NO
Silver	MG/KG	0		0%	0	0	5110	0	
Sodium	MG/KG	1150		100%	14	14		0	
Thallium	MG/KG	0		0%	0	0	67	0	
Vanadium	MG/KG	22	17.65	100%	14	14	1022	0	NO
Zinc	MG/KG	133	88.59	100%	14	14	1.00E+05	0	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.

Table 6-5
SEAD-59 Stockpile Summary Results - Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	1.5		2%	54	1		0	
1,1-Dichloroethene	UG/KG	1	1	2%	54	1	330	0	NO
Acetone	UG/KG	69	19.54	24%	54	13	50	1	NO
Meta/Para Xylene	UG/KG	2.3		4%	49	2		0	
Methyl ethyl ketone	UG/KG	7	5.371	9%	54	5	120	0	NO
Methylene chloride	UG/KG	1.4	1.4	2%	54	1	50	0	NO
Ortho Xylene	UG/KG	1.9		10%	49	5		0	
Tetrachloroethene	UG/KG	6.7	6.555	6%	54	3	1300	0	NO
Total Xylenes	UG/KG	3	3	20%	5	1	260	0	NO
Trichloroethene	UG/KG	2.7	2.306	7%	54	4	470	0	NO
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	59		20%	5	1		0	
2-Methylnaphthalene	UG/KG	1200		50%	54	27		0	
Acenaphthene	UG/KG	2400	658.7	87%	54	47	20000	0	NO
Acenaphthylene	UG/KG	3500	2163	98%	54	53	100000	0	NO
Anthracene	UG/KG	6600	2860	100%	54	54	100000	0	NO
Benzo(a)anthracene	UG/KG	14000	6783	100%	54	54	1000	48	YES
Benzo(a)pyrene	UG/KG	16000	7869	100%	54	54	1000	48	YES
Benzo(b)fluoranthene	UG/KG	11000	5044	100%	54	54	1000	47	YES
Benzo(ghi)perylene	UG/KG	8000	3595	100%	54	54	100000	0	NO
Benzo(k)fluoranthene	UG/KG	13000	6628	100%	54	54	800	49	YES
Bis(2-Ethylhexyl)phthalate	UG/KG	130		6%	54	3		0	
Carbazole	UG/KG	1100		80%	5	4		0	
Chrysene	UG/KG	13000	6780	100%	54	54	1000	48	YES
Dibenz(a,h)anthracene	UG/KG	2900	1238	98%	54	53	330	45	YES
Dibenzofuran	UG/KG	1300	508.2	61%	54	33	7000	0	NO
Fluoranthene	UG/KG	29000	12836	100%	54	54	100000	0	NO
Fluorene	UG/KG	3100	946.8	87%	54	47	30000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	8000	3472	100%	54	54	500	50	YES
Naphthalene	UG/KG	1200	488.3	61%	54	33	12000	0	NO
Pentachlorophenol	UG/KG	660	660	2%	54	1	800	0	NO
Phenanthrene	UG/KG	17000	7968	100%	54	54	100000	0	NO
Pyrene	UG/KG	22000	9525	100%	54	54	100000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	450	60.55	61%	54	33	3.3	33	YES
4,4'-DDE	UG/KG	260	75.76	61%	54	33	3.3	32	YES
4,4'-DDT	UG/KG	520	101.2	69%	54	37	3.3	37	YES
Alpha-BHC	UG/KG	4.4	4.4	2%	54	1	20	0	NO
Alpha-Chlordane	UG/KG	27	16.92	11%	54	6	94	0	NO
Beta-BHC	UG/KG	13	13	2%	54	1	36	0	NO
Endrin ketone	UG/KG	15		2%	54	1		0	
Gamma-Chlordane	UG/KG	21		9%	54	5		0	
Metals									
Aluminum	MG/KG	13400		100%	54	54		0	
Antimony	MG/KG	43.9		20%	54	11		0	
Arsenic	MG/KG	7.3	4.95	100%	54	54	13	0	NO
Barium	MG/KG	135	94.8	100%	54	54	350	0	NO
Beryllium	MG/KG	0.69	0.38	100%	54	54	7.2	0	NO
Cadmium	MG/KG	1.2	0.671	98%	54	53	2.5	0	NO
Calcium	MG/KG	100000		100%	54	54		0	
Chromium	MG/KG	35	20.56	100%	54	54	30	2	NO
Cobalt	MG/KG	13.9		100%	54	54		0	
Copper	MG/KG	51.8	32.25	100%	54	54	50	1	NO
Iron	MG/KG	26500		100%	54	54		0	
Lead	MG/KG	1440	192.2	100%	54	54	63	13	YES
Magnesium	MG/KG	26600		100%	54	54		0	
Manganese	MG/KG	1220	554.8	100%	54	54	1600	0	NO
Mercury	MG/KG	0.52	0.156	100%	54	54	0.18	5	NO
Nickel	MG/KG	56.6	30.35	100%	54	54	30	20	YES
Potassium	MG/KG	1580		100%	54	54		0	
Selenium	MG/KG	0.72	0.719	4%	54	2	3.9	0	NO
Silver	MG/KG	4.7	1.064	17%	54	9	2	2	NO
Sodium	MG/KG	525		100%	54	54		0	
Thallium	MG/KG	0.99		50%	54	27		0	
Vanadium	MG/KG	35.4		100%	54	54		0	
Zinc	MG/KG	185	96.36	100%	54	54	109	7	NO

Notes:

- Parameters that were detected in stockpile soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.

Table 6-6
SEAD-59 Stockpile Summary Results - Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commerical Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	1.5		2%	54	1		0	
1,1-Dichloroethene	UG/KG	1	1	2%	54	1	500000	0	NO
Acetone	UG/KG	69	19.54	24%	54	13	500000	0	NO
Meta/Para Xylene	UG/KG	2.3		4%	49	2		0	
Methyl ethyl ketone	UG/KG	7	5.371	9%	54	5	500000	0	NO
Methylene chloride	UG/KG	1.4	1.4	2%	54	1	500000	0	NO
Ortho Xylene	UG/KG	1.9		10%	49	5		0	
Tetrachloroethene	UG/KG	6.7	6.555	6%	54	3	150000	0	NO
Total Xylenes	UG/KG	3	3	20%	5	1	500000	0	NO
Trichloroethene	UG/KG	2.7	2.306	7%	54	4	200000	0	NO
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	59		20%	5	1		0	
2-Methylnaphthalene	UG/KG	1200		50%	54	27		0	
Acenaphthene	UG/KG	2400	658.7	87%	54	47	500000	0	NO
Acenaphthylene	UG/KG	3500	2163	98%	54	53	500000	0	NO
Anthracene	UG/KG	6600	2860	100%	54	54	500000	0	NO
Benzo(a)anthracene	UG/KG	14000	6783	100%	54	54	5600	16	YES
Benzo(a)pyrene	UG/KG	16000	7869	100%	54	54	1000	48	YES
Benzo(b)fluoranthene	UG/KG	11000	5044	100%	54	54	5600	13	NO
Benzo(ghi)perylene	UG/KG	8000	3595	100%	54	54	500000	0	NO
Benzo(k)fluoranthene	UG/KG	13000	6628	100%	54	54	56000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	130		6%	54	3		0	
Carbazole	UG/KG	1100		80%	5	4		0	
Chrysene	UG/KG	13000	6780	100%	54	54	56000	0	NO
Dibenz(a,h)anthracene	UG/KG	2900	1238	98%	54	53	560	41	YES
Dibenzofuran	UG/KG	1300	508.2	61%	54	33	350000	0	NO
Fluoranthene	UG/KG	29000	12836	100%	54	54	500000	0	NO
Fluorene	UG/KG	3100	946.8	87%	54	47	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	8000	3472	100%	54	54	5600	6	NO
Naphthalene	UG/KG	1200	488.3	61%	54	33	500000	0	NO
Pentachlorophenol	UG/KG	660	660	2%	54	1	6700	0	NO
Phenanthrene	UG/KG	17000	7968	100%	54	54	500000	0	NO
Pyrene	UG/KG	22000	9525	100%	54	54	500000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	450	60.55	61%	54	33	92000	0	NO
4,4'-DDE	UG/KG	260	75.76	61%	54	33	62000	0	NO
4,4'-DDT	UG/KG	520	101.2	69%	54	37	47000	0	NO
Alpha-BHC	UG/KG	4.4	4.4	2%	54	1	3400	0	NO
Alpha-Chlordane	UG/KG	27	16.92	11%	54	6	24000	0	NO
Beta-BHC	UG/KG	13	13	2%	54	1	200	0	NO
Endrin ketone	UG/KG	15		2%	54	1		0	
Gamma-Chlordane	UG/KG	21		9%	54	5		0	
Metals									
Aluminum	MG/KG	13400		100%	54	54		0	
Antimony	MG/KG	43.9		20%	54	11		0	
Arsenic	MG/KG	7.3	4.95	100%	54	54	16	0	NO
Barium	MG/KG	135	94.8	100%	54	54	400	0	NO
Beryllium	MG/KG	0.69	0.38	100%	54	54	590	0	NO
Cadmium	MG/KG	1.2	0.671	98%	54	53	9.3	0	NO
Calcium	MG/KG	100000		100%	54	54		0	
Chromium	MG/KG	35	20.56	100%	54	54	1500	0	NO
Cobalt	MG/KG	13.9		100%	54	54		0	
Copper	MG/KG	51.8	32.25	100%	54	54	270	0	NO
Iron	MG/KG	26500		100%	54	54		0	
Lead	MG/KG	1440	192.2	100%	54	54	1000	1	NO
Magnesium	MG/KG	26600		100%	54	54		0	
Manganese	MG/KG	1220	554.8	100%	54	54	10000	0	NO
Mercury	MG/KG	0.52	0.156	100%	54	54	2.8	0	NO
Nickel	MG/KG	56.6	30.35	100%	54	54	310	0	NO
Potassium	MG/KG	1580		100%	54	54		0	
Selenium	MG/KG	0.72	0.719	4%	54	2	1500	0	NO
Silver	MG/KG	4.7	1.064	17%	54	9	1500	0	NO
Sodium	MG/KG	525		100%	54	54		0	
Thallium	MG/KG	0.99		50%	54	27		0	
Vanadium	MG/KG	35.4		100%	54	54		0	
Zinc	MG/KG	185	96.36	100%	54	54	10000	0	NO

Notes:

- Parameters that were detected in stockpile soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.

Table 6-7
SEAD-59 Stockpile Summary Results - Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	1.5		2%	54	1		0	
1,1-Dichloroethene	UG/KG	1	1	2%	54	1	1000000	0	NO
Acetone	UG/KG	69	19.54	24%	54	13	1000000	0	NO
Meta/Para Xylene	UG/KG	2.3		4%	49	2		0	
Methyl ethyl ketone	UG/KG	7	5.371	9%	54	5	1000000	0	NO
Methylene chloride	UG/KG	1.4	1.4	2%	54	1	1000000	0	NO
Ortho Xylene	UG/KG	1.9		10%	49	5		0	
Tetrachloroethene	UG/KG	6.7	6.555	6%	54	3	300000	0	NO
Total Xylenes	UG/KG	3	3	20%	5	1	1000000	0	NO
Trichloroethene	UG/KG	2.7	2.306	7%	54	4	400000	0	NO
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	59		20%	5	1		0	
2-Methylnaphthalene	UG/KG	1200		50%	54	27		0	
Acenaphthene	UG/KG	2400	658.7	87%	54	47	1000000	0	NO
Acenaphthylene	UG/KG	3500	2163	98%	54	53	1000000	0	NO
Anthracene	UG/KG	6600	2860	100%	54	54	1000000	0	NO
Benzo(a)anthracene	UG/KG	14000	6783	100%	54	54	11000	3	NO
Benzo(a)pyrene	UG/KG	16000	7869	100%	54	54	1100	48	YES
Benzo(b)fluoranthene	UG/KG	11000	5044	100%	54	54	11000	0	NO
Benzo(ghi)perylene	UG/KG	8000	3595	100%	54	54	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	13000	6628	100%	54	54	110000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	130		6%	54	3		0	
Carbazole	UG/KG	1100		80%	5	4		0	
Chrysene	UG/KG	13000	6780	100%	54	54	110000	0	NO
Dibenz(a,h)anthracene	UG/KG	2900	1238	98%	54	53	1100	21	YES
Dibenzofuran	UG/KG	1300	508.2	61%	54	33	1000000	0	NO
Fluoranthene	UG/KG	29000	12836	100%	54	54	1000000	0	NO
Fluorene	UG/KG	3100	946.8	87%	54	47	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	8000	3472	100%	54	54	11000	0	NO
Naphthalene	UG/KG	1200	488.3	61%	54	33	1000000	0	NO
Pentachlorophenol	UG/KG	660	660	2%	54	1	55000	0	NO
Phenanthrene	UG/KG	17000	7968	100%	54	54	1000000	0	NO
Pyrene	UG/KG	22000	9525	100%	54	54	1000000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	450	60.55	61%	54	33	180000	0	NO
4,4'-DDE	UG/KG	260	75.76	61%	54	33	120000	0	NO
4,4'-DDT	UG/KG	520	101.2	69%	54	37	94000	0	NO
Alpha-BHC	UG/KG	4.4	4.4	2%	54	1	6800	0	NO
Alpha-Chlordane	UG/KG	27	16.92	11%	54	6	47000	0	NO
Beta-BHC	UG/KG	13	13	2%	54	1	14000	0	NO
Endrin ketone	UG/KG	15		2%	54	1		0	
Gamma-Chlordane	UG/KG	21		9%	54	5		0	
Metals									
Aluminum	MG/KG	13400		100%	54	54		0	
Antimony	MG/KG	43.9		20%	54	11		0	
Arsenic	MG/KG	7.3	4.95	100%	54	54	16	0	NO
Barium	MG/KG	135	94.8	100%	54	54	400	0	NO
Beryllium	MG/KG	0.69	0.38	100%	54	54	2700	0	NO
Cadmium	MG/KG	1.2	0.671	98%	54	53	60	0	NO
Calcium	MG/KG	100000		100%	54	54		0	
Chromium	MG/KG	35	20.56	100%	54	54	6800	0	NO
Cobalt	MG/KG	13.9		100%	54	54		0	
Copper	MG/KG	51.8	32.25	100%	54	54	10000	0	NO
Iron	MG/KG	26500		100%	54	54		0	
Lead	MG/KG	1440	192.2	100%	54	54	3900	0	NO
Magnesium	MG/KG	26600		100%	54	54		0	
Manganese	MG/KG	1220	554.8	100%	54	54	10000	0	NO
Mercury	MG/KG	0.52	0.156	100%	54	54	5.7	0	NO
Nickel	MG/KG	56.6	30.35	100%	54	54	10000	0	NO
Potassium	MG/KG	1580		100%	54	54		0	
Selenium	MG/KG	0.72	0.719	4%	54	2	6800	0	NO
Silver	MG/KG	4.7	1.064	17%	54	9	6800	0	NO
Sodium	MG/KG	525		100%	54	54		0	
Thallium	MG/KG	0.99		50%	54	27		0	
Vanadium	MG/KG	35.4		100%	54	54		0	
Zinc	MG/KG	185	96.36	100%	54	54	10000	0	NO
Notes:									
1. Parameters that were detected in stockpile soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discreet sample and presented in this table.									
4. NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									

Table 6-8
SEAD-59 Stockpile Summary Results - Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	1.5	1.5	2%	54	1	5.60E+06	0	NO
1,1-Dichloroethene	UG/KG	1	1	2%	54	1	4.13E+05	0	NO
Acetone	UG/KG	69	19.54	24%	54	13	5.43E+07	0	NO
Meta/Para Xylene	UG/KG	2.3		4%	49	2		0	
Methyl ethyl ketone	UG/KG	7	5.371	9%	54	5	1.13E+08	0	NO
Methylene chloride	UG/KG	1.4	1.4	2%	54	1	2.05E+04	0	NO
Ortho Xylene	UG/KG	1.9		10%	49	5		0	
Tetrachloroethene	UG/KG	6.7	6.555	6%	54	3	1309	0	NO
Total Xylenes	UG/KG	3	3	20%	5	1	4.20E+05	0	NO
Trichloroethene	UG/KG	2.7	2.306	7%	54	4	115	0	NO
Semivolatile Organic Compounds									
1,1'-Biphenyl	UG/KG	59	59	20%	5	1	2.33E+07	0	NO
2-Methylnaphthalene	UG/KG	1200		50%	54	27		0	
Acenaphthene	UG/KG	2400	658.7	87%	54	47	2.92E+07	0	NO
Acenaphthylene	UG/KG	3500		98%	54	53		0	
Anthracene	UG/KG	6600	2860	100%	54	54	1.00E+08	0	NO
Benzo(a)anthracene	UG/KG	14000	6783	100%	54	54	2110	44	YES
Benzo(a)pyrene	UG/KG	16000	7869	100%	54	54	211	53	YES
Benzo(b)fluoranthene	UG/KG	11000	5044	100%	54	54	2110	43	YES
Benzo(ghi)perylene	UG/KG	8000		100%	54	54		0	
Benzo(k)fluoranthene	UG/KG	13000	6628	100%	54	54	21096	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	130	128.4	6%	54	3	1.23E+05	0	NO
Carbazole	UG/KG	1100	798.2	80%	5	4	8.62E+04	0	NO
Chrysene	UG/KG	13000	6780	100%	54	54	2.11E+05	0	NO
Dibenz(a,h)anthracene	UG/KG	2900	1238	98%	54	53	211	48	YES
Dibenzofuran	UG/KG	1300	508.2	61%	54	33	1.56E+06	0	NO
Fluoranthene	UG/KG	29000	12836	100%	54	54	2.20E+07	0	NO
Fluorene	UG/KG	3100	946.8	87%	54	47	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	8000	3472	100%	54	54	2110	35	YES
Naphthalene	UG/KG	1200	488.3	61%	54	33	1.88E+05	0	NO
Pentachlorophenol	UG/KG	660	660	2%	54	1	8998	0	NO
Phenanthrene	UG/KG	17000		100%	54	54		0	
Pyrene	UG/KG	22000	9525	100%	54	54	2.91E+07	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	450	60.55	61%	54	33	9951	0	NO
4,4'-DDE	UG/KG	260	75.76	61%	54	33	7025	0	NO
4,4'-DDT	UG/KG	520	101.2	69%	54	37	7025	0	NO
Alpha-BHC	UG/KG	4.4	4.4	2%	54	1	359	0	NO
Alpha-Chlordane	UG/KG	27		11%	54	6		0	
Beta-BHC	UG/KG	13	13	2%	54	1	1258	0	NO
Endrin ketone	UG/KG	15		2%	54	1		0	
Gamma-Chlordane	UG/KG	21		9%	54	5		0	
Metals									
Aluminum	MG/KG	13400	10966	100%	54	54	1.00E+05	0	NO
Antimony	MG/KG	43.9	5.609	20%	54	11	409	0	NO
Arsenic	MG/KG	7.3	4.95	100%	54	54	2	54	YES
Barium	MG/KG	135	94.8	100%	54	54	6.66E+04	0	NO
Beryllium	MG/KG	0.69	0.38	100%	54	54	1941	0	NO
Cadmium	MG/KG	1.2	0.671	98%	54	53	451	0	NO
Calcium	MG/KG	100000		100%	54	54		0	
Chromium	MG/KG	35		100%	54	54		0	
Cobalt	MG/KG	13.9	10.45	100%	54	54	1921	0	NO
Copper	MG/KG	51.8	32.25	100%	54	54	4.09E+04	0	NO
Iron	MG/KG	26500	21108	100%	54	54	1.00E+05	0	NO
Lead	MG/KG	1440	192.2	100%	54	54	800	1	NO
Magnesium	MG/KG	26600		100%	54	54		0	
Manganese	MG/KG	1220	554.8	100%	54	54	1.95E+04	0	NO
Mercury	MG/KG	0.52	0.156	100%	54	54	307	0	NO
Nickel	MG/KG	56.6	30.35	100%	54	54	2.04E+04	0	NO
Potassium	MG/KG	1580		100%	54	54		0	
Selenium	MG/KG	0.72	0.719	4%	54	2	5110	0	NO
Silver	MG/KG	4.7	1.064	17%	54	9	5110	0	NO
Sodium	MG/KG	525		100%	54	54		0	
Thallium	MG/KG	0.99	0.754	50%	54	27	67	0	NO
Vanadium	MG/KG	35.4	20.57	100%	54	54	1022	0	NO
Zinc	MG/KG	185	96.36	100%	54	54	1.00E+05	0	NO
Notes:									
1. Parameters that were detected in stockpile soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discreet sample and presented in this table.									
4. USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									

Table 6-9
Summary of SEAD-59 Groundwater Compared to Regulatory Guidance Values - Remedial Investigation
SEAD-59 and SEAD-71 - Record of Decision
Seneca Army Depot Activity

Parameter	Units	Maximum Level Detected	Frequency of Detection	Number of Times Detected	Number of Analyses ¹	NYSDEC GA Groundwater Standard	Number of Times Exceeded	Primary Drinking Water Standard	Number of Times Exceeded	Region IX Tap Water PRG	Number of Times Exceeded
Volatile Organic Compounds											
1,1,1-Trichloroethane	UG/L	0.45	10%	1	10	5	0	200	0	3.17E+03	0
Toluene	UG/L	0.27	10%	1	10	5	0	1000	0	7.23E+02	0
Semivolatile Organic Compounds											
Di-n-butylphthalate	UG/L	2.3	10%	1	10	50	0		0	3.65E+03	0
Pesticides and PCBs											
4,4'-DDE	UG/L	0.008	20%	2	10	0.2	0		0	1.98E-01	0
4,4'-DDT	UG/L	0.042	10%	1	10	0.2	0		0	1.98E-01	0
Metals											
Aluminum	UG/L	3250	91%	10	11		0		0	3.65E+04	0
Antimony	UG/L	8.6	36%	4	11	3	4	6	3	1.46E+01	0
Barium	UG/L	132	100%	11	11	1000	0	2000	0	2.55E+03	0
Cadmium	UG/L	0.9	45%	5	11	5	0	5	0	1.82E+01	0
Calcium	UG/L	169000	100%	11	11		0		0		0
Chromium	UG/L	3.54	45%	5	11	50	0	100	0		0
Cobalt	UG/L	2.92	36%	4	11		0		0	7.30E+02	0
Copper	UG/L	4.65	45%	5	11	200	0	1300	0	1.46E+03	0
Iron	UG/L	3680	100%	11	11	300	5		0	1.09E+04	0
Iron+Manganese ²	UG/L	3994	100%	11	11	500	3				
Lead	UG/L	4.4	36%	4	11	25	0	15	0		0
Magnesium	UG/L	28800	100%	11	11		0		0		0
Manganese	UG/L	314	100%	11	11	300	1		0	8.76E+02	0
Mercury	UG/L	0.0639	9%	1	11	0.7	0	2	0	1.09E+01	0
Nickel	UG/L	6.08	73%	8	11	100	0		0	7.30E+02	0
Potassium	UG/L	2400	100%	11	11		0		0		0
Selenium	UG/L	4.2	14%	1	7	10	0	50	0	1.82E+02	0
Sodium	UG/L	304000	100%	11	11	20000	11		0		0
Vanadium	UG/L	5.26	18%	2	11		0		0	3.65E+01	0
Zinc	UG/L	13.2	100%	11	11		0		0	1.09E+04	0

Notes:

- 1) Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- 2) Iron+Manganese is a combined parameter for NYS GA groundwater guidance value.

Table 6-10A
SEAD-71 Summary Results - Total Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	TOTAL SOIL								
	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	23	4.614	9%	76	7	680	0	NO
Acetone	UG/KG	74	9.3	12%	76	9	50	2	NO
Benzene	UG/KG	2	2.333	3%	76	2	60	0	NO
Carbon disulfide	UG/KG	5		4%	76	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Ethyl benzene	UG/KG	4	4	3%	76	2	1000	0	NO
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	11	2.46	16%	76	12	50	0	NO
Styrene	UG/KG	1		2%	55	1		0	
Tetrachloroethene	UG/KG	33	3.39	5%	76	4	1300	0	NO
Toluene	UG/KG	16	4.003	14%	76	11	700	0	NO
Total BTEX	MG/KG	11.6		100%	4	4		0	
Total Xylenes	UG/KG	96	8.332	12%	52	6	260	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		1%	77	1		0	
2-Methylnaphthalene	UG/KG	31000		22%	77	17		0	
4-Nitroaniline	UG/KG	75		2%	55	1		0	
Acenaphthene	UG/KG	42000	6892	44%	77	34	20000	3	NO
Acenaphthylene	UG/KG	1800	225.3	26%	77	20	100000	0	NO
Anthracene	UG/KG	100000	18369	60%	77	46	100000	0	NO
Benzo(a)anthracene	UG/KG	150000	27784	78%	77	60	1000	24	YES
Benzo(a)pyrene	UG/KG	120000	22558	78%	77	60	1000	24	YES
Benzo(b)fluoranthene	UG/KG	88000	18593	79%	77	61	1000	25	YES
Benzo(ghi)perylene	UG/KG	62000	11915	70%	77	54	100000	0	NO
Benzo(k)fluoranthene	UG/KG	130000	23021	64%	77	49	800	21	YES
Bis(2-Ethylhexyl)phthalate	UG/KG	140		12%	77	9		0	
Carbazole	UG/KG	77000		60%	55	33		0	
Chrysene	UG/KG	150000	27215	82%	77	63	1000	24	YES
Di-n-butylphthalate	UG/KG	140		5%	77	4		0	
Dibenz(a,h)anthracene	UG/KG	25000	5107	58%	77	45	330	17	YES
Dibenzofuran	UG/KG	38000	5357.00	38%	77	29	7000	5	NO
Fluoranthene	UG/KG	440000	70142.00	84%	77	65	100000	5	NO
Fluorene	UG/KG	62000	9115.00	42%	77	32	30000	3	NO
Indeno(1,2,3-cd)pyrene	UG/KG	65000	11777	70%	77	54	500	26	YES
Naphthalene	UG/KG	46000	5336	23%	77	18	12000	2	NO
Phenanthrene	UG/KG	290000	55051	78%	77	60	100000	3	NO
Phenol	UG/KG	4.5	4.5	1%	77	1	330	0	NO
Pyrene	UG/KG	280000	52817	82%	77	63	100000	4	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	240	17.17	23%	77	18	3.3	15	YES
4,4'-DDE	UG/KG	810	68.13	40%	77	31	3.3	30	YES
4,4'-DDT	UG/KG	1300	204.9	49%	77	38	3.3	37	YES
Alpha-BHC	UG/KG	18	2.677	10%	77	8	20	0	NO
Alpha-Chlordane	UG/KG	74	11.14	3%	77	2	94	0	NO
Beta-BHC	UG/KG	35	4.582	10%	77	8	36	0	NO
Delta-BHC	UG/KG	1.8		1%	77	1		0	
Dieldrin	UG/KG	3.5	3.386	4%	77	3	5	0	NO
Endosulfan I	UG/KG	200	12.63	14%	77	11	2400	0	NO
Endosulfan II	UG/KG	52	5.679	6%	77	5	2400	0	NO
Endosulfan sulfate	UG/KG	110	10.79	14%	77	11	2400	0	NO
Endrin	UG/KG	120	11.15	16%	77	12	14	7	NO
Endrin aldehyde	UG/KG	120		23%	77	18		0	
Endrin ketone	UG/KG	180		21%	77	16		0	
Gamma-BHC/Lindane	UG/KG	4		1%	77	1		0	
Gamma-Chlordane	UG/KG	48		6%	77	5		0	
Heptachlor	UG/KG	1.2		1%	77	1		0	
Heptachlor epoxide	UG/KG	180		17%	77	13		0	
Methoxychlor	UG/KG	520		16%	77	12		0	
Aroclor-1260	UG/KG	200	86.29	4%	77	3	100	2	NO

Table 6-10A
SEAD-71 Summary Results - Total Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	TOTAL SOIL								
	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18000		100%	77	77		0	
Antimony	MG/KG	19.3		47%	77	36		0	
Arsenic	MG/KG	14.6	6.19	100%	77	77	13	1	NO
Barium	MG/KG	179	83.37	100%	77	77	350	0	NO
Beryllium	MG/KG	0.88	0.452	99%	77	76	7.2	0	NO
Cadmium	MG/KG	12.1	0.98	65%	77	50	2.5	4	NO
Calcium	MG/KG	295000		100%	77	77		0	
Chromium	MG/KG	60.3	20.5	100%	77	77	30	5	NO
Cobalt	MG/KG	14.6		100%	77	77		0	
Copper	MG/KG	134	43.93	100%	77	77	50	10	NO
Iron	MG/KG	65100		100%	77	77		0	
Lead	MG/KG	3470	458.5	100%	77	77	63	25	YES
Magnesium	MG/KG	59300		100%	77	77		0	
Manganese	MG/KG	1330	575.7	100%	77	77	1600	0	NO
Mercury	MG/KG	2.7	0.19	77%	77	59	0.18	7	YES
Nickel	MG/KG	110	30.72	100%	77	77	30	16	YES
Potassium	MG/KG	2940		100%	77	77		0	
Selenium	MG/KG	1.8	0.666	19%	77	15	3.9	0	NO
Silver	MG/KG	2.2	0.637	35%	77	27	2	1	NO
Sodium	MG/KG	1040		95%	77	73		0	
Thallium	MG/KG	2.3		23%	77	18		0	
Vanadium	MG/KG	29.2		100%	77	77		0	
Zinc	MG/KG	3660	321.8	99%	77	76	109	17	YES
Notes:									
1. Parameters that were detected in either surface or subsurface soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discreet sample and presented in this table.									
4. NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									

Table 6-10B
SEAD-71 Summary Results - Surface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	3	3.334	3%	68	2	680	0	NO
Acetone	UG/KG	74	9.816	13%	68	9	50	2	NO
Benzene	UG/KG	2	2.334	3%	68	2	60	0	NO
Carbon disulfide	UG/KG	5		4%	68	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Ethyl benzene	UG/KG	4	4	3%	68	2	1000	0	NO
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	11	2.569	12%	68	8	50	0	NO
Styrene	UG/KG	1		2%	47	1		0	
Tetrachloroethene	UG/KG	33	33	1%	68	1	1300	0	NO
Toluene	UG/KG	16	4.033	16%	68	11	700	0	NO
Total BTEX	MG/KG	11.6		100%	1	1		0	
Total Xylenes	UG/KG	11	4.06	11%	44	5	260	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		1%	69	1		0	
2-Methylnaphthalene	UG/KG	19000		22%	69	15		0	
4-Nitroaniline	UG/KG	75		2%	47	1		0	
Acenaphthene	UG/KG	42000	7306	42%	69	29	20000	3	NO
Acenaphthylene	UG/KG	1800	244.9	28%	69	19	100000	0	NO
Anthracene	UG/KG	100000	20281	59%	69	41	100000	0	NO
Benzo(a)anthracene	UG/KG	150000	30206	77%	69	53	1000	22	YES
Benzo(a)pyrene	UG/KG	120000	24711	77%	69	53	1000	23	YES
Benzo(b)fluoranthene	UG/KG	88000	20167	78%	69	54	1000	24	YES
Benzo(ghi)perylene	UG/KG	62000	13082	70%	69	48	100000	0	NO
Benzo(k)fluoranthene	UG/KG	130000	25392	61%	69	42	800	20	YES
Bis(2-Ethylhexyl)phthalate	UG/KG	140		9%	69	6		0	
Carbazole	UG/KG	77000		57%	47	27		0	
Chrysene	UG/KG	150000	29582	81%	69	56	1000	23	YES
Di-n-butylphthalate	UG/KG	140		6%	69	4		0	
Dibenz(a,h)anthracene	UG/KG	25000	5460	58%	69	40	330	16	YES
Dibenzofuran	UG/KG	38000	5701	39%	69	27	7000	4	NO
Fluoranthene	UG/KG	440000	76389	84%	69	58	100000	5	NO
Fluorene	UG/KG	62000	10063	41%	69	28	30000	3	NO
Indeno(1,2,3-cd)pyrene	UG/KG	65000	12888	70%	69	48	500	24	YES
Naphthalene	UG/KG	46000	2241	22%	69	15	12000	1	NO
Phenanthrene	UG/KG	290000	60020	78%	69	54	100000	3	NO
Phenol	UG/KG	4.5	4.5	1%	69	1	330	0	NO
Pyrene	UG/KG	280000	57577	81%	69	56	100000	4	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	240	19.17	26%	69	18	3.3	15	YES
4,4'-DDE	UG/KG	810	79.73	42%	69	29	3.3	29	YES
4,4'-DDT	UG/KG	1300	287.9	51%	69	35	3.3	34	YES
Alpha-BHC	UG/KG	14	2.285	7%	69	5	20	0	NO
Alpha-Chlordane	UG/KG	2	2	1%	69	1	94	0	NO
Beta-BHC	UG/KG	35	4.902	9%	69	6	36	0	NO
Delta-BHC	UG/KG	0		0%	69	0		0	
Dieldrin	UG/KG	3.4	3.39	3%	69	2	5	0	NO
Endosulfan I	UG/KG	15	3.202	10%	69	7	2400	0	NO
Endosulfan II	UG/KG	52	5.442	4%	69	3	2400	0	NO
Endosulfan sulfate	UG/KG	110	11.78	16%	69	11	2400	0	NO
Endrin	UG/KG	120	11.66	14%	69	10	14	6	NO
Endrin aldehyde	UG/KG	120		23%	69	16		0	
Endrin ketone	UG/KG	180		22%	69	15		0	
Gamma-BHC/Lindane	UG/KG	0		0%	69	0		0	
Gamma-Chlordane	UG/KG	48		6%	69	4		0	
Heptachlor	UG/KG	0		0%	69	0		0	
Heptachlor epoxide	UG/KG	180		17%	69	12		0	
Methoxychlor	UG/KG	520		16%	69	11		0	
Aroclor-1260	UG/KG	200	87.03	4%	69	3	100	2	NO

Table 6-10B
SEAD-71 Summary Results - Surface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18000		100%	69	69		0	
Antimony	MG/KG	19.3		49%	69	34		0	
Arsenic	MG/KG	14.6	6.34	100%	69	69	13	1	NO
Barium	MG/KG	179	84.79	100%	69	69	350	0	NO
Beryllium	MG/KG	0.88	0.452	99%	69	68	7.2	0	NO
Cadmium	MG/KG	12.1	1.044	67%	69	46	2.5	4	NO
Calcium	MG/KG	295000		100%	69	69		0	
Chromium	MG/KG	60.3	20.92	100%	69	69	30	5	NO
Cobalt	MG/KG	14.6		100%	69	69		0	
Copper	MG/KG	134	46.43	100%	69	69	50	10	NO
Iron	MG/KG	65100		100%	69	69		0	
Lead	MG/KG	3470	506.5	100%	69	69	63	23	YES
Magnesium	MG/KG	59300		100%	69	69		0	
Manganese	MG/KG	1330	584.4	100%	69	69	1600	0	NO
Mercury	MG/KG	2.7	0.22	80%	69	55	0.18	7	YES
Nickel	MG/KG	110	31.34	100%	69	69	30	16	YES
Potassium	MG/KG	2180		100%	69	69		0	
Selenium	MG/KG	1.8	0.811	19%	69	13	3.9	0	NO
Silver	MG/KG	2.2	0.677	39%	69	27	2	1	NO
Sodium	MG/KG	1040		97%	69	67		0	
Thallium	MG/KG	2.3		26%	69	18		0	
Vanadium	MG/KG	29.2		100%	69	69		0	
Zinc	MG/KG	3660	515.8	99%	69	68	109	17	YES

Notes:

- Parameters that were detected in surface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-10C
SEAD-71 Summary Results - Subsurface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Unrestricted Use Value ³	Number of Times Exceeded	Max Exceed SCO Value
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	23	63%	8	5	680	0	NO
Acetone	UG/KG	0	0%	8	0	50	0	
Benzene	UG/KG	0	0%	8	0	60	0	
Carbon disulfide	UG/KG	0	0%	8	0		0	
Cyclohexane	UG/KG	0	0%	0	0		0	
Ethyl benzene	UG/KG	0	0%	8	0	1000	0	
Methyl cyclohexane	UG/KG	0	0%	0	0		0	
Methylene chloride	UG/KG	2	50%	8	4	50	0	NO
Styrene	UG/KG	0	0%	8	0		0	
Tetrachloroethene	UG/KG	3	38%	8	3	1300	0	NO
Toluene	UG/KG	0	0%	8	0	700	0	
Total BTEX	MG/KG	3.5	100%	3	3		0	YES
Total Xylenes	UG/KG	96	13%	8	1	260	0	NO
Trichlorofluoromethane	UG/KG	0	0%	0	0		0	
Semivolatile Organic Compounds								
2,4-Dinitrotoluene	UG/KG	0	0%	8	0		0	
2-Methylnaphthalene	UG/KG	31000	25%	8	2		0	YES
4-Nitroaniline	UG/KG	0	0%	8	0		0	
Acenaphthene	UG/KG	13000	63%	8	5	20000	0	NO
Acenaphthylene	UG/KG	340	13%	8	1	100000	0	NO
Anthracene	UG/KG	11000	63%	8	5	100000	0	NO
Benzo(a)anthracene	UG/KG	37000	88%	8	7	1000	2	YES
Benzo(a)pyrene	UG/KG	22000	88%	8	7	1000	1	YES
Benzo(b)fluoranthene	UG/KG	26000	88%	8	7	1000	1	YES
Benzo(ghi)perylene	UG/KG	10000	75%	8	6	100000	0	NO
Benzo(k)fluoranthene	UG/KG	15000	88%	8	7	800	1	YES
Bis(2-Ethylhexyl)phthalate	UG/KG	15	38%	8	3		0	YES
Carbazole	UG/KG	9500	75%	8	6		0	YES
Chrysene	UG/KG	36000	88%	8	7	1000	1	YES
Di-n-butylphthalate	UG/KG	0	0%	8	0		0	
Dibenz(a,h)anthracene	UG/KG	9800	63%	8	5	330	1	YES
Dibenzofuran	UG/KG	11000	25%	8	2	7000	1	YES
Fluoranthene	UG/KG	88000	88%	8	7	100000	0	NO
Fluorene	UG/KG	4100	50%	8	4	30000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	12000	75%	8	6	500	2	YES
Naphthalene	UG/KG	17000	38%	8	3	12000	1	YES
Phenanthrene	UG/KG	66000	75%	8	6	100000	0	NO
Phenol	UG/KG	0	0%	8	0	330	0	
Pyrene	UG/KG	63000	88%	8	7	100000	0	NO
Pesticides and PCBs								
4,4'-DDD	UG/KG	0	0%	8	0	3.3	0	
4,4'-DDE	UG/KG	4.2	25%	8	2	3.3	1	YES
4,4'-DDT	UG/KG	13	38%	8	3	3.3	3	YES
Alpha-BHC	UG/KG	18	38%	8	3	20	0	NO
Alpha-Chlordane	UG/KG	74	13%	8	1	94	0	NO
Beta-BHC	UG/KG	2.7	25%	8	2	36	0	NO
Delta-BHC	UG/KG	1.8	13%	8	1		0	YES
Dieldrin	UG/KG	3.5	13%	8	1	5	0	NO
Endosulfan I	UG/KG	200	50%	8	4	2400	0	NO
Endosulfan II	UG/KG	26	25%	8	2	2400	0	NO
Endosulfan sulfate	UG/KG	0	0%	8	0	2400	0	
Endrin	UG/KG	29	25%	8	2	14	1	YES
Endrin aldehyde	UG/KG	7.2	25%	8	2		0	YES
Endrin ketone	UG/KG	2.2	13%	8	1		0	YES
Gamma-BHC/Lindane	UG/KG	4	13%	8	1		0	YES
Gamma-Chlordane	UG/KG	1.1	13%	8	1		0	YES
Heptachlor	UG/KG	1.2	13%	8	1		0	YES
Heptachlor epoxide	UG/KG	1.5	13%	8	1		0	YES
Methoxychlor	UG/KG	19	13%	8	1		0	YES
Aroclor-1260	UG/KG	0	0%	8	0	100	0	

Table 6-10C
SEAD-71 Summary Results - Subsurface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Unrestricted Use Value ³	Number of Times Exceeded	Max Exceed SCO Value
Metals								
Aluminum	MG/KG	14500	100%	8	8		0	YES
Antimony	MG/KG	0.47	25%	8	2		0	YES
Arsenic	MG/KG	5.4	100%	8	8	13	0	NO
Barium	MG/KG	94.1	100%	8	8	350	0	NO
Beryllium	MG/KG	0.58	100%	8	8	7.2	0	NO
Cadmium	MG/KG	0.53	50%	8	4	2.5	0	NO
Calcium	MG/KG	134000	100%	8	8		0	YES
Chromium	MG/KG	21.2	100%	8	8	30	0	NO
Cobalt	MG/KG	11	100%	8	8		0	YES
Copper	MG/KG	26.7	100%	8	8	50	0	NO
Iron	MG/KG	23600	100%	8	8		0	YES
Lead	MG/KG	96.9	100%	8	8	63	2	YES
Magnesium	MG/KG	10100	100%	8	8		0	YES
Manganese	MG/KG	784	100%	8	8	1600	0	NO
Mercury	MG/KG	0.03	50%	8	4	0.18	0	NO
Nickel	MG/KG	28	100%	8	8	30	0	NO
Potassium	MG/KG	2940	100%	8	8		0	YES
Selenium	MG/KG	1.2	25%	8	2	3.9	0	NO
Silver	MG/KG	0	0%	8	0	2	0	
Sodium	MG/KG	140	75%	8	6		0	YES
Thallium	MG/KG	0	0%	8	0		0	
Vanadium	MG/KG	24.9	100%	8	8		0	YES
Zinc	MG/KG	96.2	100%	8	8	109	0	NO
Notes:								
1. Parameters that were detected in subsurface soil are presented in this table.								
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm								
3. NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.								

Table 6-11A
SEAD-71 Summary Results - Total Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	Maximum Concentration	TOTAL SOIL						
			95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	23	4.614	9%	76	7	500000	0	NO
Acetone	UG/KG	74	9.3	12%	76	9	500000	0	NO
Benzene	UG/KG	2	2.333	3%	76	2	44000	0	NO
Carbon disulfide	UG/KG	5		4%	76	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Ethyl benzene	UG/KG	4	4	3%	76	2	390000	0	NO
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	11	2.46	16%	76	12	500000	0	NO
Styrene	UG/KG	1		2%	55	1		0	
Tetrachloroethene	UG/KG	33	3.39	5%	76	4	150000	0	NO
Toluene	UG/KG	16	4.003	14%	76	11	500000	0	NO
Total BTEX	MG/KG	11.6		100%	4	4		0	
Total Xylenes	UG/KG	96	8.332	12%	52	6	500000	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		1%	77	1		0	
2-Methylnaphthalene	UG/KG	31000		22%	77	17		0	
4-Nitroaniline	UG/KG	75		2%	55	1		0	
Acenaphthene	UG/KG	42000	6892	44%	77	34	500000	0	NO
Acenaphthylene	UG/KG	1800	225.3	26%	77	20	500000	0	NO
Anthracene	UG/KG	100000	18369	60%	77	46	500000	0	NO
Benzo(a)anthracene	UG/KG	150000	27784	78%	77	60	5600	11	YES
Benzo(a)pyrene	UG/KG	120000	22558	78%	77	60	1000	24	YES
Benzo(b)fluoranthene	UG/KG	88000	18593	79%	77	61	5600	11	YES
Benzo(ghi)perylene	UG/KG	62000	11915	70%	77	54	500000	0	NO
Benzo(k)fluoranthene	UG/KG	130000	23021	64%	77	49	56000	4	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140		12%	77	9		0	
Carbazole	UG/KG	77000		60%	55	33		0	
Chrysene	UG/KG	150000	27215	82%	77	63	56000	5	NO
Di-n-butylphthalate	UG/KG	140		5%	77	4		0	
Dibenz(a,h)anthracene	UG/KG	25000	5107	58%	77	45	560	14	YES
Dibenzofuran	UG/KG	38000	5357	38%	77	29	350000	0	NO
Fluoranthene	UG/KG	440000	70142	84%	77	65	500000	0	NO
Fluorene	UG/KG	62000	9115	42%	77	32	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	65000	11777	70%	77	54	5600	8	YES
Naphthalene	UG/KG	46000	5336	23%	77	18	500000	0	NO
Phenanthrene	UG/KG	290000	55051	78%	77	60	500000	0	NO
Phenol	UG/KG	4.5	4.5	1%	77	1	500000	0	NO
Pyrene	UG/KG	280000	52817	82%	77	63	500000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	240	17.17	23%	77	18	92000	9	NO
4,4'-DDE	UG/KG	810	68.13	40%	77	31	62000	0	NO
4,4'-DDT	UG/KG	1300	204.9	49%	77	38	47000	0	NO
Alpha-BHC	UG/KG	18	2.677	10%	77	8	3400	0	NO
Alpha-Chlordane	UG/KG	74	11.14	3%	77	2	24000	0	NO
Beta-BHC	UG/KG	35	4.582	10%	77	8	3000	0	NO
Delta-BHC	UG/KG	1.8		1%	77	1	500000	0	
Dieldrin	UG/KG	3.5	3.386	4%	77	3	1400	0	NO
Endosulfan I	UG/KG	200	12.63	14%	77	11	200000	0	NO
Endosulfan II	UG/KG	52	5.679	6%	77	5	200000	0	NO
Endosulfan sulfate	UG/KG	110	10.79	14%	77	11	200000	0	NO
Endrin	UG/KG	120	11.15	16%	77	12	89000	0	NO
Endrin aldehyde	UG/KG	120		23%	77	18		0	
Endrin ketone	UG/KG	180		21%	77	16		0	
Gamma-BHC/Lindane	UG/KG	4		1%	77	1	9200	0	
Gamma-Chlordane	UG/KG	48		6%	77	5		0	
Heptachlor	UG/KG	1.2		1%	77	1	15000	0	
Heptachlor epoxide	UG/KG	180		17%	77	13		0	
Methoxychlor	UG/KG	520		16%	77	12		0	
Aroclor-1260	UG/KG	200	86.29	4%	77	3	1000	0	NO

Table 6-11A
SEAD-71 Summary Results - Total Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Parameter ¹	Units	TOTAL SOIL							
		Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18000		100%	77	77		0	
Antimony	MG/KG	19.3		47%	77	36		0	
Arsenic	MG/KG	14.6	6.19	100%	77	77	16	0	NO
Barium	MG/KG	179	83.37	100%	77	77	400	0	NO
Beryllium	MG/KG	0.88	0.452	99%	77	76	590	0	NO
Cadmium	MG/KG	12.1	0.98	65%	77	50	9.3	1	NO
Calcium	MG/KG	295000		100%	77	77		0	
Chromium	MG/KG	60.3	20.5	100%	77	77	1500	0	NO
Cobalt	MG/KG	14.6		100%	77	77		0	
Copper	MG/KG	134	43.93	100%	77	77	270	0	NO
Iron	MG/KG	65100		100%	77	77		0	
Lead	MG/KG	3470	458.5	100%	77	77	1000	2	NO
Magnesium	MG/KG	59300		100%	77	77		0	
Manganese	MG/KG	1330	575.7	100%	77	77	10000	0	NO
Mercury	MG/KG	2.7	0.19	77%	77	59	2.8	0	NO
Nickel	MG/KG	110	30.72	100%	77	77	310	0	NO
Potassium	MG/KG	2940		100%	77	77		0	
Selenium	MG/KG	1.8	0.666	19%	77	15	1500	0	NO
Silver	MG/KG	2.2	0.637	35%	77	27	1500	0	NO
Sodium	MG/KG	1040		95%	77	73		0	
Thallium	MG/KG	2.3		23%	77	18		0	
Vanadium	MG/KG	29.2		100%	77	77		0	
Zinc	MG/KG	3660	321.8	99%	77	76	10000	0	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.

Table 6-11B
SEAD-71 Summary Results - Surface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	3	3.334	3%	68	2	500000	0	NO
Acetone	UG/KG	74	9.816	13%	68	9	500000	0	NO
Benzene	UG/KG	2	2.334	3%	68	2	44000	0	NO
Carbon disulfide	UG/KG	5		4%	68	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Ethyl benzene	UG/KG	4	4	3%	68	2	390000	0	NO
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	11	2.569	12%	68	8	500000	0	NO
Styrene	UG/KG	1		2%	47	1		0	
Tetrachloroethene	UG/KG	33	33	1%	68	1	150000	0	NO
Toluene	UG/KG	16	4.033	16%	68	11	500000	0	NO
Total BTEX	MG/KG	11.6		100%	1	1		0	
Total Xylenes	UG/KG	11	4.06	11%	44	5	500000	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		1%	69	1		0	
2-Methylnaphthalene	UG/KG	19000		22%	69	15		0	
4-Nitroaniline	UG/KG	75		2%	47	1		0	
Acenaphthene	UG/KG	42000	7306	42%	69	29	500000	0	NO
Acenaphthylene	UG/KG	1800	244.9	28%	69	19	500000	0	NO
Anthracene	UG/KG	100000	20281	59%	69	41	500000	0	NO
Benzo(a)anthracene	UG/KG	150000	30206	77%	69	53	5600	10	YES
Benzo(a)pyrene	UG/KG	120000	24711	77%	69	53	1000	23	YES
Benzo(b)fluoranthene	UG/KG	88000	20167	78%	69	54	5600	10	YES
Benzo(ghi)perylene	UG/KG	62000	13082	70%	69	48	500000	0	NO
Benzo(k)fluoranthene	UG/KG	130000	25392	61%	69	42	56000	4	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140		9%	69	6		0	
Carbazole	UG/KG	77000		57%	47	27		0	
Chrysene	UG/KG	150000	29582	81%	69	56	56000	5	NO
Di-n-butylphthalate	UG/KG	140		6%	69	4		0	
Dibenz(a,h)anthracene	UG/KG	25000	5460	58%	69	40	560	13	YES
Dibenzofuran	UG/KG	38000	5701	39%	69	27	350000	0	NO
Fluoranthene	UG/KG	440000	76389	84%	69	58	500000	0	NO
Fluorene	UG/KG	62000	10063	41%	69	28	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	65000	12888	70%	69	48	5600	7	YES
Naphthalene	UG/KG	46000	2241	22%	69	15	500000	0	NO
Phenanthrene	UG/KG	290000	60020	78%	69	54	500000	0	NO
Phenol	UG/KG	4.5	4.5	1%	69	1	500000	0	NO
Pyrene	UG/KG	280000	57577	81%	69	56	500000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	240	19.17	26%	69	18	92000	0	NO
4,4'-DDE	UG/KG	810	79.73	42%	69	29	62000	0	NO
4,4'-DDT	UG/KG	1300	287.9	51%	69	35	47000	0	NO
Alpha-BHC	UG/KG	14	2.285	7%	69	5	3400	0	NO
Alpha-Chlordane	UG/KG	2	2	1%	69	1	24000	0	NO
Beta-BHC	UG/KG	35	4.902	9%	69	6	3000	0	NO
Delta-BHC	UG/KG	0		0%	69	0	500000	0	
Dieldrin	UG/KG	3.4	3.39	3%	69	2	1400	0	NO
Endosulfan I	UG/KG	15	3.202	10%	69	7	200000	0	NO
Endosulfan II	UG/KG	52	5.442	4%	69	3	200000	0	NO
Endosulfan sulfate	UG/KG	110	11.78	16%	69	11	200000	0	NO
Endrin	UG/KG	120	11.66	14%	69	10	89000	0	NO
Endrin aldehyde	UG/KG	120		23%	69	16		0	
Endrin ketone	UG/KG	180		22%	69	15		0	
Gamma-BHC/Lindane	UG/KG	0		0%	69	0	9200	0	
Gamma-Chlordane	UG/KG	48		6%	69	4		0	
Heptachlor	UG/KG	0		0%	69	0	15000	0	
Heptachlor epoxide	UG/KG	180		17%	69	12		0	
Methoxychlor	UG/KG	520		16%	69	11		0	
Aroclor-1260	UG/KG	200	87.03	4%	69	3	1000	0	NO

Table 6-11B
SEAD-71 Summary Results - Surface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18000		100%	69	69		0	
Antimony	MG/KG	19.3		49%	69	34		0	
Arsenic	MG/KG	14.6	6.34	100%	69	69	16	0	NO
Barium	MG/KG	179	84.79	100%	69	69	400	0	NO
Beryllium	MG/KG	0.88	0.452	99%	69	68	590	0	NO
Cadmium	MG/KG	12.1	1.044	67%	69	46	9.3	1	NO
Calcium	MG/KG	295000		100%	69	69		0	
Chromium	MG/KG	60.3	20.92	100%	69	69	1500	0	NO
Cobalt	MG/KG	14.6		100%	69	69		0	
Copper	MG/KG	134	46.43	100%	69	69	270	0	NO
Iron	MG/KG	65100		100%	69	69		0	
Lead	MG/KG	3470	506.5	100%	69	69	1000	2	NO
Magnesium	MG/KG	59300		100%	69	69		0	
Manganese	MG/KG	1330	584.4	100%	69	69	10000	0	NO
Mercury	MG/KG	2.7	0.22	80%	69	55	2.8	0	NO
Nickel	MG/KG	110	31.34	100%	69	69	310	0	NO
Potassium	MG/KG	2180		100%	69	69		0	
Selenium	MG/KG	1.8	0.811	19%	69	13	1500	0	NO
Silver	MG/KG	2.2	0.677	39%	69	27	1500	0	NO
Sodium	MG/KG	1040		97%	69	67		0	
Thallium	MG/KG	2.3		26%	69	18		0	
Vanadium	MG/KG	29.2		100%	69	69		0	
Zinc	MG/KG	3660	515.8	99%	69	68	10000	0	NO
Notes:									
1. Parameters that were detected in surface soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discreet sample and presented in this table.									
4. NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									
6. Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.									

Table 6-11C
SEAD-71 Summary Results - Subsurface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Commercial Use Value ³	Number of Times Exceeded	Max Exceed SCO Value
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	23	63%	8	5	500000	0	NO
Acetone	UG/KG	0	0%	8	0	500000	0	
Benzene	UG/KG	0	0%	8	0	44000	0	
Carbon disulfide	UG/KG	0	0%	8	0		0	
Cyclohexane	UG/KG	0	0%	0	0		0	
Ethyl benzene	UG/KG	0	0%	8	0	390000	0	
Methyl cyclohexane	UG/KG	0	0%	0	0		0	
Methylene chloride	UG/KG	2	50%	8	4	500000	0	NO
Styrene	UG/KG	0	0%	8	0		0	
Tetrachloroethene	UG/KG	3	38%	8	3	150000	0	NO
Toluene	UG/KG	0	0%	8	0	500000	0	
Total BTEX	MG/KG	3.5	100%	3	3		0	YES
Total Xylenes	UG/KG	96	13%	8	1	500000	0	NO
Trichlorofluoromethane	UG/KG	0	0%	0	0		0	
Semivolatile Organic Compounds								
2,4-Dinitrotoluene	UG/KG	0	0%	8	0		0	
2-Methylnaphthalene	UG/KG	31000	25%	8	2		0	YES
4-Nitroaniline	UG/KG	0	0%	8	0		0	
Acenaphthene	UG/KG	13000	63%	8	5	500000	0	NO
Acenaphthylene	UG/KG	340	13%	8	1	500000	0	NO
Anthracene	UG/KG	11000	63%	8	5	500000	0	NO
Benzo(a)anthracene	UG/KG	37000	88%	8	7	5600	1	YES
Benzo(a)pyrene	UG/KG	22000	88%	8	7	1000	1	YES
Benzo(b)fluoranthene	UG/KG	26000	88%	8	7	5600	1	YES
Benzo(ghi)perylene	UG/KG	10000	75%	8	6	500000	0	NO
Benzo(k)fluoranthene	UG/KG	15000	88%	8	7	56000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	15	38%	8	3		0	YES
Carbazole	UG/KG	9500	75%	8	6		0	YES
Chrysene	UG/KG	36000	88%	8	7	56000	0	NO
Di-n-butylphthalate	UG/KG	0	0%	8	0		0	
Dibenz(a,h)anthracene	UG/KG	9800	63%	8	5	560	1	YES
Dibenzofuran	UG/KG	11000	25%	8	2	350000	0	NO
Fluoranthene	UG/KG	88000	88%	8	7	500000	0	NO
Fluorene	UG/KG	4100	50%	8	4	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	12000	75%	8	6	5600	1	YES
Naphthalene	UG/KG	17000	38%	8	3	500000	0	NO
Phenanthrene	UG/KG	66000	75%	8	6	500000	0	NO
Phenol	UG/KG	0	0%	8	0	500000	0	
Pyrene	UG/KG	63000	88%	8	7	500000	0	NO
Pesticides and PCBs								
4,4'-DDD	UG/KG	0	0%	8	0	92000	9	
4,4'-DDE	UG/KG	4.2	25%	8	2	62000	0	NO
4,4'-DDT	UG/KG	13	38%	8	3	47000	0	NO
Alpha-BHC	UG/KG	18	38%	8	3	3400	0	NO
Alpha-Chlordane	UG/KG	74	13%	8	1	24000	0	NO
Beta-BHC	UG/KG	2.7	25%	8	2	3000	0	NO
Delta-BHC	UG/KG	1.8	13%	8	1	500000	0	NO
Dieldrin	UG/KG	3.5	13%	8	1	1400	0	NO
Endosulfan I	UG/KG	200	50%	8	4	200000	0	NO
Endosulfan II	UG/KG	26	25%	8	2	200000	0	NO
Endosulfan sulfate	UG/KG	0	0%	8	0	200000	0	
Endrin	UG/KG	29	25%	8	2	89000	0	NO
Endrin aldehyde	UG/KG	7.2	25%	8	2		0	YES
Endrin ketone	UG/KG	2.2	13%	8	1		0	YES
Gamma-BHC/Lindane	UG/KG	4	13%	8	1	9200	0	NO
Gamma-Chlordane	UG/KG	1.1	13%	8	1		0	YES
Heptachlor	UG/KG	1.2	13%	8	1	15000	0	NO
Heptachlor epoxide	UG/KG	1.5	13%	8	1		0	YES
Methoxychlor	UG/KG	19	13%	8	1		0	YES
Aroclor-1260	UG/KG	0	0%	8	0	1000	0	

Table 6-11C
SEAD-71 Summary Results - Subsurface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Commercial Use Value ³	Number of Times Exceeded	Max Exceed SCO Value
Metals								
Aluminum	MG/KG	14500	100%	8	8		0	YES
Antimony	MG/KG	0.47	25%	8	2		0	YES
Arsenic	MG/KG	5.4	100%	8	8	16	0	NO
Barium	MG/KG	94.1	100%	8	8	400	0	NO
Beryllium	MG/KG	0.58	100%	8	8	590	0	NO
Cadmium	MG/KG	0.53	50%	8	4	9.3	0	NO
Calcium	MG/KG	134000	100%	8	8		0	YES
Chromium	MG/KG	21.2	100%	8	8	1500	0	NO
Cobalt	MG/KG	11	100%	8	8		0	YES
Copper	MG/KG	26.7	100%	8	8	270	0	NO
Iron	MG/KG	23600	100%	8	8		0	YES
Lead	MG/KG	96.9	100%	8	8	1000	0	NO
Magnesium	MG/KG	10100	100%	8	8		0	YES
Manganese	MG/KG	784	100%	8	8	10000	0	NO
Mercury	MG/KG	0.03	50%	8	4	2.8	0	NO
Nickel	MG/KG	28	100%	8	8	310	0	NO
Potassium	MG/KG	2940	100%	8	8		0	YES
Selenium	MG/KG	1.2	25%	8	2	1500	0	NO
Silver	MG/KG	0	0%	8	0	1500	0	
Sodium	MG/KG	140	75%	8	6		0	YES
Thallium	MG/KG	0	0%	8	0		0	
Vanadium	MG/KG	24.9	100%	8	8		0	YES
Zinc	MG/KG	96.2	100%	8	8	10000	0	NO
Notes:								
1. Parameters that were detected in subsurface soil are presented in this table.								
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm								
3. NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.								

Table 6-12A
SEAD-71 Summary Results - Total Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	23	4.614	9%	76	7	1000000	0	NO
Acetone	UG/KG	74	9.3	12%	76	9	1000000	0	NO
Benzene	UG/KG	2	2.333	3%	76	2	89000	0	NO
Carbon disulfide	UG/KG	5		4%	76	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Ethyl benzene	UG/KG	4	4	3%	76	2	780000	0	NO
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	11	2.46	16%	76	12	1000000	0	NO
Styrene	UG/KG	1		2%	55	1		0	
Tetrachloroethene	UG/KG	33	3.39	5%	76	4	300000	0	NO
Toluene	UG/KG	16	4.003	14%	76	11	1000000	0	NO
Total BTEX	MG/KG	11.6		100%	4	4		0	
Total Xylenes	UG/KG	96	8.332	12%	52	6	1000000	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		1%	77	1		0	
2-Methylnaphthalene	UG/KG	31000		22%	77	17		0	
4-Nitroaniline	UG/KG	75		2%	55	1		0	
Acenaphthene	UG/KG	42000	6892	44%	77	34	1000000	0	NO
Acenaphthylene	UG/KG	1800	225.3	26%	77	20	1000000	0	NO
Anthracene	UG/KG	100000	18369	60%	77	46	1000000	0	NO
Benzo(a)anthracene	UG/KG	150000	27784	78%	77	60	11000	8	YES
Benzo(a)pyrene	UG/KG	120000	22558	78%	77	60	1100	22	YES
Benzo(b)fluoranthene	UG/KG	88000	18593	79%	77	61	11000	8	YES
Benzo(ghi)perylene	UG/KG	62000	11915	70%	77	54	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	130000	23021	64%	77	49	110000	1	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140		12%	77	9		0	
Carbazole	UG/KG	77000		60%	55	33		0	
Chrysene	UG/KG	150000	27215	82%	77	63	110000	1	NO
Di-n-butylphthalate	UG/KG	140		5%	77	4		0	
Dibenz(a,h)anthracene	UG/KG	25000	5107	58%	77	45	1100	12	YES
Dibenzofuran	UG/KG	38000	5357	38%	77	29	1000000	0	NO
Fluoranthene	UG/KG	440000	70142	84%	77	65	1000000	0	NO
Fluorene	UG/KG	62000	9115	42%	77	32	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	65000	11777	70%	77	54	11000	7	YES
Naphthalene	UG/KG	46000	5336	23%	77	18	1000000	0	NO
Phenanthrene	UG/KG	290000	55051	78%	77	60	1000000	0	NO
Phenol	UG/KG	4.5	4.5	1%	77	1	1000000	0	NO
Pyrene	UG/KG	280000	52817	82%	77	63	1000000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	240	17.17	23%	77	18	180000	0	NO
4,4'-DDE	UG/KG	810	68.13	40%	77	31	120000	0	NO
4,4'-DDT	UG/KG	1300	204.9	49%	77	38	94000	0	NO
Alpha-BHC	UG/KG	18	2.677	10%	77	8	6800	0	NO
Alpha-Chlordane	UG/KG	74	11.14	3%	77	2	47000	0	NO
Beta-BHC	UG/KG	35	4.582	10%	77	8	14000	0	NO
Delta-BHC	UG/KG	1.8		1%	77	1		0	
Dieldrin	UG/KG	3.5	3.386	4%	77	3	2800	0	NO
Endosulfan I	UG/KG	200	12.63	14%	77	11	920000	0	NO
Endosulfan II	UG/KG	52	5.679	6%	77	5	920000	0	NO
Endosulfan sulfate	UG/KG	110	10.79	14%	77	11	920000	0	NO
Endrin	UG/KG	120	11.15	16%	77	12	410000	0	NO
Endrin aldehyde	UG/KG	120		23%	77	18		0	
Endrin ketone	UG/KG	180		21%	77	16		0	
Gamma-BHC/Lindane	UG/KG	4		1%	77	1		0	
Gamma-Chlordane	UG/KG	48		6%	77	5		0	
Heptachlor	UG/KG	1.2		1%	77	1		0	
Heptachlor epoxide	UG/KG	180		17%	77	13		0	
Methoxychlor	UG/KG	520		16%	77	12		0	
Aroclor-1260	UG/KG	200	86.29	4%	77	3	25000	0	NO

Table 6-12A
SEAD-71 Summary Results - Total Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18000		100%	77	77		0	
Antimony	MG/KG	19.3		47%	77	36		0	
Arsenic	MG/KG	14.6	6.19	100%	77	77	16	0	NO
Barium	MG/KG	179	83.37	100%	77	77	10000	0	NO
Beryllium	MG/KG	0.88	0.452	99%	77	76	2700	0	NO
Cadmium	MG/KG	12.1	0.98	65%	77	50	60	0	NO
Calcium	MG/KG	295000		100%	77	77		0	
Chromium	MG/KG	60.3	20.5	100%	77	77	6800	0	NO
Cobalt	MG/KG	14.6		100%	77	77		0	
Copper	MG/KG	134	43.93	100%	77	77	10000	0	NO
Iron	MG/KG	65100		100%	77	77		0	
Lead	MG/KG	3470	458.5	100%	77	77	3900	0	NO
Magnesium	MG/KG	59300		100%	77	77		0	
Manganese	MG/KG	1330	575.7	100%	77	77	10000	0	NO
Mercury	MG/KG	2.7	0.19	77%	77	59	5.7	0	NO
Nickel	MG/KG	110	30.72	100%	77	77	10000	0	NO
Potassium	MG/KG	2940		100%	77	77		0	
Selenium	MG/KG	1.8	0.666	19%	77	15	6800	0	NO
Silver	MG/KG	2.2	0.637	35%	77	27	6800	0	NO
Sodium	MG/KG	1040		95%	77	73		0	
Thallium	MG/KG	2.3		23%	77	18		0	
Vanadium	MG/KG	29.2		100%	77	77		0	
Zinc	MG/KG	3660	321.8	99%	77	76	10000	0	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.

Table 6-12B
SEAD-71 Summary Results - Surface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	3	3.334	3%	68	2	1000000	0	NO
Acetone	UG/KG	74	9.816	13%	68	9	1000000	0	NO
Benzene	UG/KG	2	2.334	3%	68	2	89000	0	NO
Carbon disulfide	UG/KG	5		4%	68	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Ethyl benzene	UG/KG	4	4	3%	68	2	780000	0	NO
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	11	2.569	12%	68	8	1000000	0	NO
Styrene	UG/KG	1		2%	47	1		0	
Tetrachloroethene	UG/KG	33	33	1%	68	1	300000	0	NO
Toluene	UG/KG	16	4.033	16%	68	11	1000000	0	NO
Total BTEX	MG/KG	11.6		100%	1	1		0	
Total Xylenes	UG/KG	11	4.06	11%	44	5	1000000	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		1%	69	1		0	
2-Methylnaphthalene	UG/KG	19000		22%	69	15		0	
4-Nitroaniline	UG/KG	75		2%	47	1		0	
Acenaphthene	UG/KG	42000	7306	42%	69	29	1000000	0	NO
Acenaphthylene	UG/KG	1800	244.9	28%	69	19	1000000	0	NO
Anthracene	UG/KG	100000	20281	59%	69	41	1000000	0	NO
Benzo(a)anthracene	UG/KG	150000	30206	77%	69	53	11000	7	YES
Benzo(a)pyrene	UG/KG	120000	24711	77%	69	53	1100	21	YES
Benzo(b)fluoranthene	UG/KG	88000	20167	78%	69	54	11000	7	YES
Benzo(ghi)perylene	UG/KG	62000	13082	70%	69	48	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	130000	25392	61%	69	42	110000	1	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140		9%	69	6		0	
Carbazole	UG/KG	77000		57%	47	27		0	
Chrysene	UG/KG	150000	29582	81%	69	56	110000	1	NO
Di-n-butylphthalate	UG/KG	140		6%	69	4		0	
Dibenz(a,h)anthracene	UG/KG	25000	5460	58%	69	40	1100	11	YES
Dibenzofuran	UG/KG	38000	5701	39%	69	27	1000000	0	NO
Fluoranthene	UG/KG	440000	76389	84%	69	58	1000000	0	NO
Fluorene	UG/KG	62000	10063	41%	69	28	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	65000	12888	70%	69	48	11000	6	YES
Naphthalene	UG/KG	46000	2241	22%	69	15	1000000	0	NO
Phenanthrene	UG/KG	290000	60020	78%	69	54	1000000	0	NO
Phenol	UG/KG	4.5	4.5	1%	69	1	1000000	0	NO
Pyrene	UG/KG	280000	57577	81%	69	56	1000000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	240	19.17	26%	69	18	180000	0	NO
4,4'-DDE	UG/KG	810	79.73	42%	69	29	120000	0	NO
4,4'-DDT	UG/KG	1300	287.9	51%	69	35	94000	0	NO
Alpha-BHC	UG/KG	14	2.285	7%	69	5	6800	0	NO
Alpha-Chlordane	UG/KG	2	2	1%	69	1	47000	0	NO
Beta-BHC	UG/KG	35	4.902	9%	69	6	14000	0	NO
Delta-BHC	UG/KG	0		0%	69	0		0	
Dieldrin	UG/KG	3.4	3.39	3%	69	2	2800	0	NO
Endosulfan I	UG/KG	15	3.202	10%	69	7	920000	0	NO
Endosulfan II	UG/KG	52	5.442	4%	69	3	920000	0	NO
Endosulfan sulfate	UG/KG	110	11.78	16%	69	11	920000	0	NO
Endrin	UG/KG	120	11.66	14%	69	10	410000	0	NO
Endrin aldehyde	UG/KG	120		23%	69	16		0	
Endrin ketone	UG/KG	180		22%	69	15		0	
Gamma-BHC/Lindane	UG/KG	0		0%	69	0		0	
Gamma-Chlordane	UG/KG	48		6%	69	4		0	
Heptachlor	UG/KG	0		0%	69	0		0	
Heptachlor epoxide	UG/KG	180		17%	69	12		0	
Methoxychlor	UG/KG	520		16%	69	11		0	
Aroclor-1260	UG/KG	200	87.03	4%	69	3	25000	0	NO

Table 6-12B
SEAD-71 Summary Results - Surface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18000		100%	69	69		0	
Antimony	MG/KG	19.3		49%	69	34		0	
Arsenic	MG/KG	14.6	6.34	100%	69	69	16	0	NO
Barium	MG/KG	179	84.79	100%	69	69	10000	0	NO
Beryllium	MG/KG	0.88	0.452	99%	69	68	2700	0	NO
Cadmium	MG/KG	12.1	1.044	67%	69	46	60	0	NO
Calcium	MG/KG	295000		100%	69	69		0	
Chromium	MG/KG	60.3	20.92	100%	69	69	6800	0	NO
Cobalt	MG/KG	14.6		100%	69	69		0	
Copper	MG/KG	134	46.43	100%	69	69	10000	0	NO
Iron	MG/KG	65100		100%	69	69		0	
Lead	MG/KG	3470	506.5	100%	69	69	3900	0	NO
Magnesium	MG/KG	59300		100%	69	69		0	
Manganese	MG/KG	1330	584.4	100%	69	69	10000	0	NO
Mercury	MG/KG	2.7	0.22	80%	69	55	5.7	0	NO
Nickel	MG/KG	110	31.34	100%	69	69	10000	0	NO
Potassium	MG/KG	2180		100%	69	69		0	
Selenium	MG/KG	1.8	0.811	19%	69	13	6800	0	NO
Silver	MG/KG	2.2	0.677	39%	69	27	6800	0	NO
Sodium	MG/KG	1040		97%	69	67		0	
Thallium	MG/KG	2.3		26%	69	18		0	
Vanadium	MG/KG	29.2		100%	69	69		0	
Zinc	MG/KG	3660	515.8	99%	69	68	10000	0	NO

Notes:

- Parameters that were detected in surface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-12C
SEAD-71 Summary Results - Subsurface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Industrial Use Value ³	Number of Times Exceeded	Max Exceed SCO Value
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	23	63%	8	5	1000000	0	NO
Acetone	UG/KG	0	0%	8	0	1000000	0	
Benzene	UG/KG	0	0%	8	0	89000	0	
Carbon disulfide	UG/KG	0	0%	8	0		0	
Cyclohexane	UG/KG	0	0%	0	0		0	
Ethyl benzene	UG/KG	0	0%	8	0	780000	0	
Methyl cyclohexane	UG/KG	0	0%	0	0		0	
Methylene chloride	UG/KG	2	50%	8	4	1000000	0	NO
Styrene	UG/KG	0	0%	8	0		0	
Tetrachloroethene	UG/KG	3	38%	8	3	300000	0	NO
Toluene	UG/KG	0	0%	8	0	1000000	0	
Total BTEX	MG/KG	3.5	100%	3	3		0	YES
Total Xylenes	UG/KG	96	13%	8	1	1000000	0	NO
Trichlorofluoromethane	UG/KG	0	0%	0	0		0	
Semivolatile Organic Compounds								
2,4-Dinitrotoluene	UG/KG	0	0%	8	0		0	
2-Methylnaphthalene	UG/KG	31000	25%	8	2		0	YES
4-Nitroaniline	UG/KG	0	0%	8	0		0	
Acenaphthene	UG/KG	13000	63%	8	5	1000000	0	NO
Acenaphthylene	UG/KG	340	13%	8	1	1000000	0	NO
Anthracene	UG/KG	11000	63%	8	5	1000000	0	NO
Benzo(a)anthracene	UG/KG	37000	88%	8	7	11000	1	YES
Benzo(a)pyrene	UG/KG	22000	88%	8	7	1100	1	YES
Benzo(b)fluoranthene	UG/KG	26000	88%	8	7	11000	1	YES
Benzo(ghi)perylene	UG/KG	10000	75%	8	6	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	15000	88%	8	7	110000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	15	38%	8	3		0	YES
Carbazole	UG/KG	9500	75%	8	6		0	YES
Chrysene	UG/KG	36000	88%	8	7	110000	0	NO
Di-n-butylphthalate	UG/KG	0	0%	8	0		0	
Dibenz(a,h)anthracene	UG/KG	9800	63%	8	5	1100	1	YES
Dibenzofuran	UG/KG	11000	25%	8	2	1000000	0	NO
Fluoranthene	UG/KG	88000	88%	8	7	1000000	0	NO
Fluorene	UG/KG	4100	50%	8	4	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	12000	75%	8	6	11000	1	YES
Naphthalene	UG/KG	17000	38%	8	3	1000000	0	NO
Phenanthrene	UG/KG	66000	75%	8	6	1000000	0	NO
Phenol	UG/KG	0	0%	8	0	1000000	0	
Pyrene	UG/KG	63000	88%	8	7	1000000	0	NO
Pesticides and PCBs								
4,4'-DDD	UG/KG	0	0%	8	0	180000	0	
4,4'-DDE	UG/KG	4.2	25%	8	2	120000	0	NO
4,4'-DDT	UG/KG	13	38%	8	3	94000	0	NO
Alpha-BHC	UG/KG	18	38%	8	3	6800	0	NO
Alpha-Chlordane	UG/KG	74	13%	8	1	47000	0	NO
Beta-BHC	UG/KG	2.7	25%	8	2	14000	0	NO
Delta-BHC	UG/KG	1.8	13%	8	1		0	YES
Dieldrin	UG/KG	3.5	13%	8	1	2800	0	NO
Endosulfan I	UG/KG	200	50%	8	4	920000	0	NO
Endosulfan II	UG/KG	26	25%	8	2	920000	0	NO
Endosulfan sulfate	UG/KG	0	0%	8	0	920000	0	
Endrin	UG/KG	29	25%	8	2	410000	0	NO
Endrin aldehyde	UG/KG	7.2	25%	8	2		0	YES
Endrin ketone	UG/KG	2.2	13%	8	1		0	YES
Gamma-BHC/Lindane	UG/KG	4	13%	8	1		0	YES
Gamma-Chlordane	UG/KG	1.1	13%	8	1		0	YES
Heptachlor	UG/KG	1.2	13%	8	1		0	YES
Heptachlor epoxide	UG/KG	1.5	13%	8	1		0	YES
Methoxychlor	UG/KG	19	13%	8	1		0	YES
Aroclor-1260	UG/KG	0	0%	8	0	25000	0	

Table 6-12C
SEAD-71 Summary Results - Subsurface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Industrial Use Value ³	Number of Times Exceeded	Max Exceed SCO Value
Metals								
Aluminum	MG/KG	14500	100%	8	8		0	YES
Antimony	MG/KG	0.47	25%	8	2		0	YES
Arsenic	MG/KG	5.4	100%	8	8	16	0	NO
Barium	MG/KG	94.1	100%	8	8	10000	0	NO
Beryllium	MG/KG	0.58	100%	8	8	2700	0	NO
Cadmium	MG/KG	0.53	50%	8	4	60	0	NO
Calcium	MG/KG	134000	100%	8	8		0	YES
Chromium	MG/KG	21.2	100%	8	8	6800	0	NO
Cobalt	MG/KG	11	100%	8	8		0	YES
Copper	MG/KG	26.7	100%	8	8	10000	0	NO
Iron	MG/KG	23600	100%	8	8		0	YES
Lead	MG/KG	96.9	100%	8	8	3900	0	NO
Magnesium	MG/KG	10100	100%	8	8		0	YES
Manganese	MG/KG	784	100%	8	8	10000	0	NO
Mercury	MG/KG	0.03	50%	8	4	5.7	0	NO
Nickel	MG/KG	28	100%	8	8	10000	0	NO
Potassium	MG/KG	2940	100%	8	8		0	YES
Selenium	MG/KG	1.2	25%	8	2	6800	0	NO
Silver	MG/KG	0	0%	8	0	6800	0	
Sodium	MG/KG	140	75%	8	6		0	YES
Thallium	MG/KG	0	0%	8	0		0	
Vanadium	MG/KG	24.9	100%	8	8		0	YES
Zinc	MG/KG	96.2	100%	8	8	10000	0	NO
Notes:								
1. Parameters that were detected in subsurface soil are presented in this table.								
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm								
3. NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.								

Table 6-13A
SEAD-71 Summary Results - Total Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	23	4.614	9%	76	7	1.20E+06	0	NO
Acetone	UG/KG	74	9.3	12%	76	9	5.43E+07	0	NO
Benzene	UG/KG	2	2.333	3%	76	2	1.41E+03	0	NO
Carbon disulfide	UG/KG	5	2.497	4%	76	3	7.20E+05	0	NO
Cyclohexane	UG/KG	4	4.359	9%	23	2	1.40E+05	0	NO
Ethyl benzene	UG/KG	4	4	3%	76	2	3.95E+05	0	NO
Methyl cyclohexane	UG/KG	6	2.46	13%	23	3	8.72E+06	0	NO
Methylene chloride	UG/KG	11	2.46	16%	76	12	2.05E+04	0	NO
Styrene	UG/KG	1	1	2%	55	1	1.70E+06	0	NO
Tetrachloroethene	UG/KG	33	3.39	5%	76	4	1.31E+03	0	NO
Toluene	UG/KG	16	4.003	14%	76	11	5.20E+05	0	NO
Total BTEX	MG/KG	11.6		100%	4	4		0	
Total Xylenes	UG/KG	96	8.332	12%	52	6	4.20E+05	0	NO
Trichlorofluoromethane	UG/KG	1	1	4%	23	1	2.00E+06	0	NO
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880	880	1%	77	1	1.23E+06	0	NO
2-Methylnaphthalene	UG/KG	31000		22%	77	17		0	
4-Nitroaniline	UG/KG	75	75	2%	55	1	8.21E+04	0	NO
Acenaphthene	UG/KG	42000	6892	44%	77	34	2.92E+07	0	NO
Acenaphthylene	UG/KG	1800		26%	77	20		0	
Anthracene	UG/KG	100000	18369	60%	77	46	1.00E+08	0	NO
Benzo(a)anthracene	UG/KG	150000	27784	78%	77	60	2110	16	YES
Benzo(a)pyrene	UG/KG	120000	22558	78%	77	60	211	44	YES
Benzo(b)fluoranthene	UG/KG	88000	18593	79%	77	61	2110	16	YES
Benzo(ghi)perylene	UG/KG	62000		70%	77	54		0	
Benzo(k)fluoranthene	UG/KG	130000	23021	64%	77	49	2.11E+04	6	YES
Bis(2-Ethylhexyl)phthalate	UG/KG	140	62	12%	77	9	1.23E+05	0	NO
Carbazole	UG/KG	77000	22182	60%	55	33	8.62E+04	0	NO
Chrysene	UG/KG	150000	27215	82%	77	63	2.11E+05	0	NO
Di-n-butylphthalate	UG/KG	140	74	5%	77	4	6.16E+07	0	NO
Dibenz(a,h)anthracene	UG/KG	25000	5107	58%	77	45	211	22	YES
Dibenzofuran	UG/KG	38000	5357	38%	77	29	1.56E+06	0	NO
Fluoranthene	UG/KG	440000	70142	84%	77	65	2.20E+07	0	NO
Fluorene	UG/KG	62000	9115	42%	77	32	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	65000	11777	70%	77	54	2110	13	YES
Naphthalene	UG/KG	46000	5336	23%	77	18	1.88E+05	0	NO
Phenanthrene	UG/KG	290000		78%	77	60		0	
Phenol	UG/KG	4.5	4.5	1%	77	1	1.00E+08	0	NO
Pyrene	UG/KG	280000	52817	82%	77	63	2.91E+07	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	240	17.17	23%	77	18	9951	0	NO
4,4'-DDE	UG/KG	810	68.13	40%	77	31	7025	0	NO
4,4'-DDT	UG/KG	1300	204.9	49%	77	38	7025	0	NO
Alpha-BHC	UG/KG	18	2.677	10%	77	8	359	0	NO
Alpha-Chlordane	UG/KG	74		3%	77	2		0	
Beta-BHC	UG/KG	35	4.582	10%	77	8	1258	0	NO
Delta-BHC	UG/KG	1.8		1%	77	1		0	
Dieldrin	UG/KG	3.5	3.386	4%	77	3	108	0	NO
Endosulfan I	UG/KG	200		14%	77	11		0	
Endosulfan II	UG/KG	52		6%	77	5		0	
Endosulfan sulfate	UG/KG	110		14%	77	11		0	
Endrin	UG/KG	120	11.15	16%	77	12	1.85E+05	0	NO
Endrin aldehyde	UG/KG	120		23%	77	18		0	
Endrin ketone	UG/KG	180		21%	77	16		0	
Gamma-BHC/Lindane	UG/KG	4	4	1%	77	1	1741.270679	0	NO
Gamma-Chlordane	UG/KG	48		6%	77	5		0	
Heptachlor	UG/KG	1.2	1.2	1%	77	1	383	0	NO
Heptachlor epoxide	UG/KG	180	10.53	17%	77	13	189	0	NO
Methoxychlor	UG/KG	520	54.7	16%	77	12	3.08E+06	0	NO
Aroclor-1260	UG/KG	200		4%	77	3		0	

Table 6-13A
SEAD-71 Summary Results - Total Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18000	12431	100%	77	77	1.00E+05	0	NO
Antimony	MG/KG	19.3	2.331	47%	77	36	409	0	NO
Arsenic	MG/KG	14.6	6.19	100%	77	77	2	77	YES
Barium	MG/KG	179	83.37	100%	77	77	6.66E+04	0	NO
Beryllium	MG/KG	0.88	0.452	99%	77	76	1941	0	NO
Cadmium	MG/KG	12.1	0.98	65%	77	50	451	0	NO
Calcium	MG/KG	295000		100%	77	77		0	
Chromium	MG/KG	60.3		100%	77	77		0	
Cobalt	MG/KG	14.6	9.91	100%	77	77	1921	0	NO
Copper	MG/KG	134	43.93	100%	77	77	40877	0	NO
Iron	MG/KG	65100	24374	100%	77	77	1.00E+05	0	NO
Lead	MG/KG	3470	458.5	100%	77	77	800	2	NO
Magnesium	MG/KG	59300		100%	77	77		0	
Manganese	MG/KG	1330	575.7	100%	77	77	19458	0	NO
Mercury	MG/KG	2.7	0.19	77%	77	59	307	0	NO
Nickel	MG/KG	110	30.72	100%	77	77	2.04E+04	0	NO
Potassium	MG/KG	2940		100%	77	77		0	
Selenium	MG/KG	1.8	0.666	19%	77	15	5110	0	NO
Silver	MG/KG	2.2	0.637	35%	77	27	5110	0	NO
Sodium	MG/KG	1040		95%	77	73		0	
Thallium	MG/KG	2.3	0.698	23%	77	18	67	0	NO
Vanadium	MG/KG	29.2	18.82	100%	77	77	1022	0	NO
Zinc	MG/KG	3660	321.8	99%	77	76	1.00E+05	0	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-13B
SEAD-71 Summary Results - Surface Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	3	3.334	3%	68	2	1.20E+06	0	NO
Acetone	UG/KG	74	9.816	13%	68	9	5.43E+07	0	NO
Benzene	UG/KG	2	2.334	3%	68	2	1.41E+03	0	NO
Carbon disulfide	UG/KG	5	2.498	4%	68	3	7.20E+05	0	NO
Cyclohexane	UG/KG	4	4.359	9%	23	2	1.40E+05	0	NO
Ethyl benzene	UG/KG	4	4	3%	68	2	3.95E+05	0	NO
Methyl cyclohexane	UG/KG	6	4.354	13%	23	3	8.72E+06	0	NO
Methylene chloride	UG/KG	11	2.569	12%	68	8	2.05E+04	0	NO
Styrene	UG/KG	1	1	2%	47	1	1.70E+06	0	NO
Tetrachloroethene	UG/KG	33	33	1%	68	1	1.31E+03	0	NO
Toluene	UG/KG	16	4.033	16%	68	11	5.20E+05	0	NO
Total BTEX	MG/KG	11.6	11.6	100%	1	1	0	0	YES
Total Xylenes	UG/KG	11	4.06	11%	44	5	4.20E+05	0	NO
Trichlorofluoromethane	UG/KG	1	1	4%	23	1	2.00E+06	0	NO
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880	880	1%	69	1	1.23E+06	0	NO
2-Methylnaphthalene	UG/KG	19000		22%	69	15		0	
4-Nitroaniline	UG/KG	75	75	2%	47	1	8.21E+04	0	NO
Acenaphthene	UG/KG	42000	7306	42%	69	29	2.92E+07	0	NO
Acenaphthylene	UG/KG	1800		28%	69	19		0	
Anthracene	UG/KG	100000	20281	59%	69	41	1.00E+08	0	NO
Benzo(a)anthracene	UG/KG	150000	30206	77%	69	53	2110	15	YES
Benzo(a)pyrene	UG/KG	120000	24711	77%	69	53	211	41	YES
Benzo(b)fluoranthene	UG/KG	88000	20167	78%	69	54	2110	15	YES
Benzo(ghi)perylene	UG/KG	62000		70%	69	48		0	
Benzo(k)fluoranthene	UG/KG	130000	25392	61%	69	42	2.11E+04	6	YES
Bis(2-Ethylhexyl)phthalate	UG/KG	140	76	9%	69	6	1.23E+05	0	NO
Carbazole	UG/KG	77000	25636	57%	47	27	8.62E+04	0	NO
Chrysene	UG/KG	150000	29582	81%	69	56	2.11E+05	0	NO
Di-n-butylphthalate	UG/KG	140	81	6%	69	4	6.16E+07	0	NO
Dibenz(a,h)anthracene	UG/KG	25000	5460	58%	69	40	211	20	YES
Dibenzofuran	UG/KG	38000	5701	39%	69	27	1.56E+06	0	NO
Fluoranthene	UG/KG	440000	76389	84%	69	58	2.20E+07	0	NO
Fluorene	UG/KG	62000	10063	41%	69	28	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	65000	12888	70%	69	48	2110	12	YES
Naphthalene	UG/KG	46000	2241	22%	69	15	1.88E+05	0	NO
Phenanthrene	UG/KG	290000		78%	69	54		0	
Phenol	UG/KG	4.5	4.5	1%	69	1	1.00E+08	0	NO
Pyrene	UG/KG	280000	57577	81%	69	56	2.91E+07	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	240	19.17	26%	69	18	9951	0	NO
4,4'-DDE	UG/KG	810	79.73	42%	69	29	7025	0	NO
4,4'-DDT	UG/KG	1300	287.9	51%	69	35	7025	0	NO
Alpha-BHC	UG/KG	14	2.285	7%	69	5	359	0	NO
Alpha-Chlordane	UG/KG	2		1%	69	1		0	
Beta-BHC	UG/KG	35	4.902	9%	69	6	1258	0	NO
Delta-BHC	UG/KG	0		0%	69	0		0	
Dieldrin	UG/KG	3.4	3.39	3%	69	2	108	0	NO
Endosulfan I	UG/KG	15		10%	69	7		0	
Endosulfan II	UG/KG	52		4%	69	3		0	
Endosulfan sulfate	UG/KG	110		16%	69	11		0	
Endrin	UG/KG	120	11.66	14%	69	10	1.85E+05	0	NO
Endrin aldehyde	UG/KG	120		23%	69	16		0	
Endrin ketone	UG/KG	180		22%	69	15		0	
Gamma-BHC/Lindane	UG/KG	0		0%	69	0	1741.27068	0	
Gamma-Chlordane	UG/KG	48		6%	69	4		0	
Heptachlor	UG/KG	0		0%	69	0	383	0	
Heptachlor epoxide	UG/KG	180	11.62	17%	69	12	189	0	NO
Methoxychlor	UG/KG	520	59.53	16%	69	11	3.08E+06	0	NO
Aroclor-1260	UG/KG	200		4%	69	3		0	

Table 6-13B
SEAD-71 Summary Results - Surface Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	18000	12513	100%	69	69	1.00E+05	0	NO
Antimony	MG/KG	19.3	2.6	49%	69	34	409	0	NO
Arsenic	MG/KG	14.6	6.34	100%	69	69	2	69	YES
Barium	MG/KG	179	84.79	100%	69	69	6.66E+04	0	NO
Beryllium	MG/KG	0.88	0.452	99%	69	68	1941	0	NO
Cadmium	MG/KG	12.1	1.044	67%	69	46	451	0	NO
Calcium	MG/KG	295000		100%	69	69		0	
Chromium	MG/KG	60.3		100%	69	69		0	
Cobalt	MG/KG	14.6	9.969	100%	69	69	1921	0	NO
Copper	MG/KG	134	46.43	100%	69	69	40877	0	NO
Iron	MG/KG	65100	24756	100%	69	69	1.00E+05	0	NO
Lead	MG/KG	3470	506.5	100%	69	69	800	2	NO
Magnesium	MG/KG	59300		100%	69	69		0	
Manganese	MG/KG	1330	584.4	100%	69	69	19458	0	NO
Mercury	MG/KG	2.7	0.22	80%	69	55	307	0	NO
Nickel	MG/KG	110	31.34	100%	69	69	2.04E+04	0	NO
Potassium	MG/KG	2180		100%	69	69		0	
Selenium	MG/KG	1.8	0.811	19%	69	13	5110	0	NO
Silver	MG/KG	2.2	0.677	39%	69	27	5110	0	NO
Sodium	MG/KG	1040		97%	69	67		0	
Thallium	MG/KG	2.3	0.712	26%	69	18	67	0	NO
Vanadium	MG/KG	29.2	18.79	100%	69	69	1022	0	NO
Zinc	MG/KG	3660	515.8	99%	69	68	1.00E+05	0	NO

Notes:

- Parameters that were detected in surface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-13C
SEAD-71 Summary Results - Subsurface Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Region IX Industrial Value ³	Number of Times Exceeded	Max Exceed SCO Value
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	23	63%	8	5	1.20E+06	0	NO
Acetone	UG/KG	0	0%	8	0	5.43E+07	0	
Benzene	UG/KG	0	0%	8	0	1.41E+03	0	
Carbon disulfide	UG/KG	0	0%	8	0	7.20E+05	0	
Cyclohexane	UG/KG	0	0%	0	0	1.40E+05	0	
Ethyl benzene	UG/KG	0	0%	8	0	3.95E+05	0	
Methyl cyclohexane	UG/KG	0	0%	0	0	8.72E+04	0	
Methylene chloride	UG/KG	2	50%	8	4	2.05E+04	0	NO
Styrene	UG/KG	0	0%	8	0	1.70E+06	0	
Tetrachloroethene	UG/KG	3	38%	8	3	1.31E+03	0	NO
Toluene	UG/KG	0	0%	8	0	5.20E+05	0	
Total BTEX	MG/KG	3.5	100%	3	3		0	YES
Total Xylenes	UG/KG	96	13%	8	1	4.20E+05	0	NO
Trichlorofluoromethane	UG/KG	0	0%	0	0	2.00E+06	0	
Semivolatile Organic Compounds								
2,4-Dinitrotoluene	UG/KG	0	0%	8	0	1.23E+06	0	
2-Methylnaphthalene	UG/KG	31000	25%	8	2		0	YES
4-Nitroaniline	UG/KG	0	0%	8	0	8.21E+04	0	
Acenaphthene	UG/KG	13000	63%	8	5	2.92E+07	0	NO
Acenaphthylene	UG/KG	340	13%	8	1		0	YES
Anthracene	UG/KG	11000	63%	8	5	1.00E+08	0	NO
Benzo(a)anthracene	UG/KG	37000	88%	8	7	2110	1	YES
Benzo(a)pyrene	UG/KG	22000	88%	8	7	211	3	YES
Benzo(b)fluoranthene	UG/KG	26000	88%	8	7	2110	1	YES
Benzo(ghi)perylene	UG/KG	10000	75%	8	6		0	YES
Benzo(k)fluoranthene	UG/KG	15000	88%	8	7	2.11E+04	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	15	38%	8	3	1.23E+05	0	NO
Carbazole	UG/KG	9500	75%	8	6	8.62E+04	0	NO
Chrysene	UG/KG	36000	88%	8	7	2.11E+05	0	NO
Di-n-butylphthalate	UG/KG	0	0%	8	0	6.16E+07	0	
Dibenz(a,h)anthracene	UG/KG	9800	63%	8	5	211	2	YES
Dibenzofuran	UG/KG	11000	25%	8	2	1.56E+06	0	NO
Fluoranthene	UG/KG	88000	88%	8	7	2.20E+07	0	NO
Fluorene	UG/KG	4100	50%	8	4	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	12000	75%	8	6	2110	1	YES
Naphthalene	UG/KG	17000	38%	8	3	1.88E+05	0	NO
Phenanthrene	UG/KG	66000	75%	8	6		0	YES
Phenol	UG/KG	0	0%	8	0	1.00E+08	0	
Pyrene	UG/KG	63000	88%	8	7	2.91E+07	0	NO
Pesticides and PCBs								
4,4'-DDD	UG/KG	0	0%	8	0	9951	0	
4,4'-DDE	UG/KG	4.2	25%	8	2	7025	0	NO
4,4'-DDT	UG/KG	13	38%	8	3	7025	0	NO
Alpha-BHC	UG/KG	18	38%	8	3	359	0	NO
Alpha-Chlordane	UG/KG	74	13%	8	1		0	YES
Beta-BHC	UG/KG	2.7	25%	8	2	1258	0	NO
Delta-BHC	UG/KG	1.8	13%	8	1		0	YES
Dieldrin	UG/KG	3.5	13%	8	1	108	0	NO
Endosulfan I	UG/KG	200	50%	8	4		0	YES
Endosulfan II	UG/KG	26	25%	8	2		0	YES
Endosulfan sulfate	UG/KG	0	0%	8	0		0	
Endrin	UG/KG	29	25%	8	2	1.85E+05	0	NO
Endrin aldehyde	UG/KG	7.2	25%	8	2		0	YES
Endrin ketone	UG/KG	2.2	13%	8	1		0	YES
Gamma-BHC/Lindane	UG/KG	4	13%	8	1	1741.27068	0	NO
Gamma-Chlordane	UG/KG	1.1	13%	8	1		0	YES
Heptachlor	UG/KG	1.2	13%	8	1	383.043525	0	NO
Heptachlor epoxide	UG/KG	1.5	13%	8	1	189	0	NO
Methoxychlor	UG/KG	19	13%	8	1	3.08E+06	0	NO
Aroclor-1260	UG/KG	0	0%	8	0		0	

Table 6-13C
SEAD-71 Summary Results - Subsurface Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Region IX Industrial Value ³	Number of Times Exceeded	Max Exceed SCO Value
Metals								
Aluminum	MG/KG	14500	100%	8	8	1.00E+05	0	NO
Antimony	MG/KG	0.47	25%	8	2	409	0	NO
Arsenic	MG/KG	5.4	100%	8	8	2	8	YES
Barium	MG/KG	94.1	100%	8	8	6.66E+04	0	NO
Beryllium	MG/KG	0.58	100%	8	8	1941	0	NO
Cadmium	MG/KG	0.53	50%	8	4	451	0	NO
Calcium	MG/KG	134000	100%	8	8		0	YES
Chromium	MG/KG	21.2	100%	8	8		0	YES
Cobalt	MG/KG	11	100%	8	8	1921	0	NO
Copper	MG/KG	26.7	100%	8	8	40877	0	NO
Iron	MG/KG	23600	100%	8	8	1.00E+05	0	NO
Lead	MG/KG	96.9	100%	8	8	800	0	NO
Magnesium	MG/KG	10100	100%	8	8		0	YES
Manganese	MG/KG	784	100%	8	8	19458	0	NO
Mercury	MG/KG	0.03	50%	8	4	307	0	NO
Nickel	MG/KG	28	100%	8	8	2.04E+04	0	NO
Potassium	MG/KG	2940	100%	8	8		0	YES
Selenium	MG/KG	1.2	25%	8	2	5110	0	NO
Silver	MG/KG	0	0%	8	0	5110	0	
Sodium	MG/KG	140	75%	8	6		0	YES
Thallium	MG/KG	0	0%	8	0	67	0	
Vanadium	MG/KG	24.9	100%	8	8	1022	0	NO
Zinc	MG/KG	96.2	100%	8	8	1.00E+05	0	NO
Notes:								
1. Parameters that were detected in subsurface soil are presented in this table.								
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm								
3. USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004								

Table 6-14A
SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	4	4.673	4%	57	2	680	0	NO
Acetone	UG/KG	74	11	16%	57	9	50	2	NO
Benzene	UG/KG	2	2.336	4%	57	2	60	0	NO
Carbon disulfide	UG/KG	5		5%	57	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	2	2.045	7%	57	4	50	0	NO
Toluene	UG/KG	4	3.302	7%	57	4	700	0	NO
Total BTEX	MG/KG	11.6		100%	4	4		0	
Total Xylenes	UG/KG	96	25.67	12%	33	4	260	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		2%	58	1		0	
2-Methylnaphthalene	UG/KG	31000		19%	58	11		0	
4-Nitroaniline	UG/KG	75		3%	36	1		0	
Acenaphthene	UG/KG	13000	1372	33%	58	19	20000	0	NO
Acenaphthylene	UG/KG	1800	249.6	34%	58	20	100000	0	NO
Anthracene	UG/KG	5000	857.2	53%	58	31	100000	0	NO
Benzo(a)anthracene	UG/KG	10000	2719	72%	58	42	1000	11	YES
Benzo(a)pyrene	UG/KG	9000	2516	72%	58	42	1000	12	YES
Benzo(b)fluoranthene	UG/KG	7400	1837	74%	58	43	1000	13	YES
Benzo(ghi)perylene	UG/KG	5800	1319	62%	58	36	100000	0	NO
Benzo(k)fluoranthene	UG/KG	8000	2196	55%	58	32	800	10	YES
Bis(2-Ethylhexyl)phthalate	UG/KG	140		16%	58	9		0	
Carbazole	UG/KG	540		50%	36	18		0	
Chrysene	UG/KG	10000	2360	78%	58	45	1000	12	YES
Di-n-butylphthalate	UG/KG	70		5%	58	3		0	
Dibenz(a,h)anthracene	UG/KG	2000	335.5	48%	58	28	330	5	YES
Dibenzofuran	UG/KG	11000	1151	29%	58	17	7000	1	NO
Fluoranthene	UG/KG	27000	6482	79%	58	46	100000	0	NO
Fluorene	UG/KG	4100	601.6	31%	58	18	30000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	5400	1265	62%	58	36	500	13	YES
Naphthalene	UG/KG	17000	903.4	19%	58	11	12000	1	NO
Phenanthrene	UG/KG	25000	4680	71%	58	41	100000	0	NO
Phenol	UG/KG	4.5	4.5	2%	58	1	330	0	NO
Pyrene	UG/KG	20000	5154	76%	58	44	100000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	17	4.645	16%	58	9	3.3	7	YES
4,4'-DDE	UG/KG	190	28.61	34%	58	20	3.3	20	YES
4,4'-DDT	UG/KG	120	26.12	45%	58	26	3.3	26	YES
Alpha-BHC	UG/KG	18	2.892	9%	58	5	20	0	NO
Beta-BHC	UG/KG	2.7	2.071	3%	58	2	36	0	NO
Delta-BHC	UG/KG	1.8	1.8	2%	58	1	40	0	NO
Dieldrin	UG/KG	3.4	3.391	3%	58	2	5	0	NO
Endosulfan sulfate	UG/KG	4.6	3.019	7%	58	4	2400	0	NO
Endrin	UG/KG	8.1	3.178	7%	58	4	14	0	NO
Endrin aldehyde	UG/KG	9.1		16%	58	9		0	
Endrin ketone	UG/KG	17		12%	58	7		0	
Gamma-BHC/Lindane	UG/KG	4	4	2%	58	1	100	0	NO
Gamma-Chlordane	UG/KG	1.2		3%	58	2		0	
Heptachlor epoxide	UG/KG	6.4		9%	58	5		0	
Methoxychlor	UG/KG	62		5%	58	3		0	
Aroclor-1260	UG/KG	200	87.16	5%	58	3	100	2	NO

Table 6-14A
SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	15900		100%	58	58		0	
Antimony	MG/KG	11.5		47%	58	27		0	
Arsenic	MG/KG	14.6	6.168	100%	58	58	13	1	NO
Barium	MG/KG	136	83.76	100%	58	58	350	0	NO
Beryllium	MG/KG	0.85	0.479	100%	58	58	7.2	0	NO
Cadmium	MG/KG	0.71	0.342	62%	58	36	2.5	0	NO
Calcium	MG/KG	295000		100%	58	58		0	
Chromium	MG/KG	37.1	19.17	100%	58	58	30	1	NO
Cobalt	MG/KG	13.9		100%	58	58		0	
Copper	MG/KG	102	34.58	100%	58	58	50	7	NO
Iron	MG/KG	38000		100%	58	58		0	
Lead	MG/KG	1010	281	100%	58	58	63	15	YES
Magnesium	MG/KG	59300		100%	58	58		0	
Manganese	MG/KG	1330	615.3	100%	58	58	1600	0	NO
Mercury	MG/KG	1	0.185	83%	58	48	0.18	5	YES
Nickel	MG/KG	110	30.55	100%	58	58	30	10	YES
Potassium	MG/KG	2940		100%	58	58		0	
Selenium	MG/KG	1.8	1.245	12%	58	7	3.9	0	NO
Silver	MG/KG	1.8	0.68	38%	58	22	2	0	NO
Sodium	MG/KG	636		95%	58	55		0	
Thallium	MG/KG	2.3		31%	58	18		0	
Vanadium	MG/KG	24.9		100%	58	58		0	
Zinc	MG/KG	1740	249.3	98%	58	57	109	10	YES
Notes:									
1. Parameters that were detected in either surface or subsurface soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discrete sample and presented in this table.									
4. NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									
6. Outlined and shaded cells represent a 95th UCL value that exceeds the maximum detected concentration.									

Table 6-14B
SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	2	2	2%	53	1	680	0	NO
Acetone	UG/KG	74	11.38	17%	53	9	50	2	NO
Benzene	UG/KG	2	2.337	4%	53	2	60	0	NO
Carbon disulfide	UG/KG	5		6%	53	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	2	2,046	8%	53	4	50	0	NO
Toluene	UG/KG	4	3,304	8%	53	4	700	0	NO
Total BTEX	MG/KG	11.6		100%	1	1		0	
Total Xylenes	UG/KG	3	3,234	10%	29	3	260	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		2%	54	1		0	
2-Methylnaphthalene	UG/KG	770		19%	54	10		0	
4-Nitroaniline	UG/KG	75		3%	32	1		0	
Acenaphthene	UG/KG	1500	366.3	33%	54	18	20000	0	NO
Acenaphthylene	UG/KG	1800	247.6	35%	54	19	100000	0	NO
Anthracene	UG/KG	5000	909.4	56%	54	30	100000	0	NO
Benzo(a)anthracene	UG/KG	10000	2907	72%	54	39	1000	11	YES
Benzo(a)pyrene	UG/KG	9000	2175	72%	54	39	1000	12	YES
Benzo(b)fluoranthene	UG/KG	7400	1964	74%	54	40	1000	13	YES
Benzo(ghi)perylene	UG/KG	5800	1414	63%	54	34	100000	0	NO
Benzo(k)fluoranthene	UG/KG	8000	1909	54%	54	29	800	10	YES
Bis(2-Ethylhexyl)phthalate	UG/KG	140		11%	54	6		0	
Carbazole	UG/KG	540		50%	32	16		0	
Chrysene	UG/KG	10000	2521	78%	54	42	1000	12	YES
Di-n-butylphthalate	UG/KG	70		6%	54	3		0	
Dibenz(a,h)anthracene	UG/KG	2000	372	50%	54	27	330	5	YES
Dibenzofuran	UG/KG	1400	185.7	30%	54	16	7000	0	NO
Fluoranthene	UG/KG	27000	6911	80%	54	43	100000	0	NO
Fluorene	UG/KG	2500	406.2	31%	54	17	30000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	5400	1357	63%	54	34	500	13	YES
Naphthalene	UG/KG	1100	188.4	19%	54	10	12000	0	NO
Phenanthrene	UG/KG	25000	4937	72%	54	39	100000	0	NO
Phenol	UG/KG	4.5	4.5	2%	54	1	330	0	NO
Pyrene	UG/KG	20000	5490	76%	54	41	100000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	17	4,859	17%	54	9	3.3	7	YES
4,4'-DDE	UG/KG	190	30.34	37%	54	20	3.3	20	YES
4,4'-DDT	UG/KG	120	28.32	46%	54	25	3.3	25	YES
Alpha-BHC	UG/KG	2.2	1.938	4%	54	2	20	0	NO
Beta-BHC	UG/KG	0		0%	54	0	36	0	
Delta-BHC	UG/KG	0		0%	54	0	40	0	
Dieldrin	UG/KG	3.4	3,391	4%	54	2	5	0	NO
Endosulfan sulfate	UG/KG	4.6	3,064	7%	54	4	2400	0	NO
Endrin	UG/KG	8.1	3,203	6%	54	3	14	0	NO
Endrin aldehyde	UG/KG	9.1		13%	54	7		0	
Endrin ketone	UG/KG	17		11%	54	6		0	
Gamma-BHC/Lindane	UG/KG	0		0%	54	0	100	0	
Gamma-Chlordane	UG/KG	1.2		2%	54	1		0	
Heptachlor epoxide	UG/KG	6.4		7%	54	4		0	
Methoxychlor	UG/KG	62		4%	54	2		0	
Aroclor-1260	UG/KG	200	87.69	6%	54	3	100	2	NO

Table 6-14B
SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Unrestricted Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	15900		100%	54	54		0	
Antimony	MG/KG	11.5		50%	54	27		0	
Arsenic	MG/KG	14.6	6.294	100%	54	54	13	1	NO
Barium	MG/KG	136	84.71	100%	54	54	350	0	NO
Beryllium	MG/KG	0.85	0.487	100%	54	54	7.2	0	NO
Cadmium	MG/KG	0.71	0.351	67%	54	36	2.5	0	NO
Calcium	MG/KG	295000		100%	54	54		0	
Chromium	MG/KG	37.1	19.34	100%	54	54	30	1	NO
Cobalt	MG/KG	13.9		100%	54	54		0	
Copper	MG/KG	102	35.73	100%	54	54	50	7	NO
Iron	MG/KG	38000		100%	54	54		0	
Lead	MG/KG	1010	299.6	100%	54	54	63	15	YES
Magnesium	MG/KG	59300		100%	54	54		0	
Manganese	MG/KG	1330	619.9	100%	54	54	1600	0	NO
Mercury	MG/KG	1	0.195	89%	54	48	0.18	5	YES
Nickel	MG/KG	110	30.92	100%	54	54	30	10	YES
Potassium	MG/KG	2180		100%	54	54		0	
Selenium	MG/KG	1.8	1.332	11%	54	6	3.9	0	NO
Silver	MG/KG	1.8	0.716	41%	54	22	2	0	NO
Sodium	MG/KG	636		98%	54	53		0	
Thallium	MG/KG	2.3		33%	54	18		0	
Vanadium	MG/KG	24		100%	54	54		0	
Zinc	MG/KG	1740	262.5	98%	54	53	109	10	YES

Notes:

- Parameters that were detected in surface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discrete sample and presented in this table.
- NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-14C

**SEAD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Unrestricted Use Value ²	Number of Times Exceeded	Max Exceed SCO Value
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	4	25%	4	1	680	0	NO
Acetone	UG/KG	0	0%	4	0	50	0	
Benzene	UG/KG	0	0%	4	0	60	0	
Carbon disulfide	UG/KG	0	0%	4	0		0	
Cyclohexane	UG/KG	0	0%	0	0		0	
Methyl cyclohexane	UG/KG	0	0%	0	0		0	
Methylene chloride	UG/KG	0	0%	4	0	50	0	
Toluene	UG/KG	0	0%	4	0	700	0	
Total BTEX	MG/KG	3.5	100%	3	3		0	YES
Total Xylenes	UG/KG	96	25%	4	1	260	0	NO
Trichlorofluoromethane	UG/KG	0	0%	0	0		0	
Semivolatile Organic Compounds								
2,4-Dinitrotoluene	UG/KG	0	0%	4	0		0	
2-Methylnaphthalene	UG/KG	31000	25%	4	1		0	YES
4-Nitroaniline	UG/KG	0	0%	4	0		0	
Acenaphthene	UG/KG	13000	25%	4	1	20000	0	NO
Acenaphthylene	UG/KG	340	25%	4	1	100000	0	NO
Anthracene	UG/KG	590	25%	4	1	100000	0	NO
Benzo(a)anthracene	UG/KG	240	75%	4	3	1000	0	NO
Benzo(a)pyrene	UG/KG	160	75%	4	3	1000	0	NO
Benzo(b)fluoranthene	UG/KG	130	75%	4	3	1000	0	NO
Benzo(ghi)perylene	UG/KG	76	50%	4	2	100000	0	NO
Benzo(k)fluoranthene	UG/KG	98	75%	4	3	800	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	15	75%	4	3		0	YES
Carbazole	UG/KG	380	50%	4	2		0	YES
Chrysene	UG/KG	290	75%	4	3	1000	0	NO
Di-n-butylphthalate	UG/KG	0	0%	4	0		0	
Dibenz(a,h)anthracene	UG/KG	4.4	25%	4	1	330	0	NO
Dibenzofuran	UG/KG	11000	25%	4	1	7000	1	YES
Fluoranthene	UG/KG	1900	75%	4	3	100000	0	NO
Fluorene	UG/KG	4100	25%	4	1	30000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	56	50%	4	2	500	0	NO
Naphthalene	UG/KG	17000	25%	4	1	12000	1	YES
Phenanthrene	UG/KG	3800	50%	4	2	100000	0	NO
Phenol	UG/KG	0	0%	4	0	330	0	
Pyrene	UG/KG	1700	75%	4	3	100000	0	NO
Pesticides and PCBs								
4,4'-DDD	UG/KG	0	0%	4	0	3.3	0	
4,4'-DDE	UG/KG	0	0%	4	0	3.3	0	
4,4'-DDT	UG/KG	5.1	25%	4	1	3.3	1	YES
Alpha-BHC	UG/KG	18	75%	4	3	20	0	NO
Beta-BHC	UG/KG	2.7	50%	4	2	36	0	NO
Delta-BHC	UG/KG	1.8	25%	4	1	40	0	NO
Dieldrin	UG/KG	0	0%	4	0	5	0	
Endosulfan sulfate	UG/KG	0	0%	4	0	2400	0	
Endrin	UG/KG	3.7	25%	4	1	14	0	
Endrin aldehyde	UG/KG	7.2	50%	4	2		0	YES
Endrin ketone	UG/KG	2.2	25%	4	1		0	YES
Gamma-BHC/Lindane	UG/KG	4	25%	4	1	100	0	NO
Gamma-Chlordane	UG/KG	1.1	25%	4	1		0	YES
Heptachlor epoxide	UG/KG	1.5	25%	4	1		0	YES
Methoxychlor	UG/KG	19	25%	4	1		0	YES
Aroclor-1260	UG/KG	0	0%	4	0	100	0	

Table 6-14C
SEAD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus NYSDEC Unrestricted Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Unrestricted Use Value ²	Number of Times Exceeded	Max Exceed SCO Value
Metals								
Aluminum	MG/KG	14500	100%	4	4		0	YES
Antimony	MG/KG	0	0%	4	0		0	
Arsenic	MG/KG	5.3	100%	4	4	13	0	NO
Barium	MG/KG	94.1	100%	4	4	350	0	NO
Beryllium	MG/KG	0.56	100%	4	4	7.2	0	NO
Cadmium	MG/KG	0	0%	4	0	2.5	0	
Calcium	MG/KG	134000	100%	4	4		0	YES
Chromium	MG/KG	21.2	100%	4	4	30	0	NO
Cobalt	MG/KG	11	100%	4	4		0	YES
Copper	MG/KG	19.4	100%	4	4	50	0	NO
Iron	MG/KG	21600	100%	4	4		0	YES
Lead	MG/KG	16	100%	4	4	63	0	NO
Magnesium	MG/KG	10100	100%	4	4		0	YES
Manganese	MG/KG	784	100%	4	4	1600	0	NO
Mercury	MG/KG	0	0%	4	0	0.18	0	
Nickel	MG/KG	28	100%	4	4	30	0	NO
Potassium	MG/KG	2940	100%	4	4		0	YES
Selenium	MG/KG	1.2	25%	4	1	3.9	0	NO
Silver	MG/KG	0	0%	4	0	2	0	
Sodium	MG/KG	138	50%	4	2		0	YES
Thallium	MG/KG	0	0%	4	0		0	
Vanadium	MG/KG	24.9	100%	4	4		0	YES
Zinc	MG/KG	82.1	100%	4	4	109	0	NO
Notes:								
1. Parameters that were detected in subsurface soil are presented in this table.								
2. NYSDEC Unrestricted Use Soil Cleanup Objective (SCO), Table 375-6.8(a), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.								

Table 6-15A
SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	4	4.673	4%	57	2	500000	0	NO
Acetone	UG/KG	74	11	16%	57	9	500000	0	NO
Benzene	UG/KG	2	2.336	4%	57	2	44000	0	NO
Carbon disulfide	UG/KG	5		5%	57	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	2	2.045	7%	57	4	500000	0	NO
Toluene	UG/KG	4	3.302	7%	57	4	500000	0	NO
Total BTEX	MG/KG	11.6		100%	4	4		0	
Total Xylenes	UG/KG	96	25.67	12%	33	4	500000	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		2%	58	1		0	
2-Methylnaphthalene	UG/KG	31000		19%	58	11		0	
4-Nitroaniline	UG/KG	75		3%	36	1		0	
Acenaphthene	UG/KG	13000	1372	33%	58	19	500000	0	NO
Acenaphthylene	UG/KG	1800	249.6	34%	58	20	500000	0	NO
Anthracene	UG/KG	5000	857.2	53%	58	31	500000	0	NO
Benzo(a)anthracene	UG/KG	10000	2719	72%	58	42	5600	3	NO
Benzo(a)pyrene	UG/KG	9000	2516	72%	58	42	1000	12	YES
Benzo(b)fluoranthene	UG/KG	7400	1837	74%	58	43	5600	3	NO
Benzo(ghi)perylene	UG/KG	5800	1319	62%	58	36	500000	0	NO
Benzo(k)fluoranthene	UG/KG	8000	2196	55%	58	32	56000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140		16%	58	9		0	
Carbazole	UG/KG	540		50%	36	18		0	
Chrysene	UG/KG	10000	2360	78%	58	45	56000	0	NO
Di-n-butylphthalate	UG/KG	70		5%	58	3		0	
Dibenz(a,h)anthracene	UG/KG	2000	335.5	48%	58	28	560	4	NO
Dibenzofuran	UG/KG	11000	1151	29%	58	17	350000	0	NO
Fluoranthene	UG/KG	27000	6482	79%	58	46	500000	0	NO
Fluorene	UG/KG	4100	601.6	31%	58	18	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	5400	1265	62%	58	36	5600	0	NO
Naphthalene	UG/KG	17000	903.4	19%	58	11	500000	0	NO
Phenanthrene	UG/KG	25000	4680	71%	58	41	500000	0	NO
Phenol	UG/KG	4.5	4.5	2%	58	1	500000	0	NO
Pyrene	UG/KG	20000	5154	76%	58	44	500000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	17	4.645	16%	58	9	92000	0	NO
4,4'-DDE	UG/KG	190	28.61	34%	58	20	62000	0	NO
4,4'-DDT	UG/KG	120	26.12	45%	58	26	47000	0	NO
Alpha-BHC	UG/KG	18	2.892	9%	58	5	3400	0	NO
Beta-BHC	UG/KG	2.7	2.071	3%	58	2	3000	0	NO
Delta-BHC	UG/KG	1.8	1.8	2%	58	1	500000	0	NO
Dieldrin	UG/KG	3.4	3.391	3%	58	2	1400	0	NO
Endosulfan sulfate	UG/KG	4.6	3.019	7%	58	4	200000	0	NO
Endrin	UG/KG	8.1	3.178	7%	58	4	89000	0	NO
Endrin aldehyde	UG/KG	9.1		16%	58	9		0	
Endrin ketone	UG/KG	17		12%	58	7		0	
Gamma-BHC/Lindane	UG/KG	4	4	2%	58	1	9200	0	NO
Gamma-Chlordane	UG/KG	1.2		3%	58	2		0	
Heptachlor epoxide	UG/KG	6.4		9%	58	5		0	
Methoxychlor	UG/KG	62		5%	58	3		0	
Aroclor-1260	UG/KG	200	87.16	5%	58	3	1000	0	NO

Table 6-15A
SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	15900		100%	58	58		0	
Antimony	MG/KG	11.5		47%	58	27		0	
Arsenic	MG/KG	14.6	6.168	100%	58	58	16	0	NO
Barium	MG/KG	136	83.76	100%	58	58	400	0	NO
Beryllium	MG/KG	0.85	0.479	100%	58	58	590	0	NO
Cadmium	MG/KG	0.71	0.342	62%	58	36	9.3	0	NO
Calcium	MG/KG	295000		100%	58	58		0	
Chromium	MG/KG	37.1	19.17	100%	58	58	1500	0	NO
Cobalt	MG/KG	13.9		100%	58	58		0	
Copper	MG/KG	102	34.58	100%	58	58	270	0	NO
Iron	MG/KG	38000		100%	58	58		0	
Lead	MG/KG	1010	281	100%	58	58	1000	1	NO
Magnesium	MG/KG	59300		100%	58	58		0	
Manganese	MG/KG	1330	615.3	100%	58	58	10000	0	NO
Mercury	MG/KG	1	0.185	83%	58	48	2.8	0	NO
Nickel	MG/KG	110	30.55	100%	58	58	310	0	NO
Potassium	MG/KG	2940		100%	58	58		0	
Selenium	MG/KG	1.8	1.245	12%	58	7	1500	0	NO
Silver	MG/KG	1.8	0.68	38%	58	22	1500	0	NO
Sodium	MG/KG	636		95%	58	55		0	
Thallium	MG/KG	2.3		31%	58	18		0	
Vanadium	MG/KG	24.9		100%	58	58		0	
Zinc	MG/KG	1740	249.3	98%	58	57	10000	0	NO
Notes:									
1. Parameters that were detected in either surface or subsurface soil are presented in this table.									
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, http://www.epa.gov/esd/tsc/download.htm									
3. Sample duplicate pairs were averaged into a discrete sample and presented in this table.									
4. NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.									
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.									
6. Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.									

Table 6-15B
SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	2	2	2%	53	1	500000	0	NO
Acetone	UG/KG	74	11.38	17%	53	9	500000	0	NO
Benzene	UG/KG	2	2.337	4%	53	2	44000	0	NO
Carbon disulfide	UG/KG	5		6%	53	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	2	2.046	8%	53	4	500000	0	NO
Toluene	UG/KG	4	3.304	8%	53	4	500000	0	NO
Total BTEX	MG/KG	11.6		100%	1	1		0	
Total Xylenes	UG/KG	3	3.234	10%	29	3	500000	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		2%	54	1		0	
2-Methylnaphthalene	UG/KG	770		19%	54	10		0	
4-Nitroaniline	UG/KG	75		3%	32	1		0	
Acenaphthene	UG/KG	1500	366.3	33%	54	18	500000	0	NO
Acenaphthylene	UG/KG	1800	247.6	35%	54	19	500000	0	NO
Anthracene	UG/KG	5000	909.4	56%	54	30	500000	0	NO
Benzo(a)anthracene	UG/KG	10000	2907	72%	54	39	5600	3	NO
Benzo(a)pyrene	UG/KG	9000	2175	72%	54	39	1000	12	YES
Benzo(b)fluoranthene	UG/KG	7400	1964	74%	54	40	5600	3	NO
Benzo(ghi)perylene	UG/KG	5800	1414	63%	54	34	500000	0	NO
Benzo(k)fluoranthene	UG/KG	8000	1909	54%	54	29	56000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140		11%	54	6		0	
Carbazole	UG/KG	540		50%	32	16		0	
Chrysene	UG/KG	10000	2521	78%	54	42	56000	0	NO
Di-n-butylphthalate	UG/KG	70		6%	54	3		0	
Dibenz(a,h)anthracene	UG/KG	2000	372	50%	54	27	560	4	NO
Dibenzofuran	UG/KG	1400	185.7	30%	54	16	350000	0	NO
Fluoranthene	UG/KG	27000	6911	80%	54	43	500000	0	NO
Fluorene	UG/KG	2500	406.2	31%	54	17	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	5400	1357	63%	54	34	5600	0	NO
Naphthalene	UG/KG	1100	188.4	19%	54	10	500000	0	NO
Phenanthrene	UG/KG	25000	4937	72%	54	39	500000	0	NO
Phenol	UG/KG	4.5	4.5	2%	54	1	500000	0	NO
Pyrene	UG/KG	20000	5490	76%	54	41	500000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	17	4.859	17%	54	9	92000	0	NO
4,4'-DDE	UG/KG	190	30.34	37%	54	20	62000	0	NO
4,4'-DDT	UG/KG	120	28.32	46%	54	25	47000	0	NO
Alpha-BHC	UG/KG	2.2	1.938	4%	54	2	3400	0	NO
Beta-BHC	UG/KG	0		0%	54	0	3000	0	
Delta-BHC	UG/KG	0		0%	54	0	500000	0	
Dieldrin	UG/KG	3.4	3.391	4%	54	2	1400	0	NO
Endosulfan sulfate	UG/KG	4.6	3.064	7%	54	4	200000	0	NO
Endrin	UG/KG	8.1	3.203	6%	54	3	89000	0	NO
Endrin aldehyde	UG/KG	9.1		13%	54	7		0	
Endrin ketone	UG/KG	17		11%	54	6		0	
Gamma-BHC/Lindane	UG/KG	0		0%	54	0	9200	0	
Gamma-Chlordane	UG/KG	1.2		2%	54	1		0	
Heptachlor epoxide	UG/KG	6.4		7%	54	4		0	
Methoxychlor	UG/KG	62		4%	54	2		0	
Aroclor-1260	UG/KG	200	87.69	6%	54	3	1000	0	NO

Table 6-15B
SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Commercial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	15900		100%	54	54		0	
Antimony	MG/KG	11.5		50%	54	27		0	
Arsenic	MG/KG	14.6	6.294	100%	54	54	16	0	NO
Barium	MG/KG	136	84.71	100%	54	54	400	0	NO
Beryllium	MG/KG	0.85	0.487	100%	54	54	590	0	NO
Cadmium	MG/KG	0.71	0.351	67%	54	36	9.3	0	NO
Calcium	MG/KG	295000		100%	54	54		0	
Chromium	MG/KG	37.1	19.34	100%	54	54	1500	0	NO
Cobalt	MG/KG	13.9		100%	54	54		0	
Copper	MG/KG	102	35.73	100%	54	54	270	0	NO
Iron	MG/KG	38000		100%	54	54		0	
Lead	MG/KG	1010	299.6	100%	54	54	1000	1	NO
Magnesium	MG/KG	59300		100%	54	54		0	
Manganese	MG/KG	1330	619.9	100%	54	54	10000	0	NO
Mercury	MG/KG	1	0.195	89%	54	48	2.8	0	NO
Nickel	MG/KG	110	30.92	100%	54	54	310	0	NO
Potassium	MG/KG	2180		100%	54	54		0	
Selenium	MG/KG	1.8	1.332	11%	54	6	1500	0	NO
Silver	MG/KG	1.8	0.716	41%	54	22	1500	0	NO
Sodium	MG/KG	636		98%	54	53		0	
Thallium	MG/KG	2.3		33%	54	18		0	
Vanadium	MG/KG	24		100%	54	54		0	
Zinc	MG/KG	1740	262.5	98%	54	53	10000	0	NO

Notes:
1. Parameters that were detected in surface soil are presented in this table.
2. 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
3. Sample duplicate pairs were averaged into a discrete sample and presented in this table.
4. NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
5. Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
6. Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-15C

SEAD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Commercial Use Value ²	Number of Times Exceeded	Max Exceed SCO Value
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	4	25%	4	1	500000	0	NO
Acetone	UG/KG	0	0%	4	0	500000	0	
Benzene	UG/KG	0	0%	4	0	44000	0	
Carbon disulfide	UG/KG	0	0%	4	0		0	
Cyclohexane	UG/KG	0	0%	0	0		0	
Methyl cyclohexane	UG/KG	0	0%	0	0		0	
Methylene chloride	UG/KG	0	0%	4	0	500000	0	
Toluene	UG/KG	0	0%	4	0	500000	0	
Total BTEX	MG/KG	3.5	100%	3	3		0	YES
Total Xylenes	UG/KG	96	25%	4	1	500000	0	NO
Trichlorofluoromethane	UG/KG	0	0%	0	0		0	
Semivolatile Organic Compounds								
2,4-Dinitrotoluene	UG/KG	0	0%	4	0		0	
2-Methylnaphthalene	UG/KG	31000	25%	4	1		0	YES
4-Nitroaniline	UG/KG	0	0%	4	0		0	
Acenaphthene	UG/KG	13000	25%	4	1	500000	0	NO
Acenaphthylene	UG/KG	340	25%	4	1	500000	0	NO
Anthracene	UG/KG	590	25%	4	1	500000	0	NO
Benzo(a)anthracene	UG/KG	240	75%	4	3	5600	0	NO
Benzo(a)pyrene	UG/KG	160	75%	4	3	1000	0	NO
Benzo(b)fluoranthene	UG/KG	130	75%	4	3	5600	0	NO
Benzo(ghi)perylene	UG/KG	76	50%	4	2	500000	0	NO
Benzo(k)fluoranthene	UG/KG	98	75%	4	3	56000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	15	75%	4	3		0	YES
Carbazole	UG/KG	380	50%	4	2		0	YES
Chrysene	UG/KG	290	75%	4	3	56000	0	NO
Di-n-butylphthalate	UG/KG	0	0%	4	0		0	
Dibenz(a,h)anthracene	UG/KG	4.4	25%	4	1	560	0	NO
Dibenzofuran	UG/KG	11000	25%	4	1	350000	0	NO
Fluoranthene	UG/KG	1900	75%	4	3	500000	0	NO
Fluorene	UG/KG	4100	25%	4	1	500000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	56	50%	4	2	5600	0	NO
Naphthalene	UG/KG	17000	25%	4	1	500000	0	NO
Phenanthrene	UG/KG	3800	50%	4	2	500000	0	NO
Phenol	UG/KG	0	0%	4	0	500000	0	
Pyrene	UG/KG	1700	75%	4	3	500000	0	NO
Pesticides and PCBs								
4,4'-DDD	UG/KG	0	0%	4	0	92000	0	
4,4'-DDE	UG/KG	0	0%	4	0	62000	0	
4,4'-DDT	UG/KG	5.1	25%	4	1	47000	0	NO
Alpha-BHC	UG/KG	18	75%	4	3	3400	0	NO
Beta-BHC	UG/KG	2.7	50%	4	2	3000	0	NO
Delta-BHC	UG/KG	1.8	25%	4	1	500000	0	NO
Dieldrin	UG/KG	0	0%	4	0	1400	0	
Endosulfan sulfate	UG/KG	0	0%	4	0	200000	0	
Endrin	UG/KG	3.7	25%	4	1	89000	0	NO
Endrin aldehyde	UG/KG	7.2	50%	4	2		0	YES
Endrin ketone	UG/KG	2.2	25%	4	1		0	YES
Gamma-BHC/Lindane	UG/KG	4	25%	4	1	9200	0	NO
Gamma-Chlordane	UG/KG	1.1	25%	4	1		0	YES
Heptachlor epoxide	UG/KG	1.5	25%	4	1		0	YES
Methoxychlor	UG/KG	19	25%	4	1		0	YES
Aroclor-1260	UG/KG	0	0%	4	0	1000	0	

Table 6-15C
SEAD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus NYSDEC Restricted Commercial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Commercial Use Value ²	Number of Times Exceeded	Max Exceed SCO Value
Metals								
Aluminum	MG/KG	14500	100%	4	4		0	YES
Antimony	MG/KG	0	0%	4	0		0	
Arsenic	MG/KG	5.3	100%	4	4	16	0	NO
Barium	MG/KG	94.1	100%	4	4	400	0	NO
Beryllium	MG/KG	0.56	100%	4	4	590	0	NO
Cadmium	MG/KG	0	0%	4	0	9.3	0	
Calcium	MG/KG	134000	100%	4	4		0	YES
Chromium	MG/KG	21.2	100%	4	4	1500	0	NO
Cobalt	MG/KG	11	100%	4	4		0	YES
Copper	MG/KG	19.4	100%	4	4	270	0	NO
Iron	MG/KG	21600	100%	4	4		0	YES
Lead	MG/KG	16	100%	4	4	1000	0	NO
Magnesium	MG/KG	10100	100%	4	4		0	YES
Manganese	MG/KG	784	100%	4	4	10000	0	NO
Mercury	MG/KG	0	0%	4	0	2.8	0	
Nickel	MG/KG	28	100%	4	4	310	0	NO
Potassium	MG/KG	2940	100%	4	4		0	YES
Selenium	MG/KG	1.2	25%	4	1	1500	0	NO
Silver	MG/KG	0	0%	4	0	1500	0	
Sodium	MG/KG	138	50%	4	2		0	YES
Thallium	MG/KG	0	0%	4	0		0	
Vanadium	MG/KG	24.9	100%	4	4		0	YES
Zinc	MG/KG	82.1	100%	4	4	10000	0	NO
Notes:								
1. Parameters that were detected in subsurface soil are presented in this table.								
2. NYSDEC Restricted Commercial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.								

Table 6-16A
SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	4	4.673	4%	57	2	1000000	0	NO
Acetone	UG/KG	74	11	16%	57	9	1000000	0	NO
Benzene	UG/KG	2	2.336	4%	57	2	89000	0	NO
Carbon disulfide	UG/KG	5		5%	57	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	2	2.045	7%	57	4	1000000	0	NO
Toluene	UG/KG	4	3.302	7%	57	4	1000000	0	NO
Total BTEX	MG/KG	11.6		100%	4	4		0	
Total Xylenes	UG/KG	96	25.67	12%	33	4	1000000	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		2%	58	1		0	
2-Methylnaphthalene	UG/KG	31000		19%	58	11		0	
4-Nitroaniline	UG/KG	75		3%	36	1		0	
Acenaphthene	UG/KG	13000	1372	33%	58	19	1000000	0	NO
Acenaphthylene	UG/KG	1800	249.6	34%	58	20	1000000	0	NO
Anthracene	UG/KG	5000	857.2	53%	58	31	1000000	0	NO
Benzo(a)anthracene	UG/KG	10000	2719	72%	58	42	11000	0	NO
Benzo(a)pyrene	UG/KG	9000	2516	72%	58	42	1100	10	YES
Benzo(b)fluoranthene	UG/KG	7400	1837	74%	58	43	11000	0	NO
Benzo(ghi)perylene	UG/KG	5800	1319	62%	58	36	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	8000	2196	55%	58	32	110000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140		16%	58	9		0	
Carbazole	UG/KG	540		50%	36	18		0	
Chrysene	UG/KG	10000	2360	78%	58	45	110000	0	NO
Di-n-butylphthalate	UG/KG	70		5%	58	3		0	
Dibenz(a,h)anthracene	UG/KG	2000	335.5	48%	58	28	1100	4	NO
Dibenzofuran	UG/KG	11000	1151	29%	58	17	1000000	0	NO
Fluoranthene	UG/KG	27000	6482	79%	58	46	1000000	0	NO
Fluorene	UG/KG	4100	601.6	31%	58	18	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	5400	1265	62%	58	36	11000	0	NO
Naphthalene	UG/KG	17000	903.4	19%	58	11	1000000	0	NO
Phenanthrene	UG/KG	25000	4680	71%	58	41	1000000	0	NO
Phenol	UG/KG	4.5	4.5	2%	58	1	1000000	0	NO
Pyrene	UG/KG	20000	5154	76%	58	44	1000000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	17	4.645	16%	58	9	180000	0	NO
4,4'-DDE	UG/KG	190	28.61	34%	58	20	120000	0	NO
4,4'-DDT	UG/KG	120	26.12	45%	58	26	94000	0	NO
Alpha-BHC	UG/KG	18	2.892	9%	58	5	6800	0	NO
Beta-BHC	UG/KG	2.7	2.071	3%	58	2	14000	0	NO
Delta-BHC	UG/KG	1.8	1.8	2%	58	1	1000000	0	NO
Dieldrin	UG/KG	3.4	3.391	3%	58	2	2800	0	NO
Endosulfan sulfate	UG/KG	4.6	3.019	7%	58	4	920000	0	NO
Endrin	UG/KG	8.1	3.178	7%	58	4	410000	0	NO
Endrin aldehyde	UG/KG	9.1		16%	58	9		0	
Endrin ketone	UG/KG	17		12%	58	7		0	
Gamma-BHC/Lindane	UG/KG	4	4	2%	58	1	23000	0	NO
Gamma-Chlordane	UG/KG	1.2		3%	58	2		0	
Heptachlor epoxide	UG/KG	6.4		9%	58	5		0	
Methoxychlor	UG/KG	62		5%	58	3		0	
Aroclor-1260	UG/KG	200	87.16	5%	58	3	25000	0	NO

Table 6-16A
SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	15900		100%	58	58		0	
Antimony	MG/KG	11.5		47%	58	27		0	
Arsenic	MG/KG	14.6	6.168	100%	58	58	16	0	NO
Barium	MG/KG	136	83.76	100%	58	58	10000	0	NO
Beryllium	MG/KG	0.85	0.479	100%	58	58	2700	0	NO
Cadmium	MG/KG	0.71	0.342	62%	58	36	60	0	NO
Calcium	MG/KG	295000		100%	58	58		0	
Chromium	MG/KG	37.1	19.17	100%	58	58	6800	0	NO
Cobalt	MG/KG	13.9		100%	58	58		0	
Copper	MG/KG	102	34.58	100%	58	58	10000	0	NO
Iron	MG/KG	38000		100%	58	58		0	
Lead	MG/KG	1010	281	100%	58	58	3900	0	NO
Magnesium	MG/KG	59300		100%	58	58		0	
Manganese	MG/KG	1330	615.3	100%	58	58	10000	0	NO
Mercury	MG/KG	1	0.185	83%	58	48	5.7	0	NO
Nickel	MG/KG	110	30.55	100%	58	58	10000	0	NO
Potassium	MG/KG	2940		100%	58	58		0	
Selenium	MG/KG	1.8	1.245	12%	58	7	6800	0	NO
Silver	MG/KG	1.8	0.68	38%	58	22	6800	0	NO
Sodium	MG/KG	636		95%	58	55		0	
Thallium	MG/KG	2.3		31%	58	18		0	
Vanadium	MG/KG	24.9		100%	58	58		0	
Zinc	MG/KG	1740	249.3	98%	58	57	10000	0	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-16B
SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective SEA
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	2	2	2%	53	1	1000000	0	NO
Acetone	UG/KG	74	11.38	17%	53	9	1000000	0	NO
Benzene	UG/KG	2	2.337	4%	53	2	89000	0	NO
Carbon disulfide	UG/KG	5		6%	53	3		0	
Cyclohexane	UG/KG	4		9%	23	2		0	
Methyl cyclohexane	UG/KG	6		13%	23	3		0	
Methylene chloride	UG/KG	2	2.046	8%	53	4	1000000	0	NO
Toluene	UG/KG	4	3.304	8%	53	4	1000000	0	NO
Total BTEX	MG/KG	11.6		100%	1	1		0	
Total Xylenes	UG/KG	3	3.234	10%	29	3	1000000	0	NO
Trichlorofluoromethane	UG/KG	1		4%	23	1		0	
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880		2%	54	1		0	
2-Methylnaphthalene	UG/KG	770		19%	54	10		0	
4-Nitroaniline	UG/KG	75		3%	32	1		0	
Acenaphthene	UG/KG	1500	366.3	33%	54	18	1000000	0	NO
Acenaphthylene	UG/KG	1800	247.6	35%	54	19	1000000	0	NO
Anthracene	UG/KG	5000	909.4	56%	54	30	1000000	0	NO
Benzo(a)anthracene	UG/KG	10000	2907	72%	54	39	11000	0	NO
Benzo(a)pyrene	UG/KG	9000	2175	72%	54	39	1100	10	YES
Benzo(b)fluoranthene	UG/KG	7400	1964	74%	54	40	11000	0	NO
Benzo(ghi)perylene	UG/KG	5800	1414	63%	54	34	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	8000	1909	54%	54	29	110000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140		11%	54	6		0	
Carbazole	UG/KG	540		50%	32	16		0	
Chrysene	UG/KG	10000	2521	78%	54	42	110000	0	NO
Di-n-butylphthalate	UG/KG	70		6%	54	3		0	
Dibenz(a,h)anthracene	UG/KG	2000	372	50%	54	27	1100	4	NO
Dibenzofuran	UG/KG	1400	185.7	30%	54	16	1000000	0	NO
Fluoranthene	UG/KG	27000	6911	80%	54	43	1000000	0	NO
Fluorene	UG/KG	2500	406.2	31%	54	17	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	5400	1357	63%	54	34	11000	0	NO
Naphthalene	UG/KG	1100	188.4	19%	54	10	1000000	0	NO
Phenanthrene	UG/KG	25000	4937	72%	54	39	1000000	0	NO
Phenol	UG/KG	4.5	4.5	2%	54	1	1000000	0	NO
Pyrene	UG/KG	20000	5490	76%	54	41	1000000	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	17	4.859	17%	54	9	180000	0	NO
4,4'-DDE	UG/KG	190	30.34	37%	54	20	120000	0	NO
4,4'-DDT	UG/KG	120	28.32	46%	54	25	94000	0	NO
Alpha-BHC	UG/KG	2.2	1.938	4%	54	2	6800	0	NO
Beta-BHC	UG/KG	0		0%	54	0	14000	0	
Delta-BHC	UG/KG	0		0%	54	0	1000000	0	
Dieldrin	UG/KG	3.4	3.391	4%	54	2	2800	0	NO
Endosulfan sulfate	UG/KG	4.6	3.064	7%	54	4	920000	0	NO
Endrin	UG/KG	8.1	3.203	6%	54	3	410000	0	NO
Endrin aldehyde	UG/KG	9.1		13%	54	7		0	
Endrin ketone	UG/KG	17		11%	54	6		0	
Gamma-BHC/Lindane	UG/KG	0		0%	54	0	23000	0	
Gamma-Chlordane	UG/KG	1.2		2%	54	1		0	
Heptachlor epoxide	UG/KG	6.4		7%	54	4		0	
Methoxychlor	UG/KG	62		4%	54	2		0	
Aroclor-1260	UG/KG	200	87.69	6%	54	3	25000	0	NO

Table 6-16B
SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Objective SEA
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Industrial Use Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	15900		100%	54	54		0	
Antimony	MG/KG	11.5		50%	54	27		0	
Arsenic	MG/KG	14.6	6.294	100%	54	54	16	0	NO
Barium	MG/KG	136	84.71	100%	54	54	10000	0	NO
Beryllium	MG/KG	0.85	0.487	100%	54	54	2700	0	NO
Cadmium	MG/KG	0.71	0.351	67%	54	36	60	0	NO
Calcium	MG/KG	295000		100%	54	54		0	
Chromium	MG/KG	37.1	19.34	100%	54	54	6800	0	NO
Cobalt	MG/KG	13.9		100%	54	54		0	
Copper	MG/KG	102	35.73	100%	54	54	10000	0	NO
Iron	MG/KG	38000		100%	54	54		0	
Lead	MG/KG	1010	299.6	100%	54	54	3900	0	NO
Magnesium	MG/KG	59300		100%	54	54		0	
Manganese	MG/KG	1330	619.9	100%	54	54	10000	0	NO
Mercury	MG/KG	1	0.195	89%	54	48	5.7	0	NO
Nickel	MG/KG	110	30.92	100%	54	54	10000	0	NO
Potassium	MG/KG	2180		100%	54	54		0	
Selenium	MG/KG	1.8	1.332	11%	54	6	6800	0	NO
Silver	MG/KG	1.8	0.716	41%	54	22	6800	0	NO
Sodium	MG/KG	636		98%	54	53		0	
Thallium	MG/KG	2.3		33%	54	18		0	
Vanadium	MG/KG	24		100%	54	54		0	
Zinc	MG/KG	1740	262.5	98%	54	53	10000	0	NO

Notes:

- Parameters that were detected in surface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-16C

**AD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Object
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Industrial Use Value ²	Number of Times Exceeded	Max Exceed SCO Value
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	4	25%	4	1	1000000	0	NO
Acetone	UG/KG	0	0%	4	0	1000000	0	
Benzene	UG/KG	0	0%	4	0	89000	0	
Carbon disulfide	UG/KG	0	0%	4	0		0	
Cyclohexane	UG/KG	0	0%	0	0		0	
Methyl cyclohexane	UG/KG	0	0%	0	0		0	
Methylene chloride	UG/KG	0	0%	4	0	1000000	0	
Toluene	UG/KG	0	0%	4	0	1000000	0	
Total BTEX	MG/KG	3.5	100%	3	3		0	YES
Total Xylenes	UG/KG	96	25%	4	1	1000000	0	NO
Trichlorofluoromethane	UG/KG	0	0%	0	0		0	
Semivolatile Organic Compounds								
2,4-Dinitrotoluene	UG/KG	0	0%	4	0		0	
2-Methylnaphthalene	UG/KG	31000	25%	4	1		0	YES
4-Nitroaniline	UG/KG	0	0%	4	0		0	
Acenaphthene	UG/KG	13000	25%	4	1	1000000	0	NO
Acenaphthylene	UG/KG	340	25%	4	1	1000000	0	NO
Anthracene	UG/KG	590	25%	4	1	1000000	0	NO
Benzo(a)anthracene	UG/KG	240	75%	4	3	11000	0	NO
Benzo(a)pyrene	UG/KG	160	75%	4	3	1100	0	NO
Benzo(b)fluoranthene	UG/KG	130	75%	4	3	11000	0	NO
Benzo(ghi)perylene	UG/KG	76	50%	4	2	1000000	0	NO
Benzo(k)fluoranthene	UG/KG	98	75%	4	3	110000	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	15	75%	4	3		0	YES
Carbazole	UG/KG	380	50%	4	2		0	YES
Chrysene	UG/KG	290	75%	4	3	110000	0	NO
Di-n-butylphthalate	UG/KG	0	0%	4	0		0	
Dibenz(a,h)anthracene	UG/KG	4.4	25%	4	1	1100	0	NO
Dibenzofuran	UG/KG	11000	25%	4	1	1000000	0	NO
Fluoranthene	UG/KG	1900	75%	4	3	1000000	0	NO
Fluorene	UG/KG	4100	25%	4	1	1000000	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	56	50%	4	2	11000	0	NO
Naphthalene	UG/KG	17000	25%	4	1	1000000	0	NO
Phenanthrene	UG/KG	3800	50%	4	2	1000000	0	NO
Phenol	UG/KG	0	0%	4	0	1000000	0	
Pyrene	UG/KG	1700	75%	4	3	1000000	0	NO
Pesticides and PCBs								
4,4'-DDD	UG/KG	0	0%	4	0	180000	0	
4,4'-DDE	UG/KG	0	0%	4	0	120000	0	
4,4'-DDT	UG/KG	5.1	25%	4	1	94000	0	NO
Alpha-BHC	UG/KG	18	75%	4	3	6800	0	NO
Beta-BHC	UG/KG	2.7	50%	4	2	14000	0	NO
Delta-BHC	UG/KG	1.8	25%	4	1	1000000	0	NO
Dieldrin	UG/KG	0	0%	4	0	2800	0	
Endosulfan sulfate	UG/KG	0	0%	4	0	920000	0	
Endrin	UG/KG	3.7	25%	4	1	410000	0	NO
Endrin aldehyde	UG/KG	7.2	50%	4	2		0	YES
Endrin ketone	UG/KG	2.2	25%	4	1		0	YES
Gamma-BHC/Lindane	UG/KG	4	25%	4	1	23000	0	NO
Gamma-Chlordane	UG/KG	1.1	25%	4	1		0	YES
Heptachlor epoxide	UG/KG	1.5	25%	4	1		0	YES
Methoxychlor	UG/KG	19	25%	4	1		0	YES
Aroclor-1260	UG/KG	0	0%	4	0	25000	0	

Table 6-16C

AD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus NYSDEC Restricted Industrial Use Soil Cleanup Object
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Industrial Use Value ²	Number of Times Exceeded	Max Exceed SCO Value
Metals								
Aluminum	MG/KG	14500	100%	4	4		0	YES
Antimony	MG/KG	0	0%	4	0		0	
Arsenic	MG/KG	5.3	100%	4	4	16	0	NO
Barium	MG/KG	94.1	100%	4	4	10000	0	NO
Beryllium	MG/KG	0.56	100%	4	4	2700	0	NO
Cadmium	MG/KG	0	0%	4	0	60	0	
Calcium	MG/KG	134000	100%	4	4		0	YES
Chromium	MG/KG	21.2	100%	4	4	6800	0	NO
Cobalt	MG/KG	11	100%	4	4		0	YES
Copper	MG/KG	19.4	100%	4	4	10000	0	NO
Iron	MG/KG	21600	100%	4	4		0	YES
Lead	MG/KG	16	100%	4	4	3900	0	NO
Magnesium	MG/KG	10100	100%	4	4		0	YES
Manganese	MG/KG	784	100%	4	4	10000	0	NO
Mercury	MG/KG	0	0%	4	0	5.7	0	
Nickel	MG/KG	28	100%	4	4	10000	0	NO
Potassium	MG/KG	2940	100%	4	4		0	YES
Selenium	MG/KG	1.2	25%	4	1	6800	0	NO
Silver	MG/KG	0	0%	4	0	6800	0	
Sodium	MG/KG	138	50%	4	2		0	YES
Thallium	MG/KG	0	0%	4	0		0	
Vanadium	MG/KG	24.9	100%	4	4		0	YES
Zinc	MG/KG	82.1	100%	4	4	10000	0	NO
Notes:								
1. Parameters that were detected in subsurface soil are presented in this table.								
2. NYSDEC Restricted Industrial Use Soil Cleanup Objective (SCO), Table 375-6.8(b), under Subpart 375-6: Remedial Program Soil Cleanup Objectives.								

Table 6-17A
SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	4	4.673	4%	57	2	1.20E+06	0	NO
Acetone	UG/KG	74	11	16%	57	9	5.43E+07	0	NO
Benzene	UG/KG	2	2.336	4%	57	2	1409	0	NO
Carbon disulfide	UG/KG	5	2.498	5%	57	3	7.20E+05	0	NO
Cyclohexane	UG/KG	4	4.359	9%	23	2	1.40E+05	0	NO
Methyl cyclohexane	UG/KG	6	4.354	13%	23	3	8.72E+06	0	NO
Methylene chloride	UG/KG	2	2.045	7%	57	4	2.05E+04	0	NO
Toluene	UG/KG	4	3.302	7%	57	4	5.20E+05	0	NO
Total BTEX	MG/KG	11.6		100%	4	4		0	
Total Xylenes	UG/KG	96	25.67	12%	33	4	4.20E+05	0	NO
Trichlorofluoromethane	UG/KG	1	1	4%	23	1	2.00E+06	0	NO
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880	880	2%	58	1	1.23E+06	0	NO
2-Methylnaphthalene	UG/KG	31000		19%	58	11		0	
4-Nitroaniline	UG/KG	75	75	3%	36	1	8.21E+04	0	NO
Acenaphthene	UG/KG	13000	1372	33%	58	19	2.92E+07	0	NO
Acenaphthylene	UG/KG	1800		34%	58	20		0	
Anthracene	UG/KG	5000	857.2	53%	58	31	1.00E+08	0	NO
Benzo(a)anthracene	UG/KG	10000	2719	72%	58	42	2110	5	YES
Benzo(a)pyrene	UG/KG	9000	2516	72%	58	42	211	28	YES
Benzo(b)fluoranthene	UG/KG	7400	1837	74%	58	43	2110	5	NO
Benzo(ghi)perylene	UG/KG	5800		62%	58	36		0	
Benzo(k)fluoranthene	UG/KG	8000	2196	55%	58	32	21096	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140	61.77	16%	58	9	1.23E+05	0	NO
Carbazole	UG/KG	540	181	50%	36	18	8.62E+04	0	NO
Chrysene	UG/KG	10000	2360	78%	58	45	2.11E+05	0	NO
Di-n-butylphthalate	UG/KG	70	63.1	5%	58	3	6.16E+07	0	NO
Dibenz(a,h)anthracene	UG/KG	2000	335.5	48%	58	28	211	9	YES
Dibenzofuran	UG/KG	11000	1151	29%	58	17	1.56E+06	0	NO
Fluoranthene	UG/KG	27000	6482	79%	58	46	2.20E+07	0	NO
Fluorene	UG/KG	4100	601.6	31%	58	18	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	5400	1265	62%	58	36	2110	4	NO
Naphthalene	UG/KG	17000	903.4	19%	58	11	1.88E+05	0	NO
Phenanthrene	UG/KG	25000		71%	58	41		0	
Phenol	UG/KG	4.5	4.5	2%	58	1	1.00E+08	0	NO
Pyrene	UG/KG	20000	5154	76%	58	44	2.91E+07	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	17	4.645	16%	58	9	9951	0	NO
4,4'-DDE	UG/KG	190	28.61	34%	58	20	7025	0	NO
4,4'-DDT	UG/KG	120	26.12	45%	58	26	7025	0	NO
Alpha-BHC	UG/KG	18	2.892	9%	58	5	359	0	NO
Beta-BHC	UG/KG	2.7	2.071	3%	58	2	1258	0	NO
Delta-BHC	UG/KG	1.8		2%	58	1		0	
Dieldrin	UG/KG	3.4	3.391	3%	58	2	108	0	NO
Endosulfan sulfate	UG/KG	4.6		7%	58	4		0	
Endrin	UG/KG	8.1	3.178	7%	58	4	1.85E+05	0	NO
Endrin aldehyde	UG/KG	9.1		16%	58	9		0	
Endrin ketone	UG/KG	17		12%	58	7		0	
Gamma-BHC/Lindane	UG/KG	4	4	2%	58	1	1741	0	NO
Gamma-Chlordane	UG/KG	1.2		3%	58	2		0	
Heptachlor epoxide	UG/KG	6.4	2.106	9%	58	5	189	0	NO
Methoxychlor	UG/KG	62	23.77	5%	58	3	3.08E+06	0	NO
Aroclor-1260	UG/KG	200		5%	58	3		0	

Table 6-17A
SEAD-71 Fenced Area Excluded Summary Results - Total Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

TOTAL SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	15900	12011	100%	58	58	1.00E+05	0	NO
Antimony	MG/KG	11.5	2.533	47%	58	27	409	0	NO
Arsenic	MG/KG	14.6	6.168	100%	58	58	1.59E+00	58	YES
Barium	MG/KG	136	83.76	100%	58	58	6.66E+04	0	NO
Beryllium	MG/KG	0.85	0.479	100%	58	58	1941	0	NO
Cadmium	MG/KG	0.71	0.342	62%	58	36	451	0	NO
Calcium	MG/KG	295000		100%	58	58		0	
Chromium	MG/KG	37.1		100%	58	58		0	
Cobalt	MG/KG	13.9	10.18	100%	58	58	1921	0	NO
Copper	MG/KG	102	34.58	100%	58	58	4.09E+04	0	NO
Iron	MG/KG	38000	23872	100%	58	58	1.00E+05	0	NO
Lead	MG/KG	1010	281	100%	58	58	800	1	NO
Magnesium	MG/KG	59300		100%	58	58		0	
Manganese	MG/KG	1330	615.3	100%	58	58	1.95E+04	0	NO
Mercury	MG/KG	1	0.185	83%	58	48	307	0	NO
Nickel	MG/KG	110	30.55	100%	58	58	2.04E+04	0	NO
Potassium	MG/KG	2940		100%	58	58		0	
Selenium	MG/KG	1.8	1.245	12%	58	7	5110	0	NO
Silver	MG/KG	1.8	0.68	38%	58	22	5110	0	NO
Sodium	MG/KG	636		95%	58	55		0	
Thallium	MG/KG	2.3	0.728	31%	58	18	67	0	NO
Vanadium	MG/KG	24.9	19.27	100%	58	58	1022	0	NO
Zinc	MG/KG	1740	249.3	98%	58	57	1.00E+05	0	NO

Notes:

- Parameters that were detected in either surface or subsurface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discrete sample and presented in this table.
- USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-17B
SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	2	2	2%	53	1	1.20E+06	0	NO
Acetone	UG/KG	74	11.38	17%	53	9	5.43E+07	0	NO
Benzene	UG/KG	2	2.337	4%	53	2	1409	0	NO
Carbon disulfide	UG/KG	5	2.499	6%	53	3	7.20E+05	0	NO
Cyclohexane	UG/KG	4	4.359	9%	23	2	1.40E+05	0	NO
Methyl cyclohexane	UG/KG	6	4.354	13%	23	3	8.72E+06	0	NO
Methylene chloride	UG/KG	2	2.046	8%	53	4	2.05E+04	0	NO
Toluene	UG/KG	4	3.304	8%	53	4	5.20E+05	0	NO
Total BTEX	MG/KG	11.6		100%	1	1		0	
Total Xylenes	UG/KG	3	3.234	10%	29	3	4.20E+05	0	NO
Trichlorofluoromethane	UG/KG	1	1	4%	23	1	2.00E+06	0	NO
Semivolatile Organic Compounds									
2,4-Dinitrotoluene	UG/KG	880	880	2%	54	1	1.23E+06	0	NO
2-Methylnaphthalene	UG/KG	770		19%	54	10		0	
4-Nitroaniline	UG/KG	75	75	3%	32	1	8.21E+04	0	NO
Acenaphthene	UG/KG	1500	366.3	33%	54	18	2.92E+07	0	NO
Acenaphthylene	UG/KG	1800		35%	54	19		0	
Anthracene	UG/KG	5000	909.4	56%	54	30	1.00E+08	0	NO
Benzo(a)anthracene	UG/KG	10000	2907	72%	54	39	2110	5	YES
Benzo(a)pyrene	UG/KG	9000	2175	72%	54	39	211	28	YES
Benzo(b)fluoranthene	UG/KG	7400	1964	74%	54	40	2110	5	NO
Benzo(ghi)perylene	UG/KG	5800		63%	54	34		0	
Benzo(k)fluoranthene	UG/KG	8000	1909	54%	54	29	21096	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	140	76.39	11%	54	6	1.23E+05	0	NO
Carbazole	UG/KG	540	190.9	50%	32	16	8.62E+04	0	NO
Chrysene	UG/KG	10000	2521	78%	54	42	2.11E+05	0	NO
Di-n-butylphthalate	UG/KG	70	63.14	6%	54	3	6.16E+07	0	NO
Dibenz(a,h)anthracene	UG/KG	2000	372	50%	54	27	211	9	YES
Dibenzofuran	UG/KG	1400	185.7	30%	54	16	1.56E+06	0	NO
Fluoranthene	UG/KG	27000	6911	80%	54	43	2.20E+07	0	NO
Fluorene	UG/KG	2500	406.2	31%	54	17	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	5400	1357	63%	54	34	2110	4	NO
Naphthalene	UG/KG	1100	188.4	19%	54	10	1.88E+05	0	NO
Phenanthrene	UG/KG	25000		72%	54	39		0	
Phenol	UG/KG	4.5	4.5	2%	54	1	1.00E+08	0	NO
Pyrene	UG/KG	20000	5490	76%	54	41	2.91E+07	0	NO
Pesticides and PCBs									
4,4'-DDD	UG/KG	17	4.859	17%	54	9	9951	0	NO
4,4'-DDE	UG/KG	190	30.34	37%	54	20	7025	0	NO
4,4'-DDT	UG/KG	120	28.32	46%	54	25	7025	0	NO
Alpha-BHC	UG/KG	2.2	1.938	4%	54	2	359	0	NO
Beta-BHC	UG/KG	0		0%	54	0	1258	0	
Delta-BHC	UG/KG	0		0%	54	0		0	
Dieldrin	UG/KG	3.4	3.391	4%	54	2	108	0	NO
Endosulfan sulfate	UG/KG	4.6	3.064	7%	54	4		0	YES
Endrin	UG/KG	8.1	3.203	6%	54	3	1.85E+05	0	NO
Endrin aldehyde	UG/KG	9.1		13%	54	7		0	
Endrin ketone	UG/KG	17		11%	54	6		0	
Gamma-BHC/Lindane	UG/KG	0		0%	54	0	1741	0	
Gamma-Chlordane	UG/KG	1.2		2%	54	1		0	
Heptachlor epoxide	UG/KG	6.4	2.199	7%	54	4	189	0	NO
Methoxychlor	UG/KG	62	41.64	4%	54	2	3.08E+06	0	NO
Aroclor-1260	UG/KG	200	87.69	6%	54	3		0	YES

Table 6-17B
SEAD-71 Fenced Area Excluded Summary Results - Surface Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SURFACE SOIL									
Parameter ¹	Units	Maximum Concentration	95th UCL Recommended Value ²	Frequency of Detection	Number of Analyses ³	Number of Times Detected	Region IX Industrial Value ⁴	Number of Times Exceeded	95th Exceeded SCO Value
Metals									
Aluminum	MG/KG	15900	12058	100%	54	54	1.00E+05	0	NO
Antimony	MG/KG	11.5	2.673	50%	54	27	409	0	NO
Arsenic	MG/KG	14.6	6.294	100%	54	54	1.59E+00	54	YES
Barium	MG/KG	136	84.71	100%	54	54	6.66E+04	0	NO
Beryllium	MG/KG	0.85	0.487	100%	54	54	1941	0	NO
Cadmium	MG/KG	0.71	0.351	67%	54	36	451	0	NO
Calcium	MG/KG	295000		100%	54	54		0	
Chromium	MG/KG	37.1		100%	54	54		0	
Cobalt	MG/KG	13.9	10.23	100%	54	54	1921	0	NO
Copper	MG/KG	102	35.73	100%	54	54	4.09E+04	0	NO
Iron	MG/KG	38000	24134	100%	54	54	1.00E+05	0	NO
Lead	MG/KG	1010	299.6	100%	54	54	800	1	NO
Magnesium	MG/KG	59300		100%	54	54		0	
Manganese	MG/KG	1330	619.9	100%	54	54	1.95E+04	0	NO
Mercury	MG/KG	1	0.195	89%	54	48	307	0	NO
Nickel	MG/KG	110	30.92	100%	54	54	2.04E+04	0	NO
Potassium	MG/KG	2180		100%	54	54		0	
Selenium	MG/KG	1.8	1.332	11%	54	6	5110	0	NO
Silver	MG/KG	1.8	0.716	41%	54	22	5110	0	NO
Sodium	MG/KG	636		98%	54	53		0	
Thallium	MG/KG	2.3	0.735	33%	54	18	67	0	NO
Vanadium	MG/KG	24	19.26	100%	54	54	1022	0	NO
Zinc	MG/KG	1740	262.5	98%	54	53	1.00E+05	0	NO

Notes:

- Parameters that were detected in surface soil are presented in this table.
- 95th Upper Confidence Limit was calculated from USEPA program, ProUCL Ver 4, <http://www.epa.gov/esd/tsc/download.htm>
- Sample duplicate pairs were averaged into a discrete sample and presented in this table.
- USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004
- Bold and shaded cells represent 95th UCL values that were replaced with the maximum detected concentration.
- Outlined and shaded cells represent the a 95th UCL value that exceeds the maximum detected concentration.

Table 6-17C
SEAD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Region IX Industrial Value ²	Number of Times Exceeded	Max Exceed SCO Value
Volatile Organic Compounds								
1,1,1-Trichloroethane	UG/KG	4	25%	4	1	1.20E+06	0	NO
Acetone	UG/KG	0	0%	4	0	5.43E+07	0	
Benzene	UG/KG	0	0%	4	0	1409	0	
Carbon disulfide	UG/KG	0	0%	4	0	7.20E+05	0	
Cyclohexane	UG/KG	0	0%	0	0	1.40E+05	0	
Methyl cyclohexane	UG/KG	0	0%	0	0	8.72E+06	0	
Methylene chloride	UG/KG	0	0%	4	0	2.05E+04	0	
Toluene	UG/KG	0	0%	4	0	5.20E+05	0	
Total BTEX	MG/KG	3.5	100%	3	3		0	YES
Total Xylenes	UG/KG	96	25%	4	1	4.20E+05	0	NO
Trichlorofluoromethane	UG/KG	0	0%	0	0	2.00E+06	0	
Semivolatile Organic Compounds								
2,4-Dinitrotoluene	UG/KG	0	0%	4	0	1.23E+06	0	
2-Methylnaphthalene	UG/KG	31000	25%	4	1		0	YES
4-Nitroaniline	UG/KG	0	0%	4	0	8.21E+04	0	
Acenaphthene	UG/KG	13000	25%	4	1	2.92E+07	0	NO
Acenaphthylene	UG/KG	340	25%	4	1		0	YES
Anthracene	UG/KG	590	25%	4	1	1.00E+08	0	NO
Benzo(a)anthracene	UG/KG	240	75%	4	3	2110	0	NO
Benzo(a)pyrene	UG/KG	160	75%	4	3	211	0	NO
Benzo(b)fluoranthene	UG/KG	130	75%	4	3	2110	0	NO
Benzo(ghi)perylene	UG/KG	76	50%	4	2		0	YES
Benzo(k)fluoranthene	UG/KG	98	75%	4	3	21096	0	NO
Bis(2-Ethylhexyl)phthalate	UG/KG	15	75%	4	3	1.23E+05	0	NO
Carbazole	UG/KG	380	50%	4	2	8.62E+04	0	NO
Chrysene	UG/KG	290	75%	4	3	2.11E+05	0	NO
Di-n-butylphthalate	UG/KG	0	0%	4	0	6.16E+07	0	
Dibenz(a,h)anthracene	UG/KG	4.4	25%	4	1	211	0	NO
Dibenzofuran	UG/KG	11000	25%	4	1	1.56E+06	0	NO
Fluoranthene	UG/KG	1900	75%	4	3	2.20E+07	0	NO
Fluorene	UG/KG	4100	25%	4	1	2.63E+07	0	NO
Indeno(1,2,3-cd)pyrene	UG/KG	56	50%	4	2	2110	0	NO
Naphthalene	UG/KG	17000	25%	4	1	1.88E+05	0	NO
Phenanthrene	UG/KG	3800	50%	4	2		0	YES
Phenol	UG/KG	0	0%	4	0	1.00E+08	0	
Pyrene	UG/KG	1700	75%	4	3	2.91E+07	0	NO
Pesticides and PCBs								
4,4'-DDD	UG/KG	0	0%	4	0	9951	0	
4,4'-DDE	UG/KG	0	0%	4	0	7025	0	
4,4'-DDT	UG/KG	5.1	25%	4	1	7025	0	NO
Alpha-BHC	UG/KG	18	75%	4	3	359	0	NO
Beta-BHC	UG/KG	2.7	50%	4	2	1258	0	NO
Delta-BHC	UG/KG	1.8	25%	4	1		0	YES
Dieldrin	UG/KG	0	0%	4	0	108	0	
Endosulfan sulfate	UG/KG	0	0%	4	0		0	
Endrin	UG/KG	3.7	25%	4	1	1.85E+05	0	NO
Endrin aldehyde	UG/KG	7.2	50%	4	2		0	YES
Endrin ketone	UG/KG	2.2	25%	4	1		0	YES
Gamma-BHC/Lindane	UG/KG	4	25%	4	1	1741	0	NO
Gamma-Chlordane	UG/KG	1.1	25%	4	1		0	YES
Heptachlor epoxide	UG/KG	1.5	25%	4	1	189	0	NO
Methoxychlor	UG/KG	19	25%	4	1	3.08E+06	0	NO
Aroclor-1260	UG/KG	0	0%	4	0		0	

Table 6-17C
SEAD-71 Fenced Area Excluded Summary Results - Subsurface Soil versus EPA Region IX Industrial Soil Cleanup Objective
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

SUBSURFACE SOIL								
Parameter ¹	Units	Maximum Concentration	Frequency of Detection	Number of Analyses	Number of Times Detected	Region IX Industrial Value ²	Number of Times Exceeded	Max Exceed SCO Value
Metals								
Aluminum	MG/KG	14500	100%	4	4	1.00E+05	0	NO
Antimony	MG/KG	0	0%	4	0	409	0	
Arsenic	MG/KG	5.3	100%	4	4	1.59E+00	4	YES
Barium	MG/KG	94.1	100%	4	4	6.66E+04	0	NO
Beryllium	MG/KG	0.56	100%	4	4	1941	0	NO
Cadmium	MG/KG	0	0%	4	0	451	0	
Calcium	MG/KG	134000	100%	4	4		0	YES
Chromium	MG/KG	21.2	100%	4	4		0	YES
Cobalt	MG/KG	11	100%	4	4	1921	0	NO
Copper	MG/KG	19.4	100%	4	4	4.09E+04	0	NO
Iron	MG/KG	21600	100%	4	4	1.00E+05	0	NO
Lead	MG/KG	16	100%	4	4	800	0	NO
Magnesium	MG/KG	10100	100%	4	4		0	YES
Manganese	MG/KG	784	100%	4	4	1.95E+04	0	NO
Mercury	MG/KG	0	0%	4	0	307	0	
Nickel	MG/KG	28	100%	4	4	2.04E+04	0	NO
Potassium	MG/KG	2940	100%	4	4		0	YES
Selenium	MG/KG	1.2	25%	4	1	5110	0	NO
Silver	MG/KG	0	0%	4	0	5110	0	
Sodium	MG/KG	138	50%	4	2		0	YES
Thallium	MG/KG	0	0%	4	0	67	0	
Vanadium	MG/KG	24.9	100%	4	4	1022	0	NO
Zinc	MG/KG	82.1	100%	4	4	1.00E+05	0	NO
Notes:								
1. Parameters that were detected in subsurface soil are presented in this table.								
2. USEPA region IX PRG Industrial Soil Cleanup Objective (SCO), 2004								

Table 6-18
Summary of SEAD-71 Groundwater Compared to Regulatory Guidance Values - Remedial Investigation
SEAD-59 and SEAD-71 - Record of Decision
Seneca Army Depot Activity

Parameter	Units	Maximum Level Detected	Frequency of Detection	Number of Times Detected	Number of Analyses ¹	NYSDEC GA Groundwater Standard	Number of Times Exceeded	Primary Drinking Water Standard	Number of Times Exceeded	Region IX Tap Water PRG	Number of Times Exceeded
Volatile Organic Compounds											
1,1,1-Trichloroethane	UG/L	3.1	33%	2	6	5	0	200	0	3.17E+03	0
Semivolatile Organic Compounds											
4-Nitroaniline	UG/L	8.7	17%	1	6	5	1		0	3.20E+00	1
Bis(2-Ethylhexyl)phthalate	UG/L	1.6	17%	1	6	5	0		0	4.80E+00	0
Pesticides and PCBs											
4,4'-DDE	UG/L	0.02225	33%	2	6	0.2	0		0	1.98E-01	0
4,4'-DDT	UG/L	0.0437	50%	3	6	0.2	0		0	1.98E-01	0
Endrin ketone	UG/L	0.008	17%	1	6	5	0		0		0
Metals											
Aluminum	UG/L	12200	43%	3	7		0		0	3.65E+04	0
Antimony	UG/L	6.9	43%	3	7	3	3	6	3	1.46E+01	0
Barium	UG/L	121	100%	7	7	1000	0	2000	0	2.55E+03	0
Beryllium	UG/L	0.819	14%	1	7		0	4	0	7.30E+01	0
Calcium	UG/L	218000	100%	7	7		0		0		0
Chromium	UG/L	4.58	29%	2	7	50	0	100	0		0
Cobalt	UG/L	1.2	29%	2	7		0		0	7.30E+02	0
Copper	UG/L	5.3	29%	2	7	200	0	1300	0	1.46E+03	0
Iron	UG/L	4470	100%	7	7	300	1		0	1.09E+04	0
Iron+Manganese ²	UG/L	4546.7	100%	7	7	500	2				
Lead	UG/L	7.3	29%	2	7	25	0	15	0		0
Magnesium	UG/L	28800	100%	7	7		0		0		0
Manganese	UG/L	2680	71%	5	7	300	1		0	8.76E+02	1
Mercury	UG/L	0.069	25%	2	8	0.7	0	2	0	1.09E+01	0
Nickel	UG/L	6.6	57%	4	7	100	0		0	7.30E+02	0
Potassium	UG/L	1150	100%	7	7		0		0		0
Sodium	UG/L	62200	100%	7	7	20000	4		0		0
Vanadium	UG/L	3	14%	1	7		0		0	3.65E+01	0
Zinc	UG/L	83.4	100%	7	7		0		0	1.09E+04	0

Notes:

- 1) Sample duplicate pairs were averaged into a discreet sample and presented in this table.
- 2) Iron+Manganese is a combined parameter for NYS GA groundwater guidance value.

TABLE 7-1
TOTAL NON-CARCINOGENIC HAZARDS AND CARCINOGENIC RISKS - SEAD-59
REASONABLE MAXIMUM EXPOSURE (RME) - In-site Soil and Groundwater
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

RECEPTOR	EXPOSURE ROUTE	REASONABLE MAXIMUM EXPOSURE (RME)			
		HAZARD INDEX		CANCER RISK	
		Hazard Index	Percent Contribution	Cancer Risk	Percent Contribution
<u>INDUSTRIAL WORKER</u>	Inhalation of Dust in Ambient Air	1E-01	11%	1E-07	0%
	Ingestion of Soil	2E-01	15%	8E-06	35%
	Dermal Contact to Soil	1E-02	1%	5E-06	22%
	Intake of Groundwater	8E-01	72%	1E-05	43%
	<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<u>1E+00</u>	100%	<u>2E-05</u>	100%
<u>CONSTRUCTION WORKER</u>	Inhalation of Dust in Ambient Air	7E+00	84%	2E-07	11%
	Ingestion of Soil	6E-01	6%	1E-06	53%
	Dermal Contact to Soil	2E-02	0%	3E-07	15%
	Dermal Contact to Groundwater	4E-04	0%	2E-10	0%
	Intake of Groundwater	8E-01	9%	4E-07	20%
<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<u>9E+00</u>	100%	<u>2E-06</u>	100%	
<u>ADOLESCENT TRESPASSER</u> <u>(Ages 11-16 yr)</u>	Inhalation of Dust in Ambient Air	8E-04	1%	1E-10	0%
	Ingestion of Soil	1E-02	9%	1E-07	26%
	Dermal Contact to Soil	7E-04	0%	5E-08	10%
	Intake of Groundwater	1E-01	90%	3E-07	64%
	<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<u>1E-01</u>	100%	<u>5E-07</u>	100%

Table 7-2
Comparison of Metal Concentrations in SEAD-59 Groundwater
with SEDA Background Values

SEAD-59 and SEAD-71 Record of Decision

Seneca Army Depot Activity

Compound	SEAD-59 Groundwater Concentration		Seneca Background (mg/L)	
	Maximum (mg/L)	Average (mg/L)	Maximum (mg/L)	Average (mg/L)
Antimony	0.0086	0.0056	0.0527	0.0082
Iron	3.68	0.60	69.4	4.490
Manganese	0.314	0.126	1.12	0.224

NA = not available

**Table 7-3
Comparison of Aluminum and Manganese Concentrations in SEAD-59 Soil with SEDA Background and
Regulatory Guidance Values**

SEAD-59 and SEAD-71 Record of Decision

Seneca Army Depot Activity

Compound	SEAD-59 Surface and Subsurface Soil Concentration (mg/Kg)			Seneca Background (mg/Kg)			Regulatory Guidance Values (mg/Kg)		
	Max¹	Ave²	95% UCL³	Max¹	Ave²	95% UCL³	Region IX Residential Soil PRG	Region IX Industrial Soil PRG	New York Unrestricted Use SCO
Aluminum	18,300	10,895	11,184	20,500	13,206	14,315	77,000	990,000	NA
Manganese	1,290	503	527	2,380	609	701	1,800	23,000	1,600

1 Max = maximum detected concentration

2 Ave = average AOC concentration

3 95th UCL = appropriate percentage upper confidence level of the mean of the AOC data set (e.g., 95th)

TABLE 7-4
TOTAL NON-CARCINOGENIC AND CARCINOGENIC RISKS FOR UNCERTAINTY ANALYSIS - SEAD-59 STOCKPILES
REASONABLE MAXIMUM EXPOSURE (RME) - Stockpile Soil and Groundwater
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

RECEPTOR	EXPOSURE ROUTE	REASONABLE MAXIMUM EXPOSURE (RME)			
		HAZARD INDEX		CANCER RISK	
		Hazard Index	Percent Contribution	Cancer Risk	Percent Contribution
<u>INDUSTRIAL WORKER</u>	Inhalation of Dust in Ambient Air	1.E-01	12%	1E-07	0%
	Ingestion of Soil	2.E-01	13%	3E-05	46%
	Dermal Contact to Soil	1.E-02	1%	2E-05	37%
	Intake of Groundwater	8.E-01	73%	1E-05	16%
	<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<u>1.E+00</u>	100%	<u>6E-05</u>	100%
<u>CONSTRUCTION WORKER</u>	Inhalation of Dust in Ambient Air	1.E-01	9%	5E-09	0%
	Ingestion of Soil	5.E-01	33%	4E-06	68%
	Dermal Contact to Soil	2.E-02	1%	1E-06	25%
	Dermal Contact to Groundwater	4.E-04	0%	2E-10	0%
	Intake of Groundwater	8.E-01	56%	4E-07	7%
<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<u>2.E+00</u>	100%	<u>6E-06</u>	100%	
<u>ADOLESCENT TRESPASSER</u> <u>(Ages 11-16 yr)</u>	Inhalation of Dust in Ambient Air	9.E-04	1%	1E-10	0%
	Ingestion of Soil	1.E-02	8%	5E-07	45%
	Dermal Contact to Soil	6.E-04	0%	2E-07	23%
	Intake of Groundwater	1.E-01	91%	3E-07	32%
	<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<u>1.E-01</u>	100%	<u>1E-06</u>	100%

Table 7-5

Comparison of Metal Concentrations in SEAD-59 Stockpiled Soil versus SEDA Background and Regulatory Guidance Values

SEAD-59 and SEAD-71 Record of Decision

Seneca Army Depot Activity

Compound	SEAD-59 Stockpiled Soil Concentration (mg/Kg)			Seneca Background (mg/Kg)			Regulatory Guidance Values (mg/Kg)		
	Max ¹	Ave ²	95% UCL ³	Max ¹	Ave ²	95% UCL ³	Region IX Residential Soil PRG	Region IX Industrial Soil PRG	New York Unrestricted Use SCO
Aluminum	13400	10701	10800	20500	13206	14315	77000	990000	NA
Antimony	43.9	3.1	6.8	6.55	2.7	3.3	31	410	NA
Arsenic	7.3	4.8	4.9	21.5	5.2	6.0	0.4	1.6	13
Iron	26500	20590	21147	38600	24661	26489	55000	720000	NA
Manganese	1220	522	489	2380	609	701	1800	23000	1600
Thallium	0.99	0.50	0.56	1.2	0.26	0.32	5.1	66	NA
Vanadium	35.4	19.9	19.4	32.7	21	23	550	7200	NA

1 Max = maximum detected concentration

2 Ave = average AOC concentration

3 95th UCL = appropriate percentage upper confidence level of the mean of the AOC data set (e.g., 95th)

TABLE 7-6
TOTAL NON-CARCINOGENIC HAZARDS AND CARCINOGENIC RISKS - SEAD-71
REASONABLE MAXIMUM EXPOSURE (RME) - All Soil and Groundwater
 SEAD-59 and SEAD-71 Record of Decision
 Seneca Army Depot Activity

RECEPTOR	EXPOSURE ROUTE	REASONABLE MAXIMUM EXPOSURE (RME)			
		HAZARD INDEX		CANCER RISK	
		Hazard Index	Percent Contribution	Cancer Risk	Percent Contribution
<u>INDUSTRIAL WORKER</u>	Inhalation of Dust in Ambient Air	NQ	0%	2E-07	0%
	Ingestion of Soil	1.E-01	4%	4E-05	24%
	Dermal Contact to Soil	6.E-03	0%	1E-04	66%
	Intake of Groundwater	2.E+00	96%	1E-05	9%
	<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<i><u>3.E+00</u></i>	100%	<i><u>2E-04</u></i>	100%
<u>CONSTRUCTION WORKER</u>	Inhalation of Dust in Ambient Air	NQ	0%	5E-07	4%
	Ingestion of Soil	3.E-01	12%	5E-06	41%
	Dermal Contact to Soil	8.E-03	0%	6E-06	50%
	Dermal Contact to Groundwater	1.E-03	0%	4E-10	0%
	Intake of Groundwater	2.E+00	88%	6E-07	5%
<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<i><u>3.E+00</u></i>	100%	<i><u>1E-05</u></i>	100%	
<u>CHILD TRESPASSER</u>	Inhalation of Dust in Ambient Air	NQ	0%	9E-09	0%
	Ingestion of Soil	5.E-02	5%	5E-06	41%
	Dermal Contact to Soil	1.E-03	0%	6E-06	47%
	Intake of Groundwater	9.E-01	95%	1E-06	11%
	<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<i><u>1.E+00</u></i>	100%	<i><u>1E-05</u></i>	100%

NQ= Not Quantified due to lack of toxicity data.

TABLE 7-7
TOTAL NON-CARCINOGENIC AND CARCINOGENIC RISKS FOR UNCERTAINTY ANALYSIS - SEAD-71 (FENCED AREA EXCLUDED)
REASONABLE MAXIMUM EXPOSURE (RME)
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

RECEPTOR	EXPOSURE ROUTE	REASONABLE MAXIMUM EXPOSURE (RME)			
		HAZARD INDEX		CANCER RISK	
		Hazard Index	Percent Contribution	Cancer Risk	Percent Contribution
<u>INDUSTRIAL WORKER</u>	Inhalation of Dust in Ambient Air	2E-01	5%	1E-07	0%
	Ingestion of Soil	2E-01	5%	1E-05	36%
	Dermal Contact to Soil	1E-02	0%	1E-05	25%
	Intake of Groundwater	3E+00	91%	1E-05	39%
	<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<u>3E+00</u>	100%	<u>4E-05</u>	100%
<u>CONSTRUCTION WORKER</u>	Inhalation of Dust in Ambient Air	9E+00	68%	3E-07	6%
	Ingestion of Soil	5E-01	4%	3E-06	60%
	Dermal Contact to Soil	2E-02	0%	9E-07	20%
	Dermal Contact to Groundwater	4E-01	4%	7E-10	0%
	Intake of Groundwater	3E+00	25%	6E-07	14%
	<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<u>1E+01</u>	100%	<u>4E-06</u>	100%
<u>ADOLESCENT TRESPASSER</u> <u>(Ages 11-16 yr)</u>	Inhalation of Dust in Ambient Air	1E-03	0%	2E-10	0%
	Ingestion of Soil	1E-02	2%	2E-07	28%
	Dermal Contact to Soil	7E-04	0%	9E-08	12%
	Intake of Groundwater	5E-01	97%	5E-07	60%
	<i>TOTAL RECEPTOR RISK (Nc & Car)</i>	<u>5E-01</u>	100%	<u>8E-07</u>	100%

Table 7-8
Comparison of Iron and Manganese Concentrations in SEAD-71 Groundwater with
SEDA Background Values

SEAD-59 and SEAD-71 Record of Decision

Seneca Army Depot Activity

	Iron		Manganese	
	SEAD-71	SEDA Background	SEAD-71	SEDA Background
Sample Number	8	28	8	28
Minimum (mg/L)	0.023	0.011	0.008	0.003
25 th percentile (mg/L)	0.037	0.244	0.014	0.026
Median (mg/L)	0.116	0.506	0.062	0.097
Arithmetic Mean (mg/L)	5.063	3.92	0.633	0.194
Maximum (mg/L)	35.1	69.4	2.68	1.12
75 th percentile (mg/L)	1.577	1.250	0.838	0.253
90 th percentile (mg/L)	13.66	6.855	1.98	0.474

Table 7-9
Comparison of Aluminum and Manganese Concentrations in SEAD-71 Soil Outside Fenced Area with SEDA
Background and Regulatory Guidance Values
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Compound	SEAD-71 Surface and Subsurface Soil Concentration (mg/Kg)			Seneca Background (mg/Kg)			Regulatory Guidance Values (mg/Kg)		
	Max ¹	Ave ²	95% UCL ³	Max ¹	Ave ²	95% UCL ³	Region IX Residential Soil PRG	Region IX Industrial Soil PRG	New York Unrestricted Use SCO
Aluminum	15,900	11,493	11,997	20,500	13,206	14,315	77,000	990,000	NA
Manganese	1,330	570	605	2,380	609	701	1,800	23,000	1,600

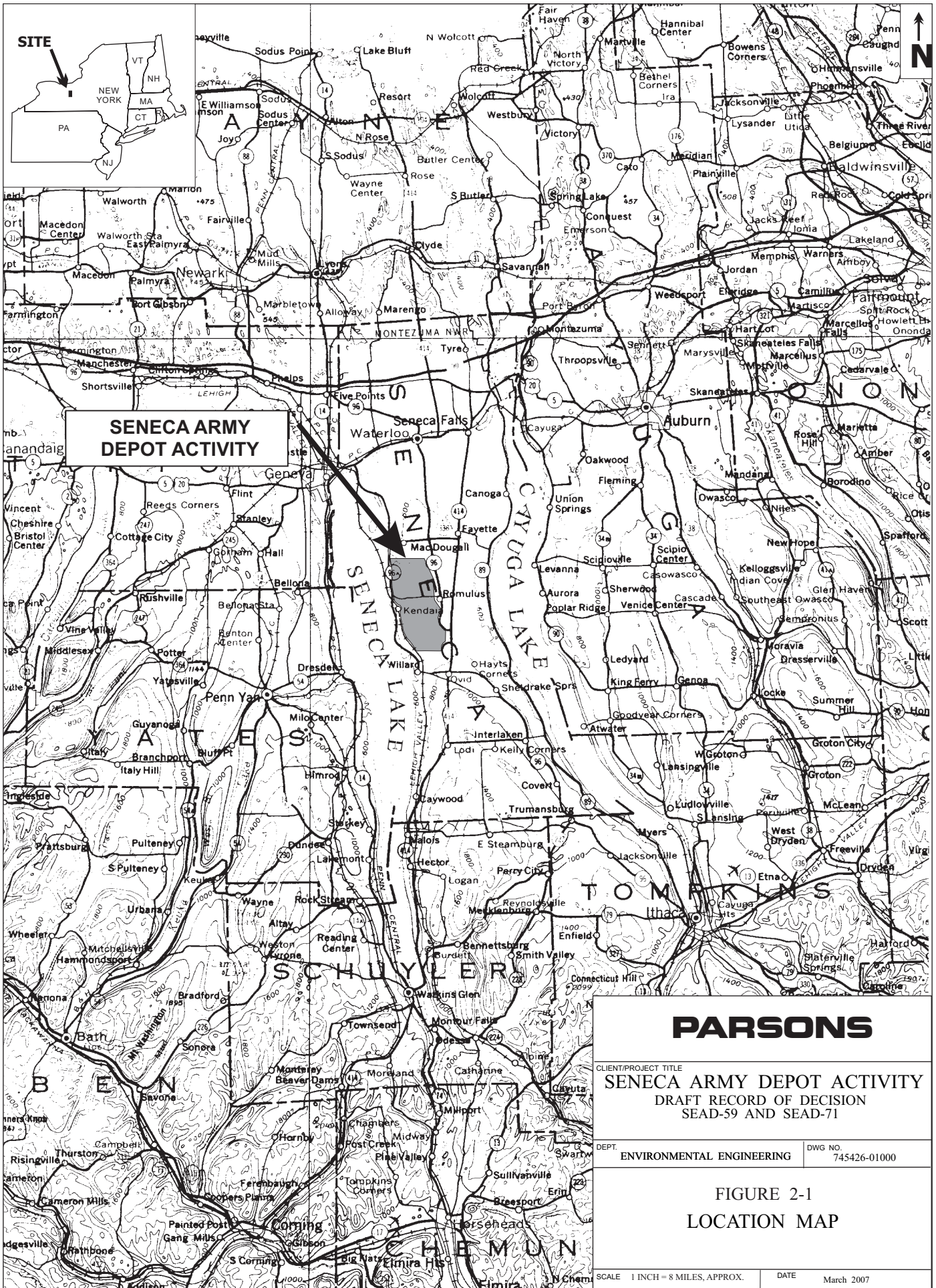
1 Max = maximum detected concentration

2 Ave = average AOC concentration

3 95th UCL = appropriate percentage upper confidence level of the mean of the AOC data set (e.g., 95th)

LIST OF FIGURES

<u>NUMBER</u>	<u>TITLE</u>
2-1	Location Map
2-2	SEAD-59 Site Map
2-3	SEAD-71 Site Map
3-1	Location of SEAD-59 and SEAD-71
6-1	SEAD-59 Phase I Remedial Investigation Sample Locations
7-1	Human Health Risk Assessment Methodology
7-2	Conceptual Site Model for SEAD-59 and SEAD-71
7-3	Screening Level Ecological Risk Assessment Process



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LEGEND

- MINOR WATERWAY
- MAJOR WATERWAY
- FENCE
- UNPAVED ROAD
- BRUSH LINE
- LANDFILL EXTENTS
- ===== RAILROAD
- 760 ----- GROUND SURFACE ELEVATION CONTOUR
- ⊕ ROAD SIGN
- ⊗ DECIDUOUS TREE
- △ GUIDE POST
- ⊕ FIRE HYDRANT
- ⊗ MANHOLE
- ⊕ COORDINATE GRID (250' GRID)
- POLE
- UTILITY BOX
- ⊗ SURVEY MONUMENT
- OVERHEAD UTILITY POLE
- MAILBOX/RR SIGNAL
- APPROXIMATE EXTENT OF AOC



PARSONS

SENECA ARMY DEPOT ACTIVITY
SEAD-59 AND SEAD-71
RECORD OF DECISION

FIGURE 2-2

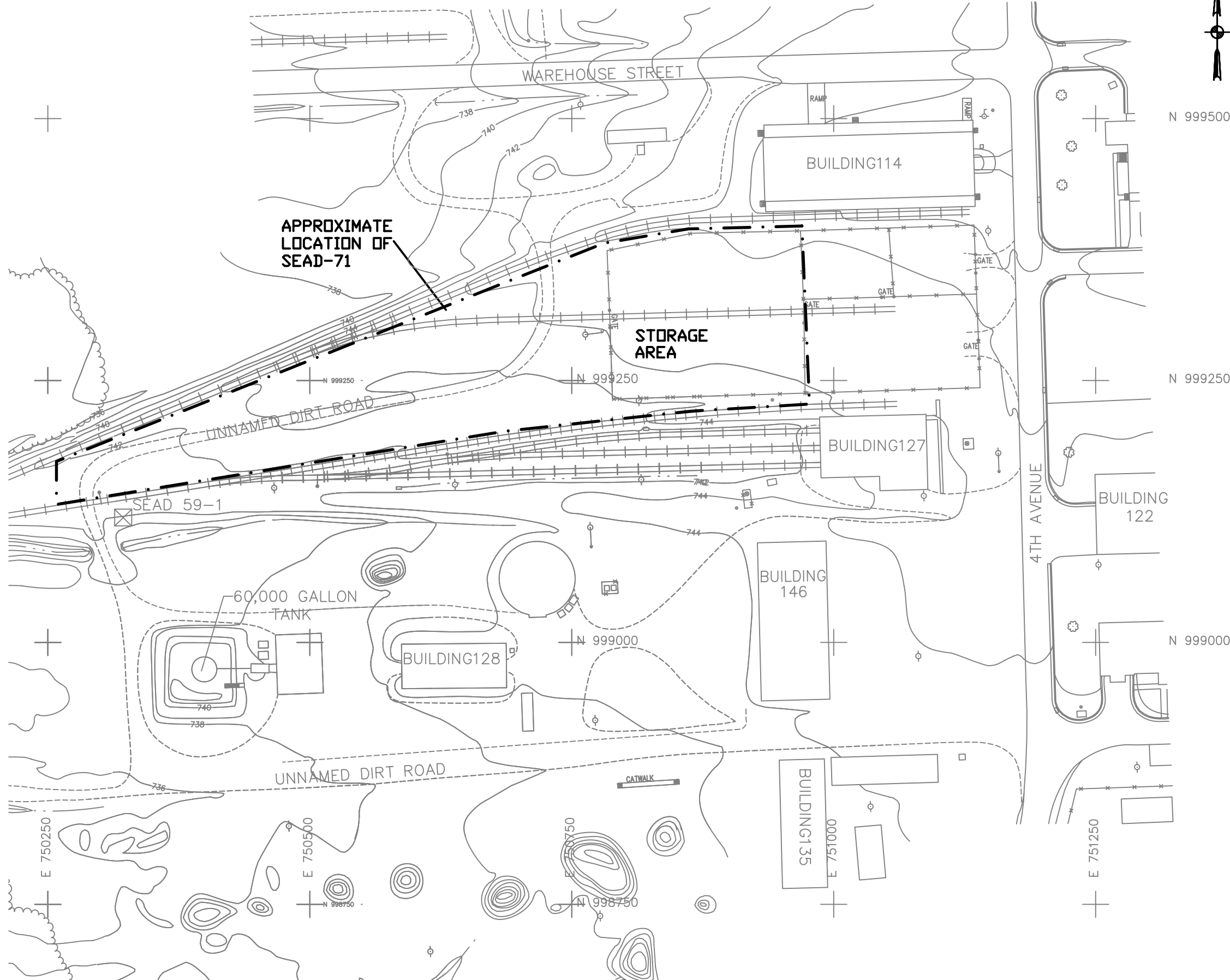
SEAD-59
SITE PLAN

February 2008

743519-03000

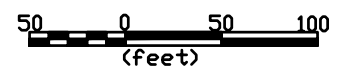


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LEGEND

	MINOR WATERWAY				
	MAJOR WATERWAY				
	FENCE				
	UNPAVED ROAD				
	BRUSH LINE				
	LANDFILL EXTENTS				
	RAILROAD				
	GROUND SURFACE ELEVATION CONTOUR				
	ROAD SIGN		DECIDUOUS TREE		GUIDE POST
	FIRE HYDRANT		MANHOLE		CORDINATE GRID (250' GRID)
	POLE		UTILITY BOX		MAILBOX/RR SIGNAL
	OVERHEAD UTILITY POLE		MAILBOX/RR SIGNAL		
	APPROXIMATE EXTENT OF ADC				



PARSONS

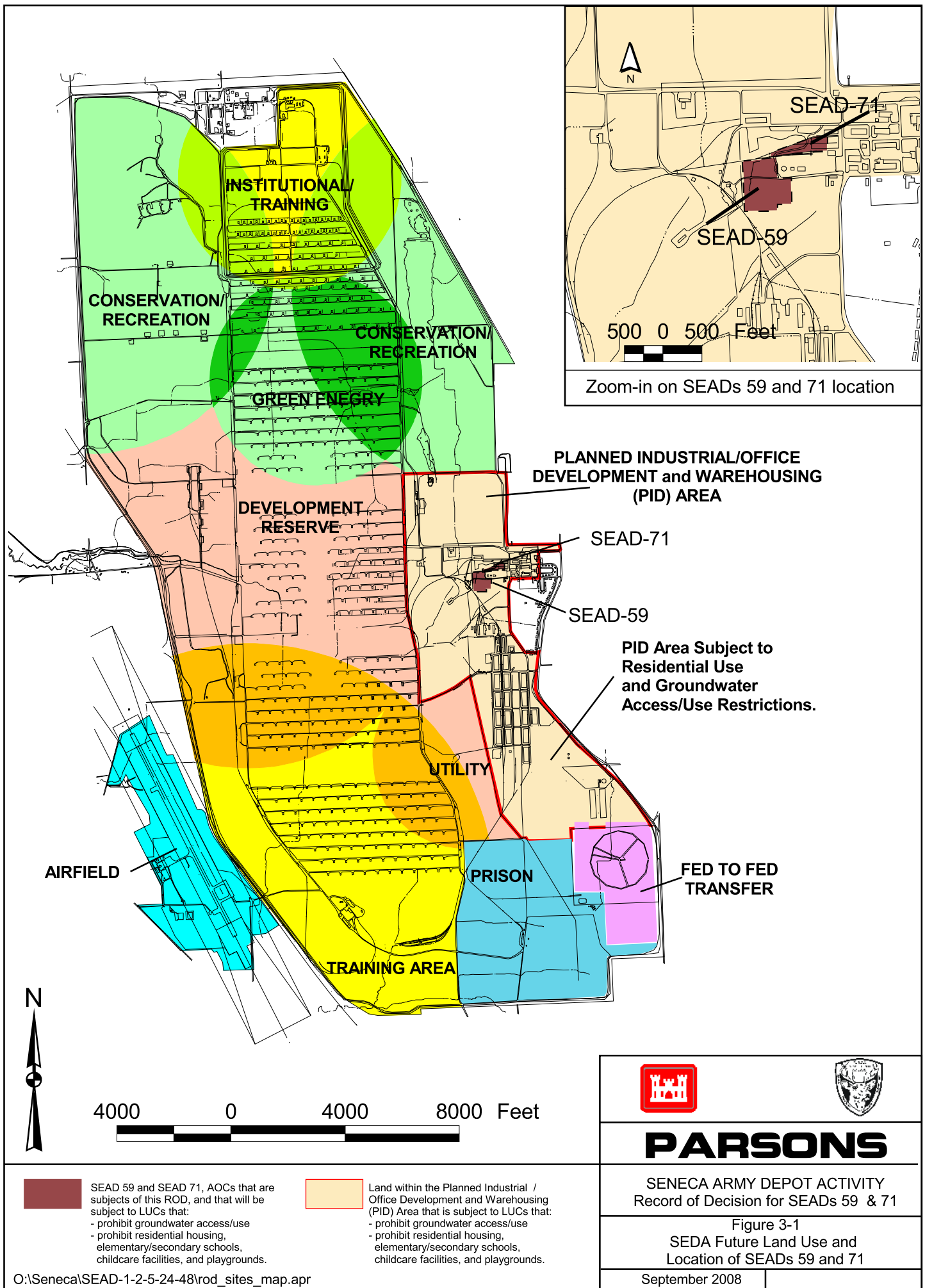
SENECA ARMY DEPOT ACTIVITY
SEAD-59 AND SEAD-71
RECORD OF DECISION

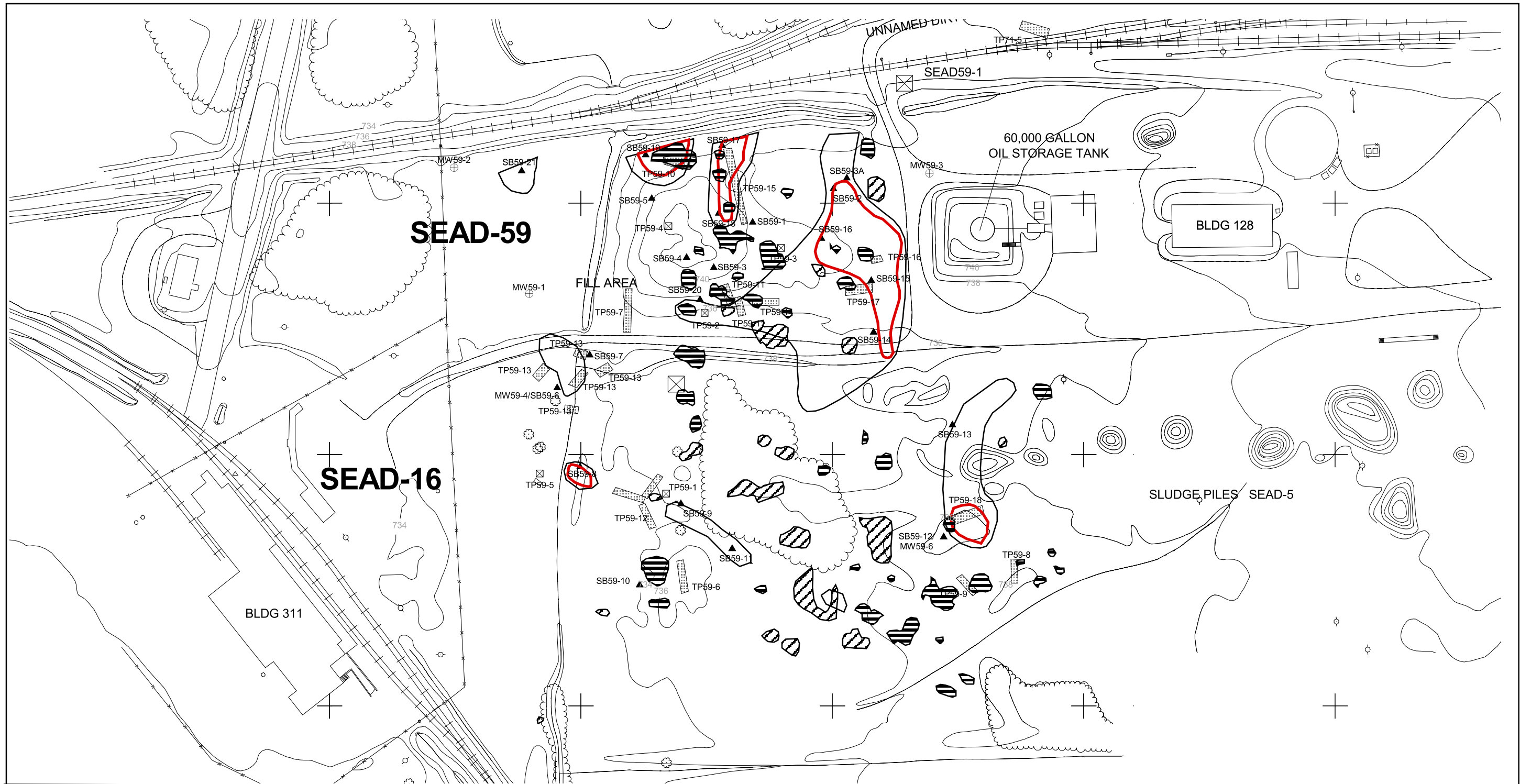
FIGURE 2-3

SEAD-71
SITE PLAN

February 2008

743519-03000









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-  Base Map Features
-  Phase I RI Test Pit Locations
-  ESI Test Pit Locations
-  Monitoring Well Location
-  Soil Boring Location

Suspected Source of Geophysical Anomalies

-  Known Surface Debris
-  Unknown

Soil Gas

-  20 ppm or greater
-  10 ppm - 20 ppm



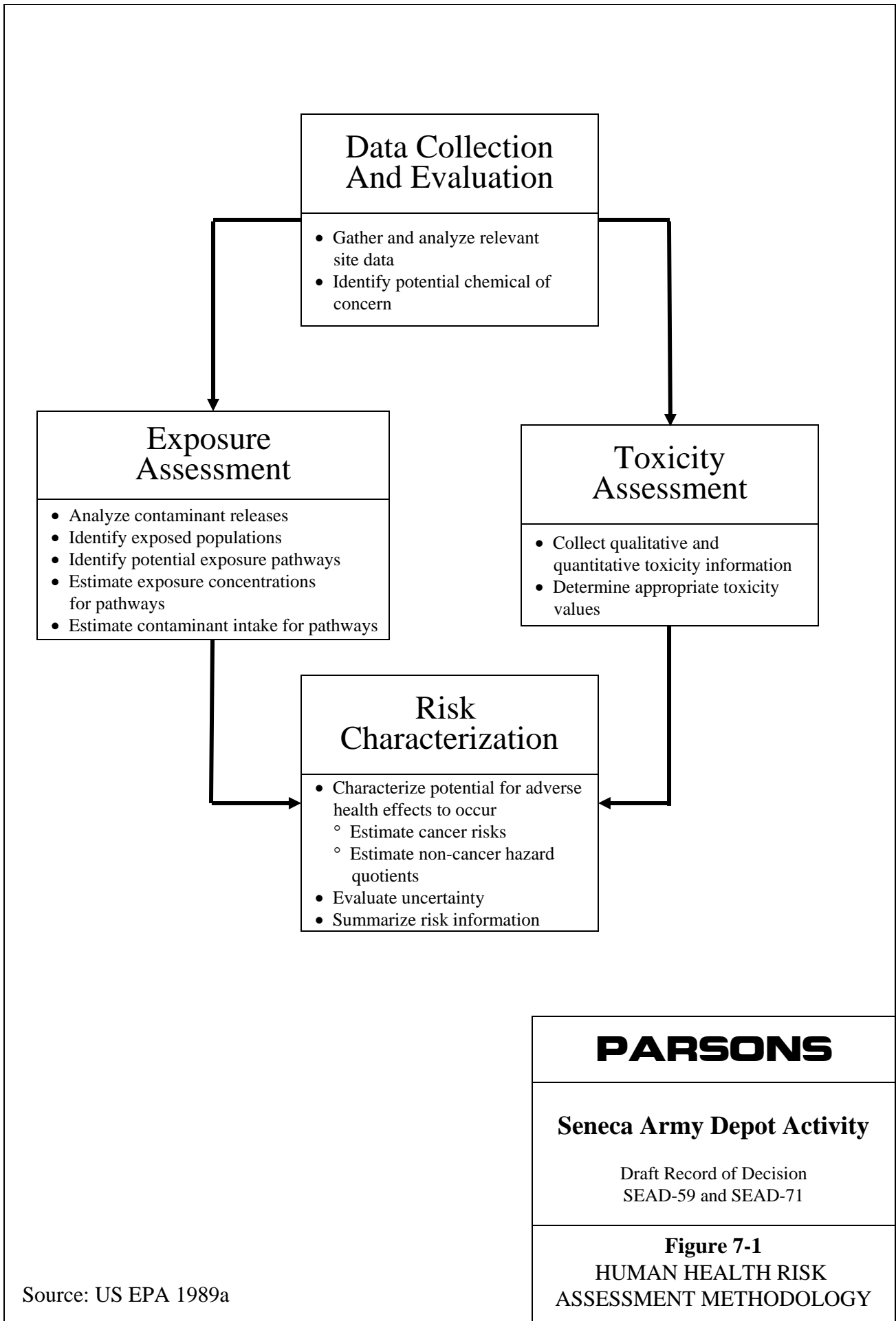
PARSONS

SENECA ARMY DEPOT ACTIVITY
SEAD-59 and SEAD-71 Record of Decision

FIGURE 6-1
SEAD-59 Phase I Remediation Investigation
Sample Locations

DATE
JAN 2008

SHEET No. 1 OF 1



PARSONS

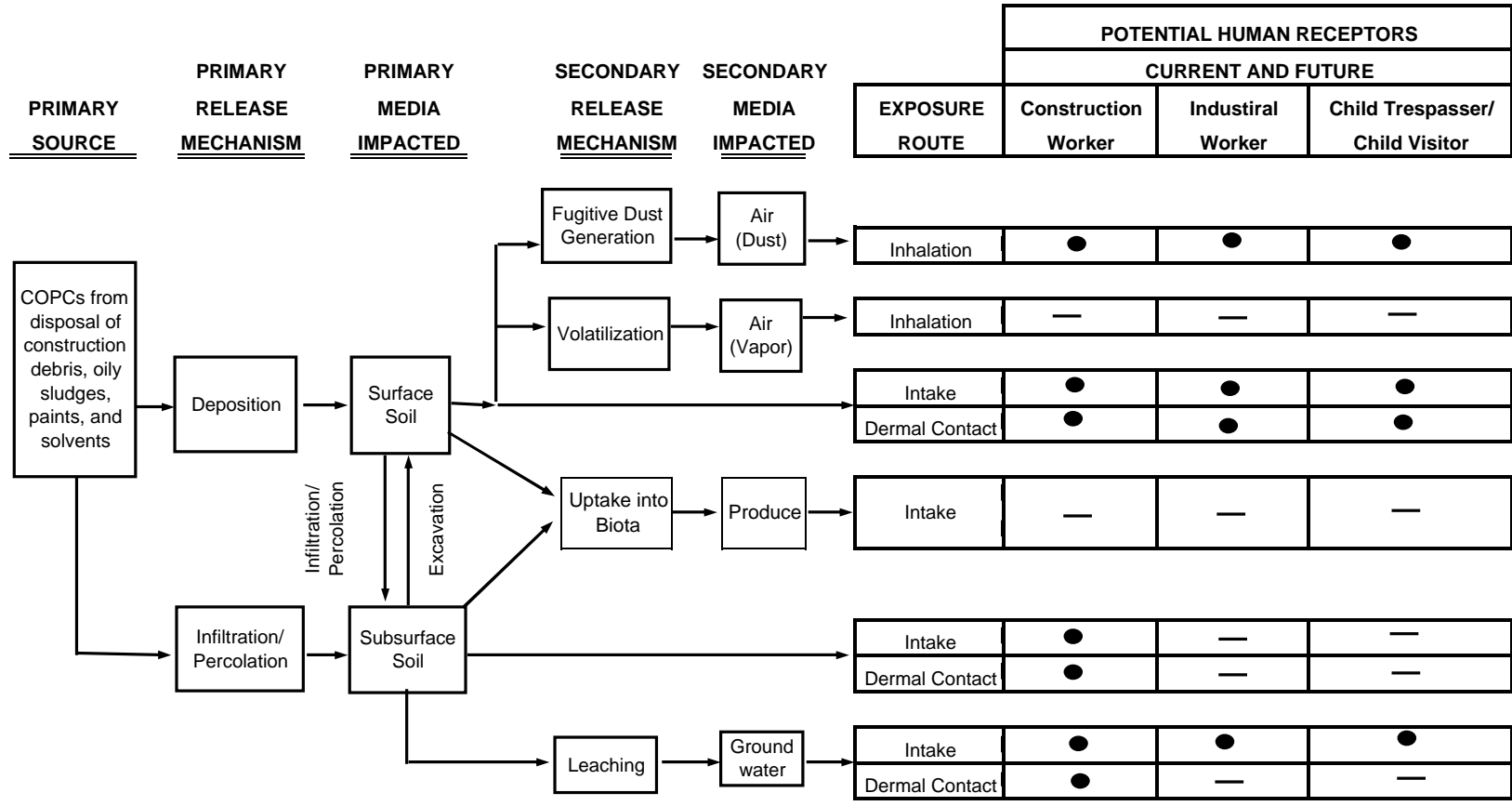
Seneca Army Depot Activity

Draft Record of Decision
SEAD-59 and SEAD-71

Figure 7-1
HUMAN HEALTH RISK
ASSESSMENT METHODOLOGY

Source: US EPA 1989a

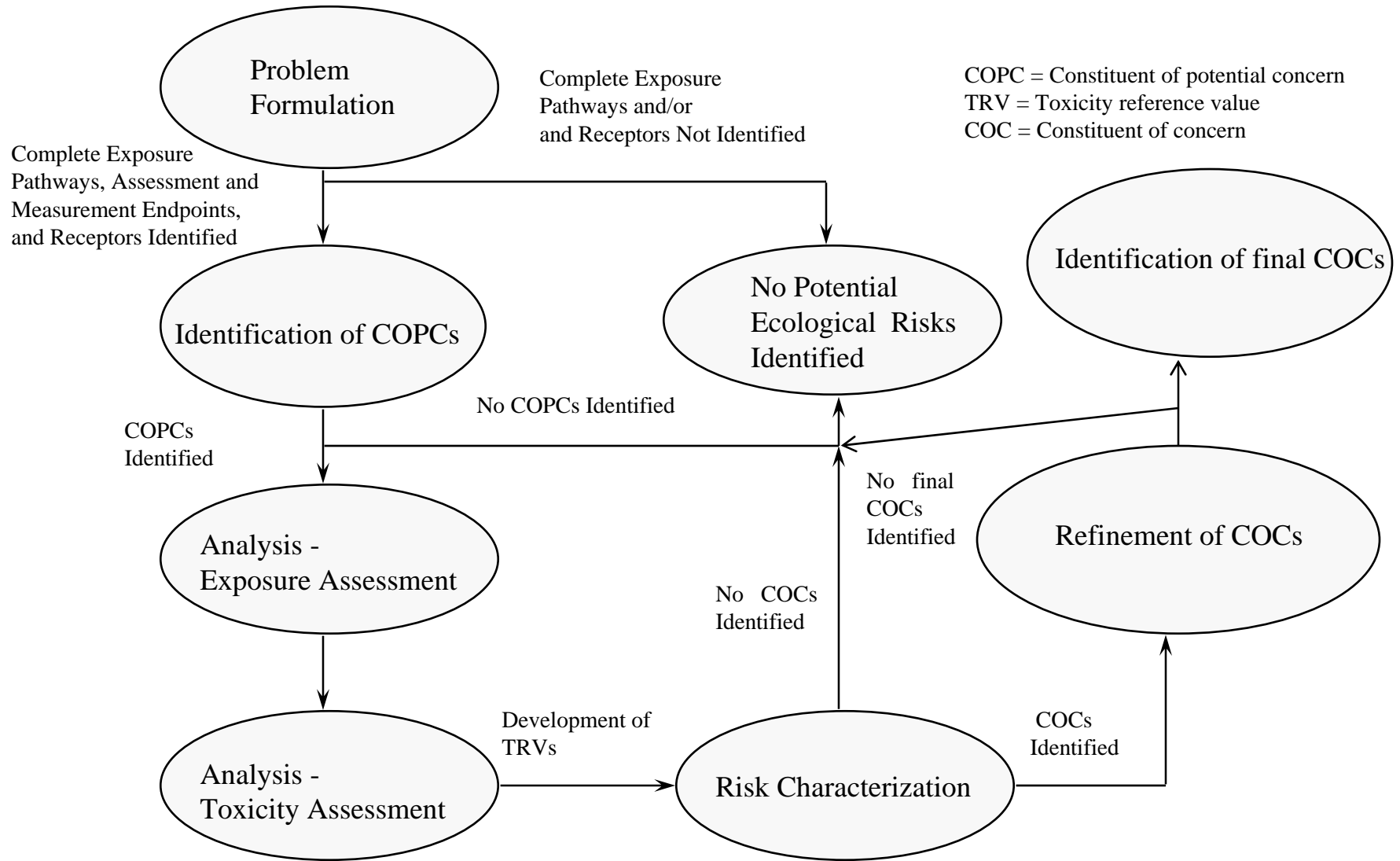
Figure 7-2
Conceptual Site Model for SEAD-59 and SEAD-71
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity



LEGEND

- = Potential Pathways
- = Principal Pathways for quantitative evaluation
- = Incomplete pathways

Figure 7-3 Screening Level Ecological Risk Assessment Process



APPENDICES

<u>APPENDIX</u>	<u>TITLE</u>
A	Administrative Record
B	Letter of Concurrence
C	Public Comment and Responsiveness Summary
D	Analytical Results for Samples
E	Risk Assessment Data and Results
F	List of ARARs

APPENDIX A

ADMINISTRATIVE RECORD

ADMINISTRATIVE RECORD

DISP-01-001 Project Scoping Plan for Performing a CERCLA RI/FS at the Fill Area West of Building 135 (SEAD-59) (PRE-DRAFT), Engineering Science, Inc., July 1995

DISP-01-001 Project Scoping Plan for Performing a CERCLA RI/FS at the Alleged Paint Disposal Area (SEAD-71) (PRE-DRAFT), Engineering Science, Inc., July 1995

DISP-01-001 Project Scoping Plan for Performing a CERCLA RI/FS at the Sewage Sludge Waste Piles (SEAD 5), the Fill Area West of Building 135 (SEAD 59), and the Alleged Paint Disposal Area (SEAD 71), Seneca Army Depot Activity (DRAFT), Parsons Engineering Science, Inc., January 1996

DISP-01-001 Project Scoping Plan for Performing a CERCLA RI/FS at the fill Area West of Building 135 (SEAD-59), and the Alleged Paint Disposal Area (SEAD-71) (DRAFT-FINAL), Parsons Engineering Science, Inc., February 1997

DISP-01-001 Project Scoping Plan for Performing a CERCLA RI/FS at the Fill Area West of Building 135 (SEAD-59), and the Alleged Paint Disposal Area (SEAD-71) (FINAL), Parsons Engineering Science, Inc., April 1997

DISP-01-002 Phase I Remedial Investigation (RI) at the Fill Area West of Building 135 (SEAD-59), and the Alleged Paint Disposal Area (SEAD-71), Seneca Arm Depot Activity (DRAFT), Parsons Engineering Science, Inc., July 1998

DISP-01-002 Phase I Remedial Investigation (RI) at the Fill Area West of Building 135 (SEAD-59), and the Alleged Paint Disposal Area (SEAD-71), Seneca Arm Depot Activity (FINAL), Parsons Engineering Science, Inc., November 2001

DISP-01-002 Phase I Remedial Investigation (RI) at the Fill Area West of Building 135 (SEAD-59), and the Alleged Paint Disposal Area (SEAD-71), Seneca Arm Depot Activity (FINAL-REVISED), Parsons Engineering Science, Inc., July 2002

DISP-01-002 Phase II Remedial Investigation (RI) at the Fill Area West of Building 135 (SEAD-59), and the Alleged Paint Disposal Area (SEAD-71), Seneca Arm Depot Activity (PRE-DRAFT), Parsons Infrastructure & Technology Group, Inc., April 2005

DISP-01-002 Phase II Remedial Investigation (RI) at the Fill Area West of Building 135 (SEAD-59), and the Alleged Paint Disposal Area (SEAD-71), Seneca Arm Depot Activity (DRAFT), Parsons Infrastructure & Technology Group, Inc., June 2005

DISP-01-002 Phase II Remedial Investigation (RI) at the Fill Area West of Building 135 (SEAD-59), and the Alleged Paint Disposal Area (SEAD-71), Vols I & II, [CD], Seneca Arm Depot Activity (DRAFT-Final), Parsons Infrastructure & Technology Group, Inc., April 2006

DISP-01-003 Engineering Evaluation/Cost Analysis (EE/CA) Approval Memorandum Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71), (DRAFT), Parsons Engineering Science, Inc., December 1998

- DISP-01-004 Action Memorandum for Removal Actions at SWMU's SEAD-59 and SEAD-71, Seneca Army Depot Activity, (DRAFT), Parsons Engineering Science, Inc., June 2001
- DISP-01-004 Response to Comments on Action Memorandum for Removal Actions at SWMU's SEAD-59 and SEAD-71, Seneca Army Depot Activity, (DRAFT), December 2001 (Filed in back of DRAFT June 2001 book)
- DISP-01-004 Action Memorandum for Removal Actions at SWMU's SEAD-59 and SEAD-71, Seneca Army Depot Activity, (FINAL), Parsons Engineering Science, Inc., April 2002
- DISP-01-004 Action Memorandum for Removal Actions at SWMU's SEAD-59 and SEAD-71, Seneca Army Depot Activity, (FINAL REVISED), Parsons Engineering Science, Inc., June 2002
- DISP-01-005 Memorandum Cost Curves for SEAD 4 and SEAD-59, Parsons Engineering Science, Inc., October 2001
- DISP-01-006 Final Workplan SEAD-59 & -71, Time Critical Removal Action, ENSR Corporation, August 2002.
- DISP-01-007 Final Draft Removal Report SEAD-59 & -71, Time Critical Removal Action, ENSR Corporation, December 2002
- DISP-01-007 Final Removal Report SEAD-59 & -71, Time Critical Removal Action, ENSR Corporation, January 2003
- DISP-01-008 Site Specific Health and Safety Plan, SEAD 59/71 – Groundwater Sampling, Parsons Engineering Science, Inc., September 2003.
- DISP-03-001 DRAFT Proposed Plan for the Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71) [CD], Parsons Infrastructure & Technology Group, Inc., March 2007
- DISP-03-001 DRAFT Final Proposed Plan for the Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71) [CD], Parsons Infrastructure & Technology Group, Inc., June 2007
- DISP-05-001 Decision Document for Removal Actions at SWMUs SEAD-59 and SEAD-71, Seneca Army Depot Activity, (DRAFT), Parsons Engineering Science, Inc., April 2001
- DISP-05-003 Draft ROD Fill Area West of Building 135 (SEAD 59) & Alleged Paint Disposal Area (SEAD 71) and Appendices, Parsons Infrastructure & Technology Group, Inc., February 2008.
- DISP-05-003 Draft-Final ROD Fill Area West of Building 135 (SEAD 59) & Alleged Paint Disposal Area (SEAD 71) and Appendices, Parsons Infrastructure & Technology Group, Inc., April 2008.

APPENDIX B

LETTER OF CONCURRENCE

APPENDIX C

PUBLIC COMMENT AND RESPONSIVENESS SUMMARY

PUBLIC COMMENTS AND RESPONSIVENESS SUMMARY**The FILL AREA WEST OF BUILDING 135 (SEAD-59) AND THE ALLEGED PAINT
DISPOSAL AREA (SEAD-59)****SENECA ARMY DEPOT SUPERFUND SITE****INTRODUCTION**

A responsiveness summary is required by Superfund policy. It provides a summary of citizen's comments and concerns received during the public comment period, and the Army's responses to those comments and concerns.

OVERVIEW

Since the inception of this project, the Army has implemented an active policy of involvement with the local community. This involvement has occurred through the public forum provided by regular meetings of the Base Clean-up Team (BCT). During these meetings, representatives of the community, the Army and the regulators are brought together in a forum where ideas and concerns are voiced and addressed. The BCT has been routinely briefed by the Army in regards to the progress and the results obtained during both the investigation and remedial alternative selection process. In addition to regular project specific briefings, the Army has provided experts in various fields related to the CERCLA program that have provided lectures intended to educate the general public in the various technical aspects of the CERCLA program at SEDA. Lectures have been conducted on risk assessments, both human health and ecological, remedial alternatives, such as bioventing and natural attenuation, institutional controls, and the feasibility study process.

BACKGROUND ON COMMUNITY INVOLVEMENT

Initially, during the years from 1991 through 1995 the Army formed and solicited community involvement through quarterly meetings with the Technical Review Committee (TRC). The TRC was comprised of community leaders with an active interest in the on-goings of the CERCLA process at the depot. These meetings were open to the public and were announced in the local newspaper and the radio. Following inclusion of the depot on the final BRAC closure list in late 1995, the Army transitioned from the TRC and formed the Base Clean-up Team (BCT). The BCT was comprised of several of the TRC members with the addition of additional Army and regulatory representatives. The BCT increased the frequency of the meetings to a monthly basis. Since the formation of the TRC and the BCT, the Army has met with the local community members on a regular basis and has discussed the finding of both the RI and the FS. In addition, the proposed plan has been presented to the BCT.

SUMMARY OF COMMUNITY RELATIONS ACTIVITIES

The RI reports, the Completion Report for the Time-Critical Removal Action and the Proposed Plan for SEAD-59 and SEAD-71 were released to the public for comment. These documents were made available to the public in the administrative record file at the information repositories at Building 123 within the Seneca Army Depot Activity, 5786 State Route 96, Romulus, New York, 14541-0009. The public comment period on these documents was held from December 10, 2007 to January 8, 2008. The notice of availability for the above-referenced documents was published in the Finger Lake Times during this time period.

On December 19, 2007, the Army, the USEPA and the NYSDEC conducted a public meeting at the Seneca County Board of Supervisors Room, located at the Seneca County Office Building in Waterloo, NY to inform local officials and interested citizens about the Superfund process, to review current and planned remedial activities at the AOCs, and to respond to any questions from area residents and other attendees. The meeting included poster board presentations and provided an opportunity for the public to speak to Army, USEPA and NYSDEC representatives involved in the process. The public was given the opportunity to provide formal comments that would be documented and become part of the official record for the selected remedy.

SUMMARY OF COMMENTS AND RESPONSES

No formal comments were received from the community during the public meeting. There is no official transcript since no comments were provided. There was one letter received from the public during the public comment period, which is provided on the following page. The Army's response to this letter is also provided.

Mr. Stephen M. Absolom
BRAC Environmental Coordinator
Seneca Army Depot Activity
Building 123, P.O. Box 9
5786 State Route 96
Romulus, New York 14541-0009

January 4, 2008

Dear Mr. Absolom,

This letter serves as comments on the Proposed Plan – Draft Final for the Fill Area West of Building 135 (SEAD-59) and the Alleged Paint Disposal Area (SEAD-71).

The proposed alternatives demonstrate the outstanding leadership that the U.S. Army Corps of Engineers and Parson's Engineering have displayed in regards to their long-standing working relationship in regards to environmental remediation at Seneca Army Depot Activity. Both the Corps of Engineers and Parson's Engineering have done a commendable job in making the Depot available for future uses.

I thank you for the ability to comment on the Proposed Plan.

Regards,



Thomas J. Klotzbach
1204 Waterport Road
Waterport, New York 14571

Response:

The U.S. Army Corps of Engineers, Seneca Army Depot, acknowledges receipt of Mr. Klotzbach's letter, dated January 4, 2008. We wish to express our thanks for his comments in appreciation of the efforts undertaken at SEAD-59 and SEAD-71.

APPENDIX D

ANALYTICAL RESULTS FOR SAMPLES

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 UJ	5 U	5 U	5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 UJ	5 UJ	6 R	6 U	6 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	UG/KG	5 UJ	5 U	6 R	5 U	6 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	UG/KG				6 U					
1,2,4-Trichlorobenzene	UG/KG	5 UJ	5 UJ	6 R	6 U	6 U	5 UJ	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	UG/KG	5 UJ	5 UJ	6 R		6 U	5 UJ	5 U	5 U	5 U
1,2-Dibromoethane	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	UG/KG	5 UJ	5 UJ	6 R	6 U	6 U	5 UJ	5 U	5 U	5 U
1,2-Dichloroethane	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	UG/KG	5 UJ	5 UJ	6 R	6 U	6 U	5 UJ	5 U	5 U	5 U
1,3-Dichloropropane	UG/KG				6 U					
1,4-Dichlorobenzene	UG/KG	5 UJ	5 UJ	6 R	6 U	6 U	5 UJ	5 U	5 U	5 U
Acetone	UG/KG	50 J	5 U	6 R	9.6 J	41 NJ	31 NJ	47 NJ	98 NJ	18 NJ
Benzene	UG/KG	1 J	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Bromodichloromethane	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Bromoform	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Carbon disulfide	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Chlorobenzene	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Chlorodibromomethane	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Chloroethane	UG/KG	5 UJ	5 U	6 R	12 U	6 U	5 U	5 U	5 U	5 U
Chloroform	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Cis-1,2-Dichloroethene	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Cis-1,3-Dichloropropene	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Cyclohexane	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09	CL-59-01-F09
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09	CL-59-01-F09
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	5 UJ	5 UJ	6 R		6 U	5 U	5 U	5 U	5 U
Ethyl benzene	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Isopropylbenzene	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Meta/Para Xylene	UG/KG				6 U					
Methyl Acetate	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Methyl Tertbutyl Ether	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 UJ	5 UJ
Methyl bromide	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 UJ	5 UJ
Methyl butyl ketone	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 UJ	5 UJ
Methyl chloride	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Methyl cyclohexane	UG/KG	4 J	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Methyl ethyl ketone	UG/KG	5 UJ	5 U	6 R	12 U	6 U	5 U	5 U	17 J	5 U
Methyl isobutyl ketone	UG/KG	5 UJ	5 U	6 R	12 U	6 U	5 U	5 U	5 UJ	5 UJ
Methylene chloride	UG/KG	8 UJ	5 U	6 UJ		6 U	5 U	5 U	5 UJ	5 UJ
Ortho Xylene	UG/KG				6 U					
Styrene	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Tetrachloroethene	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Toluene	UG/KG	2 J	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG	5 UJ	5 UJ	6 R		6 U	5 UJ	5 U	5 U	5 U
Trans-1,2-Dichloroethene	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Trans-1,3-Dichloropropene	UG/KG	5 UJ	5 U	6 R		6 U	5 U	5 U	5 U	5 U
Trichloroethene	UG/KG	5 UJ	5 U	6 R	6 U	6 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	UG/KG	5 UJ	5 UJ	6 R		6 U	5 U	5 U	5 U	5 U
Vinyl chloride	UG/KG	5 UJ	5 U	6 R	12 U	6 U	5 U	5 U	5 U	5 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG	360 U	380 U	410 UJ		390 U	370 U	410 U	370 UJ	380 UJ
2,4,5-Trichlorophenol	UG/KG	910 U	950 U	1000 U	390 U	980 U	940 U	1000 U	920 U	960 U
2,4,6-Trichlorophenol	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
2,4-Dichlorophenol	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
2,4-Dimethylphenol	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
2,4-Dinitrophenol	UG/KG	910 U	950 U	1000 U	2000 U	980 U	940 U	1000 U	920 U	960 U
2,4-Dinitrotoluene	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
2,6-Dinitrotoluene	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
2-Chloronaphthalene	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
2-Chlorophenol	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
2-Methylnaphthalene	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	42 J	370 U	380 U
2-Methylphenol	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
2-Nitroaniline	UG/KG	910 U	950 U	1000 U	2000 U	980 U	940 U	1000 U	920 U	960 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
3,3'-Dichlorobenzidine	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
3-Nitroaniline	UG/KG	910 U	950 U	1000 U	2000 U	980 U	940 U	1000 U	920 U	960 U
4,6-Dinitro-2-methylphenol	UG/KG	910 U	950 U	1000 U		980 U	940 U	1000 U	920 U	960 U
4-Bromophenyl phenyl ether	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
4-Chloro-3-methylphenol	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
4-Chloroaniline	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
4-Chlorophenyl phenyl ether	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
4-Methylphenol	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
4-Nitroaniline	UG/KG	910 U	950 U	1000 U		980 U	940 U	1000 U	920 U	960 U
4-Nitrophenol	UG/KG	910 U	950 U	1000 U	2000 U	980 U	940 U	1000 U	920 U	960 U
Acenaphthene	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Acenaphthylene	UG/KG	360 U	380 U	410 U	76 J	390 U	370 U	410 U	370 U	53 J
Acetophenone	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
Aniline	UG/KG				390 U					
Anthracene	UG/KG	360 U	380 U	410 U	82 J	390 U	370 U	410 U	370 U	120 J
Atrazine	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
Benzaldehyde	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
Benzo(a)anthracene	UG/KG	360 U	380 U	410 U	240 J	390 U	370 U	86 NJ	370 U	510 NJ
Benzo(a)pyrene	UG/KG	360 U	380 U	410 U	270 J	390 U	370 U	95 J	370 U	520
Benzo(b)fluoranthene	UG/KG	360 U	380 U	410 U	200 J	390 U	370 U	120 J	370 U	630
Benzo(ghi)perylene	UG/KG	360 U	380 U	410 U	190 J	390 U	370 U	53 J	370 U	130 J
Benzo(k)fluoranthene	UG/KG	360 U	380 U	410 U	200 J	390 U	370 U	48 J	370 U	360 J
Benzoic Acid	UG/KG				2000 U					
Bis(2-Chloroethoxy)methane	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
Bis(2-Chloroethyl)ether	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	360 U	380 U	410 U	390 U	41 J	40 J	410 U	370 U	39 NJ
Butylbenzylphthalate	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Caprolactam	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
Carbazole	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
Chrysene	UG/KG	360 U	380 U	410 U	260 J	390 U	370 U	90 J	370 U	490
Di-n-butylphthalate	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Di-n-octylphthalate	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Dibenz(a,h)anthracene	UG/KG	360 U	380 U	410 U	59 J	390 U	370 U	410 U	370 U	39 J
Dibenzofuran	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Diethyl phthalate	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Dimethylphthalate	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Fluoranthene	UG/KG	360 U	380 U	410 U	480 J	390 U	370 U	140 J	370 U	920
Fluorene	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	71 J
Hexachlorobenzene	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Hexachlorobutadiene	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Hexachlorocyclopentadiene	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Indeno(1,2,3-cd)pyrene	UG/KG	360 U	380 U	410 U	180 J	390 U	370 U	57 J	370 U	140 J
Isophorone	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
N-Nitrosodiphenylamine	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
N-Nitrosodipropylamine	UG/KG	360 U	380 U	410 U		390 U	370 U	410 U	370 U	380 U
Naphthalene	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	53 J	370 U	380 U
Nitrobenzene	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Pentachlorophenol	UG/KG	910 U	950 U	1000 U	2000 U	980 U	940 U	1000 U	920 U	960 U
Phenanthrene	UG/KG	360 U	380 U	410 U	210 J	390 U	370 U	110 J	370 U	360 J
Phenol	UG/KG	360 U	380 U	410 U	390 U	390 U	370 U	410 U	370 U	380 U
Pyrene	UG/KG	360 U	380 U	410 U	440 J	390 U	370 U	140 J	370 U	960
Pyridine	UG/KG			410 U	2000 U				370 U	380 U
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	3.6 U	3.8 U	4.1 U	20 U	3.9 U	3.8 U	4.1 U	3.6 U	3.7 U
4,4'-DDE	UG/KG	3.6 U	3.8 U	4.1 U	20 U	3.9 U	3.8 U	17 NJ	3.6 U	10
4,4'-DDT	UG/KG	3.6 U	3.8 U	4.1 U	20 U	3.9 U	3.8 U	4.1 U	3.6 U	3.7 U
Aldrin	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Alpha-BHC	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Alpha-Chlordane	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Beta-BHC	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Delta-BHC	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Dieldrin	UG/KG	3.6 U	3.8 U	4.1 U	20 U	3.9 U	3.8 U	4.1 U	3.6 U	3.7 U
Endosulfan I	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Endosulfan II	UG/KG	3.6 U	3.8 U	4.1 U	20 U	3.9 U	3.8 U	4.1 U	3.6 U	3.7 U
Endosulfan sulfate	UG/KG	3.6 U	3.8 U	4.1 U	20 U	3.9 U	3.8 U	4.1 U	3.6 U	3.7 U
Endrin	UG/KG	3.6 U	3.8 U	4.1 U	20 U	3.9 U	3.8 U	4.1 U	3.6 U	3.7 U
Endrin aldehyde	UG/KG	3.6 U	3.8 U	4.1 U	20 U	3.9 U	3.8 U	4.1 U	3.6 U	3.7 U
Endrin ketone	UG/KG	3.6 U	3.8 U	4.1 U	20 U	3.9 U	3.8 U	4.1 U	3.6 U	3.7 U
Gamma-BHC/Lindane	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Gamma-Chlordane	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Heptachlor	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Heptachlor epoxide	UG/KG	1.9 U	1.9 U	2.1 U	10 U	2 U	2 U	2.1 U	1.9 U	1.9 U
Methoxychlor	UG/KG	19 U	19 U	21 U	100 U	20 U	20 U	21 U	19 U	19 U
Toxaphene	UG/KG	190 U	190 U	210 U	200 U	200 U	200 U	210 U	190 U	190 U
Aroclor-1016	UG/KG	36 U	38 U	41 U	39 U	40 U	39 U	42 U	36 U	38 U
Aroclor-1221	UG/KG	36 U	38 U	41 U	39 U	40 U	39 U	42 U	36 U	38 U
Aroclor-1232	UG/KG	36 U	38 U	41 U	39 U	40 U	39 U	42 U	36 U	38 U
Aroclor-1242	UG/KG	36 U	38 U	41 U	39 U	40 U	39 U	42 U	36 U	38 U
Aroclor-1248	UG/KG	36 U	38 U	41 U	39 U	40 U	39 U	42 U	36 U	38 U
Aroclor-1254	UG/KG	36 U	38 U	41 U	39 U	40 U	39 U	42 U	36 U	38 U
Aroclor-1260	UG/KG	36 U	38 U	41 U	39 U	40 U	39 U	42 U	36 U	38 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F01	CL-59-01-F02	CL-59-01-F03	CL-59-01-F04	CL-59-01-F05	CL-59-01-F06	CL-59-01-F07	CL-59-01-F08	CL-59-01-F09
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	11900 J	11300 J	13100	9840	12200 J	10600 J	10400 J	6080	9340
Antimony	MG/KG	1.1 J	1.7 J	2 J	3.5 UJ	1.2 J	1.4 J	1.4 J	0.99 J	1.7 J
Arsenic	MG/KG	6.4	9.5	4.7	3.2 J	6.8 J	7.5 J	5.7 J	2.6	4.5
Barium	MG/KG	113 J	111 J	117 J	99.9	102 J	89.8 J	109 J	52.8 J	71 J
Beryllium	MG/KG	0.62	0.69	0.68	0.19	0.61	0.56	0.55	0.31 J	0.48
Cadmium	MG/KG	0.24 J	0.31	0.65	0.29 U	0.42	0.3 J	0.27 J	0.44	0.67
Calcium	MG/KG	20200 J	3130 J	3140	7970	2790 J	3080 J	21600 J	87800	57000
Chromium	MG/KG	17.8 J	19 J	19.8 J	15.2	18.4 J	16.2 J	16.9 J	9.6 J	15.3 J
Cobalt	MG/KG	9.5 J	10.2 J	10.7	7.8	9.7 J	9.5 J	7.8 J	5.1	7.8
Copper	MG/KG	25 J	25.3 J	18.5	19.6	17.5 J	22.9 J	20.4 J	19.8	25.1
Cyanide	MG/KG									
Iron	MG/KG	23000	31900	24700	17900 J	24700 J	23300 J	22600 J	14400	21800
Lead	MG/KG	11 J	14.6 J	12.8 J	17.2	13.1 J	14 J	12 J	6.6 J	16.3 J
Magnesium	MG/KG	5860 J	4360 J	4620 J	3990	5000 J	4560 J	9820 J	15400 J	9760 J
Manganese	MG/KG	509 J	361 J	623 J	464	516 J	1050 J	428 J	302 J	536 J
Mercury	MG/KG	0.04	0.04	0.04	0.04	0.03	0.03 J	0.03 J	0.02 J	0.04 J
Nickel	MG/KG	26.8 J	30.8 J	32.8 J	22.7	30.3 J	29.3 J	27.7 J	16.7 J	24.8 J
Potassium	MG/KG	1170	1150	911	1030	1070 J	1100 J	969 J	924	1070
Selenium	MG/KG	0.4 U	0.37 U	0.46 U	0.59 U	0.39 U	0.45 U	0.5 U	0.42 U	0.43 U
Silver	MG/KG	0.98	1.4	1	0.59 U	1.2	1.5	1	0.1 U	0.11 U
Sodium	MG/KG	113	53.1	150	316	211 J	135 J	184 J	182	300
Thallium	MG/KG	0.2 U	0.18 U	0.23 U	0.59 U	0.19 U	0.22 U	0.25 U	0.35 J	0.21 U
Vanadium	MG/KG	21.8 J	24.7 J	21.3 J	16.8	21.8 J	20.8 J	18.2 J	10.8 J	16.4 J
Zinc	MG/KG	63.1	63.2	72.4 J	96.3 J	64.2 J	54.8 J	61.8 J	36 J	50.6 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
1,1,2,2-Tetrachloroethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 UJ	5 U	5 U	6 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
1,1,2-Trichloroethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
1,1-Dichloroethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
1,1-Dichloroethene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
1,2,3-Trichloropropane	UG/KG									
1,2,4-Trichlorobenzene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 UJ	5 U	5 U	6 U
1,2-Dibromo-3-chloropropane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 UJ	5 U	5 U	6 U
1,2-Dibromoethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
1,2-Dichlorobenzene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 UJ	5 U	5 U	6 U
1,2-Dichloroethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
1,3-Dichlorobenzene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 UJ	5 U	5 U	6 U
1,3-Dichloropropane	UG/KG									
1,4-Dichlorobenzene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 UJ	5 U	5 U	6 U
Acetone	UG/KG	83 NJ	10 NJ	28 NJ	66 NJ	56 NJ	120 NJ	5 U	5 U	6 U
Benzene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Bromodichloromethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Bromoform	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Carbon disulfide	UG/KG	6 R	6 U	6 U	6 U	1 J	6 U	5 U	5 U	6 U
Carbon tetrachloride	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Chlorobenzene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Chlorodibromomethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Chloroethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Chloroform	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Cis-1,2-Dichloroethene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Cis-1,3-Dichloropropene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Cyclohexane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Ethyl benzene	UG/KG	6 R	6 U	6 U	6 U	6 U	6 U	5 U	5 U	6 U
Isopropylbenzene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Meta/Para Xylene	UG/KG									
Methyl Acetate	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Methyl Tertbutyl Ether	UG/KG	6 R	6 UJ	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Methyl bromide	UG/KG	6 R	6 UJ	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Methyl butyl ketone	UG/KG	6 R	6 UJ	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Methyl chloride	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Methyl cyclohexane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Methyl ethyl ketone	UG/KG	6 R	6 U	6 J	11 J	10 J	25 J	5 U	5 U	6 U
Methyl isobutyl ketone	UG/KG	6 R	6 UJ	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Methylene chloride	UG/KG	6 U	6 UJ	6 UJ	6 U	5 U	6 UJ	5 UJ	5 UJ	3 UJ
Ortho Xylene	UG/KG									
Styrene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Tetrachloroethene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Toluene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG	6 R	6 U	6 U	6 U	5 U	6 UJ	5 U	5 U	6 U
Trans-1,2-Dichloroethene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Trans-1,3-Dichloropropene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Trichloroethene	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Trichlorofluoromethane	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Vinyl chloride	UG/KG	6 R	6 U	6 U	6 U	5 U	6 U	5 U	5 U	6 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG	390 UJ	390 UJ	410 U	390 UJ	380 UJ	400 U	360 U	360 U	380 U
2,4,5-Trichlorophenol	UG/KG	970 U	990 U	1000 U	980 U	950 U	1000 U	900 U	900 U	960 U
2,4,6-Trichlorophenol	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
2,4-Dichlorophenol	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
2,4-Dimethylphenol	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
2,4-Dinitrophenol	UG/KG	970 U	990 U	1000 U	980 U	950 U	1000 U	900 U	900 U	960 U
2,4-Dinitrotoluene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
2,6-Dinitrotoluene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
2-Chloronaphthalene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
2-Chlorophenol	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
2-Methylnaphthalene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
2-Methylphenol	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
2-Nitroaniline	UG/KG	970 U	990 U	1000 U	980 U	950 U	1000 U	900 U	900 U	960 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18	CL-59-01-F18
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18	CL-59-01-F18
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
3,3'-Dichlorobenzidine	UG/KG	390 UJ	390 UJ	410 U	390 UJ	380 UJ	400 U	360 U	360 U	380 U
3-Nitroaniline	UG/KG	970 U	990 U	1000 U	980 U	950 U	1000 U	900 U	900 U	960 U
4,6-Dinitro-2-methylphenol	UG/KG	970 U	990 U	1000 U	980 U	950 U	1000 U	900 U	900 U	960 U
4-Bromophenyl phenyl ether	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
4-Chloro-3-methylphenol	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
4-Chloroaniline	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
4-Chlorophenyl phenyl ether	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
4-Methylphenol	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
4-Nitroaniline	UG/KG	970 U	990 U	1000 U	980 U	950 U	1000 U	900 U	900 U	960 U
4-Nitrophenol	UG/KG	970 U	990 U	1000 U	980 U	950 U	1000 U	900 U	900 U	960 U
Acenaphthene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Acenaphthylene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Acetophenone	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Aniline	UG/KG									
Anthracene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Atrazine	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Benzaldehyde	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Benzo(a)anthracene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Benzo(a)pyrene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Benzo(b)fluoranthene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Benzo(ghi)perylene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Benzo(k)fluoranthene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Benzoic Acid	UG/KG									
Bis(2-Chloroethoxy)methane	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Bis(2-Chloroethyl)ether	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Butylbenzylphthalate	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Caprolactam	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Carbazole	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Chrysene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Di-n-butylphthalate	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Di-n-octylphthalate	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Dibenz(a,h)anthracene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Dibenzofuran	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Diethyl phthalate	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Dimethylphthalate	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Fluoranthene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Fluorene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Hexachlorobenzene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Hexachlorobutadiene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Hexachlorocyclopentadiene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Indeno(1,2,3-cd)pyrene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Isophorone	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
N-Nitrosodiphenylamine	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
N-Nitrosodipropylamine	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Naphthalene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Nitrobenzene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Pentachlorophenol	UG/KG	970 U	990 U	1000 U	980 U	950 U	1000 U	900 U	900 U	960 U
Phenanthrene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Phenol	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Pyrene	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Pyridine	UG/KG	390 U	390 U	410 U	390 U	380 U	400 U	360 U	360 U	380 U
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	3.8 U	3.9 U	4 U	4 U	3.7 U	4 U	3.6 U	3.6 U	3.9 U
4,4'-DDE	UG/KG	3.8 U	3.9 U	4.7	4 U	3.7 U	4 U	4.4	3.6 U	3.9 U
4,4'-DDT	UG/KG	3.8 U	3.9 U	4 U	4 U	3.7 U	4 U	3.6 U	3.6 U	3.9 U
Aldrin	UG/KG	2 U	2 U	2.1 U	2 U	1.9 U	2.1 U	1.8 U	1.8 U	2 U
Alpha-BHC	UG/KG	2 U	2 U	2.1 U	2 U	1.9 U	2.1 U	1.8 U	1.8 U	2 U
Alpha-Chlordane	UG/KG	2 U	2 U	2.1 U	2 U	1.9 U	2.1 U	1.8 U	1.8 U	2 U
Beta-BHC	UG/KG	2 U	2 U	2.1 U	2 U	1.9 U	2.1 U	1.8 U	1.8 U	2 U
Delta-BHC	UG/KG	2 U	2 U	2.1 U	2 U	1.9 U	2.1 U	1.8 U	1.8 U	2 U
Dieldrin	UG/KG	3.8 U	3.9 U	4 U	4 U	3.7 U	4 U	3.6 U	3.6 U	3.9 U
Endosulfan I	UG/KG	2 U	2 U	2.1 U	2 U	1.9 U	2.1 U	1.8 U	1.8 U	2 U
Endosulfan II	UG/KG	3.8 U	3.9 U	4 U	4 U	3.7 U	4 U	3.6 U	3.6 U	3.9 U
Endosulfan sulfate	UG/KG	3.8 U	3.9 U	4 U	4 U	3.7 U	4 U	3.6 U	3.6 U	3.9 U
Endrin	UG/KG	3.8 U	3.9 U	4 U	4 U	3.7 U	4 U	3.6 U	3.6 U	3.9 U
Endrin aldehyde	UG/KG	3.8 U	3.9 U	4 U	4 U	3.7 U	4 U	3.6 U	3.6 U	3.9 U
Endrin ketone	UG/KG	3.8 U	3.9 U	4 U	4 U	3.7 U	4 U	3.6 U	3.6 U	3.9 U
Gamma-BHC/Lindane	UG/KG	2 U	2 U	2.1 U	2 U	1.9 U	2.1 U	1.8 U	1.8 U	2 U
Gamma-Chlordane	UG/KG	2 UJ	2 UJ	2.1 UJ	2 UJ	1.9 UJ	2.1 UJ	1.8 UJ	1.8 UJ	2 UJ
Heptachlor	UG/KG	2 U	2 U	2.1 U	2 U	1.9 U	2.1 U	1.8 U	1.8 U	2 U
Heptachlor epoxide	UG/KG	2 U	2 U	2.1 U	2 U	1.9 U	2.1 U	1.8 U	1.8 U	2 U
Methoxychlor	UG/KG	20 U	20 U	21 U	20 U	19 U	21 U	18 U	18 U	20 U
Toxaphene	UG/KG	200 U	200 U	210 U	200 U	190 U	210 U	180 U	180 U	200 U
Aroclor-1016	UG/KG	38 U	39 U	41 U	40 U	38 U	41 U	36 U	36 U	39 U
Aroclor-1221	UG/KG	38 U	39 U	41 U	40 U	38 U	41 U	36 U	36 U	39 U
Aroclor-1232	UG/KG	38 U	39 U	41 U	40 U	38 U	41 U	36 U	36 U	39 U
Aroclor-1242	UG/KG	38 U	39 U	41 U	40 U	38 U	41 U	36 U	36 U	39 U
Aroclor-1248	UG/KG	38 U	39 U	41 U	40 U	38 U	41 U	36 U	36 U	39 U
Aroclor-1254	UG/KG	38 U	39 U	41 U	40 U	38 U	41 U	36 U	36 U	39 U
Aroclor-1260	UG/KG	38 U	39 U	41 U	40 U	38 U	41 U	36 U	36 U	39 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F10	CL-59-01-F11	CL-59-01-F12	CL-59-01-F13	CL-59-01-F14	CL-59-01-F15	CL-59-01-F16	CL-59-01-F17	CL-59-01-F18
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	10900 J	12000	18300 J	13800	8590	14700	8130 J	5290 J	13200 J
Antimony	MG/KG	1.8 J	1.5 J	2 J	2.1 J	1.3 J	1.6 J	1.4 J	0.65 J	1.5 J
Arsenic	MG/KG	5.9 J	5.3	5.7 J	7	3.2	5.9	3.6 J	2.8 J	7.8 J
Barium	MG/KG	80.8 J	117 J	145 J	95.5 J	55.4 J	164 J	63.2 J	45.6 J	96.4 J
Beryllium	MG/KG	0.53	0.62	0.87	0.79	0.42	0.81	0.38	0.22 J	0.69
Cadmium	MG/KG	0.68 J	0.64	0.66	0.87	0.54	0.81	0.42	0.25 J	0.78
Calcium	MG/KG	7520 J	2710	3210 J	3610	7800	3020	92900 J	83400 J	4260 J
Chromium	MG/KG	17.8 J	18.4 J	25.7 J	23.4 J	12.9 J	20.5 J	12.4 J	7.4 J	19.7 J
Cobalt	MG/KG	10.7 J	10.7	9 J	12.4	6.5	9.6	6.9 J	3.8 J	12.3 J
Copper	MG/KG	20.8	13	26.5 J	27.1	20.7	24.9	17.1 J	13.4 J	23.5 J
Cyanide	MG/KG									
Iron	MG/KG	22500	23600	25700 J	30800	18700	26800	13100 J	9210 J	25300 J
Lead	MG/KG	12.3 J	11.1 J	13.5 J	19 J	7.9 J	15.3 J	6 J	4.1 J	13.5 J
Magnesium	MG/KG	7060 J	4230 J	5570 J	5400 J	14000 J	3860 J	16100 J	24700 J	4580 J
Manganese	MG/KG	738 J	780 J	282 J	358 J	417 J	809 J	330 J	301 J	806 J
Mercury	MG/KG	0.03 J	0.05	0.04	0.05	0.02 J	0.09	0.02 U	0.02 U	0.03 J
Nickel	MG/KG	32.5 J	29 J	32.4 J	37.3 J	22.3 J	25.8 J	19.6 J	9 J	31.9 J
Potassium	MG/KG	1180	1130	1770 J	1050	1070	1170	1160 J	1320 J	1120 J
Selenium	MG/KG	0.46 J	0.46 U	0.45 U	0.48 U	0.42 U	0.46 U	0.4 U	0.38 U	0.43 U
Silver	MG/KG	0.64	0.81	0.75	0.75	0.1 U	0.76	0.1 U	0.1 U	0.75
Sodium	MG/KG	216	150	1800 J	138	295	1130	171 J	808 J	899
Thallium	MG/KG	0.23 U	0.23 U	0.26 J	0.24 U	0.21 U	0.23 U	0.2 U	0.4 J	0.21 U
Vanadium	MG/KG	18.2 J	19.9 J	28.5 J	23.3 J	14.2 J	24.5 J	13.3 J	10.3 J	23.9 J
Zinc	MG/KG	77.6 J	94.8 J	76.3 J	62.8 J	42 J	71.2 J	35.5 J	19.6 J	65.8 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-WE1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 UJ	5 U	6 U	5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 UJ	5 U	6 U	5 U
1,1,2-Trichloroethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,1-Dichloroethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,1-Dichloroethene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,2,3-Trichloropropane	UG/KG									
1,2,4-Trichlorobenzene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,2-Dibromo-3-chloropropane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,2-Dibromoethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,2-Dichlorobenzene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,2-Dichloroethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,3-Dichlorobenzene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
1,3-Dichloropropane	UG/KG									
1,4-Dichlorobenzene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Acetone	UG/KG	51 NJ	38 NJ	5 NJ	45 NJ	38 NJ	66 NJ	5 UJ	12 NJ	49 NJ
Benzene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Bromodichloromethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Bromoform	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Carbon disulfide	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Carbon tetrachloride	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Chlorobenzene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Chlorodibromomethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Chloroethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Chloroform	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Cis-1,2-Dichloroethene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Cis-1,3-Dichloropropene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Cyclohexane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-F26
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-F26
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Ethyl benzene	UG/KG	6 U	6 U	6 U	6 U	6 U	6 U	5 U	6 U	5 U
Isopropylbenzene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Meta/Para Xylene	UG/KG									
Methyl Acetate	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Methyl Tertbutyl Ether	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Methyl bromide	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Methyl butyl ketone	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Methyl chloride	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Methyl cyclohexane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Methyl ethyl ketone	UG/KG	6 U	6 U	6 U	11 J	6 J	12 J	5 U	6 U	4 J
Methyl isobutyl ketone	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Methylene chloride	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Ortho Xylene	UG/KG									
Styrene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Tetrachloroethene	UG/KG	6 U	6 U	6 U	6 U	5 U	2 J	5 U	6 U	5 U
Toluene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Trans-1,2-Dichloroethene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Trans-1,3-Dichloropropene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Trichloroethene	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Trichlorofluoromethane	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Vinyl chloride	UG/KG	6 U	6 U	6 U	6 U	5 U	6 U	5 U	6 U	5 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2,4,5-Trichlorophenol	UG/KG	990 U	950 U	970 U	980 U	950 U	990 U	930 U	950 U	1100 U
2,4,6-Trichlorophenol	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2,4-Dichlorophenol	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2,4-Dimethylphenol	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2,4-Dinitrophenol	UG/KG	990 U	950 U	970 U	980 U	950 U	990 U	930 U	950 U	1100 U
2,4-Dinitrotoluene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2,6-Dinitrotoluene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2-Chloronaphthalene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2-Chlorophenol	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2-Methylnaphthalene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2-Methylphenol	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
2-Nitroaniline	UG/KG	990 U	950 U	970 U	980 U	950 U	990 U	930 U	950 U	1100 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-WE1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
3,3'-Dichlorobenzidine	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
3-Nitroaniline	UG/KG	990 U	950 U	970 U	980 U	950 U	990 U	930 U	950 U	1100 U
4,6-Dinitro-2-methylphenol	UG/KG	990 U	950 U	970 U	980 U	950 U	990 U	930 U	950 U	1100 U
4-Bromophenyl phenyl ether	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
4-Chloro-3-methylphenol	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
4-Chloroaniline	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
4-Chlorophenyl phenyl ether	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
4-Methylphenol	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
4-Nitroaniline	UG/KG	990 U	950 U	970 U	980 U	950 U	990 U	930 U	950 U	1100 U
4-Nitrophenol	UG/KG	990 U	950 U	970 U	980 U	950 U	990 U	930 U	950 U	1100 U
Acenaphthene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Acenaphthylene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Acetophenone	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Aniline	UG/KG									
Anthracene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Atrazine	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Benzaldehyde	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Benzo(a)anthracene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Benzo(a)pyrene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	60 J	380 U	430 U
Benzo(b)fluoranthene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	68 J	380 U	430 U
Benzo(ghi)perylene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Benzo(k)fluoranthene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	25 J	380 U	430 U
Benzoic Acid	UG/KG									
Bis(2-Chloroethoxy)methane	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Bis(2-Chloroethyl)ether	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Butylbenzylphthalate	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Caprolactam	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Carbazole	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Chrysene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Di-n-butylphthalate	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Di-n-octylphthalate	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Dibenz(a,h)anthracene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Dibenzofuran	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Diethyl phthalate	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Dimethylphthalate	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Fluoranthene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	54 J	380 U	430 U
Fluorene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Hexachlorobenzene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Hexachlorobutadiene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Hexachlorocyclopentadiene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-F26
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-F26
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Indeno(1,2,3-cd)pyrene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	390 U	430 U
Isophorone	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
N-Nitrosodiphenylamine	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
N-Nitrosodipropylamine	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Naphthalene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Nitrobenzene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Pentachlorophenol	UG/KG	990 U	950 U	970 U	980 U	950 U	990 U	930 U	950 U	1100 U
Phenanthrene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Phenol	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	430 U
Pyrene	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	75 J	380 U	430 U
Pyridine	UG/KG	390 U	380 U	390 U	390 U	380 U	390 U	370 U	380 U	
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	3.9 U	3.8 U	3.8 U	3.9 U	3.8 U	3.9 U	3.7 U	3.9 U	4.4 U
4,4'-DDE	UG/KG	3.9 U	3.8 U	3.8 U	3.9 U	3.8 U	3.9 U	3.7 U	3.9 U	4.4 U
4,4'-DDT	UG/KG	3.9 U	3.8 U	3.8 U	3.9 U	3.8 U	3.9 U	3.7 U	3.9 U	4.4 U
Aldrin	UG/KG	2 U	1.9 U	2 U	2 U	2 U	2 U	1.9 U	2 U	2.2 U
Alpha-BHC	UG/KG	2 U	1.9 U	2 U	2 U	2 U	2 U	1.9 U	2 U	2.2 U
Alpha-Chlordane	UG/KG	2 U	1.9 U	2 UJ	2 UJ	2 UJ	2 UJ	1.9 UJ	2 UJ	2.2 U
Beta-BHC	UG/KG	2 U	1.9 U	2 U	2 U	2 U	2 U	1.9 U	2 U	2.2 U
Delta-BHC	UG/KG	2 U	1.9 U	2 UJ	2 UJ	2 UJ	2 UJ	1.9 UJ	2 UJ	2.2 U
Dieldrin	UG/KG	3.9 U	3.8 U	3.8 U	3.9 U	3.8 U	3.9 U	3.7 U	3.9 U	4.4 U
Endosulfan I	UG/KG	2 U	1.9 U	2 U	2 U	2 U	2 U	1.9 U	2 U	2.2 U
Endosulfan II	UG/KG	3.9 U	3.8 U	3.8 U	3.9 U	3.8 U	3.9 U	3.7 U	3.9 U	4.4 U
Endosulfan sulfate	UG/KG	3.9 U	3.8 U	3.8 U	3.9 U	3.8 U	3.9 U	3.7 U	3.9 U	4.4 U
Endrin	UG/KG	3.9 U	3.8 U	3.8 U	3.9 U	3.8 U	3.9 U	3.7 U	3.9 U	4.4 U
Endrin aldehyde	UG/KG	3.9 U	3.8 U	3.8 U	3.9 U	3.8 U	3.9 U	3.7 U	3.9 U	4.4 U
Endrin ketone	UG/KG	3.9 U	3.8 U	3.8 U	3.9 U	3.8 U	3.9 U	3.7 U	3.9 U	4.4 U
Gamma-BHC/Lindane	UG/KG	2 U	1.9 U	2 U	2 U	2 U	2 U	1.9 U	2 U	2.2 U
Gamma-Chlordane	UG/KG	2 UJ	1.9 UJ	2 UJ	2 UJ	2 UJ	2 UJ	1.9 UJ	2 UJ	2.2 U
Heptachlor	UG/KG	2 U	1.9 U	2 U	2 U	2 U	2 U	1.9 U	2 U	2.2 U
Heptachlor epoxide	UG/KG	2 U	1.9 U	2 U	2 U	2 U	2 U	1.9 U	2 U	2.2 U
Methoxychlor	UG/KG	20 U	19 U	20 U	20 U	20 U	20 U	19 U	20 U	22 U
Toxaphene	UG/KG	200 U	190 U	200 U	200 U	200 U	200 U	190 U	200 U	220 U
Aroclor-1016	UG/KG	39 U	38 U	39 U	40 U	38 U	40 U	37 U	39 U	44 U
Aroclor-1221	UG/KG	39 U	38 U	39 U	40 U	38 U	40 U	37 U	39 U	44 U
Aroclor-1232	UG/KG	39 U	38 U	39 U	40 U	38 U	40 U	37 U	39 U	44 U
Aroclor-1242	UG/KG	39 U	38 U	39 U	40 U	38 U	40 U	37 U	39 U	44 U
Aroclor-1248	UG/KG	39 U	38 U	39 U	40 U	38 U	40 U	37 U	39 U	44 U
Aroclor-1254	UG/KG	39 U	38 U	39 U	40 U	38 U	40 U	37 U	39 U	44 U
Aroclor-1260	UG/KG	39 U	38 U	39 U	40 U	38 U	40 U	37 U	39 U	44 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-F26
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-F19	CL-59-01-F20	CL-59-01-F21	CL-59-01-F22	CL-59-01-F23	CL-59-01-F24	CL-59-01-F25	CL-59-01-F26	CL-59-01-F26
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	16600 J	12700 J	13200 J	11900 J	15600 J	12400 J	8320 J	13200 J	14400 J
Antimony	MG/KG	1.7 J	1.7 J	1.4 J	1.6 J	2.2 J	1.7 J	1.4 J	2.8 J	1.9 J
Arsenic	MG/KG	7 J	8 J	5.8 J	7.1 J	7.3 J	5.5 J	2.3 J	5.5 J	6 J
Barium	MG/KG	161 J	145 J	143 J	116 J	84.8 J	82.5 J	92.5 J	119 J	148 J
Beryllium	MG/KG	0.66	0.63	0.77	0.69	0.88	0.72	0.4	0.88	0.92
Cadmium	MG/KG	0.76	0.69	0.56	0.54	0.64 J	0.43	0.42	0.49	0.39
Calcium	MG/KG	1350 J	1840 J	3150 J	2880 J	4890 J	1670 J	85500 J	3760 J	3270 J
Chromium	MG/KG	23.4 J	20.2 J	20.9 J	18.4 J	23.7 J	17.2 J	12.2 J	19.7 J	20.2 J
Cobalt	MG/KG	10.8 J	11.1 J	9.8 J	10.9 J	12.7 J	11 J	5.1 J	8.9 J	10.6 J
Copper	MG/KG	32.3 J	20.6 J	27.4 J	25.6 J	36.3 J	9.8 J	15.7 J	20.5 J	23.8 J
Cyanide	MG/KG									
Iron	MG/KG	26300 J	24100 J	23500 J	24500 J	29000 J	21800 J	15600 J	23200 J	23900 J
Lead	MG/KG	14.9 J	14.1 J	13.9 J	14.5 J	15.9 J	21.3 J	7.9 J	12.2 J	17.5 J
Magnesium	MG/KG	5260 J	4850 J	4780 J	4540 J	6480 J	3080 J	14600 J	4860 J	4560 J
Manganese	MG/KG	416 J	914 J	708 J	568 J	341 J	271 J	331 J	455 J	417 J
Mercury	MG/KG	0.05	0.04	0.05	0.06	0.05	0.04	0.03 J	0.03 J	0.08
Nickel	MG/KG	28.5 J	32.7 J	34.9 J	32.3 J	40.5 J	16.3 J	19.4 J	27.3 J	29.4 J
Potassium	MG/KG	1560 J	1250 J	1100 J	818 J	959 J	723 J	874 J	1060 J	1080 J
Selenium	MG/KG	0.42 U	0.45 U	0.43 U	0.41 U	0.44 U	0.46 U	0.4 U	0.55 J	0.5 U
Silver	MG/KG	0.85	0.82	0.58	0.67	0.61	0.67	0.1 U	0.74	1.2
Sodium	MG/KG	3010 J	2380 J	166 J	1200 J	365 J	463 J	180 J	87.2 J	202 J
Thallium	MG/KG	0.21 U	0.22 U	0.21 U	0.2 U	0.22 U	0.23 U	0.2 U	0.23 U	0.25 U
Vanadium	MG/KG	27.8 J	23.1 J	21.8 J	21.5 J	23.2 J	24.3 J	12.9 J	22.9 J	22.6 J
Zinc	MG/KG	61 J	67.2 J	80.5 J	65.4 J	78.8 J	44.6 J	58.2 J	59 J	78.5 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG		6 U	23 U	6 U	5 UJ	6 R	7 UJ	6 UJ	5 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
1,1,2-Trichloroethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
1,1-Dichloroethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
1,1-Dichloroethene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
1,2,3-Trichloropropane	UG/KG									
1,2,4-Trichlorobenzene	UG/KG	6 UJ	6 U	23 U	6 U	5 UJ	6 R	7 UJ	6 UJ	5 UJ
1,2-Dibromo-3-chloropropane	UG/KG	6 UJ	6 U	23 U	6 U	5 UJ	6 R	7 UJ	6 UJ	5 UJ
1,2-Dibromoethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 UJ	6 U	5 U
1,2-Dichlorobenzene	UG/KG	6 UJ	6 U	23 U	6 U	5 UJ	6 R	7 UJ	6 UJ	5 UJ
1,2-Dichloroethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
1,3-Dichlorobenzene	UG/KG	6 UJ	6 U	23 U	6 U	5 UJ	6 R	7 UJ	6 UJ	5 UJ
1,3-Dichloropropane	UG/KG									
1,4-Dichlorobenzene	UG/KG	6 UJ	6 U	23 U	6 U	5 UJ	6 R	7 UJ	6 UJ	5 UJ
Acetone	UG/KG	110 NJ	220 NJ	550 NJ	45 NJ	5 U	6 U	7 U	6 U	50 NJ
Benzene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Bromodichloromethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Bromoform	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 UJ	6 U	5 U
Carbon disulfide	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Carbon tetrachloride	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Chlorobenzene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 UJ	6 U	5 U
Chlorodibromomethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 UJ	6 U	5 U
Chloroethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Chloroform	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Cis-1,2-Dichloroethene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Cis-1,3-Dichloropropene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Cyclohexane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 U	6 U	5 U
Ethyl benzene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 UJ	6 U	5 U
Isopropylbenzene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 UJ	6 U	5 U
Meta/Para Xylene	UG/KG									
Methyl Acetate	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Methyl Tertbutyl Ether	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Methyl bromide	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Methyl butyl ketone	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 UJ	6 U	5 U
Methyl chloride	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Methyl cyclohexane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Methyl ethyl ketone	UG/KG	13 J	61 J	190 J	6 U	5 U	6 U	7 U	6 U	5 U
Methyl isobutyl ketone	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Methylene chloride	UG/KG	6 U	6 UJ	23 UJ	6 UJ	5 U	7 U	7 U	6 U	5 U
Ortho Xylene	UG/KG									
Styrene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 UJ	6 U	5 U
Tetrachloroethene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 UJ	7 UJ	6 U	5 U
Toluene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG	6 UJ	6 U	23 U	6 U	5 UJ	6 R	7 UJ	6 UJ	5 UJ
Trans-1,2-Dichloroethene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Trans-1,3-Dichloropropene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Trichloroethene	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Trichlorofluoromethane	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Vinyl chloride	UG/KG	6 U	6 U	23 U	6 U	5 U	6 U	7 U	6 U	5 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG	420 U	410 U	460 U	390 U	360 U	59 NJ	470 U	400 U	400 U
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG	420 U	410 UJ	460 UJ	390 U	360 U	430 U	470 U	400 U	400 U
2,4,5-Trichlorophenol	UG/KG	1100 U	1000 U	1200 U	980 U	920 U	1100 U	1200 U	1000 U	1000 U
2,4,6-Trichlorophenol	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
2,4-Dichlorophenol	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
2,4-Dimethylphenol	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
2,4-Dinitrophenol	UG/KG	1100 U	1000 U	1200 U	980 U	920 U	1100 U	1200 U	1000 U	1000 U
2,4-Dinitrotoluene	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
2,6-Dinitrotoluene	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
2-Chloronaphthalene	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
2-Chlorophenol	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
2-Methylnaphthalene	UG/KG	420 U	410 U	460 U	390 U	360 U	420 J	130 J	250 J	400 U
2-Methylphenol	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
2-Nitroaniline	UG/KG	1100 U	1000 U	1200 U	980 U	920 U	1100 U	1200 U	1000 U	1000 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
3,3'-Dichlorobenzidine	UG/KG	420 U	410 UJ	460 UJ	390 U	360 U	430 U	470 U	400 U	400 U
3-Nitroaniline	UG/KG	1100 U	1000 U	1200 U	980 U	920 U	1100 U	1200 U	1000 U	1000 U
4,6-Dinitro-2-methylphenol	UG/KG	1100 U	1000 U	1200 U	980 U	920 U	1100 U	1200 U	1000 U	1000 U
4-Bromophenyl phenyl ether	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
4-Chloro-3-methylphenol	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
4-Chloroaniline	UG/KG	420 U	410 U	460 U	390 U	360 U	1200	130 J	400 U	400 U
4-Chlorophenyl phenyl ether	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
4-Methylphenol	UG/KG	420 U	410 U	90 J	390 U	360 U	24 NJ	470 U	400 U	150 J
4-Nitroaniline	UG/KG	1100 U	1000 U	1200 U	980 U	920 U	1100 U	1200 U	1000 U	1000 U
4-Nitrophenol	UG/KG	1100 U	1000 U	1200 U	980 U	920 U	1100 U	1200 U	1000 U	1000 U
Acenaphthene	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	130 J	400 U
Acenaphthylene	UG/KG	420 U	410 U	460 U	390 U	360 U	90 J	160 J	160 J	400 U
Acetophenone	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Aniline	UG/KG									
Anthracene	UG/KG	420 U	410 U	460 U	390 U	360 U	130 J	190 J	330 J	400 U
Atrazine	UG/KG	420 U	410 U	460 U	390 U	360 U	120 J	470 U	400 U	400 U
Benzaldehyde	UG/KG	420 U	410 U	50 J	390 U	360 U	430 U	470 U	400 U	400 U
Benzo(a)anthracene	UG/KG	420 U	410 U	460 U	390 U	360 U	360 J	670 NJ	600 NJ	62 NJ
Benzo(a)pyrene	UG/KG	420 U	410 U	460 U	390 U	360 U	330 J	620	640	53 J
Benzo(b)fluoranthene	UG/KG	420 U	410 U	460 U	390 U	360 U	670	1000	720	67 J
Benzo(ghi)perylene	UG/KG	420 U	410 U	460 U	390 U	360 U	250 J	260 J	360 J	400 U
Benzo(k)fluoranthene	UG/KG	420 U	410 U	460 U	390 U	360 U	220 J	370 J	310 J	400 U
Benzoic Acid	UG/KG									
Bis(2-Chloroethoxy)methane	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Bis(2-Chloroethyl)ether	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	420 U	410 U	460 U	390 U	25 J	44 NJ	55 J	41 J	400 U
Butylbenzylphthalate	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Caprolactam	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Carbazole	UG/KG	420 U	410 U	460 U	390 U	360 U	98 J	470 U	140 J	400 U
Chrysene	UG/KG	420 U	410 U	460 U	390 U	360 U	550 NJ	700	590	60 J
Di-n-butylphthalate	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Di-n-octylphthalate	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Dibenz(a,h)anthracene	UG/KG	420 U	410 U	460 U	390 U	360 U	67 J	89 J	99 J	400 U
Dibenzofuran	UG/KG	420 U	410 U	460 U	390 U	360 U	110 J	470 U	120 J	400 U
Diethyl phthalate	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Dimethylphthalate	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Fluoranthene	UG/KG	420 U	410 U	460 U	390 U	360 U	930	1000	1100	130 J
Fluorene	UG/KG	420 U	410 U	460 U	390 U	360 U	40 NJ	470 U	220 J	400 U
Hexachlorobenzene	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Hexachlorobutadiene	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Hexachlorocyclopentadiene	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Indeno(1,2,3-cd)pyrene	UG/KG	420 U	410 U	460 U	390 U	360 U	270 J	340 J	390 J	400 U
Isophorone	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
N-Nitrosodiphenylamine	UG/KG	420 U	410 U	460 U	390 U	360 U	100 J	470 U	400 U	400 U
N-Nitrosodipropylamine	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Naphthalene	UG/KG	420 U	410 U	460 U	390 U	360 U	170 J	88 J	180 J	400 U
Nitrobenzene	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Pentachlorophenol	UG/KG	1100 U	1000 U	1200 U	980 U	920 U	1100 U	1200 U	1000 U	1000 U
Phenanthrene	UG/KG	420 U	410 U	460 U	390 U	360 U	580	230 J	1300	140 J
Phenol	UG/KG	420 U	410 U	460 U	390 U	360 U	430 U	470 U	400 U	400 U
Pyrene	UG/KG	420 U	410 U	460 U	390 U	360 U	900	1100	1100	100 J
Pyridine	UG/KG		410 U	460 U	390 U					
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	4.2 U	4.1 U	4.6 U	20 U	9.7	740 J	340 J	5.5 J	4 U
4,4'-DDE	UG/KG	4.2 U	4.1 U	10	20 U	35	2600	760	26	14 J
4,4'-DDT	UG/KG	4.2 U	4.1 U	4.6 U	57	6.1	3700	1200	22	4 U
Aldrin	UG/KG	2.2 U	2.1 U	2.4 U	10 U	1.9 U	220 U	48 U	2.1 U	2 U
Alpha-BHC	UG/KG	2.2 U	2.1 U	2.4 U	10 U	1.9 U	220 UJ	48 U	2.1 U	2 U
Alpha-Chlordane	UG/KG	2.2 U	2.1 U	2.4 U	10 U	1.9 U	220 U	48 U	2.1 U	2 U
Beta-BHC	UG/KG	2.2 U	2.1 U	2.4 U	10 U	1.9 U	220 U	48 U	2.1 U	2 U
Delta-BHC	UG/KG	2.2 U	2.1 U	2.4 U	10 U	1.9 U	220 U	48 U	2.1 U	2 U
Dieldrin	UG/KG	4.2 U	4.1 U	4.6 U	20 U	3.6 U	430 U	94 U	4 U	4 U
Endosulfan I	UG/KG	2.2 U	2.1 U	2.4 U	10 U	1.9 U	220 U	48 U	2.1 U	2 U
Endosulfan II	UG/KG	4.2 U	4.1 U	4.6 U	20 U	3.6 U	430 U	94 U	4 U	4 U
Endosulfan sulfate	UG/KG	4.2 U	4.1 U	4.6 U	20 U	3.6 U	430 U	94 U	4 U	4 U
Endrin	UG/KG	4.2 U	4.1 U	4.6 U	20 U	3.6 U	430 U	94 U	4 U	4 U
Endrin aldehyde	UG/KG	4.2 U	4.1 U	4.6 U	20 U	3.6 U	430 U	94 U	4 U	4 U
Endrin ketone	UG/KG	4.2 U	4.1 U	4.6 U	20 U	3.6 U	430 U	94 U	4 U	4 U
Gamma-BHC/Lindane	UG/KG	2.2 U	2.1 U	2.4 U	10 U	1.9 U	220 U	48 U	2.1 U	2 U
Gamma-Chlordane	UG/KG	2.2 U	2.1 UJ	2.4 UJ	10 UJ	1.9 U	220 U	48 U	2.1 U	2 U
Heptachlor	UG/KG	2.2 U	2.1 U	2.4 U	10 U	1.9 U	220 U	48 U	2.1 U	2 U
Heptachlor epoxide	UG/KG	2.2 U	2.1 U	2.4 U	10 U	1.9 U	220 U	48 U	2.1 U	2 U
Methoxychlor	UG/KG	22 U	21 U	24 U	100 U	19 U	2200 U	480 U	21 U	20 U
Toxaphene	UG/KG	220 U	210 U	240 U	1000 U	190 U	22000 U	4800 U	210 U	200 U
Aroclor-1016	UG/KG	42 U	42 U	46 U	40 U	37 U	44 U	47 U	41 U	40 U
Aroclor-1221	UG/KG	42 U	42 U	46 U	40 U	37 U	44 U	47 U	41 U	40 U
Aroclor-1232	UG/KG	42 U	42 U	46 U	40 U	37 U	44 U	47 U	41 U	40 U
Aroclor-1242	UG/KG	42 U	42 U	46 U	40 U	37 U	44 U	47 U	41 U	40 U
Aroclor-1248	UG/KG	42 U	42 U	46 U	40 U	37 U	44 U	47 U	41 U	40 U
Aroclor-1254	UG/KG	42 U	42 U	46 U	40 U	37 U	44 U	47 U	41 U	40 U
Aroclor-1260	UG/KG	42 U	42 U	46 U	40 U	37 U	44 U	47 U	41 U	40 U
Metals										

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WE2	CL-59-01-WE3	CL-59-01-WE4	CL-59-01-WE5	CL-59-01-WN1	CL-59-01-WN2	CL-59-01-WN3	CL-59-01-WN4	CL-59-01-WN5
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	13900 J	12900	13000	16200 J	13900 J	16300 J	12400 J	13500 J	13800 J
Antimony	MG/KG	1.3 J	1.8 J	1.9 J	1.6 J	1.4 J	5.1 J	3.9 J	1.6 J	1.7 J
Arsenic	MG/KG	6.9 J	5.6	5	5 J	6.7	32.2	16.7 J	6.3 J	4.7 J
Barium	MG/KG	139 J	132 J	126 J	199 J	110 J	115 J	83.3 J	127 J	138 J
Beryllium	MG/KG	0.76	0.75	0.75	0.79	0.68	2.6	1.4 J	0.89	0.73
Cadmium	MG/KG	0.41	0.8	0.99	0.77	0.25 J	2.5	1.6 J	0.54	0.39
Calcium	MG/KG	3510 J	3580	6380	1860 J	3880	9170	22700 J	5020 J	3020 J
Chromium	MG/KG	19.5 J	18.3 J	18.3 J	22.3 J	20.4 J	39.3 J	33.6 J	16.9 J	22.3 J
Cobalt	MG/KG	9.4 J	10.2	8.6	9.7 J	9	47.8	30.4 J	9.4 J	9.1 J
Copper	MG/KG	18.9 J	19.5	33.5	19.2 J	22.4 J	194 J	96.7 J	22.6 J	27.4 J
Cyanide	MG/KG									
Iron	MG/KG	24500 J	22800	20200	23600 J	25100 J	64000 J	32700 J	19400 J	24600 J
Lead	MG/KG	15.9 J	18.6 J	25.7 J	15.2 J	14.4 J	140 J	108 J	81.5 J	13.3 J
Magnesium	MG/KG	3850 J	4010 J	3470 J	4230 J	4630 J	5480 J	7370 J	3080 J	5140 J
Manganese	MG/KG	544 J	583 J	665 J	417 J	360 J	836 J	595 J	600 J	620 J
Mercury	MG/KG	0.06	0.08	0.1	0.07	0.08	0.15	0.1	0.1	0.03 J
Nickel	MG/KG	26.1 J	28 J	24.5 J	25.9 J	29.2 J	88.3 J	57.2 J	23.9 J	30 J
Potassium	MG/KG	1230 J	1180	1250	1380 J	1200	1640	1460 J	1160 J	1120 J
Selenium	MG/KG	0.45 U	0.45 U	1.5 J	0.45 U	0.43 U	0.49 U	0.46 U	0.77 J	0.42 U
Silver	MG/KG	1.3	0.8	0.81	0.77	2	2.3	1.3	1	1.2
Sodium	MG/KG	108 J	354	2400	4060 J	159	186	224 J	50.8 J	514 J
Thallium	MG/KG	0.22 U	0.22 U	0.28 U	0.23 U	0.22 U	0.25 U	0.23 U	0.22 U	0.21 U
Vanadium	MG/KG	23 J	21.2 J	21.3 J	24.3 J	22.8 J	26 J	24.8 J	20.7 J	23.3 J
Zinc	MG/KG	90.8 J	69 J	90.4 J	105 J	147 J	298 J	233 J	73.6 J	63.3 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
J = the reported value is an estimated concentration
UJ = the compound was not detected; the associated reporting limit is approximate
R = the data was rejected in the data validating process
NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
1,1,2,2-Tetrachloroethane	UG/KG	6 UJ	5.9 U	6 U	5 U	6 U	6 R	6 UJ	6 R	5 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
1,1,2-Trichloroethane	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
1,1-Dichloroethane	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
1,1-Dichloroethene	UG/KG	6 U	5.9 U	1 J	5 U	2 J	8 J	6 U	6 UJ	5 U
1,2,3-Trichloropropane	UG/KG		5.9 U							
1,2,4-Trichlorobenzene	UG/KG	6 UJ	5.9 U	6 U	5 U	6 U	6 R	6 UJ	6 R	5 UJ
1,2-Dibromo-3-chloropropane	UG/KG	6 UJ		6 U	5 U	6 U	6 R	6 UJ	6 R	5 UJ
1,2-Dibromoethane	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
1,2-Dichlorobenzene	UG/KG	6 UJ	5.9 U	6 U	5 U	6 U	6 R	6 UJ	6 R	5 UJ
1,2-Dichloroethane	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
1,3-Dichlorobenzene	UG/KG	6 UJ	5.9 U	6 U	5 U	6 U	6 R	6 UJ	6 R	5 UJ
1,3-Dichloropropane	UG/KG		5.9 U							
1,4-Dichlorobenzene	UG/KG	6 UJ	5.9 U	6 U	5 U	6 U	6 R	6 UJ	6 R	5 UJ
Acetone	UG/KG	69 NJ	23 UJ	6 U	5 U	36 NJ	6 U	11 NJ	14 J	46
Benzene	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Bromodichloromethane	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Bromoform	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Carbon disulfide	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Carbon tetrachloride	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Chlorobenzene	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Chlorodibromomethane	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Chloroethane	UG/KG	6 U	12 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Chloroform	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Cis-1,2-Dichloroethene	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Cis-1,3-Dichloropropene	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Cyclohexane	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 UJ
Ethyl benzene	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Isopropylbenzene	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Meta/Para Xylene	UG/KG		5.9 U							
Methyl Acetate	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Methyl Tertbutyl Ether	UG/KG	6 U		6 U	5 U	6 U	6 U	6 UJ	6 UJ	5 U
Methyl bromide	UG/KG	6 U		6 U	5 U	6 U	6 U	6 UJ	6 UJ	5 U
Methyl butyl ketone	UG/KG	6 U		6 U	5 U	6 U	6 U	6 UJ	6 UJ	5 U
Methyl chloride	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Methyl cyclohexane	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Methyl ethyl ketone	UG/KG	7 J	12 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Methyl isobutyl ketone	UG/KG	6 U	12 U	6 U	5 U	6 U	6 U	6 UJ	6 UJ	5 U
Methylene chloride	UG/KG	6 U	5.9 U	6 UJ	5 UJ	6 UJ	6 UJ	6 UJ	6 UJ	11 U
Ortho Xylene	UG/KG		5.9 U							
Styrene	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Tetrachloroethene	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Toluene	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG	6 UJ		6 U	5 U	6 U	6 R	6 UJ	6 R	5 UJ
Trans-1,2-Dichloroethene	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Trans-1,3-Dichloropropene	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Trichloroethene	UG/KG	6 U	5.9 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Trichlorofluoromethane	UG/KG	6 U		6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Vinyl chloride	UG/KG	6 U	12 U	6 U	5 U	6 U	6 U	6 U	6 UJ	5 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
2,4,5-Trichlorophenol	UG/KG	940 U	390 U	960 U	920 U	970 U	990 U	960 U	980 U	960 U
2,4,6-Trichlorophenol	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
2,4-Dichlorophenol	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
2,4-Dimethylphenol	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
2,4-Dinitrophenol	UG/KG	940 U	2000 U	960 U	920 U	970 U	990 U	960 U	980 U	960 U
2,4-Dinitrotoluene	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
2,6-Dinitrotoluene	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
2-Chloronaphthalene	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
2-Chlorophenol	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
2-Methylnaphthalene	UG/KG	370 U	390 U	380 U	360 U	82 NJ	120 J	380 U	390 U	380 U
2-Methylphenol	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
2-Nitroaniline	UG/KG	940 U	2000 U	960 U	920 U	970 U	990 U	960 U	980 U	960 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
3,3'-Dichlorobenzidine	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
3-Nitroaniline	UG/KG	940 U	2000 U	960 U	920 U	970 U	990 U	960 U	980 U	960 U
4,6-Dinitro-2-methylphenol	UG/KG	940 U		960 U	920 U	970 U	990 U	960 U	980 U	960 U
4-Bromophenyl phenyl ether	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
4-Chloro-3-methylphenol	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
4-Chloroaniline	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
4-Chlorophenyl phenyl ether	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
4-Methylphenol	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
4-Nitroaniline	UG/KG	940 U		960 U	920 U	970 U	990 U	960 U	980 U	960 U
4-Nitrophenol	UG/KG	940 U	2000 U	960 U	920 U	970 U	990 U	960 U	980 U	960 U
Acenaphthene	UG/KG	370 U	390 U	380 U	360 U	380 U	64 J	380 U	390 U	380 U
Acenaphthylene	UG/KG	39 J	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Acetophenone	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
Aniline	UG/KG		390 U							
Anthracene	UG/KG	370 U	390 U	380 U	360 U	47 J	120 J	380 U	390 U	380 U
Atrazine	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
Benzaldehyde	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
Benzo(a)anthracene	UG/KG	170 NJ	390 U	380 U	360 U	380 U	360 J	380 U	390 U	380 U
Benzo(a)pyrene	UG/KG	240 J	390 U	380 U	360 U	380 U	360 J	380 U	390 U	380 U
Benzo(b)fluoranthene	UG/KG	300 J	390 U	380 U	360 U	380 U	510	380 U	390 U	380 U
Benzo(ghi)perylene	UG/KG	170 J	390 U	380 U	360 U	380 U	190 J	380 U	390 U	380 U
Benzo(k)fluoranthene	UG/KG	120 J	390 U	380 U	360 U	380 U	200 J	380 U	390 U	380 U
Benzoic Acid	UG/KG		2000 U							
Bis(2-Chloroethoxy)methane	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
Bis(2-Chloroethyl)ether	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	370 U	390 U	380 U	360 U	47 J	86 J	380 U	26 J	380 U
Butylbenzylphthalate	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Caprolactam	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
Carbazole	UG/KG	370 U		380 U	360 U	380 U	110 J	380 U	390 U	380 U
Chrysene	UG/KG	180 J	390 U	380 U	360 U	380 U	410	380 U	390 U	380 U
Di-n-butylphthalate	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Di-n-octylphthalate	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Dibenz(a,h)anthracene	UG/KG	38 J	390 U	380 U	360 U	380 U	58 J	380 U	390 U	380 U
Dibenzofuran	UG/KG	370 U	390 U	380 U	360 U	380 U	64 J	380 U	390 U	380 U
Diethyl phthalate	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Dimethylphthalate	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Fluoranthene	UG/KG	240 J	390 U	380 U	360 U	380 U	800	380 U	390 U	380 U
Fluorene	UG/KG	370 U	390 U	380 U	360 U	380 U	72 J	380 U	390 U	380 U
Hexachlorobenzene	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Hexachlorobutadiene	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Hexachlorocyclopentadiene	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Indeno(1,2,3-cd)pyrene	UG/KG	170 J	390 U	380 U	360 U	380 U	210 J	380 U	390 U	380 U
Isophorone	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
N-Nitrosodiphenylamine	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
N-Nitrosodipropylamine	UG/KG	370 U		380 U	360 U	380 U	390 U	380 U	390 U	380 U
Naphthalene	UG/KG	370 U	390 U	380 U	360 U	380 U	77 J	380 U	390 U	380 U
Nitrobenzene	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Pentachlorophenol	UG/KG	940 U	2000 U	960 U	920 U	970 U	990 U	960 U	980 U	960 U
Phenanthrene	UG/KG	72 J	390 U	380 U	360 U	41 NJ	600	380 U	390 U	380 U
Phenol	UG/KG	370 U	390 U	380 U	360 U	380 U	390 U	380 U	390 U	380 U
Pyrene	UG/KG	240 J	390 U	380 U	360 U	380 U	660	380 U	390 U	25 J
Pyridine	UG/KG		2000 U	380 U	360 U	380 U	390 U	380 U		
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	3.8 U	19 U	3.8 U	3.6 U	5.4	35 J	3.8 U	3.9 U	3.9 U
4,4'-DDE	UG/KG	15	19 U	3.8 U	3.6 U	3.8 U	32 NJ	3.8 U	3.9 U	3.9 U
4,4'-DDT	UG/KG	3.8 U	19 U	3.8 U	3.6 U	3.8 U	16	3.8 U	3.9 U	3.9 U
Aldrin	UG/KG	1.9 U	10 U	2 U	1.9 U	2 U	2 U	2 U	2 U	2 U
Alpha-BHC	UG/KG	1.9 U	10 U	2 U	1.9 U	2 U	2 U	2 U	2 U	2 U
Alpha-Chlordane	UG/KG	1.9 U	10 U	2 U	1.9 U	2 U	2 U	2 U	2 U	2 U
Beta-BHC	UG/KG	1.9 U	10 U	2 U	1.9 U	2 U	2.4 J	2 U	2 U	2 U
Delta-BHC	UG/KG	1.9 U	10 U	2 U	1.9 U	2 U	2 U	2 U	2 U	2 U
Dieldrin	UG/KG	3.8 U	19 U	3.8 U	3.6 U	3.8 U	3.9 U	3.8 U	3.9 U	3.9 U
Endosulfan I	UG/KG	1.9 U	10 U	2 U	1.9 U	2 U	2 U	2 U	2 U	2 U
Endosulfan II	UG/KG	3.8 U	19 U	3.8 U	3.6 U	3.8 U	3.9 U	3.8 U	3.9 U	3.9 U
Endosulfan sulfate	UG/KG	3.8 U	19 U	3.8 U	3.6 U	3.8 U	3.9 U	3.8 U	3.9 U	3.9 U
Endrin	UG/KG	3.8 U	19 U	3.8 U	3.6 U	3.8 U	3.9 U	3.8 U	3.9 U	3.9 U
Endrin aldehyde	UG/KG	3.8 U	19 U	3.8 U	3.6 U	3.8 U	3.9 U	3.8 U	3.9 U	3.9 U
Endrin ketone	UG/KG	3.8 U	19 U	3.8 U	3.6 U	3.8 U	3.9 U	3.8 U	3.9 U	3.9 U
Gamma-BHC/Lindane	UG/KG	1.9 U	10 U	2 U	1.9 U	2 U	2 U	2 U	2 U	2 U
Gamma-Chlordane	UG/KG	1.9 U	10 U	2 UJ	1.9 UJ	2 UJ	2 UJ	2 UJ	2 U	2 U
Heptachlor	UG/KG	1.9 U	10 U	2 U	1.9 U	2 U	2 U	2 U	2 U	2 U
Heptachlor epoxide	UG/KG	1.9 U	10 U	2 U	1.9 U	2 U	2 U	2 U	2 U	2 U
Methoxychlor	UG/KG	19 U	100 U	20 U	19 U	20 U	20 U	20 U	20 U	20 U
Toxaphene	UG/KG	190 U	190 U	200 U	190 U	200 U	200 U	200 U	200 U	200 U
Aroclor-1016	UG/KG	38 U	39 U	38 U	37 U	38 U	40 U	38 U	40 U	39 U
Aroclor-1221	UG/KG	38 U	39 U	38 U	37 U	38 U	40 U	38 U	40 U	39 U
Aroclor-1232	UG/KG	38 U	39 U	38 U	37 U	38 U	40 U	38 U	40 U	39 U
Aroclor-1242	UG/KG	38 U	39 U	38 U	37 U	38 U	40 U	38 U	40 U	39 U
Aroclor-1248	UG/KG	38 U	39 U	38 U	37 U	38 U	40 U	38 U	40 U	39 U
Aroclor-1254	UG/KG	38 U	39 U	38 U	37 U	38 U	40 U	38 U	40 U	39 U
Aroclor-1260	UG/KG	38 U	39 U	38 U	37 U	38 U	40 U	38 U	40 U	39 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WN6	CL-59-01-WS1	CL-59-01-WS2	CL-59-01-WS3	CL-59-01-WS4	CL-59-01-WS5	CL-59-01-WS6	CL-59-01-WW1	CL-59-01-WW2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	7700 J	11400	10400 J	5520 J	12700 J	7150 J	12600 J	16900 J	14000 J
Antimony	MG/KG	1.3 J	3.5 UJ	1.6 J	0.8 J	1.6 J	1.4 J	1.8 J	1.7 J	1.9 J
Arsenic	MG/KG	4.7 J	5.7 J	6 J	2.6 J	4.8 J	2.8 J	10.3 J	5.8	5.5
Barium	MG/KG	62.8 J	149	84.1 J	50.2 J	100 J	76.8 J	158 J	192 J	176 J
Beryllium	MG/KG	0.41	0.3	0.49	0.23 J	0.66	0.42	0.73	0.91	0.66
Cadmium	MG/KG	0.29 J	0.29 U	0.51	0.28 J	0.63	0.96	0.88	0.39	0.41
Calcium	MG/KG	119000 J	2920 J	11100 J	86000 J	1620 J	58000 J	2100 J	7600	6170
Chromium	MG/KG	11.7 J	18.8	14.8 J	7.6 J	18.4 J	15.9 J	20.1 J	20.3 J	19.7 J
Cobalt	MG/KG	7.9 J	13.6	8.3 J	3.9 J	10.2 J	6.4 J	17.7 J	7.6	10.4
Copper	MG/KG	17.9 J	16	24.4 J	13.4 J	15.1 J	50.9 J	26 J	24.3 J	17.9 J
Cyanide	MG/KG									
Iron	MG/KG	17000 J	25600 J	19600 J	9350 J	20300 J	11400 J	27600 J	22900 J	25600 J
Lead	MG/KG	9.3 J	12.9	9.9 J	4.1 J	14.2 J	72.6 J	16.5 J	22.7 J	26.3 J
Magnesium	MG/KG	7890 J	3890	4980 J	30200 J	3530 J	9980 J	4640 J	4270 J	4470 J
Manganese	MG/KG	360 J	844 J	371 J	350 J	512 J	272 J	1290 J	400 J	769 J
Mercury	MG/KG	0.02 J	0.04	0.02 U	0.02 U	0.08	0.07	0.09	0.15	0.11
Nickel	MG/KG	21.5 J	29.7	23.9 J	9 J	22.6 J	23.6 J	40.6 J	23.5 J	25.3 J
Potassium	MG/KG	937 J	1050	1110 J	1380 J	1000 J	1080 J	872 J	1360	1150
Selenium	MG/KG	0.4 U	0.58 U	0.38 U	0.39 U	0.79 J	0.55 J	0.47 U	0.45 U	0.47 U
Silver	MG/KG	0.1 U	0.58 U	0.48 J	0.1 U	0.72	0.1 U	0.83	1.9	2.1
Sodium	MG/KG	209 J	34.7 J	114 J	418 J	1480 J	956 J	2230 J	139	58.6
Thallium	MG/KG	0.2 U	0.86 J	0.19 U	0.3 J	0.21 U	0.2 U	0.23 U	0.23 U	0.23 U
Vanadium	MG/KG	12.9 J	21.7	20.7 J	11.6 J	21.8 J	17.8 J	24.6 J	25.1 J	22.2 J
Zinc	MG/KG	37.3 J	70.4 J	45.1 J	20.3 J	60.7 J	99.5 J	74.1 J	75.2 J	95 J

Note(s):

(1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)

(2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5 U	5 R	5 UJ	5 R	5 UJ	4 U	5 U	5 U	5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
1,1,2-Trichloroethane	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
1,1-Dichloroethane	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
1,1-Dichloroethene	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
1,2,3-Trichloropropane	UG/KG									
1,2,4-Trichlorobenzene	UG/KG	5 U	5 R	5 UJ	5 R	5 UJ	4 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	UG/KG	5 U	5 R	5 UJ	5 R	5 UJ	4 U	5 U	5 U	5 U
1,2-Dibromoethane	UG/KG	5 U	5 UJ	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
1,2-Dichlorobenzene	UG/KG	5 U	5 R	5 UJ	5 R	5 UJ	4 U	5 U	5 U	5 U
1,2-Dichloroethane	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
1,3-Dichlorobenzene	UG/KG	5 U	5 R	5 UJ	5 R	5 UJ	4 U	5 U	5 U	5 U
1,3-Dichloropropane	UG/KG									
1,4-Dichlorobenzene	UG/KG	5 U	5 R	5 UJ	5 R	5 UJ	4 U	5 U	5 U	5 U
Acetone	UG/KG	5 U	5 U	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Benzene	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Bromodichloromethane	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Bromoform	UG/KG	5 U	5 UJ	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Carbon disulfide	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Carbon tetrachloride	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Chlorobenzene	UG/KG	5 U	5 UJ	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Chlorodibromomethane	UG/KG	5 U	5 UJ	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Chloroethane	UG/KG	5 U	5 U	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Chloroform	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Cis-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Cis-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Cyclohexane	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	5 U	5 UJ	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Ethyl benzene	UG/KG	5 U	5 UJ	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Isopropylbenzene	UG/KG	5 U	5 UJ	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Meta/Para Xylene	UG/KG									
Methyl Acetate	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Methyl Tertbutyl Ether	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Methyl bromide	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Methyl butyl ketone	UG/KG	5 U	5 UJ	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Methyl chloride	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Methyl cyclohexane	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Methyl ethyl ketone	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Methyl isobutyl ketone	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Methylene chloride	UG/KG	5 U	6 U	2 J	5 R	5 U	2 J	1 J	2 J	2 J
Ortho Xylene	UG/KG									
Styrene	UG/KG	5 U	5 UJ	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Tetrachloroethene	UG/KG	5 U	5 UJ	5 U	5 R	5 UJ	4 U	5 U	5 U	5 U
Toluene	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG	5 U	5 R	5 UJ	5 R	5 UJ	4 U	5 U	5 U	5 U
Trans-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Trans-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Trichloroethene	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Trichlorofluoromethane	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Vinyl chloride	UG/KG	5 U	5 U	5 U	5 R	5 U	4 U	5 U	5 U	5 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2,4,5-Trichlorophenol	UG/KG	920 U	920 U	930 U	940 U	960 U	890 U	1000 U	870 U	900 U
2,4,6-Trichlorophenol	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2,4-Dichlorophenol	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2,4-Dimethylphenol	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2,4-Dinitrophenol	UG/KG	920 U	920 U	930 UJ	940 UJ	960 UJ	890 UJ	1000 UJ	870 U	900 U
2,4-Dinitrotoluene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2,6-Dinitrotoluene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2-Chloronaphthalene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2-Chlorophenol	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2-Methylnaphthalene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2-Methylphenol	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
2-Nitroaniline	UG/KG	920 U	920 U	930 U	940 U	960 U	890 U	1000 U	870 U	900 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
3,3'-Dichlorobenzidine	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
3-Nitroaniline	UG/KG	920 U	920 U	930 U	940 U	960 U	890 U	1000 U	870 U	900 U
4,6-Dinitro-2-methylphenol	UG/KG	920 U	920 U	930 U	940 U	960 U	890 U	1000 U	870 U	900 U
4-Bromophenyl phenyl ether	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
4-Chloro-3-methylphenol	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
4-Chloroaniline	UG/KG	370 U	370 U	370 UJ	380 UJ	380 UJ	360 UJ	400 UJ	350 UJ	360 UJ
4-Chlorophenyl phenyl ether	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
4-Methylphenol	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
4-Nitroaniline	UG/KG	920 U	920 U	930 UJ	940 UJ	960 UJ	890 UJ	1000 UJ	870 U	900 U
4-Nitrophenol	UG/KG	920 U	920 U	930 U	940 U	960 U	890 U	1000 U	870 U	900 U
Acenaphthene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Acenaphthylene	UG/KG	370 U	35 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Acetophenone	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Aniline	UG/KG									
Anthracene	UG/KG	370 U	92 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Atrazine	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Benzaldehyde	UG/KG	370 U	370 U	370 UJ	380 UJ	380 UJ	360 UJ	400 UJ	350 UJ	360 UJ
Benzo(a)anthracene	UG/KG	370 U	210 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Benzo(a)pyrene	UG/KG	370 U	220 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Benzo(b)fluoranthene	UG/KG	370 U	280 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Benzo(ghi)perylene	UG/KG	370 U	130 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Benzo(k)fluoranthene	UG/KG	370 U	100 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Benzoic Acid	UG/KG									
Bis(2-Chloroethoxy)methane	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Bis(2-Chloroethyl)ether	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Butylbenzylphthalate	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Caprolactam	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Carbazole	UG/KG	370 U	57 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Chrysene	UG/KG	370 U	230 NJ	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Di-n-butylphthalate	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Di-n-octylphthalate	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Dibenz(a,h)anthracene	UG/KG	370 U	32 NJ	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Dibenzofuran	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Diethyl phthalate	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Dimethylphthalate	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Fluoranthene	UG/KG	370 U	530	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Fluorene	UG/KG	370 U	30 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Hexachlorobenzene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Hexachlorobutadiene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Hexachlorocyclopentadiene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Indeno(1,2,3-cd)pyrene	UG/KG	370 U	130 J	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Isophorone	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
N-Nitrosodiphenylamine	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
N-Nitrosodipropylamine	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Naphthalene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Nitrobenzene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Pentachlorophenol	UG/KG	920 U	920 U	930 U	940 U	960 U	890 U	1000 U	870 U	900 U
Phenanthrene	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Phenol	UG/KG	370 U	370 U	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Pyrene	UG/KG	370 U	500	370 U	380 U	380 U	360 U	400 U	350 U	360 U
Pyridine	UG/KG									
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	3.7 U	3.7 U	3.8 U	3.8 U	3.8 U	3.5 U	4 U	3.4 U	3.6 U
4,4'-DDE	UG/KG	3.7 U	16 NJ	3.8 U	3.8 U	3.8 U	3.5 U	4 U	3.4 U	3.6 U
4,4'-DDT	UG/KG	3.7 U	10 J	4.3	3.8 U	3.8 U	3.5 U	4 U	3.4 U	3.6 U
Aldrin	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.8 U	2 U	1.8 U	1.8 U
Alpha-BHC	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.8 U	2 U	1.8 U	1.8 U
Alpha-Chlordane	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.8 U	2 U	1.8 U	1.8 U
Beta-BHC	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.8 U	2 U	1.8 U	1.8 U
Delta-BHC	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.8 U	2 U	1.8 U	1.8 U
Dieldrin	UG/KG	3.7 U	3.7 U	3.8 U	3.8 U	3.8 U	3.5 U	4 U	3.4 U	3.6 U
Endosulfan I	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.8 U	2 U	1.8 U	1.8 U
Endosulfan II	UG/KG	3.7 U	3.7 U	3.8 U	3.8 U	3.8 U	3.5 U	4 U	3.4 U	3.6 U
Endosulfan sulfate	UG/KG	3.7 U	3.7 U	3.8 U	3.8 U	3.8 U	3.5 U	4 U	3.4 U	3.6 U
Endrin	UG/KG	3.7 U	5.8 NJ	3.8 U	3.8 U	3.8 U	3.5 U	4 U	3.4 U	3.6 U
Endrin aldehyde	UG/KG	3.7 U	3.7 U	3.8 U	3.8 U	3.8 U	3.5 U	4 U	3.4 U	3.6 U
Endrin ketone	UG/KG	3.7 U	3.7 U	3.8 U	3.8 U	3.8 U	3.5 U	4 U	3.4 U	3.6 U
Gamma-BHC/Lindane	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.8 U	2 U	1.8 U	1.8 U
Gamma-Chlordane	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2.2	1.8 U	2 U	1.8 U	1.8 U
Heptachlor	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.8 U	2 U	1.8 U	1.8 U
Heptachlor epoxide	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	2 U	1.8 U	2 U	1.8 U	1.8 U
Methoxychlor	UG/KG	19 U	19 U	19 U	19 U	20 U	18 U	20 U	18 U	18 U
Toxaphene	UG/KG	190 U	190 U	190 UJ	190 UJ	200 U	180 U	200 U	180 U	180 U
Aroclor-1016	UG/KG	37 U	38 U	38 U	38 U	38 U	35 U	40 U	35 U	36 U
Aroclor-1221	UG/KG	37 U	38 U	38 U	38 U	38 U	35 U	40 U	35 U	36 U
Aroclor-1232	UG/KG	37 U	38 U	38 U	38 U	38 U	35 U	40 U	35 U	36 U
Aroclor-1242	UG/KG	37 U	38 U	38 U	38 U	38 U	35 U	40 U	35 U	36 U
Aroclor-1248	UG/KG	37 U	38 U	38 U	38 U	38 U	35 U	40 U	35 U	36 U
Aroclor-1254	UG/KG	37 U	38 U	38 U	38 U	38 U	35 U	40 U	35 U	36 U
Aroclor-1260	UG/KG	37 U	38 U	38 U	38 U	38 U	35 U	40 U	35 U	36 U
Metals										

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-01-WW3	CL-59-01-WW4	CL-59-02-F01	CL-59-02-F02	CL-59-02-WE1	CL-59-02-WE2	CL-59-02-WN1	CL-59-02-WN2	CL-59-02-WS1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	10500 J	12900 J	9230 J	7630 J	8050 J	7810 J	12000 J	7040 J	7480 J
Antimony	MG/KG	1.4 J	2 J	1.5 J	1.1 J	1.2 J	1.3 J	2 J	0.99 J	0.83 J
Arsenic	MG/KG	6.5	6.4	6.4 J	5.7 J	4.5 J	3.6 J	5.4 J	4.7 J	5.5 J
Barium	MG/KG	113 J	117 J	57.6 J	45.3 J	56.7 J	55.6 J	149 J	42.3 J	36.8 J
Beryllium	MG/KG	0.54	0.69	0.5	0.39	0.44	0.36	0.72	0.37	0.39
Cadmium	MG/KG	0.21 J	0.38	0.22 J	0.29	0.13 J	0.24 J	0.39	0.21 J	0.17 J
Calcium	MG/KG	3230	29800	5020 J	31200 J	1980 J	77800 J	9570 J	37700 J	1880 J
Chromium	MG/KG	16.2 J	18 J	15.9 J	12.4 J	14 J	12.2 J	16.5 J	12.1 J	13.3 J
Cobalt	MG/KG	8.1	7.7	9 J	9.6 J	5.4 J	5.8 J	6.4 J	6.3 J	7.4 J
Copper	MG/KG	20.5 J	31.3 J	24.5 J	20.9 J	21.6 J	15.4 J	29.4 J	31.4 J	23.7 J
Cyanide	MG/KG									
Iron	MG/KG	23600 J	20900 J	21900 J	18400 J	16900 J	17100 J	20200 J	16900 J	19000 J
Lead	MG/KG	13.4 J	50.9 J	12 J	10.9 J	9.3 J	7.1 J	54.8 J	8.8 J	9.8 J
Magnesium	MG/KG	3790 J	7080 J	5020 J	13500 J	3220 J	13600 J	3610 J	11800 J	3420 J
Manganese	MG/KG	405 J	360 J	339 J	613 J	156 J	390 J	285 J	316 J	200 J
Mercury	MG/KG	0.13	0.24 J	0.03 J	0.06 J	0.07 J	0.39 J	0.51 J	0.03 J	0.04 J
Nickel	MG/KG	23.3 J	24.3 J	29.2 J	23.3 J	22.1 J	19.1 J	20.4 J	20.8 J	24.8 J
Potassium	MG/KG	955	1280	1000 J	863 J	666 J	942 J	978 J	725 J	653 J
Selenium	MG/KG	0.43 U	0.42 U	0.46 U	0.37 U	0.41 U	0.42 U	0.49 U	0.42 U	0.41 U
Silver	MG/KG	1.9	1.2	2.2 J	1.4 J	1.6 J	0.46 J	1.9 J	1.1 J	1.9 J
Sodium	MG/KG	50.3	73.6	97.5 J	175 J	402 J	156 J	48.3 J	93.8 J	66.6 J
Thallium	MG/KG	0.21 U	0.21 U	0.23 U	0.18 U	0.36 J	0.21 U	0.24 U	0.43 J	0.21 U
Vanadium	MG/KG	20.3 J	21.3 J	16.4 J	13.7 J	13.4 J	12.8 J	19.3 J	12.4 J	13.7 J
Zinc	MG/KG	68.6 J	84.5 J	90.1 J	76.6 J	63.8 J	36.9 J	77.3 J	58.4 J	76.2 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
J = the reported value is an estimated concentration
UJ = the compound was not detected; the associated reporting limit is approximate
R = the data was rejected in the data validating process
NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
1,1,2-Trichloroethane	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
1,1-Dichloroethane	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
1,1-Dichloroethene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
1,2,3-Trichloropropane	UG/KG				6 U	6.3 U	5.7 U		5 U	5 U
1,2,4-Trichlorobenzene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	UG/KG	5 U	5 UJ	5 U				5 U	5 U	5 U
1,2-Dibromoethane	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
1,2-Dichlorobenzene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
1,2-Dichloroethane	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
1,3-Dichlorobenzene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
1,3-Dichloropropane	UG/KG				6 U	6.3 U	5.7 U			
1,4-Dichlorobenzene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Acetone	UG/KG	5 U	13 U	5 UJ	24 U	25 U	23 U	5 U	5 U	5 U
Benzene	UG/KG	5 U	1 J	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Bromodichloromethane	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Bromoform	UG/KG	5 U	5 UJ	5 U				5 U	5 U	5 U
Carbon disulfide	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Carbon tetrachloride	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Chlorobenzene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Chlorodibromomethane	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Chloroethane	UG/KG	5 U	5 U	5 UJ	12 U	13 U	11 U	5 U	5 U	5 U
Chloroform	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Cis-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Cis-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Cyclohexane	UG/KG	5 U	3 J	5 U				5 U	5 U	5 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Ethyl benzene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Isopropylbenzene	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Meta/Para Xylene	UG/KG				6 U	6.3 U	5.7 U			
Methyl Acetate	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Methyl Tertbutyl Ether	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Methyl bromide	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Methyl butyl ketone	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Methyl chloride	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Methyl cyclohexane	UG/KG	5 U	5 J	5 U				5 U	5 U	5 U
Methyl ethyl ketone	UG/KG	5 U	2 J	5 U	12 U	13 U	11 U	5 U	5 U	5 U
Methyl isobutyl ketone	UG/KG	5 U	5 U	5 U	12 U	13 U	11 U	5 U	5 U	5 U
Methylene chloride	UG/KG	1 J	5 U	5 U	6 U	6.3 U	1.3 J	1 J	1 J	2 J
Ortho Xylene	UG/KG				6 U	6.3 U	5.7 U			
Styrene	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Tetrachloroethene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Toluene	UG/KG	5 U	3 J	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG	5 U	3 J	5 U				5 U	5 U	5 U
Trans-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Trans-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Trichloroethene	UG/KG	5 U	5 U	5 U	6 U	6.3 U	5.7 U	5 U	5 U	5 U
Trichlorofluoromethane	UG/KG	5 U	5 U	5 U				5 U	5 U	5 U
Vinyl chloride	UG/KG	5 U	5 U	5 U	12 U	13 U	11 U	5 U	5 U	5 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
2,4,5-Trichlorophenol	UG/KG	920 U	900 U	990 U	400 U	420 U	380 U	930 U	910 U	870 U
2,4,6-Trichlorophenol	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
2,4-Dichlorophenol	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
2,4-Dimethylphenol	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
2,4-Dinitrophenol	UG/KG	920 UJ	900 U	990 UJ	2100 U	2100 U	1900 U	930 U	910 U	870 U
2,4-Dinitrotoluene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
2,6-Dinitrotoluene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
2-Chloronaphthalene	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
2-Chlorophenol	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
2-Methylnaphthalene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
2-Methylphenol	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
2-Nitroaniline	UG/KG	920 U	900 U	990 U	2100 U	2100 U	1900 U	930 U	910 U	870 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
3,3'-Dichlorobenzidine	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
3-Nitroaniline	UG/KG	920 U	900 U	990 U	2100 U	2100 U	1900 U	930 U	910 U	870 U
4,6-Dinitro-2-methylphenol	UG/KG	920 U	900 U	990 U				930 U	910 U	870 U
4-Bromophenyl phenyl ether	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
4-Chloro-3-methylphenol	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
4-Chloroaniline	UG/KG	370 UJ	360 UJ	390 UJ	400 U	420 U	380 U	370 UJ	360 UJ	350 UJ
4-Chlorophenyl phenyl ether	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
4-Methylphenol	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
4-Nitroaniline	UG/KG	920 UJ	900 U	990 UJ				930 U	910 U	870 U
4-Nitrophenol	UG/KG	920 U	900 U	990 U	2100 U	2100 U	1900 U	930 U	910 U	870 U
Acenaphthene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Acenaphthylene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Acetophenone	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
Aniline	UG/KG				400 U	420 U	380 U			
Anthracene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Atrazine	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
Benzaldehyde	UG/KG	370 UJ	360 UJ	390 UJ				370 UJ	360 UJ	350 UJ
Benzo(a)anthracene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Benzo(a)pyrene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Benzo(b)fluoranthene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Benzo(ghi)perylene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Benzo(k)fluoranthene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Benzoic Acid	UG/KG				2100 U	2100 U	1900 U			
Bis(2-Chloroethoxy)methane	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
Bis(2-Chloroethyl)ether	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Butylbenzylphthalate	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Caprolactam	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
Carbazole	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
Chrysene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Di-n-butylphthalate	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Di-n-octylphthalate	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Dibenz(a,h)anthracene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Dibenzofuran	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Diethyl phthalate	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Dimethylphthalate	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Fluoranthene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Fluorene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Hexachlorobenzene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Hexachlorobutadiene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Hexachlorocyclopentadiene	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Indeno(1,2,3-cd)pyrene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Isophorone	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
N-Nitrosodiphenylamine	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
N-Nitrosodipropylamine	UG/KG	370 U	360 U	390 U				370 U	360 U	350 U
Naphthalene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Nitrobenzene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Pentachlorophenol	UG/KG	920 U	900 U	990 U	2100 U	2100 U	1900 U	930 U	910 U	870 U
Phenanthrene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Phenol	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Pyrene	UG/KG	370 U	360 U	390 U	400 U	420 U	380 U	370 U	360 U	350 U
Pyridine	UG/KG				2100 U	2100 U	1900 U			
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	3.6 U	3.5 U	3.9 U	20 U	21 U	19 U	3.6 U	3.7 U	3.4 U
4,4'-DDE	UG/KG	3.6 U	3.5 U	3.9 U	20 U	21 U	19 U	3.6 U	3.7 U	3.4 U
4,4'-DDT	UG/KG	3.6 U	3.5 U	3.9 U	20 U	21 U	19 U	3.6 U	3.7 U	3.4 U
Aldrin	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Alpha-BHC	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Alpha-Chlordane	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Beta-BHC	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Delta-BHC	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Dieldrin	UG/KG	3.6 U	3.5 U	3.9 U	20 U	21 U	19 U	3.6 U	3.7 U	3.4 U
Endosulfan I	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Endosulfan II	UG/KG	3.6 U	3.5 U	3.9 U	20 U	21 U	19 U	3.6 U	3.7 U	3.4 U
Endosulfan sulfate	UG/KG	3.6 U	3.5 U	3.9 U	20 U	21 U	19 U	3.6 U	3.7 U	3.4 U
Endrin	UG/KG	3.6 U	3.5 U	3.9 U	20 U	21 U	19 U	3.6 U	3.7 U	3.4 U
Endrin aldehyde	UG/KG	3.6 U	3.5 U	3.9 U	20 U	21 U	19 U	3.6 U	3.7 U	3.4 U
Endrin ketone	UG/KG	3.6 U	3.5 U	3.9 U	20 U	21 U	19 U	3.6 U	3.7 U	3.4 U
Gamma-BHC/Lindane	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Gamma-Chlordane	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Heptachlor	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Heptachlor epoxide	UG/KG	1.9 U	1.8 U	2 U	10 U	11 U	9.7 U	1.9 U	1.9 U	1.8 U
Methoxychlor	UG/KG	19 U	18 U	20 U	100 U	110 U	97 U	19 U	19 U	18 U
Toxaphene	UG/KG	190 U	180 U	200 U	200 U	210 U	190 U	190 UJ	190 UJ	180 UJ
Aroclor-1016	UG/KG	37 U	36 U	40 U	40 U	42 U	38 U	37 U	37 U	35 U
Aroclor-1221	UG/KG	37 U	36 U	40 U	40 U	42 U	38 U	37 U	37 U	35 U
Aroclor-1232	UG/KG	37 U	36 U	40 U	40 U	42 U	38 U	37 U	37 U	35 U
Aroclor-1242	UG/KG	37 U	36 U	40 U	40 U	42 U	38 U	37 U	37 U	35 U
Aroclor-1248	UG/KG	37 U	36 U	40 U	40 U	42 U	38 U	37 U	37 U	35 U
Aroclor-1254	UG/KG	37 U	36 U	40 U	40 U	42 U	38 U	37 U	37 U	35 U
Aroclor-1260	UG/KG	37 U	36 U	40 U	40 U	42 U	38 U	37 U	37 U	35 U
Metals										

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2	
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sample ID	CL-59-02-WS2	CL-59-02-WW1	CL-59-02-WW2	CL-59-03-F01	CL-59-03-F02	CL-59-03-F03	CL-59-03-WE1	CL-59-03-WN1	CL-59-03-WN2	
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
		1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	9600 J	9140 J	12600 J	8160	10600	9260	14500 J	13500 J	8530 J	
Antimony	MG/KG	0.94 J	1.2 J	1.5 J	3.4 UJ	3.6 UJ	3.2 UJ	1.2 J	1.2 J	1.4 J	
Arsenic	MG/KG	4.7 J	4.8 J	7.7 J	4.8	5.6	4.8	6.5 J	7.5 J	5.9 J	
Barium	MG/KG	68.5 J	88.8 J	129 J	51.1	72.3	77.9	128 J	125 J	47.1 J	
Beryllium	MG/KG	0.46	0.48	0.68	0.12	0.26	0.19	0.74	0.76	0.4	
Cadmium	MG/KG	0.23 J	0.33	0.33	0.29 U	0.3 U	0.27 U	0.23 J	0.24 J	0.22 J	
Calcium	MG/KG	52000 J	77100 J	3780 J	13200	13000	71900	3130 J	3130 J	23920	
Chromium	MG/KG	14.7 J	13.8 J	19 J	14.3	19.1	14.9	21.9 J	20.5 J	13.7 J	
Cobalt	MG/KG	6.7 J	6.8 J	13.3 J	7.8	12.2	8.4	7.8 J	8.2 J	11.1 J	
Copper	MG/KG	21.4 J	18 J	22 J	22.6	22.9	19.5	16.9 J	18.4 J	15.7 J	
Cyanide	MG/KG										
Iron	MG/KG	18800 J	20200 J	26200 J	19600	24400	19800	25700 J	26400 J	8850 J	
Lead	MG/KG	7.9 J	11.3 J	14.7 J	11.6 J	14.2 J	14.5 J	11.8 J	13.2 J	9.7 J	
Magnesium	MG/KG	9750 J	8110 J	4600 J	4430	6220	15100	4560 J	4120 J	8870 J	
Manganese	MG/KG	324 J	208 J	780 J	281	462	440	193 J	249 J	476 J	
Mercury	MG/KG	0.05 J	0.14 J	0.09 J	0.03 J	0.04	0.03 J	0.08 J	0.43 J	0.06 J	
Nickel	MG/KG	22.9 J	20.5 J	32.3 J	25.9	32	24.9	28.2 J	27.8 J	27 J	
Potassium	MG/KG	968 J	661 J	979 J	971	980	888	994 J	922 J	699 J	
Selenium	MG/KG	0.43 U	0.41 U	0.47 U	0.57 U	0.6 U	0.54 U	0.45 U	0.45 U	0.38 U	
Silver	MG/KG	1.1 J	0.54 J	2.6 J	0.57 U	0.6 U	0.54 U	2.4 J	2.5 J	1.1 J	
Sodium	MG/KG	152 J	97.1 J	43.6 J	103	98.4	241	36.3 J	33.3 J	107 J	
Thallium	MG/KG	0.21 U	0.2 U	0.23 U	0.57 U	0.6 U	0.54 U	0.7 J	0.64 J	0.19 U	
Vanadium	MG/KG	15.6 J	14.5 J	21.9 J	14.9	17	15.7	22.5 J	22.8 J	12.1 J	
Zinc	MG/KG	57.9 J	43.5 J	60.9 J	85 J	120 J	64.4 J	78.3 J	73.8 J	83.8 J	

Note(s):

(1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)

(2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-F01	CL-59-04-WE1	CL-59-04-WN1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-F01	CL-59-04-WE1	CL-59-04-WN1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 UJ	5 UJ	6 UJ	5 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 UJ	5 UJ
1,1,2-Trichloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
1,1-Dichloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
1,1-Dichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
1,2,3-Trichloropropane	UG/KG									
1,2,4-Trichlorobenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 UJ	5 UJ	6 UJ	5 UJ
1,2-Dibromo-3-chloropropane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 UJ	5 UJ	6 UJ	5 UJ
1,2-Dibromoethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
1,2-Dichlorobenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 UJ	5 UJ	6 UJ	5 UJ
1,2-Dichloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
1,3-Dichlorobenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 UJ	5 UJ	6 UJ	5 UJ
1,3-Dichloropropane	UG/KG									
1,4-Dichlorobenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 UJ	5 UJ	6 UJ	5 UJ
Acetone	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Benzene	UG/KG	5 U	5 U	5 U	5 U	5 U	1 J	5 U	6 UJ	5 U
Bromodichloromethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Bromoform	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Carbon disulfide	UG/KG	5 U	5 U	5 U	5 U	5 U	1 J	5 U	6 UJ	5 U
Carbon tetrachloride	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Chlorobenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Chlorodibromomethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Chloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Chloroform	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Cis-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Cis-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Cyclohexane	UG/KG	5 U	5 U	5 U	5 U	5 U	3 J	5 U	2 J	5 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-FO1	CL-59-04-WE1	CL-59-04-WN1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-FO1	CL-59-04-WE1	CL-59-04-WN1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 UJ	5 UJ
Ethyl benzene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Isopropylbenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Meta/Para Xylene	UG/KG									
Methyl Acetate	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Methyl Tertbutyl Ether	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Methyl bromide	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Methyl butyl ketone	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Methyl chloride	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Methyl cyclohexane	UG/KG	5 U	5 U	5 U	5 U	5 U	4 J	5 U	3 J	5 U
Methyl ethyl ketone	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Methyl isobutyl ketone	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Methylene chloride	UG/KG	2 J	2 J	2 J	2 J	1 J	6 U	9 U	6 UJ	6 U
Ortho Xylene	UG/KG									
Styrene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Tetrachloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Toluene	UG/KG	5 U	5 U	5 U	5 U	5 U	3 J	1 J	2 J	5 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG	5 U	5 U	5 U	5 U	5 U	2 J	5 UJ	2 J	5 UJ
Trans-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Trans-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Trichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Trichlorofluoromethane	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 UJ	5 UJ
Vinyl chloride	UG/KG	5 U	5 U	5 U	5 U	5 U	6 U	5 U	6 UJ	5 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2,4,5-Trichlorophenol	UG/KG	920 U	910 U	880 U	870 U	1000 U	950 U	910 U	980 U	970 U
2,4,6-Trichlorophenol	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2,4-Dichlorophenol	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2,4-Dimethylphenol	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2,4-Dinitrophenol	UG/KG	920 UJ	910 UJ	880 U	870 UJ	1000 UJ	950 UJ	910 UJ	980 UJ	970 UJ
2,4-Dinitrotoluene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2,6-Dinitrotoluene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2-Chloronaphthalene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2-Chlorophenol	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2-Methylnaphthalene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2-Methylphenol	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
2-Nitroaniline	UG/KG	920 U	910 U	880 U	870 U	1000 U	950 U	910 U	980 U	970 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-F01	CL-59-04-WE1	CL-59-04-WN1	CL-59-04-WN1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-F01	CL-59-04-WE1	CL-59-04-WN1	CL-59-04-WN1
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
3,3'-Dichlorobenzidine	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
3-Nitroaniline	UG/KG	920 U	910 U	880 U	870 U	1000 U	950 U	910 U	980 U	970 U
4,6-Dinitro-2-methylphenol	UG/KG	920 U	910 U	880 U	870 U	1000 U	950 UJ	910 U	980 UJ	970 U
4-Bromophenyl phenyl ether	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
4-Chloro-3-methylphenol	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
4-Chloroaniline	UG/KG	370 UJ	360 UJ	350 UJ	350 UJ	400 UJ	380 U	360 UJ	390 U	390 UJ
4-Chlorophenyl phenyl ether	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
4-Methylphenol	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
4-Nitroaniline	UG/KG	920 UJ	910 UJ	880 U	870 UJ	1000 UJ	950 U	910 U	980 U	970 U
4-Nitrophenol	UG/KG	920 U	910 U	880 U	870 U	1000 U	950 U	910 U	980 U	970 U
Acenaphthene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Acenaphthylene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Acetophenone	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Aniline	UG/KG									
Anthracene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Atrazine	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Benzaldehyde	UG/KG	370 UJ	360 UJ	350 UJ	350 UJ	400 UJ	380 U	360 U	390 U	390 U
Benzo(a)anthracene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Benzo(a)pyrene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Benzo(b)fluoranthene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Benzo(ghi)perylene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Benzo(k)fluoranthene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Benzoic Acid	UG/KG									
Bis(2-Chloroethoxy)methane	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Bis(2-Chloroethyl)ether	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	370 U	360 U	350 U	350 U	400 U	50 NJ	360 U	48 NJ	390 U
Butylbenzylphthalate	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Caprolactam	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Carbazole	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Chrysene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Di-n-butylphthalate	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Di-n-octylphthalate	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Dibenz(a,h)anthracene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Dibenzofuran	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Diethyl phthalate	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Dimethylphthalate	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Fluoranthene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	37 J	390 U	390 U
Fluorene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Hexachlorobenzene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Hexachlorobutadiene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Hexachlorocyclopentadiene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-F01	CL-59-04-WE1	CL-59-04-WN1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-F01	CL-59-04-WE1	CL-59-04-WN1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Indeno(1,2,3-cd)pyrene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Isophorone	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
N-Nitrosodiphenylamine	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
N-Nitrosodipropylamine	UG/KG	370 U	360 U	350 U	350 U	400 U	380 UJ	360 U	390 UJ	390 U
Naphthalene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Nitrobenzene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Pentachlorophenol	UG/KG	920 U	910 U	880 U	870 U	1000 U	950 U	910 U	980 U	970 U
Phenanthrene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Phenol	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	360 U	390 U	390 U
Pyrene	UG/KG	370 U	360 U	350 U	350 U	400 U	380 U	43 J	390 U	390 U
Pyridine	UG/KG									
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	3.6 U	3.6 U	3.5 U	3.5 U	4 U	3.8 U	3.6 U	3.9 U	3.9 U
4,4'-DDE	UG/KG	3.6 U	3.6 U	7.6 J	3.5 U	4 U	3.8 U	3.6 U	3.9 U	3.9 U
4,4'-DDT	UG/KG	3.6 U	3.6 U	7.5	3.5 U	5.8	3.8 U	3.6 U	3.9 U	3.9 U
Aldrin	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 U	2 U	2 U
Alpha-BHC	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 UJ	2 U	2 UJ
Alpha-Chlordane	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 U	2 U	2 U
Beta-BHC	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 U	2 U	2 U
Delta-BHC	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 U	2 U	2 U
Dieldrin	UG/KG	3.6 U	3.6 U	3.5 U	3.5 U	4 U	3.8 U	3.6 U	3.9 U	3.9 U
Endosulfan I	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 U	2 U	2 U
Endosulfan II	UG/KG	3.6 U	3.6 U	3.5 U	3.5 U	4 U	3.8 U	3.6 U	3.9 U	3.9 U
Endosulfan sulfate	UG/KG	3.6 U	3.6 U	3.5 U	3.5 U	4 U	3.8 U	3.6 U	3.9 U	3.9 U
Endrin	UG/KG	3.6 U	3.6 U	3.5 U	3.5 U	4 U	3.8 U	16 NJ	3.9 U	3.9 U
Endrin aldehyde	UG/KG	3.6 U	3.6 U	3.5 U	3.5 U	4 U	3.8 U	3.6 U	3.9 U	3.9 U
Endrin ketone	UG/KG	3.6 U	3.6 U	3.5 U	3.5 U	4 U	3.8 U	3.6 U	3.9 U	3.9 U
Gamma-BHC/Lindane	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 U	2 U	2 U
Gamma-Chlordane	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 U	2 U	2 U
Heptachlor	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 U	2 U	2 U
Heptachlor epoxide	UG/KG	1.9 U	1.9 U	1.8 U	1.8 U	2.1 U	2 U	1.9 U	2 U	2 U
Methoxychlor	UG/KG	19 U	19 U	18 U	18 U	21 U	20 U	19 U	20 U	20 U
Toxaphene	UG/KG	190 UJ	190 UJ	180 UJ	180 UJ	210 UJ	200 U	190 U	200 U	200 U
Aroclor-1016	UG/KG	37 U	36 U	35 U	35 U	41 U	39 U	37 U	40 U	39 U
Aroclor-1221	UG/KG	37 U	36 U	35 U	35 U	41 U	39 U	37 U	40 U	39 U
Aroclor-1232	UG/KG	37 U	36 U	35 U	35 U	41 U	39 U	37 U	40 U	39 U
Aroclor-1242	UG/KG	37 U	36 U	35 U	35 U	41 U	39 U	37 U	40 U	39 U
Aroclor-1248	UG/KG	37 U	36 U	35 U	35 U	41 U	39 U	37 U	40 U	39 U
Aroclor-1254	UG/KG	37 U	36 U	35 U	35 U	41 U	39 U	37 U	40 U	39 U
Aroclor-1260	UG/KG	37 U	36 U	35 U	35 U	41 U	39 U	37 U	40 U	39 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-F01	CL-59-04-WE1	CL-59-04-WN1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-03-WN3	CL-59-03-WS1	CL-59-03-WS2	CL-59-03-WS3	CL-59-03-WW1	CL-59-04-F04	CL-59-04-F01	CL-59-04-WE1	CL-59-04-WN1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	4960 J	5420 J	5280 J	15800 J	12500 J	4870	12000 J	9390	7880 J
Antimony	MG/KG	0.9 J	0.68 J	0.73 J	0.14 UJ	1.4 J	0.7 J	1.9 J	1.3 J	1.1 J
Arsenic	MG/KG	4.2 J	3.6 J	2.8 J	3.6 J	5.3 J	3.5	8 J	3.2	4.6 J
Barium	MG/KG	29.4 J	51.7 J	34.8 J	52.9 J	169 J	26.2	78.6 J	78.2	66.6 J
Beryllium	MG/KG	0.26 J	0.26	0.25 J	0.09 U	0.67	0.26	0.57	0.42	0.39
Cadmium	MG/KG	0.16 J	0.17 J	0.22 J	0.24 J	0.23 J	0.15 J	0.29 J	0.22	0.22 J
Calcium	MG/KG	74900 J	82700 J	90200 J	15000 J	11900 J	64000	2940 J	78000	38700 J
Chromium	MG/KG	8.5 J	8.2 J	8.3 J	20.2 J	19.8 J	8.2	20 J	13.1	11.5 J
Cobalt	MG/KG	6.3 J	4.6 J	4.3 J	18.6 J	7.3 J	5.4 J	14.8 J	5.9 J	7.5 J
Copper	MG/KG	15.6 J	13.4 J	10.1 J	10 J	19.6 J	19.5	23.6 J	20.1	18.1 J
Cyanide	MG/KG									
Iron	MG/KG	14600 J	12900 J	12200 J	18500 J	23200 J	13800 J	29600 J	17800 J	14700 J
Lead	MG/KG	6.1 J	5.8 J	4.6 J	7.1 J	13.9 J	5.6 J	9.3 J	7.1 J	8.5 J
Magnesium	MG/KG	11300 J	15500 J	10600 J	25300 J	5360 J	14700 J	5320 J	18700 J	9600 J
Manganese	MG/KG	365 J	380 J	265 J	296 J	185 J	286 J	782 J	322 J	399 J
Mercury	MG/KG	0.13 J	0.11 J	0.04 J	0.02 J	0.24 J	0.02 U	0.02 J	0.02 U	0.04 J
Nickel	MG/KG	17.6 J	15.4 J	14 J	29.8 J	27.8 J	13.7 J	36.1 J	17.4 J	21.2 J
Potassium	MG/KG	595 J	631 J	539 J	972 J	857 J	654	736 J	1830	787 J
Selenium	MG/KG	0.43 U	0.39 U	0.39 U	0.36 U	0.43 U	0.42 U	0.42 U	0.4 U	0.43 U
Silver	MG/KG	0.37 J	0.1 U	0.1 U	1.3 J	2.1 J	0.11 U	1.6	0.1 U	0.61 J
Sodium	MG/KG	107 J	140 J	121 J	3410 J	2070 J	137	82 J	190	73.6 J
Thallium	MG/KG	0.22 U	0.19 U	0.2 U	1.8 J	0.55 J	0.21 U	0.21 U	0.2 U	0.21 U
Vanadium	MG/KG	9.2 J	9.5 J	8.4 J	28.5 J	20.1 J	9.5	16.1 J	17.2	13.5 J
Zinc	MG/KG	43.4 J	33.9 J	67.7 J	25.3 J	64.1 J	34.6 J	75.2 J	36.8 J	40.3 J

Note(s):

(1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)

(2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	
	Location ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1	
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sample ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1	
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
		1	1	1	1	1	1	1	1	
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	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U	
1,1,2,2-Tetrachloroethane	UG/KG	4 UJ	5.5 U	6 U	5 U	5 UJ	5 U	6 UJ	5 U	
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	4 UJ	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U	
1,1,2-Trichloroethane	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U	
1,1-Dichloroethane	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U	
1,1-Dichloroethene	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U	
1,2,3-Trichloropropane	UG/KG		5.5 U							
1,2,4-Trichlorobenzene	UG/KG	4 UJ	5.5 U	6 U	5 U	5 UJ	5 U	6 UJ	5 U	
1,2-Dibromo-3-chloropropane	UG/KG	4 UJ		6 U	5 U	5 UJ	5 UJ	6 UJ	5 U	
1,2-Dibromoethane	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U	
1,2-Dichlorobenzene	UG/KG	4 UJ	5.5 U	6 U	5 U	5 UJ	5 U	6 UJ	5 U	
1,2-Dichloroethane	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U	
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U	
1,3-Dichlorobenzene	UG/KG	4 UJ	5.5 U	6 U	5 U	5 UJ	5 U	6 UJ	5 U	
1,3-Dichloropropane	UG/KG		5.5 U							
1,4-Dichlorobenzene	UG/KG	4 UJ	5.5 U	6 U	5 U	5 UJ	5 U	6 UJ	5 U	
Acetone	UG/KG	4 U	22 U	11 NJ	14 NJ	5 UJ	10 U	23 U	5 UJ	
Benzene	UG/KG	4 U	5.5 U	6 U	5 U	1 J	5 U	6 U	5 U	
Bromodichloromethane	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U	
Bromoform	UG/KG	4 U		6 U	5 U	5 U	5 UJ	6 UJ	5 U	
Carbon disulfide	UG/KG	4 U	5.5 U	1 J	5 U	5 U	5 U	6 U	5 U	
Carbon tetrachloride	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U	
Chlorobenzene	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U	
Chlorodibromomethane	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U	
Chloroethane	UG/KG	4 U	11 U	6 U	5 U	5 UJ	5 U	6 U	5 UJ	
Chloroform	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U	
Cis-1,2-Dichloroethene	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U	
Cis-1,3-Dichloropropene	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U	
Cyclohexane	UG/KG	4 U		6 U	5 U	3 J	5 U	6 U	5 U	

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	4 UJ		6 U	5 U	5 U	5 U	6 U	5 U
Ethyl benzene	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U
Isopropylbenzene	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U
Meta/Para Xylene	UG/KG		5.5 U						
Methyl Acetate	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U
Methyl Tertbutyl Ether	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U
Methyl bromide	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U
Methyl butyl ketone	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U
Methyl chloride	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U
Methyl cyclohexane	UG/KG	4 U		1 J	5 U	4 J	5 U	6 U	5 U
Methyl ethyl ketone	UG/KG	4 U	11 U	6 U	5 U	5 U	5 U	2 J	5 U
Methyl isobutyl ketone	UG/KG	4 U	11 U	6 U	5 U	5 U	5 U	6 U	5 U
Methylene chloride	UG/KG	7 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U
Ortho Xylene	UG/KG		5.5 U						
Styrene	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U
Tetrachloroethene	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U
Toluene	UG/KG	0.9 J	5.5 U	6 U	5 U	2 J	5 U	6 U	5 U
Total BTEX	MG/KG								
Total Xylenes	UG/KG	4 UJ		6 U	5 U	5 UJ	5 U	6 UJ	5 U
Trans-1,2-Dichloroethene	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U
Trans-1,3-Dichloropropene	UG/KG	4 U		6 U	5 U	5 U	5 U	6 U	5 U
Trichloroethene	UG/KG	4 U	5.5 U	6 U	5 U	5 U	5 U	6 U	5 U
Trichlorofluoromethane	UG/KG	4 UJ		6 U	5 U	5 U	5 U	6 U	5 U
Vinyl chloride	UG/KG	4 U	11 U	6 U	5 U	5 U	5 U	6 U	5 U
Semivolatile Organics									
1,1'-Biphenyl	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
1,2,4-Trichlorobenzene	UG/KG								
1,2-Dichlorobenzene	UG/KG								
1,3-Dichlorobenzene	UG/KG								
1,4-Dichlorobenzene	UG/KG								
2,2'-oxybis(1-Chloropropane)	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
2,4,5-Trichlorophenol	UG/KG	900 U	370 U	940 U	940 U	880 U	920 U	990 U	900 U
2,4,6-Trichlorophenol	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
2,4-Dichlorophenol	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
2,4-Dimethylphenol	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
2,4-Dinitrophenol	UG/KG	900 UJ	1900 U	940 UJ	940 UJ	880 U	920 U	990 U	900 U
2,4-Dinitrotoluene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
2,6-Dinitrotoluene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
2-Chloronaphthalene	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
2-Chlorophenol	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
2-Methylnaphthalene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
2-Methylphenol	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
2-Nitroaniline	UG/KG	900 U	1900 U	940 U	940 U	880 U	920 U	990 U	900 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
3,3'-Dichlorobenzidine	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
3-Nitroaniline	UG/KG	900 U	1900 U	940 U	940 U	880 U	920 U	990 U	900 U
4,6-Dinitro-2-methylphenol	UG/KG	900 U		940 UJ	940 UJ	880 U	920 U	990 U	900 U
4-Bromophenyl phenyl ether	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
4-Chloro-3-methylphenol	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
4-Chloroaniline	UG/KG	360 UJ	370 U	370 U	370 U	350 U	370 U	390 U	360 U
4-Chlorophenyl phenyl ether	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
4-Methylphenol	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
4-Nitroaniline	UG/KG	900 U		940 U	940 U	880 U	920 U	990 U	900 U
4-Nitrophenol	UG/KG	900 U	1900 U	940 U	940 U	880 U	920 U	990 U	900 U
Acenaphthene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Acenaphthylene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Acetophenone	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
Aniline	UG/KG		370 U						
Anthracene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Atrazine	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
Benzaldehyde	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
Benzo(a)anthracene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Benzo(a)pyrene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Benzo(b)fluoranthene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Benzo(ghi)perylene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Benzo(k)fluoranthene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Benzoic Acid	UG/KG		1900 U						
Bis(2-Chloroethoxy)methane	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
Bis(2-Chloroethyl)ether	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
Bis(2-Chloroisopropyl)ether	UG/KG								
Bis(2-Ethylhexyl)phthalate	UG/KG	360 U	370 U	44 NJ	47 NJ	350 U	370 U	390 U	360 U
Butylbenzylphthalate	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Caprolactam	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
Carbazole	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U
Chrysene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Di-n-butylphthalate	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Di-n-octylphthalate	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Dibenz(a,h)anthracene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Dibenzofuran	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Diethyl phthalate	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Dimethylphthalate	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Fluoranthene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	59 J
Fluorene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Hexachlorobenzene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Hexachlorobutadiene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Hexachlorocyclopentadiene	UG/KG	360 U		370 U	370 U	350 U	370 U	390 U	360 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Indeno(1,2,3-cd)pyrene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Isophorone	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
N-Nitrosodiphenylamine	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
N-Nitrosodipropylamine	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Naphthalene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Nitrobenzene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Pentachlorophenol	UG/KG	900 U	1900 U	940 U	940 U	880 U	920 U	990 U	900 U
Phenanthrene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Phenol	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Pyrene	UG/KG	360 U	370 U	370 U	370 U	350 U	370 U	390 U	360 U
Pyridine	UG/KG		1900 U						60 J
Total Unknown PAHs as SV	MG/KG								
Pesticides/PCBs									
4,4'-DDD	UG/KG	3.6 U	18 U	3.7 U	3.7 U	3.5 U	3.6 U	3.9 U	3.6 U
4,4'-DDE	UG/KG	3.6 U	18 U	3.7 U	3.7 U	3.5 U	3.6 U	3.9 U	4
4,4'-DDT	UG/KG	3.6 U	18 U	3.7 U	3.7 U	4.9	3.6 U	3.9 U	3.6 U
Aldrin	UG/KG	1.8 U	9.4 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	1.8 U
Alpha-BHC	UG/KG	1.8 U	9.4 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	1.8 U
Alpha-Chlordane	UG/KG	1.8 U	9.4 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	1.8 U
Beta-BHC	UG/KG	1.8 U	9.4 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	1.8 U
Delta-BHC	UG/KG	1.8 U	9.4 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	1.8 U
Dieldrin	UG/KG	3.6 U	18 U	3.7 U	3.7 U	3.5 U	3.6 U	3.9 U	3.6 U
Endosulfan I	UG/KG	1.8 U	9.4 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	1.8 U
Endosulfan II	UG/KG	3.6 U	18 U	3.7 U	3.7 U	3.5 U	3.6 U	3.9 U	3.6 U
Endosulfan sulfate	UG/KG	3.6 U	18 U	3.7 U	3.7 U	3.5 U	3.6 U	3.9 U	3.6 U
Endrin	UG/KG	3.6 U	18 U	3.7 U	3.7 U	3.5 U	3.6 U	3.9 U	3.6 U
Endrin aldehyde	UG/KG	3.6 U	18 U	3.7 U	3.7 U	3.5 U	3.6 U	3.9 U	3.6 U
Endrin ketone	UG/KG	3.6 U	18 U	3.7 U	3.7 U	3.5 U	3.6 U	3.9 U	3.6 U
Gamma-BHC/Lindane	UG/KG	1.8 U	9.4 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	1.8 U
Gamma-Chlordane	UG/KG	1.8 U	9.4 U	1.9 U	2.4 J	1.8 U	1.8 U	2 U	1.8 U
Heptachlor	UG/KG	1.8 U	9.4 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	1.8 U
Heptachlor epoxide	UG/KG	1.8 U	9.4 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	1.8 U
Methoxychlor	UG/KG	18 U	94 U	19 U	19 U	18 U	18 U	20 U	18 U
Toxaphene	UG/KG	180 U	180 U	190 U	190 U	180 U	180 U	200 U	180 U
Aroclor-1016	UG/KG	36 U	37 U	38 U	38 U	36 U	36 U	40 U	36 U
Aroclor-1221	UG/KG	36 U	37 U	38 U	38 U	36 U	36 U	40 U	36 U
Aroclor-1232	UG/KG	36 U	37 U	38 U	38 U	36 U	36 U	40 U	36 U
Aroclor-1242	UG/KG	36 U	37 U	38 U	38 U	36 U	36 U	40 U	36 U
Aroclor-1248	UG/KG	36 U	37 U	38 U	38 U	36 U	36 U	40 U	36 U
Aroclor-1254	UG/KG	36 U	37 U	38 U	38 U	36 U	36 U	40 U	36 U
Aroclor-1260	UG/KG	36 U	37 U	38 U	38 U	36 U	36 U	40 U	36 U

Metals

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1	
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sample ID	CL-59-04-WN2	CL-59-04-WS1	CL-59-04-WS2	CL-59-04-WW1	CL-59-OTHERA-F01	CL-59-OTHERA-WE1	CL-59-OTHERA-WN1	CL-59-OTHERA-WS1	
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
		1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	6020 J	8210	9070	12200	10600	13700	16800	11600	
Antimony	MG/KG	1.1 J	3.2 UJ	1.7 J	2 J	1.5 J	1.1 J	1.4 J	0.9 J	
Arsenic	MG/KG	3.6 J	5 J	4.2	6.3	6.3	6.7	6.5	8.3	
Barium	MG/KG	67.1 J	59.6	90.4	68	87.5	135	198	126	
Beryllium	MG/KG	0.31 J	0.23	0.43	0.58	0.6	0.72	1.1	0.69	
Cadmium	MG/KG	0.21 J	0.27 U	0.23	0.27	0.32 J	0.21 J	0.51	0.44	
Calcium	MG/KG	103000 J	2540	99200	2230	36200	2780	6310	5590	
Chromium	MG/KG	9.7 J	15.9	13.6	20.7	16.2	19.1	21.4	16.9	
Cobalt	MG/KG	5.2 J	9.8	7.2 J	9.3 J	12.8 J	7.9 J	9.8 J	14.4 J	
Copper	MG/KG	16 J	21.4	18.8	17.7	21.1	16.4	31.6	20.3	
Cyanide	MG/KG									
Iron	MG/KG	11900 J	20300 J	18400 J	26300 J	22800	25100	26500	26000	
Lead	MG/KG	6 J	12.3	7.2 J	8 J	14.3	12.1	19	37	
Magnesium	MG/KG	18600 J	3650	16400 J	4760 J	7060	3510	3910	3970	
Manganese	MG/KG	281 J	421	407 J	849 J	908	288	837	1170	
Mercury	MG/KG	0.02 U	0.02 J	0.05	0.03 J	0.03 J	0.03 J	0.14	0.14	
Nickel	MG/KG	17.1 J	26.4	22.1 J	30.9 J	26.9	20.2	25.3	24.7	
Potassium	MG/KG	751 J	972	1590	1010	1000	971	1230	895	
Selenium	MG/KG	0.42 U	0.53 U	0.41 U	0.42 U	0.43 UJ	0.44 UJ	0.48 UJ	0.43 UJ	
Silver	MG/KG	0.11 U	0.53 U	0.1 U	1.7	1.8	2.5	2.9	2.8	
Sodium	MG/KG	123 J	92.5	171	99.8	73.1	93.6	49.8 J	39.6 J	
Thallium	MG/KG	0.21 U	0.53 U	0.2 U	0.21 U	0.22 U	0.22 U	0.24 U	0.21 U	
Vanadium	MG/KG	10.8 J	17.7	15.8	16.5	18	25.4	26.1	22.8	
Zinc	MG/KG	33.3 J	82.2 J	39.9 J	68.5 J	58.1	46.1	73.5	54	

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Volatile Organics								
1,1,1-Trichloroethane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
1,1,2,2-Tetrachloroethane	UG/KG	5 UJ	4 U	6 UJ	5 U	5 U	5 R	5.4 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
1,1,2-Trichloroethane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
1,1-Dichloroethane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
1,1-Dichloroethene	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
1,2,3-Trichloropropane	UG/KG							5.4 U
1,2,4-Trichlorobenzene	UG/KG	5 UJ	4 U	6 UJ	5 U	5 U	5 R	5.4 U
1,2-Dibromo-3-chloropropane	UG/KG	5 UJ	4 U	6 UJ	5 U	5 UJ	5 R	
1,2-Dibromoethane	UG/KG	5 U	4 U	6 UJ	5 U	5 U	5 U	
1,2-Dichlorobenzene	UG/KG	5 UJ	4 U	6 UJ	5 U	5 U	5 R	5.4 U
1,2-Dichloroethane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
1,2-Dichloroethene (total)	UG/KG							
1,2-Dichloropropane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
1,3-Dichlorobenzene	UG/KG	5 UJ	4 U	6 UJ	5 U	5 U	5 R	5.4 U
1,3-Dichloropropane	UG/KG							5.4 U
1,4-Dichlorobenzene	UG/KG	5 UJ	4 U	6 UJ	5 U	5 U	5 R	5.4 U
Acetone	UG/KG	5 U	4 UJ	35 NJ	5 UJ	14 U	24 U	22 U
Benzene	UG/KG	5 U	4 U	6 U	5 U	5 U	1 J	5.4 U
Bromodichloromethane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
Bromoform	UG/KG	5 UJ	4 U	6 UJ	5 U	5 UJ	5 UJ	
Carbon disulfide	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
Carbon tetrachloride	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
Chlorobenzene	UG/KG	5 U	4 U	6 UJ	5 U	5 U	5 U	5.4 U
Chlorodibromomethane	UG/KG	5 U	4 U	6 UJ	5 U	5 U	5 U	5.4 U
Chloroethane	UG/KG	5 U	4 UJ	6 U	5 UJ	5 U	5 U	11 U
Chloroform	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
Cis-1,2-Dichloroethene	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
Cis-1,3-Dichloropropene	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
Cyclohexane	UG/KG	5 U	4 U	6 U	5 U	5 U	3 J	

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
Ethyl benzene	UG/KG	5 U	4 U	6 UJ	5 U	5 U	5 U	5.4 U
Isopropylbenzene	UG/KG	5 U	4 U	6 UJ	5 U	5 U	5 U	
Meta/Para Xylene	UG/KG							5.4 U
Methyl Acetate	UG/KG	5 U	4 U	2 J	5 U	1 J	1 J	
Methyl Tertbutyl Ether	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
Methyl bromide	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
Methyl butyl ketone	UG/KG	5 U	4 U	6 UJ	5 U	5 U	5 U	
Methyl chloride	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
Methyl cyclohexane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 J	
Methyl ethyl ketone	UG/KG	5 U	4 U	2 J	5 U	5 U	2 J	11 U
Methyl isobutyl ketone	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	11 U
Methylene chloride	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
Ortho Xylene	UG/KG							5.4 U
Styrene	UG/KG	5 U	4 U	6 UJ	5 U	5 U	5 U	
Tetrachloroethene	UG/KG	5 U	4 U	6 UJ	5 U	5 U	5 U	5.4 U
Toluene	UG/KG	5 U	4 U	6 U	5 U	5 U	3 J	5.4 U
Total BTEX	MG/KG							
Total Xylenes	UG/KG	5 UJ	4 U	6 UJ	5 U	5 U	2 J	
Trans-1,2-Dichloroethene	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
Trans-1,3-Dichloropropene	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
Trichloroethene	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	5.4 U
Trichlorofluoromethane	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	
Vinyl chloride	UG/KG	5 U	4 U	6 U	5 U	5 U	5 U	11 U
Semivolatile Organics								
1,1'-Biphenyl	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
1,2,4-Trichlorobenzene	UG/KG							
1,2-Dichlorobenzene	UG/KG							
1,3-Dichlorobenzene	UG/KG							
1,4-Dichlorobenzene	UG/KG							
2,2'-oxybis(1-Chloropropane)	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
2,4,5-Trichlorophenol	UG/KG	930 U	910 U	930 U	920 U	870 U	890 U	360 U
2,4,6-Trichlorophenol	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
2,4-Dichlorophenol	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
2,4-Dimethylphenol	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
2,4-Dinitrophenol	UG/KG	930 U	910 U	930 U	920 U	870 U	890 U	1800 U
2,4-Dinitrotoluene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
2,6-Dinitrotoluene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
2-Chloronaphthalene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
2-Chlorophenol	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
2-Methylnaphthalene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
2-Methylphenol	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
2-Nitroaniline	UG/KG	930 U	910 U	930 U	920 U	870 U	890 U	1800 U

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
3,3'-Dichlorobenzidine	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
3-Nitroaniline	UG/KG	930 U	910 U	930 U	920 U	870 U	890 U	1800 U
4,6-Dinitro-2-methylphenol	UG/KG	930 U	910 U	930 U	920 U	870 U	890 U	
4-Bromophenyl phenyl ether	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
4-Chloro-3-methylphenol	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
4-Chloroaniline	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
4-Chlorophenyl phenyl ether	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
4-Methylphenol	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
4-Nitroaniline	UG/KG	930 U	910 U	930 U	920 U	870 U	890 U	
4-Nitrophenol	UG/KG	930 U	910 U	930 U	920 U	870 U	890 U	1800 U
Acenaphthene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Acenaphthylene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Acetophenone	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
Aniline	UG/KG							360 U
Anthracene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Atrazine	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
Benzaldehyde	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
Benzo(a)anthracene	UG/KG	370 U	360 U	370 U	370 U	350 U	100 J	360 U
Benzo(a)pyrene	UG/KG	370 U	360 U	370 U	370 U	350 U	120 J	360 U
Benzo(b)fluoranthene	UG/KG	370 U	360 U	370 U	370 U	350 U	150 J	360 U
Benzo(ghi)perylene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Benzo(k)fluoranthene	UG/KG	370 U	360 U	370 U	370 U	350 U	100 J	360 U
Benzoic Acid	UG/KG							1800 U
Bis(2-Chloroethoxy)methane	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
Bis(2-Chloroethyl)ether	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
Bis(2-Chloroisopropyl)ether	UG/KG							
Bis(2-Ethylhexyl)phthalate	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Butylbenzylphthalate	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Caprolactam	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
Carbazole	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
Chrysene	UG/KG	370 U	360 U	370 U	370 U	350 U	120 J	360 U
Di-n-butylphthalate	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Di-n-octylphthalate	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Dibenz(a,h)anthracene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Dibenzofuran	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Diethyl phthalate	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Dimethylphthalate	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Fluoranthene	UG/KG	370 U	360 U	370 U	370 U	350 U	200 J	360 U
Fluorene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Hexachlorobenzene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Hexachlorobutadiene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Hexachlorocyclopentadiene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Indeno(1,2,3-cd)pyrene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Isophorone	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
N-Nitrosodiphenylamine	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
N-Nitrosodipropylamine	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	
Naphthalene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Nitrobenzene	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Pentachlorophenol	UG/KG	930 U	910 U	930 U	920 U	870 U	890 U	1800 U
Phenanthrene	UG/KG	370 U	360 U	370 U	370 U	350 U	84 J	360 U
Phenol	UG/KG	370 U	360 U	370 U	370 U	350 U	350 U	360 U
Pyrene	UG/KG	370 U	360 U	370 U	370 U	350 U	210 J	360 U
Pyridine	UG/KG							1800 U
Total Unknown PAHs as SV	MG/KG							
Pesticides/PCBs								
4,4'-DDD	UG/KG	3.7 U	3.6 U	3.7 U	3.6 U	3.5 U	3.5 U	18 U
4,4'-DDE	UG/KG	3.7 U	3.6 U	3.7 U	3.6 U	3.5 U	6 J	18 U
4,4'-DDT	UG/KG	3.7 U	3.6 U	3.7 U	3.6 U	3.5 U	3.5 U	18 U
Aldrin	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Alpha-BHC	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Alpha-Chlordane	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Beta-BHC	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Delta-BHC	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Dieldrin	UG/KG	3.7 U	3.6 U	3.7 U	3.6 U	3.5 U	3.5 U	18 U
Endosulfan I	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Endosulfan II	UG/KG	3.7 U	3.6 U	3.7 U	3.6 U	3.5 U	3.5 U	18 U
Endosulfan sulfate	UG/KG	3.7 U	3.6 U	3.7 U	3.6 U	3.5 U	3.5 U	18 U
Endrin	UG/KG	3.7 U	3.6 U	3.7 U	3.6 U	3.5 U	3.5 U	18 U
Endrin aldehyde	UG/KG	3.7 U	3.6 U	3.7 U	3.6 U	3.5 U	3.5 U	18 U
Endrin ketone	UG/KG	3.7 U	3.6 U	3.7 U	3.6 U	3.5 U	3.5 U	18 U
Gamma-BHC/Lindane	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Gamma-Chlordane	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Heptachlor	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Heptachlor epoxide	UG/KG	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	9.2 U
Methoxychlor	UG/KG	19 U	19 U	19 U	19 U	18 U	18 U	92 U
Toxaphene	UG/KG	190 U	190 U	190 U	190 U	180 U	180 U	180 U
Aroclor-1016	UG/KG	38 U	37 U	37 U	37 U	35 U	36 U	36 U
Aroclor-1221	UG/KG	38 U	37 U	37 U	37 U	35 U	36 U	36 U
Aroclor-1232	UG/KG	38 U	37 U	37 U	37 U	35 U	36 U	36 U
Aroclor-1242	UG/KG	38 U	37 U	37 U	37 U	35 U	36 U	36 U
Aroclor-1248	UG/KG	38 U	37 U	37 U	37 U	35 U	36 U	36 U
Aroclor-1254	UG/KG	38 U	37 U	37 U	37 U	35 U	36 U	36 U
Aroclor-1260	UG/KG	38 U	37 U	37 U	37 U	35 U	36 U	36 U
Metals								

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERA-WW1	CL-59-OTHERB-F01	CL-59-OTHERB-WE1	CL-59-OTHERB-WN1	CL-59-OTHERB-WS1	CL-59-OTHERB-WW1	CL-59-OTHERC-F01
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	12500	11400	11400	12400	11200	10700	10800
Antimony	MG/KG	1.5 J	1.1 J	1.5 J	1.5 J	1.4 J	1.4 J	3.2 UJ
Arsenic	MG/KG	6	6.4	5.6	7.8	6.2	5.9	3.7
Barium	MG/KG	166	59.6	83	92.5	81.2	64.4	82.9
Beryllium	MG/KG	0.67	0.57	0.6	0.68	0.56	0.54	0.23
Cadmium	MG/KG	0.51	0.26 J	0.17 J	0.26 J	0.19 J	0.27 J	0.27 U
Calcium	MG/KG	4390	11800	9390	3140	2540	25600	17200
Chromium	MG/KG	16.5	18.3	17.7	19.5	17.4	16	15.9
Cobalt	MG/KG	10.2 J	8.3 J	7.9 J	12.6 J	9.1 J	7.2 J	6
Copper	MG/KG	12.9	19.9	17.7	30.2	25.1	18.8	17.6
Cyanide	MG/KG							
Iron	MG/KG	23700	23800	22300	26200	23200	20900	19300 J
Lead	MG/KG	31.4	13.1	12.8	17.1	11.7	15.9	20.8 J
Magnesium	MG/KG	2530	5280	5090	4520	4390	6540	5170
Manganese	MG/KG	1050	261	265	540	543	340	267 J
Mercury	MG/KG	0.11	0.06	0.05	0.05	0.02 J	0.06	0.11
Nickel	MG/KG	15.4	27.6	28.5	35.5	27.9	23.1	21.8
Potassium	MG/KG	831	833	838	962	947	793	1090
Selenium	MG/KG	0.45 UJ	0.36 UJ	0.45 UJ	0.44 UJ	0.43 UJ	0.39 UJ	0.54 U
Silver	MG/KG	2.6	2	2.1	2.5	2.3	1.7	0.54 U
Sodium	MG/KG	35.9 J	164	239	95.7	96	109	193
Thallium	MG/KG	0.23 U	0.18 U	0.4 J	0.22 U	0.21 U	0.19 U	0.54 U
Vanadium	MG/KG	22.9	18.3	18.2	21.5	19.6	16.5	19.9
Zinc	MG/KG	46.2	125	54.8	74.4	57.4	68.6	90.4 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
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	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5 UJ	5.3 U	6 U	5.6 U	5.8 U	6 UJ	6.2 U	5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
1,1,2-Trichloroethane	UG/KG	5 U					6 U		5 U
1,1-Dichloroethane	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
1,1-Dichloroethene	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
1,2,3-Trichloropropane	UG/KG		5.3 U	6 U	5.6 U	5.8 U		6.2 U	
1,2,4-Trichlorobenzene	UG/KG	5 UJ	5.3 U	6 U	5.6 U	5.8 U	6 UJ	6.2 U	5 U
1,2-Dibromo-3-chloropropane	UG/KG	5 UJ					6 UJ		5 U
1,2-Dibromoethane	UG/KG	5 U					6 U		5 U
1,2-Dichlorobenzene	UG/KG	5 UJ	5.3 U	6 U	5.6 U	5.8 U	6 UJ	6.2 U	5 U
1,2-Dichloroethane	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
1,2-Dichloroethene (total)	UG/KG								
1,2-Dichloropropane	UG/KG	5 U					6 U		5 U
1,3-Dichlorobenzene	UG/KG	5 UJ	5.3 U	6 U	5.6 U	5.8 U	6 UJ	6.2 U	5 U
1,3-Dichloropropane	UG/KG		5.3 U	6 U	5.6 U	5.8 U		6.2 U	
1,4-Dichlorobenzene	UG/KG	5 UJ	5.3 U	6 U	5.6 U	5.8 U	6 UJ	6.2 U	5 U
Acetone	UG/KG	16 J	21 U	24 U	22 U	23 U	9 U	7.5 J	11 NJ
Benzene	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Bromodichloromethane	UG/KG	5 U					6 U		5 U
Bromoform	UG/KG	5 U					6 UJ		5 U
Carbon disulfide	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Carbon tetrachloride	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Chlorobenzene	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Chlorodibromomethane	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Chloroethane	UG/KG	5 U	11 U	12 U	11 U	12 U	6 U	12 U	5 U
Chloroform	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Cis-1,2-Dichloroethene	UG/KG	5 U					6 U		5 U
Cis-1,3-Dichloropropene	UG/KG	5 U					6 U		5 U
Cyclohexane	UG/KG	5 U					1 J		5 U

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	5 U					6 U		5 U
Ethyl benzene	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Isopropylbenzene	UG/KG	5 U					6 U		5 U
Meta/Para Xylene	UG/KG		5.3 U	6 U	5.6 U	5.8 U		6.2 U	
Methyl Acetate	UG/KG	5 U					6 U		5 U
Methyl Tertbutyl Ether	UG/KG	5 U					6 U		5 U
Methyl bromide	UG/KG	5 U					6 U		5 U
Methyl butyl ketone	UG/KG	5 U					6 U		5 U
Methyl chloride	UG/KG	5 U					6 U		5 U
Methyl cyclohexane	UG/KG	5 U					2 J		5 U
Methyl ethyl ketone	UG/KG	5 U	11 U	12 U	11 U	12 U	6 U	12 U	5 U
Methyl isobutyl ketone	UG/KG	5 U	11 U	1.9 J	11 U	12 U	6 U	12 U	5 U
Methylene chloride	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Ortho Xylene	UG/KG		5.3 U	6 U	5.6 U	5.8 U		6.2 U	
Styrene	UG/KG	5 U					6 U		5 U
Tetrachloroethene	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Toluene	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	1 J	6.2 U	5 U
Total BTEX	MG/KG								
Total Xylenes	UG/KG	5 UJ					1 J		5 U
Trans-1,2-Dichloroethene	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Trans-1,3-Dichloropropene	UG/KG	5 U					6 U		5 U
Trichloroethene	UG/KG	5 U	5.3 U	6 U	5.6 U	5.8 U	6 U	6.2 U	5 U
Trichlorofluoromethane	UG/KG	5 U					6 U		5 U
Vinyl chloride	UG/KG	5 U	11 U	12 U	11 U	12 U	6 U	12 U	5 U
Semivolatile Organics									
1,1'-Biphenyl	UG/KG	360 U					370 U		360 U
1,2,4-Trichlorobenzene	UG/KG								
1,2-Dichlorobenzene	UG/KG								
1,3-Dichlorobenzene	UG/KG								
1,4-Dichlorobenzene	UG/KG								
2,2'-oxybis(1-Chloropropane)	UG/KG	360 U					370 U		360 UJ
2,4,5-Trichlorophenol	UG/KG	910 U	350 UJ	400 U	370 U	380 U	940 U	410 U	910 U
2,4,6-Trichlorophenol	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
2,4-Dichlorophenol	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
2,4-Dimethylphenol	UG/KG	360 U					370 U		360 U
2,4-Dinitrophenol	UG/KG	910 U	1800 UJ	2000 U	1900 U	2000 U	940 UJ	2100 U	910 U
2,4-Dinitrotoluene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
2,6-Dinitrotoluene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
2-Chloronaphthalene	UG/KG	360 U					370 U		360 U
2-Chlorophenol	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
2-Methylnaphthalene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
2-Methylphenol	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
2-Nitroaniline	UG/KG	910 U	1800 UJ	2000 U	1900 U	2000 U	940 U	2100 U	910 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
3,3'-Dichlorobenzidine	UG/KG	360 UJ	350 UJ	400 U	370 U	380 U	370 U	410 U	360 UJ
3-Nitroaniline	UG/KG	910 U	1800 UJ	2000 U	1900 U	2000 U	940 U	2100 U	910 U
4,6-Dinitro-2-methylphenol	UG/KG	910 U					940 U		910 U
4-Bromophenyl phenyl ether	UG/KG	360 U					370 U		360 U
4-Chloro-3-methylphenol	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
4-Chloroaniline	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 UJ	410 U	360 U
4-Chlorophenyl phenyl ether	UG/KG	360 U					370 U		360 U
4-Methylphenol	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
4-Nitroaniline	UG/KG	910 U					940 UJ		910 U
4-Nitrophenol	UG/KG	910 U	1800 UJ	2000 U	1900 U	2000 U	940 U	2100 U	910 U
Acenaphthene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Acenaphthylene	UG/KG	360 U	350 UJ	400 U	370 U	43 J	370 U	46 J	360 U
Acetophenone	UG/KG	360 U					370 U		360 U
Aniline	UG/KG		350 UJ	400 U	370 U	380 U		410 U	
Anthracene	UG/KG	360 U	350 UJ	400 U	370 U	68 J	370 U	410 U	360 U
Atrazine	UG/KG	360 U					370 U		360 U
Benzaldehyde	UG/KG	360 U					370 UJ		360 U
Benzo(a)anthracene	UG/KG	95 J	130 J	69 J	370 U	190 J	370 U	150 J	360 U
Benzo(a)pyrene	UG/KG	97 J	130 J	61 NJ	370 U	180 J	370 U	180 J	360 U
Benzo(b)fluoranthene	UG/KG	140 J	120 J	67 J	370 U	160 J	370 U	120 J	360 U
Benzo(ghi)perylene	UG/KG	360 U	87 J	400 U	370 U	140 J	370 U	110 J	360 U
Benzo(k)fluoranthene	UG/KG	85 NJ	120 J	400 U	370 U	170 J	370 U	130 J	360 U
Benzoic Acid	UG/KG		1800 UJ	2000 U	1900 U	2000 U		2100 U	
Bis(2-Chloroethoxy)methane	UG/KG	360 U					370 U		360 U
Bis(2-Chloroethyl)ether	UG/KG	360 U					370 U		360 U
Bis(2-Chloroisopropyl)ether	UG/KG								
Bis(2-Ethylhexyl)phthalate	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Butylbenzylphthalate	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Caprolactam	UG/KG	360 U					370 U		360 U
Carbazole	UG/KG	360 U					370 U		360 U
Chrysene	UG/KG	110 J	170 J	89 J	370 U	210 J	370 U	150 J	360 U
Di-n-butylphthalate	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U		360 U
Di-n-octylphthalate	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Dibenz(a,h)anthracene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	44 J	360 U
Dibenzofuran	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Diethyl phthalate	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Dimethylphthalate	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Fluoranthene	UG/KG	180 J	140 J	89 J	370 U	350 J	370 U	200 J	360 U
Fluorene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Hexachlorobenzene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Hexachlorobutadiene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Hexachlorocyclopentadiene	UG/KG	360 U					370 U		360 U

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Indeno(1,2,3-cd)pyrene	UG/KG	360 U	75 J	400 U	370 U	130 J	370 U	100 J	360 U
Isophorone	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
N-Nitrosodiphenylamine	UG/KG	360 U					370 U		360 U
N-Nitrosodipropylamine	UG/KG	360 U					370 U		360 U
Naphthalene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Nitrobenzene	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Pentachlorophenol	UG/KG	910 U	1800 UJ	2000 U	1900 U	2000 U	940 U	2100 U	910 U
Phenanthrene	UG/KG	73 J	58 J	400 U	370 U	180 J	370 U	79 J	360 U
Phenol	UG/KG	360 U	350 UJ	400 U	370 U	380 U	370 U	410 U	360 U
Pyrene	UG/KG	170 J	140 J	98 J	370 U	320 J	370 U	200 J	360 U
Pyridine	UG/KG		1800 UJ	2000 U	1900 U	2000 U		2100 U	360 U
Total Unknown PAHs as SV	MG/KG								
Pesticides/PCBs									
4,4'-DDD	UG/KG	13	18 UJ	20 U	19 U	83 J	3.7 U	20 U	3.6 U
4,4'-DDE	UG/KG	27	18 U	22 J	19 U	35 J	3.7 U	20 U	3.6 U
4,4'-DDT	UG/KG	59	18 U	24	19 U	19 U	3.7 U	20 U	3.6 U
Aldrin	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Alpha-BHC	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Alpha-Chlordane	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Beta-BHC	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Delta-BHC	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Dieldrin	UG/KG	3.6 U	18 U	20 U	19 U	19 U	3.7 U	20 U	3.6 U
Endosulfan I	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Endosulfan II	UG/KG	3.6 U	18 U	20 U	19 U	19 U	3.7 U	20 U	3.6 U
Endosulfan sulfate	UG/KG	6.2 J	18 U	20 U	19 U	19 U	3.7 U	20 U	3.6 U
Endrin	UG/KG	3.6 U	18 U	20 U	19 U	19 U	3.7 U	20 U	3.6 U
Endrin aldehyde	UG/KG	3.6 U	18 U	20 U	19 U	19 U	3.7 U	20 U	3.6 U
Endrin ketone	UG/KG	3.6 U	18 U	20 U	19 U	19 U	3.7 U	20 U	3.6 U
Gamma-BHC/Lindane	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Gamma-Chlordane	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Heptachlor	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Heptachlor epoxide	UG/KG	1.8 U	9.1 U	10 U	9.5 U	9.8 U	1.9 U	10 U	1.9 U
Methoxychlor	UG/KG	18 U	91 U	100 U	95 U	98 U	19 U	100 U	19 U
Toxaphene	UG/KG	180 U	180 U	200 U	190 U	190 U	190 UJ	200 U	190 U
Aroclor-1016	UG/KG	36 U	35 U	40 U	37 U	38 U	38 U	41 U	37 U
Aroclor-1221	UG/KG	36 U	35 U	40 U	37 U	38 U	38 U	41 U	37 U
Aroclor-1232	UG/KG	36 U	35 U	40 U	37 U	38 U	38 U	41 U	37 U
Aroclor-1242	UG/KG	36 U	35 U	40 U	37 U	38 U	38 U	41 U	37 U
Aroclor-1248	UG/KG	36 U	35 U	40 U	37 U	38 U	38 U	41 U	37 U
Aroclor-1254	UG/KG	36 U	35 U	40 U	37 U	38 U	38 U	41 U	37 U
Aroclor-1260	UG/KG	79 NJ	35 U	40 U	37 U	38 U	38 U	41 U	37 U

Metals

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-59-OTHERC-WE2	CL-59-OTHERC-WN1	CL-59-OTHERC-WS1	CL-59-OTHERC-WW1	FD-59-CL-01	FD-59-CL-02	FD-59-CL-05	FD-59-CL-06
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	14700 J	12900	13800	14200	12200	7650 J	11000	5850 J
Antimony	MG/KG	2.4 J	3.2 UJ	3.6 UJ	3.2 UJ	3.4 UJ	1.1 J	3.6 UJ	1.3 J
Arsenic	MG/KG	7 J	4.8	9.3	5.5	4.9	5.6 J	4.1 J	2.7 J
Barium	MG/KG	99.7 J	109	140	136	137	41.1 J	109	50.8 J
Beryllium	MG/KG	0.73	0.53	0.45	0.22	0.32	0.45	0.22	0.3
Cadmium	MG/KG	0.39	0.27 J	0.64	0.27 U	0.57	0.23 J	0.3 U	0.38 J
Calcium	MG/KG	6460	13100	7470	3010	10900	81400 J	9650 J	76500 J
Chromium	MG/KG	20.7 J	19.1	20.4	19.6	19	12.9 J	16.4	9.1 J
Cobalt	MG/KG	10.2 J	8.3	18.4	11.7	8.6	6.6 J	9.1	5.5 J
Copper	MG/KG	22.8 J	18.4 J	29.6	16.7	32 J	21.1 J	19.2	16
Cyanide	MG/KG								
Iron	MG/KG	23900	22200 J	27800 J	25900 J	21400 J	20800 J	20900 J	13800
Lead	MG/KG	40 J	23.1 J	73.7 J	13.7 J	69.1 J	9.4 J	16.7	6.7 J
Magnesium	MG/KG	4240 J	3880	4850	3720	4700	5190 J	4000	15500 J
Manganese	MG/KG	453 J	406 J	1240 J	762 J	613 J	245 J	479 J	282 J
Mercury	MG/KG	0.14	0.1	0.17	0.05	0.16	0.44 J	0.03 J	0.02 J
Nickel	MG/KG	28.6 J	21.7	39.2	25.2	23	21.3 J	24.6	16.4 J
Potassium	MG/KG	1240 J	944	1300	1150	1410	908 J	1130	908
Selenium	MG/KG	0.44 U	0.53 U	0.59 U	0.54 U	0.57 U	0.42 U	0.6 U	0.42 U
Silver	MG/KG	1.4	0.53 U	0.59 U	0.54 U	0.57 U	0.56	0.6 U	0.11 U
Sodium	MG/KG	89.9	220 J	63	122	382 J	130 J	323 J	161
Thallium	MG/KG	0.22 U	0.62 J	1.1 J	0.83 J	0.63 J	0.21 U	0.6 U	0.21 U
Vanadium	MG/KG	22.4 J	22.2	25.8 J	27.4	20.9	14.7 J	20.7	9.8 J
Zinc	MG/KG	228 J	71.7 J	100 J	73.2 J	181 J	70.5 J	90.9 J	33.9 J

Note(s):

(1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)

(2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
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	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5 UJ	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 U	6 U	6 U	5.7 U	5 UJ	5.8 U	5.7 U	5 UJ
1,1,2-Trichloroethane	UG/KG	5 U	6 U	6 U	5 U	5 U	5.8 U	5.7 U	5 U
1,1-Dichloroethane	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
1,1-Dichloroethene	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
1,2,3-Trichloropropane	UG/KG				5.7 U		5.8 U	5.7 U	
1,2,4-Trichlorobenzene	UG/KG	5 UJ	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 UJ
1,2-Dibromo-3-chloropropane	UG/KG	5 UJ	6 U	6 U		5 U			5 UJ
1,2-Dibromoethane	UG/KG	5 U	6 U	6 U		5 U			5 U
1,2-Dichlorobenzene	UG/KG	5 UJ	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 UJ
1,2-Dichloroethane	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
1,2-Dichloroethene (total)	UG/KG								
1,2-Dichloropropane	UG/KG	5 U	6 U	6 U		5 U			5 U
1,3-Dichlorobenzene	UG/KG	5 UJ	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 UJ
1,3-Dichloropropane	UG/KG				5.7 U		5.8 U	5.7 U	
1,4-Dichlorobenzene	UG/KG	5 UJ	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 UJ
Acetone	UG/KG	10	84 NJ	45 NJ	23 U	5 U	23 U	23 U	5 U
Benzene	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
Bromodichloromethane	UG/KG	5 U	6 U	6 U		5 U			5 U
Bromoform	UG/KG	5 U	6 U	6 U		5 U			5 U
Carbon disulfide	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
Carbon tetrachloride	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
Chlorobenzene	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
Chlorodibromomethane	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
Chloroethane	UG/KG	5 U	6 U	6 U	11 U	5 U	12 U	11 U	5 U
Chloroform	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
Cis-1,2-Dichloroethene	UG/KG	5 U	6 U	6 U		5 U			5 U
Cis-1,3-Dichloropropene	UG/KG	5 U	6 U	6 U		5 U			5 U
Cyclohexane	UG/KG	5 U	6 U	6 U		5 U			5 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG	5 U	6 U	6 U		5 U			5 UJ
Ethyl benzene	UG/KG	5 U	6 U	6 U	3.4 J	5 U	5.8 U	5.7 U	5 U
Isopropylbenzene	UG/KG	5 U	6 U	6 U		5 U			5 U
Meta/Para Xylene	UG/KG				13 J		5.8 U	5.7 U	
Methyl Acetate	UG/KG	5 U	6 U	6 U		5 U			5 U
Methyl Tertbutyl Ether	UG/KG	5 U	6 UJ	6 U		5 U			5 U
Methyl bromide	UG/KG	5 U	6 UJ	6 U		5 U			5 U
Methyl butyl ketone	UG/KG	5 U	6 UJ	6 U		5 U			5 U
Methyl chloride	UG/KG	5 U	6 U	6 U		5 U			5 U
Methyl cyclohexane	UG/KG	5 U	6 U	6 U		5 U			5 U
Methyl ethyl ketone	UG/KG	5 U	14 J	4 J	11 U	5 U	12 U	11 U	5 U
Methyl isobutyl ketone	UG/KG	5 U	6 UJ	6 U	11 U	5 U	12 U	11 U	5 U
Methylene chloride	UG/KG	5 U	6 UJ	6 U	1.5 J	5 U	5.8 U	5.7 U	5 U
Ortho Xylene	UG/KG				4.3 J		5.8 U	5.7 U	
Styrene	UG/KG	5 U	6 U	6 U		5 U			5 U
Tetrachloroethene	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	2.2 J	5 U
Toluene	UG/KG	5 U	6 U	6 U	5.6 J	5 U	5.8 U	5.7 U	5 U
Total BTEX	MG/KG								
Total Xylenes	UG/KG	5 UJ	6 U	6 U		5 U			5 UJ
Trans-1,2-Dichloroethene	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
Trans-1,3-Dichloropropene	UG/KG	5 U	6 U	6 U		5 U			5 U
Trichloroethene	UG/KG	5 U	6 U	6 U	5.7 U	5 U	5.8 U	5.7 U	5 U
Trichlorofluoromethane	UG/KG	5 U	6 U	6 U		5 U			5 UJ
Vinyl chloride	UG/KG	5 U	6 U	6 U	11 U	5 U	12 U	11 U	5 U
Semivolatile Organics									
1,1'-Biphenyl	UG/KG	370 U	390 U	79 J		340 U			360 U
1,2,4-Trichlorobenzene	UG/KG								
1,2-Dichlorobenzene	UG/KG								
1,3-Dichlorobenzene	UG/KG								
1,4-Dichlorobenzene	UG/KG								
2,2'-oxybis(1-Chloropropane)	UG/KG	370 U	390 U	370 U		340 U			360 U
2,4,5-Trichlorophenol	UG/KG	920 U	970 U	920 U	380 U	870 U	3900 U	1100 U	900 U
2,4,6-Trichlorophenol	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
2,4-Dichlorophenol	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
2,4-Dimethylphenol	UG/KG	370 U	390 U	370 U		340 U			360 U
2,4-Dinitrophenol	UG/KG	920 U	970 U	920 UJ	1900 U	870 U	20000 U	5900 U	900 UJ
2,4-Dinitrotoluene	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
2,6-Dinitrotoluene	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
2-Chloronaphthalene	UG/KG	370 U	390 U	370 U		340 U			360 U
2-Chlorophenol	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
2-Methylnaphthalene	UG/KG	370 U	390 U	410	380 U	340 U	690 J	150 J	360 U
2-Methylphenol	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
2-Nitroaniline	UG/KG	920 U	970 U	920 U	1900 U	870 U	20000 U	5900 U	900 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
3,3'-Dichlorobenzidine	UG/KG	370 U	390 U	370 UJ	380 U	340 U	3900 U	1100 U	360 U
3-Nitroaniline	UG/KG	920 U	970 U	920 U	1900 U	870 U	20000 U	5900 U	900 U
4,6-Dinitro-2-methylphenol	UG/KG	920 U	970 U	920 U		870 U			900 UJ
4-Bromophenyl phenyl ether	UG/KG	370 U	390 U	370 U		340 U			360 U
4-Chloro-3-methylphenol	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
4-Chloroaniline	UG/KG	370 U	390 U	370 UJ	380 U	340 U	3900 U	1100 U	360 U
4-Chlorophenyl phenyl ether	UG/KG	370 U	390 U	370 U		340 U			360 U
4-Methylphenol	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
4-Nitroaniline	UG/KG	920 U	970 U	920 U		870 U			900 U
4-Nitrophenol	UG/KG	920 U	970 U	920 U	1900 U	870 U	20000 U	5900 U	900 U
Acenaphthene	UG/KG	370 U	390 U	730	380 U	340 U	5100 J	210 J	49 J
Acenaphthylene	UG/KG	370 U	390 U	1000	380 U	340 U	520 J	680 J	360 U
Acetophenone	UG/KG	370 U	390 U	370 U		340 U			360 U
Aniline	UG/KG				380 U		3900 U	1100 U	
Anthracene	UG/KG	370 U	390 U	2500 J	380 U	30 J	8200 J	810 J	59 J
Atrazine	UG/KG	370 U	390 U	370 U		340 U			360 U
Benzaldehyde	UG/KG	370 U	390 U	370 U		340 U			360 U
Benzo(a)anthracene	UG/KG	370 U	390 U	7900 NJ	76 J	71 NJ	16000 J	2500 J	140 J
Benzo(a)pyrene	UG/KG	370 U	390 U	8400 J	82 J	65 J	14000 J	2600	110 J
Benzo(b)fluoranthene	UG/KG	370 U	390 U	8600 J	72 J	86 J	12000 J	2000	130 J
Benzo(ghi)perylene	UG/KG	370 U	390 U	2300 J	49 J	34 NJ	9000 J	1800	38 J
Benzo(k)fluoranthene	UG/KG	370 U	390 U	5300 J	70 J	30 J	13000 J	2100	77 J
Benzoic Acid	UG/KG				1900 U		20000 UJ	5900 U	
Bis(2-Chloroethoxy)methane	UG/KG	370 U	390 U	370 U		340 U			360 U
Bis(2-Chloroethyl)ether	UG/KG	370 U	390 U	370 U		340 U			360 U
Bis(2-Chloroisopropyl)ether	UG/KG								
Bis(2-Ethylhexyl)phthalate	UG/KG	19 J	390 U	150 NJ	380 U	47 J	3900 U	1100 U	360 U
Butylbenzylphthalate	UG/KG	370 U	390 U	370 UJ	380 U	340 U	3900 U	1100 U	360 U
Caprolactam	UG/KG	370 U	390 U	370 U		340 U			360 U
Carbazole	UG/KG	370 U	390 U	380		340 U			360 U
Chrysene	UG/KG	370 U	390 U	7700 J	90 J	66 J	16000 J	2400	150 J
Di-n-butylphthalate	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
Di-n-octylphthalate	UG/KG	370 U	390 U	370 UJ	380 U	340 U	3900 U	1100 U	360 U
Dibenz(a,h)anthracene	UG/KG	370 U	390 U	1100 J	380 U	340 U	2900 J	570 J	360 U
Dibenzofuran	UG/KG	370 U	390 U	430	380 U	340 U	2800 J	160 J	360 U
Diethyl phthalate	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
Dimethylphthalate	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
Fluoranthene	UG/KG	370 U	390 U	13000 J	170 J	130 J	44000 J	4700	320 J
Fluorene	UG/KG	370 U	390 U	1200 J	380 U	340 U	5000 J	320 J	360 U
Hexachlorobenzene	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
Hexachlorobutadiene	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
Hexachlorocyclopentadiene	UG/KG	370 U	390 U	370 U		340 U			360 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
Indeno(1,2,3-cd)pyrene	UG/KG	370 U	390 U	2500 J	45 J	36 J	8700 J	1600 J	43 J
Isophorone	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
N-Nitrosodiphenylamine	UG/KG	370 U	390 U	370 U		340 U			360 U
N-Nitrosodipropylamine	UG/KG	370 U	390 U	370 U		340 U			360 U
Naphthalene	UG/KG	370 U	390 U	390	380 U	340 U	1700 J	210 J	360 U
Nitrobenzene	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
Pentachlorophenol	UG/KG	920 U	970 U	920 U	1900 U	870 U	20000 U	5900 U	900 U
Phenanthrene	UG/KG	370 U	390 U	6900 J	98 J	99 J	41000 J	2500	240 J
Phenol	UG/KG	370 U	390 U	370 U	380 U	340 U	3900 U	1100 U	360 U
Pyrene	UG/KG	370 U	390 U	13000 J	140 J	120 J	35000 J	4000 J	280 J
Pyridine	UG/KG		390 U		1900 U		20000 U	5900 U	
Total Unknown PAHs as SV	MG/KG								
Pesticides/PCBs									
4,4'-DDD	UG/KG	3.7 U	3.8 U	8.3 J	19 U	3.4 UJ	51 J	95 U	3.6 U
4,4'-DDE	UG/KG	3.7 UJ	3.8 U	43 J	19 U	3.4 UJ	29 J	95 U	3.6 U
4,4'-DDT	UG/KG	3.7 U	3.8 U	14 J	19 U	3.4 UJ	55 J	95 U	3.6 U
Aldrin	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 U	10 U	49 U	1.9 U
Alpha-BHC	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 U	10 U	49 U	1.9 U
Alpha-Chlordane	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 UJ	10 U	49 U	1.9 U
Beta-BHC	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 U	10 U	49 U	1.9 U
Delta-BHC	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 U	10 U	49 U	1.9 U
Dieldrin	UG/KG	3.7 U	3.8 U	3.7 U	19 U	3.4 U	19 U	95 U	3.6 U
Endosulfan I	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 U	10 U	49 U	1.9 U
Endosulfan II	UG/KG	3.7 U	3.8 U	3.7 U	19 U	3.4 U	19 U	95 U	3.6 U
Endosulfan sulfate	UG/KG	3.7 U	3.8 U	3.7 U	19 U	3.4 U	19 U	95 U	3.6 U
Endrin	UG/KG	3.7 U	3.8 U	3.7 U	19 U	3.4 U	19 U	95 U	3.6 U
Endrin aldehyde	UG/KG	3.7 U	3.8 U	5.5 NJ	19 U	3.4 U	19 U	95 U	3.6 U
Endrin ketone	UG/KG	3.7 U	3.8 U	12 J	19 U	3.4 U	19 U	95 U	3.6 U
Gamma-BHC/Lindane	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 U	10 U	49 U	1.9 U
Gamma-Chlordane	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 UJ	10 U	49 U	1.9 U
Heptachlor	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 U	10 U	49 U	1.9 U
Heptachlor epoxide	UG/KG	1.9 U	2 U	1.9 U	9.7 U	1.8 U	10 U	49 U	1.9 U
Methoxychlor	UG/KG	19 U	20 U	19 U	97 U	18 UJ	99 U	490 U	19 U
Toxaphene	UG/KG	190 U	200 U	190 U	190 U	180 U	190 U	950 U	190 U
Aroclor-1016	UG/KG	37 U	39 U	37 U	38 U	35 U	39 U	38 U	37 U
Aroclor-1221	UG/KG	37 U	39 U	37 U	38 U	35 U	39 U	38 U	37 U
Aroclor-1232	UG/KG	37 U	39 U	37 U	38 U	35 U	39 U	38 U	37 U
Aroclor-1242	UG/KG	37 U	39 U	37 U	38 U	35 U	39 U	38 U	37 U
Aroclor-1248	UG/KG	37 U	39 U	37 U	38 U	35 U	39 U	38 U	37 U
Aroclor-1254	UG/KG	37 U	39 U	37 U	38 U	35 U	39 U	38 U	37 U
Aroclor-1260	UG/KG	37 U	39 U	37 U	38 U	35 U	39 U	38 U	37 U
Metals									

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	FD-59-CL-3	FD-59-CL-7	FD-59-W5-6	FD-59-WS-01	FD-59-WS-05	FD-59-WS-07	FD-59-WS-8	FD-71-CL-04
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	11200 J	11800 J	10700 J	10500	7790 J	10600	10800	7920 J
Antimony	MG/KG	1.2 J	2 J	1.7 J	3.4 UJ	1.2 J	3.5 UJ	3.4 UJ	1.1 J
Arsenic	MG/KG	6.5	3.9 J	5.8 J	4.5	4.6 J	4.4 J	4	4.8
Barium	MG/KG	118 J	71.2 J	84 J	94	45.8 J	97.8	83.3	51 J
Beryllium	MG/KG	0.58	0.56	0.55	0.22	0.38	0.36	0.28	0.4
Cadmium	MG/KG	0.26 J	0.34 J	0.49	0.28 U	0.25 J	0.36 J	0.69	0.16 J
Calcium	MG/KG	3320	1370 J	66900 J	67600	56300 J	29700	48000 J	51800 J
Chromium	MG/KG	17.4 J	15.7 J	19 J	16.3	12.4 J	17.8 J	17.1	12.6 J
Cobalt	MG/KG	9.3	8 J	9.7 J	7.9	7.4 J	9.1	9.6	7.5 J
Copper	MG/KG	21.3 J	6.5 J	27 J	20.3	20.2 J	23.6 J	24.3 J	19.4 J
Cyanide	MG/KG								
Iron	MG/KG	24000 J	19000 J	22000 J	19600	18500	20000	19200	14600
Lead	MG/KG	12.6 J	13.2 J	28.7 J	15.9 J	8.5 J	41.3 J	54 J	17.1 J
Magnesium	MG/KG	4050 J	2750 J	6880 J	8290	11000 J	5530 J	8600	10700 J
Manganese	MG/KG	453 J	225 J	443 J	445	370 J	390 J	472	405 J
Mercury	MG/KG	0.04 J	0.04	0.06	0.06	0.05 J	0.05	0.09	0.03
Nickel	MG/KG	25.1 J	14.1 J	31.9 J	24.1	20.4 J	24.4 J	23.8	21.4 J
Potassium	MG/KG	988	608 J	1230 J	1030	843 J	1150	1110	854
Selenium	MG/KG	0.4 U	0.77 J	0.38 U	0.56 U	0.36 U	1.2 UJ	0.56 U	0.42 U
Silver	MG/KG	1.5	0.67	0.24 J	0.56 U	0.43 J	0.57 U	0.56 U	0.38 J
Sodium	MG/KG	50.2	412 J	153 J	101	133 J	142 J	182 J	113
Thallium	MG/KG	0.2 U	0.22 U	0.19 U	0.56 U	0.18 U	0.9 J	0.57 J	0.21 U
Vanadium	MG/KG	21.2 J	21 J	18.8 J	17.3	12.9 J	18.3	20.1	12.6 J
Zinc	MG/KG	71.9 J	40.5 J	67.2 J	74.6 J	51.2 J	145 J	74.3 J	52.3

Note(s):

(1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)

(2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	MW59-4	SB59-1	SB59-1	SB59-1	SB59-1	SB59-11	SB59-13	SB59-15	SB59-17
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	59055	SB59-1-08	SB59-1-04	SB59-1-06	59132	59060	59061	59131	
Sample Depth to Top of Sample ⁽¹⁾	4	6	6	10	3	6	4	8	
Sample Depth to Bottom of Sample ⁽¹⁾	6	8	8	12	5	6.9	5.3	9.2	
Sample Date	10/20/1997	2/20/1994	2/20/1994	2/20/1994	10/24/1997	10/21/1997	10/21/1997	10/23/1997	
QC Code	SA	DU	SA	SA	SA	SA	SA	DU	
Study ID	RI PHASE 1 STEP 1	ESI	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	

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		13 U	12 U	11 U	55 U	11 U	60 U
1,1,2,2-Tetrachloroethane	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG								
1,1,2-Trichloroethane	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
1,1-Dichloroethane	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
1,1-Dichloroethene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
1,2,3-Trichloropropane	UG/KG								
1,2,4-Trichlorobenzene	UG/KG								
1,2-Dibromo-3-chloropropane	UG/KG								
1,2-Dibromoethane	UG/KG								
1,2-Dichlorobenzene	UG/KG								
1,2-Dichloroethane	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
1,2-Dichloroethene (total)	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
1,2-Dichloropropane	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
1,3-Dichlorobenzene	UG/KG								
1,3-Dichloropropane	UG/KG								
1,4-Dichlorobenzene	UG/KG								
Acetone	UG/KG	12 U		47 U	23 U	11 U	55 U	11 U	60 U
Benzene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	6 J
Bromodichloromethane	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Bromoform	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Carbon disulfide	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Carbon tetrachloride	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Chlorobenzene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Chlorodibromomethane	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Chloroethane	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Chloroform	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Cis-1,2-Dichloroethene	UG/KG								
Cis-1,3-Dichloropropene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Cyclohexane	UG/KG								

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-4	SB59-1	SB59-1	SB59-1	SB59-11	SB59-13	SB59-15	SB59-17
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59055	SB59-1-08	SB59-1-04	SB59-1-06	59132	59060	59061	59131
	Sample Depth to Top of Sample ⁽¹⁾	4	6	6	10	3	6	4	8
	Sample Depth to Bottom of Sample ⁽¹⁾	6	8	8	12	5	6.9	5.3	9.2
	Sample Date	10/20/1997	2/20/1994	2/20/1994	2/20/1994	10/24/1997	10/21/1997	10/21/1997	10/23/1997
	QC Code	SA	DU	SA	SA	SA	SA	SA	DU
	Study ID	RI PHASE 1 STEP 1	ESI	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG								
Ethyl benzene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	14 J
Isopropylbenzene	UG/KG								
Meta/Para Xylene	UG/KG								
Methyl Acetate	UG/KG								
Methyl Tertbutyl Ether	UG/KG								
Methyl bromide	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Methyl butyl ketone	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Methyl chloride	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Methyl cyclohexane	UG/KG								
Methyl ethyl ketone	UG/KG	12 U		14 U	12 U	11 U	55 U	11 U	60 U
Methyl isobutyl ketone	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Methylene chloride	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Ortho Xylene	UG/KG								
Styrene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Tetrachloroethene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Toluene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	16 J
Total BTEX	MG/KG	4					6	4.8	
Total Xylenes	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	140
Trans-1,2-Dichloroethene	UG/KG								
Trans-1,3-Dichloropropene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Trichloroethene	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Trichlorofluoromethane	UG/KG								
Vinyl chloride	UG/KG	12 U		13 U	12 U	11 U	55 U	11 U	60 U
Semivolatle Organics									
1,1'-Biphenyl	UG/KG								
1,2,4-Trichlorobenzene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
1,2-Dichlorobenzene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
1,3-Dichlorobenzene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
1,4-Dichlorobenzene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
2,2'-oxybis(1-Chloropropane)	UG/KG		1900 U	420 U	530 U				
2,4,5-Trichlorophenol	UG/KG	190 U	4700 U	1000 U	1300 U	170 U	350 U	190 U	180 U
2,4,6-Trichlorophenol	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
2,4-Dichlorophenol	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
2,4-Dimethylphenol	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
2,4-Dinitrophenol	UG/KG	190 U	4700 U	1000 U	1300 U	170 U	350 U	190 U	180 U
2,4-Dinitrotoluene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
2,6-Dinitrotoluene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
2-Chloronaphthalene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
2-Chlorophenol	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
2-Methylnaphthalene	UG/KG	78 U	150 J	110 J	78 J	70 U	93 J	77 U	18 J
2-Methylphenol	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
2-Nitroaniline	UG/KG	190 U	4700 U	1000 U	1300 U	170 U	350 U	190 U	180 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-4	SB59-1	SB59-1	SB59-1	SB59-11	SB59-13	SB59-15	SB59-17
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59055	SB59-1-08	SB59-1-04	SB59-1-06	59132	59060	59061	59131
	Sample Depth to Top of Sample ⁽¹⁾	4	6	6	10	3	6	4	8
	Sample Depth to Bottom of Sample ⁽¹⁾	6	8	8	12	5	6.9	5.3	9.2
	Sample Date	10/20/1997	2/20/1994	2/20/1994	2/20/1994	10/24/1997	10/21/1997	10/21/1997	10/23/1997
	QC Code	SA	DU	SA	SA	SA	SA	SA	DU
	Study ID	RI PHASE 1 STEP 1	ESI	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
3,3'-Dichlorobenzidine	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
3-Nitroaniline	UG/KG	190 U	4700 U	1000 U	1300 U	170 UJ	350 U	190 U	180 U
4,6-Dinitro-2-methylphenol	UG/KG	190 U	4700 U	1000 U	1300 U	170 U	350 U	190 U	180 U
4-Bromophenyl phenyl ether	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
4-Chloro-3-methylphenol	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
4-Chloroaniline	UG/KG	78 U	1900 U	420 U	530 U	70 UJ	140 U	77 U	75 U
4-Chlorophenyl phenyl ether	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
4-Methylphenol	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
4-Nitroaniline	UG/KG	190 U	4700 U	1000 U	1300 U	170 U	350 U	190 U	180 U
4-Nitrophenol	UG/KG	190 U	4700 U	1000 U	1300 U	170 U	350 U	190 U	180 U
Acenaphthene	UG/KG	78 U	390 J	160 J	190 J	70 U	110 J	77 U	11 J
Acenaphthylene	UG/KG	78 U	640 J	120 J	97 J	70 U	140 U	77 U	75 U
Acetophenone	UG/KG								
Aniline	UG/KG								
Anthracene	UG/KG	78 U	1400 J	270 J	600	70 U	140 U	77 U	16 J
Atrazine	UG/KG								
Benzaldehyde	UG/KG								
Benzo(a)anthracene	UG/KG	78 U	5000	780	1200	3.8 J	140 U	77 U	23 J
Benzo(a)pyrene	UG/KG	78 U	5500 J	870	1100	3.6 J	140 U	77 U	18 J
Benzo(b)fluoranthene	UG/KG	78 U	5100 J	730	860	3.8 J	140 U	7.6 J	20 J
Benzo(ghi)perylene	UG/KG	78 U	2400 J	430	560	70 U	140 U	77 U	10 J
Benzo(k)fluoranthene	UG/KG	78 U	6100 J	800	810	3.7 J	140 U	77 U	20 J
Benzoic Acid	UG/KG								
Bis(2-Chloroethoxy)methane	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Bis(2-Chloroethyl)ether	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Bis(2-Chloroisopropyl)ether	UG/KG	78 U				70 U	140 U	77 U	75 U
Bis(2-Ethylhexyl)phthalate	UG/KG	13 J	1900 U	80 J	260 J	16 J	38 J	17 J	15 J
Butylbenzylphthalate	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Caprolactam	UG/KG								
Carbazole	UG/KG	78 U	1300 J	210 J	260 J	70 U	140 U	77 U	14 J
Chrysene	UG/KG	78 U	5100	930	1200	4.8 J	140 U	4.8 J	22 J
Di-n-butylphthalate	UG/KG	78 U	1900 U	30 J	29 J	9.9 J	140 U	5.4 J	5.1 J
Di-n-octylphthalate	UG/KG	78 U	1900 UJ	420 U	530 U	70 U	140 U	77 U	75 U
Dibenz(a,h)anthracene	UG/KG	78 U	1900 UJ	420 U	530 U	70 U	140 U	77 U	4.8 J
Dibenzofuran	UG/KG	78 U	280 J	110 J	130 J	70 U	110 J	77 U	9.1 J
Diethyl phthalate	UG/KG	5.5 J	1900 U	420 U	530 U	5.4 J	140 U	11 J	6.8 J
Dimethylphthalate	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Fluoranthene	UG/KG	78 U	9900	1500	2600	9.4 J	140 U	4.8 J	55 J
Fluorene	UG/KG	78 U	730 J	200 J	280 J	70 U	260	77 U	15 J
Hexachlorobenzene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Hexachlorobutadiene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Hexachlorocyclopentadiene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-4	SB59-1	SB59-1	SB59-1	SB59-11	SB59-13	SB59-15	SB59-17
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59055	SB59-1-08	SB59-1-04	SB59-1-06	59132	59060	59061	59131
	Sample Depth to Top of Sample ⁽¹⁾	4	6	6	10	3	6	4	8
	Sample Depth to Bottom of Sample ⁽¹⁾	6	8	8	12	5	6.9	5.3	9.2
	Sample Date	10/20/1997	2/20/1994	2/20/1994	2/20/1994	10/24/1997	10/21/1997	10/21/1997	10/23/1997
	QC Code	SA	DU	SA	SA	SA	SA	SA	DU
	Study ID	RI PHASE 1 STEP 1	ESI	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Indeno(1,2,3-cd)pyrene	UG/KG	78 U	2200 J	400 J	590	70 U	140 U	77 U	10 J
Isophorone	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
N-Nitrosodiphenylamine	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
N-Nitrosodipropylamine	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Naphthalene	UG/KG	78 U	140 J	160 J	110 J	70 U	69 J	77 U	23 J
Nitrobenzene	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Pentachlorophenol	UG/KG	190 U	4700 U	1000 U	1300 U	170 UJ	350 U	190 U	180 U
Phenanthrene	UG/KG	78 U	6200	980	1800	11 J	280	4.6 J	63 J
Phenol	UG/KG	78 U	1900 U	420 U	530 U	70 U	140 U	77 U	75 U
Pyrene	UG/KG	78 U	13000	1400	2200	7.2 J	25 J	5.1 J	53 J
Pyridine	UG/KG								
Total Unknown PAHs as SV	MG/KG	0.6 U					25 J	0.6 U	
Pesticides/PCBs									
4,4'-DDD	UG/KG	3.9 U		36	11	3.5 U	3.6 U	3.8 U	3.8 U
4,4'-DDE	UG/KG	3.6 J		25	7.3 J	3.5 U	3.6 U	1.8 J	3.8 U
4,4'-DDT	UG/KG	4.4		25	21	3.5 U	3.6 U	3.8 U	3.8 U
Aldrin	UG/KG	2 U		2.2 U	2.1 U	1.8 U	1.8 U	2 U	1.9 U
Alpha-BHC	UG/KG	9.9 J		2.2 U	2.1 U	1.8 U	6.6 UJ	6.3 UJ	1.9 U
Alpha-Chlordane	UG/KG	2 U		2.2 U	2.1 U	1.8 U	1.8 U	2 U	1.9 U
Beta-BHC	UG/KG	3.4 J		2.2 U	2.1 U	1.8 U	2.6 J	2.4 J	1.9 U
Delta-BHC	UG/KG	1.2 J		2.2 U	2.1 U	1.8 U	0.95 J	2 U	1.9 U
Dieldrin	UG/KG	3.9 U		4.2 U	4 U	3.5 U	3.6 U	3.8 U	3.8 U
Endosulfan I	UG/KG	2 U		2.2 U	2.1 U	1.8 U	1.8 U	2 U	1.9 U
Endosulfan II	UG/KG	3.9 U		4.2 U	4 U	3.5 U	3.6 U	3.8 U	3.8 U
Endosulfan sulfate	UG/KG	3.9 U		4.2 U	4 U	3.5 U	3.6 U	3.8 U	3.8 U
Endrin	UG/KG	3.9 U		4.2 U	4 U	3.5 U	3.6 U	3.8 U	3.8 U
Endrin aldehyde	UG/KG	3.9 U		4.2 U	3.9 J	3.5 U	3.6 U	3.8 U	3.8 U
Endrin ketone	UG/KG	3.9 U		4.2 U	4 U	3.5 U	3.6 U	3.8 U	3.8 U
Gamma-BHC/Lindane	UG/KG	2.6 U		2.2 U	2.1 U	1.8 U	2 UJ	1.9 UJ	1.9 U
Gamma-Chlordane	UG/KG	2 U		2.2 U	2.1 U	1.8 U	1.8 U	2 U	1.9 U
Heptachlor	UG/KG	2 U		2.2 U	2.1 U	1.8 U	1.8 U	2 U	1.9 U
Heptachlor epoxide	UG/KG	2 U		2.2 U	2.1 U	1.8 U	1.8 U	2 U	1.9 U
Methoxychlor	UG/KG	20 U		22 U	21 U	18 U	18 U	20 U	19 U
Toxaphene	UG/KG	200 U		220 U	210 U	180 U	180 U	200 U	190 U
Aroclor-1016	UG/KG	39 U		42 U	40 U	35 U	36 U	38 U	38 U
Aroclor-1221	UG/KG	80 U		86 U	81 U	71 U	73 U	78 U	76 U
Aroclor-1232	UG/KG	39 U		42 U	40 U	35 U	36 U	38 U	38 U
Aroclor-1242	UG/KG	39 U		42 U	40 U	35 U	36 U	38 U	38 U
Aroclor-1248	UG/KG	39 U		42 U	40 U	35 U	36 U	38 U	38 U
Aroclor-1254	UG/KG	39 U		42 U	40 U	35 U	36 U	38 U	38 U
Aroclor-1260	UG/KG	39 U		42 U	40 U	35 U	36 U	38 U	38 U

Metals

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	MW59-4	SB59-1	SB59-1	SB59-1	SB59-11	SB59-13	SB59-15	SB59-17	SB59-17
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	59055	SB59-1-08	SB59-1-04	SB59-1-06	59132	59060	59061	59131	59131
Sample Depth to Top of Sample ⁽¹⁾	4	6	6	10	3	6	4	8	8
Sample Depth to Bottom of Sample ⁽¹⁾	6	8	8	12	5	6.9	5.3	9.2	9.2
Sample Date	10/20/1997	2/20/1994	2/20/1994	2/20/1994	10/24/1997	10/21/1997	10/21/1997	10/23/1997	10/23/1997
QC Code	SA	DU	SA	SA	SA	SA	SA	DU	DU
Study ID	RI PHASE 1 STEP 1	ESI	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1

Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	10700		13000 J	11800 J	7740	11100	7450	6390
Antimony	MG/KG	0.58 UJ		0.74 J	0.24 J	0.61 UJ	0.6 UJ	0.64 UJ	0.62 UJ
Arsenic	MG/KG	4.8		4.4 J	3.8 J	4.1	5.7	3.9	3.5
Barium	MG/KG	49.7		108 J	75.7 J	43.7	52	52.7	40
Beryllium	MG/KG	0.39		0.58 J	0.48 J	0.24	0.27	0.23	0.21
Cadmium	MG/KG	0.08 U		0.37 J	0.1 J	0.08 U	0.08 U	0.09 U	0.09 U
Calcium	MG/KG	2060		83700 J	37400 J	72200	33900	123000	88800
Chromium	MG/KG	18.5		18.4 J	18.1 J	13	18.6	12.7	10.2
Cobalt	MG/KG	11.4		7.1 J	8.6 J	8.1	14.2	8.1	7.3
Copper	MG/KG	12.5		32.9 J	23.5 J	19.7	21	19.1	17.6
Cyanide	MG/KG	0.62 UJ		0.63 U	0.59 U	0.56 UJ	0.58 UJ	0.58 UJ	0.59 UJ
Iron	MG/KG	25300		18300 J	20500 J	18400	28900	16900	14800
Lead	MG/KG	15.7		38.4 J	10.5 J	9.6	8.7	8.3	6.6
Magnesium	MG/KG	4390		8610 J	14500 J	13600	7990	14900	14800
Manganese	MG/KG	376		418 J	329 J	356	576	469	391
Mercury	MG/KG	0.04 U		0.16 J	0.03 J	0.04 U	0.05 U	0.06 U	0.05 U
Nickel	MG/KG	29.7		23 J	27.9 J	23.2	35.5	23.8	19.8
Potassium	MG/KG	1110		2290 J	2520 J	1000	1060	1160	1230
Selenium	MG/KG	0.8 U		1 J	0.42 J	0.84 U	0.83 U	0.89 U	0.86 U
Silver	MG/KG	0.22 U		0.15 U	0.12 U	0.23 U	0.23 U	0.24 U	0.24 U
Sodium	MG/KG	98		353 J	164 J	127	112	817	165
Thallium	MG/KG	0.82 UJ		0.27 U	0.22 U	0.86 UJ	0.85 UJ	0.91 UJ	0.88 UJ
Vanadium	MG/KG	14.8		24.8 J	22 J	12.6	15	12.9	12.3
Zinc	MG/KG	133		116 J	69.7 J	80.5	60.5	67.1	64.7

Note(s):
 (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
 (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	SB59-17	SB59-18	SB59-2	SB59-2
Matrix	SOIL	SOIL	SOIL	SOIL
Sample ID	59068	59127	SB59-2-02	SB59-2-04
Sample Depth to Top of Sample ⁽¹⁾	8	10	2	6
Sample Depth to Bottom of Sample ⁽¹⁾	9.2	11	4	7
Sample Date	10/23/1997	10/24/1997	5/26/1994	5/26/1994
QC Code	SA	SA	SA	SA
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI

Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Volatile Organics					
1,1,1-Trichloroethane	UG/KG	11 U	11 U	12 U	12 U
1,1,2,2-Tetrachloroethane	UG/KG	11 U	11 U	12 U	12 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG				
1,1,2-Trichloroethane	UG/KG	11 U	11 U	12 U	12 U
1,1-Dichloroethane	UG/KG	11 U	11 U	12 U	12 U
1,1-Dichloroethene	UG/KG	11 U	11 U	12 U	12 U
1,2,3-Trichloropropane	UG/KG				
1,2,4-Trichlorobenzene	UG/KG				
1,2-Dibromo-3-chloropropane	UG/KG				
1,2-Dibromoethane	UG/KG				
1,2-Dichlorobenzene	UG/KG				
1,2-Dichloroethane	UG/KG	11 U	11 U	12 U	12 U
1,2-Dichloroethene (total)	UG/KG	11 U	11 U	12 U	12 U
1,2-Dichloropropane	UG/KG	11 U	11 U	12 U	12 U
1,3-Dichlorobenzene	UG/KG				
1,3-Dichloropropane	UG/KG				
1,4-Dichlorobenzene	UG/KG				
Acetone	UG/KG	11 U	11 U	45 U	23 U
Benzene	UG/KG	11 U	11 U	12 U	12 U
Bromodichloromethane	UG/KG	11 U	11 U	12 U	12 U
Bromoform	UG/KG	11 U	11 U	12 U	12 U
Carbon disulfide	UG/KG	11 U	11 U	12 U	12 U
Carbon tetrachloride	UG/KG	11 U	11 U	12 U	12 U
Chlorobenzene	UG/KG	11 U	11 U	12 U	12 U
Chlorodibromomethane	UG/KG	11 U	11 U	12 U	12 U
Chloroethane	UG/KG	11 U	11 U	12 U	12 U
Chloroform	UG/KG	11 U	11 U	12 U	12 U
Cis-1,2-Dichloroethene	UG/KG				
Cis-1,3-Dichloropropene	UG/KG	11 U	11 U	12 U	12 U
Cyclohexane	UG/KG				

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	SB59-17	SB59-18	SB59-2	SB59-2
Matrix	SOIL	SOIL	SOIL	SOIL
Sample ID	59068	59127	SB59-2-02	SB59-2-04
Sample Depth to Top of Sample ⁽¹⁾	8	10	2	6
Sample Depth to Bottom of Sample ⁽¹⁾	9.2	11	4	7
Sample Date	10/23/1997	10/24/1997	5/26/1994	5/26/1994
QC Code	SA	SA	SA	SA
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI

Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dichlorodifluoromethane	UG/KG				
Ethyl benzene	UG/KG	11 U	11 U	12 U	12 U
Isopropylbenzene	UG/KG				
Meta/Para Xylene	UG/KG				
Methyl Acetate	UG/KG				
Methyl Tertbutyl Ether	UG/KG				
Methyl bromide	UG/KG	11 U	11 U	12 U	12 U
Methyl butyl ketone	UG/KG	11 U	11 U	12 U	12 U
Methyl chloride	UG/KG	11 U	11 U	12 U	12 U
Methyl cyclohexane	UG/KG				
Methyl ethyl ketone	UG/KG	11 U	11 U	12 J	12 U
Methyl isobutyl ketone	UG/KG	11 U	11 U	12 U	12 U
Methylene chloride	UG/KG	11 U	11 U	12 U	12 U
Ortho Xylene	UG/KG				
Styrene	UG/KG	11 U	11 U	12 U	12 U
Tetrachloroethene	UG/KG	11 U	11 U	12 U	12 U
Toluene	UG/KG	11 U	11 U	12 U	12 U
Total BTEX	MG/KG	5.2	4.8		
Total Xylenes	UG/KG	11 U	11 U	12 U	12 U
Trans-1,2-Dichloroethene	UG/KG				
Trans-1,3-Dichloropropene	UG/KG	11 U	11 U	12 U	12 U
Trichloroethene	UG/KG	11 U	11 U	12 U	12 U
Trichlorofluoromethane	UG/KG				
Vinyl chloride	UG/KG	11 U	11 U	12 U	12 U
Semivolatile Organics					
1,1'-Biphenyl	UG/KG				
1,2,4-Trichlorobenzene	UG/KG	75 U	380 U	820 U	390 U
1,2-Dichlorobenzene	UG/KG	75 U	380 U	820 U	390 U
1,3-Dichlorobenzene	UG/KG	75 U	380 U	820 U	390 U
1,4-Dichlorobenzene	UG/KG	75 U	380 U	820 U	390 U
2,2'-oxybis(1-Chloropropane)	UG/KG			820 U	390 U
2,4,5-Trichlorophenol	UG/KG	180 U	910 U	2000 U	940 U
2,4,6-Trichlorophenol	UG/KG	75 U	380 U	820 U	390 U
2,4-Dichlorophenol	UG/KG	75 U	380 U	820 U	390 U
2,4-Dimethylphenol	UG/KG	75 U	380 U	820 U	390 U
2,4-Dinitrophenol	UG/KG	180 U	910 UJ	2000 U	940 U
2,4-Dinitrotoluene	UG/KG	75 U	380 U	820 U	390 U
2,6-Dinitrotoluene	UG/KG	75 U	380 U	820 U	390 U
2-Chloronaphthalene	UG/KG	75 U	380 U	820 U	390 U
2-Chlorophenol	UG/KG	75 U	380 U	820 U	390 U
2-Methylnaphthalene	UG/KG	22 J	250 J	160 J	150 J
2-Methylphenol	UG/KG	75 U	380 U	820 U	390 U
2-Nitroaniline	UG/KG	180 U	910 U	2000 U	940 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	SB59-17	SB59-18	SB59-2	SB59-2
Matrix	SOIL	SOIL	SOIL	SOIL
Sample ID	59068	59127	SB59-2-02	SB59-2-04
Sample Depth to Top of Sample ⁽¹⁾	8	10	2	6
Sample Depth to Bottom of Sample ⁽¹⁾	9.2	11	4	7
Sample Date	10/23/1997	10/24/1997	5/26/1994	5/26/1994
QC Code	SA	SA	SA	SA
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI

Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Nitrophenol	UG/KG	75 U	380 U	820 U	390 U
3,3'-Dichlorobenzidine	UG/KG	75 U	380 U	820 U	390 U
3-Nitroaniline	UG/KG	180 U	910 U	2000 U	940 U
4,6-Dinitro-2-methylphenol	UG/KG	180 U	910 U	2000 U	940 U
4-Bromophenyl phenyl ether	UG/KG	75 U	380 U	820 U	390 U
4-Chloro-3-methylphenol	UG/KG	75 U	380 U	820 U	390 U
4-Chloroaniline	UG/KG	75 U	380 UJ	820 U	390 U
4-Chlorophenyl phenyl ether	UG/KG	75 U	380 U	820 U	390 U
4-Methylphenol	UG/KG	75 U	380 UJ	820 U	28 J
4-Nitroaniline	UG/KG	180 U	910 U	2000 U	940 U
4-Nitrophenol	UG/KG	180 U	910 U	2000 U	940 U
Acenaphthene	UG/KG	16 J	180 J	230 J	100 J
Acenaphthylene	UG/KG	4.6 J	41 J	100 J	23 J
Acetophenone	UG/KG				
Aniline	UG/KG				
Anthracene	UG/KG	35 J	380	440 J	160 J
Atrazine	UG/KG				
Benzaldehyde	UG/KG				
Benzo(a)anthracene	UG/KG	71 J	620	1600	260 J
Benzo(a)pyrene	UG/KG	54 J	570	1500	250 J
Benzo(b)fluoranthene	UG/KG	56 J	920	3100 J	290 J
Benzo(ghi)perylene	UG/KG	35 J	320 J	740 J	130 J
Benzo(k)fluoranthene	UG/KG	66 J	380 U	820 UJ	270 J
Benzoic Acid	UG/KG				
Bis(2-Chloroethoxy)methane	UG/KG	75 U	380 U	820 U	390 U
Bis(2-Chloroethyl)ether	UG/KG	75 U	380 U	820 U	390 U
Bis(2-Chloroisopropyl)ether	UG/KG	75 U	380 U		
Bis(2-Ethylhexyl)phthalate	UG/KG	26 J	380 U	72 J	35 J
Butylbenzylphthalate	UG/KG	75 U	380 U	820 U	390 U
Caprolactam	UG/KG				
Carbazole	UG/KG	29 J	370 J	220 J	64 J
Chrysene	UG/KG	72 J	600	1500	270 J
Di-n-butylphthalate	UG/KG	5 J	380 U	820 U	390 U
Di-n-octylphthalate	UG/KG	75 U	380 U	820 U	390 U
Dibenz(a,h)anthracene	UG/KG	13 J	150 J	470 J	84 J
Dibenzofuran	UG/KG	16 J	280 J	820 U	82 J
Diethyl phthalate	UG/KG	8.5 J	380 U	820 U	390 U
Dimethylphthalate	UG/KG	75 U	380 U	820 U	390 U
Fluoranthene	UG/KG	170	1500	3200	750
Fluorene	UG/KG	34 J	530	380 J	160 J
Hexachlorobenzene	UG/KG	75 U	380 U	820 U	390 U
Hexachlorobutadiene	UG/KG	75 U	380 UJ	820 U	390 U
Hexachlorocyclopentadiene	UG/KG	75 U	380 U	820 U	390 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	SB59-17	SB59-18	SB59-2	SB59-2
Maxtrix	SOIL	SOIL	SOIL	SOIL
Sample ID	59068	59127	SB59-2-02	SB59-2-04
Sample Depth to Top of Sample ⁽¹⁾	8	10	2	6
Sample Depth to Bottom of Sample ⁽¹⁾	9.2	11	4	7
Sample Date	10/23/1997	10/24/1997	5/26/1994	5/26/1994
QC Code	SA	SA	SA	SA
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI

Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Hexachloroethane	UG/KG	75 U	380 U	820 U	390 U
Indeno(1,2,3-cd)pyrene	UG/KG	33 J	300 J	940	130 J
Isophorone	UG/KG	75 U	380 U	820 U	390 U
N-Nitrosodiphenylamine	UG/KG	75 U	380 U	820 U	390 U
N-Nitrosodipropylamine	UG/KG	75 U	380 U	820 U	390 U
Naphthalene	UG/KG	20 J	750	170 J	160 J
Nitrobenzene	UG/KG	75 U	380 U	820 U	390 U
Pentachlorophenol	UG/KG	180 U	910 U	2000 U	940 U
Phenanthrene	UG/KG	180	1900	1800	620
Phenol	UG/KG	75 U	380 U	820 U	390 U
Pyrene	UG/KG	170	1300	3200	510
Pyridine	UG/KG				
Total Unknown PAHs as SV	MG/KG	0.6 U	25 J		
Pesticides/PCBs					
4,4'-DDD	UG/KG	3.8 U	12 U	48 J	5.4 J
4,4'-DDE	UG/KG	3.8 U	8.2 U	81 J	8.2 J
4,4'-DDT	UG/KG	3.8 U	11 U	16 J	3.9 UJ
Aldrin	UG/KG	1.9 U	1.9 U	1.2 J	2 UJ
Alpha-BHC	UG/KG	1.9 U	1.9 U	2.1 UJ	2 UJ
Alpha-Chlordane	UG/KG	1.9 U	1.9 U	5.2 J	2 UJ
Beta-BHC	UG/KG	1.9 U	1.9 U	2.1 UJ	2 UJ
Delta-BHC	UG/KG	1.9 U	1.9 U	2.1 UJ	2 UJ
Dieldrin	UG/KG	3.8 U	3.8 U	4.1 UJ	3.9 UJ
Endosulfan I	UG/KG	1.9 U	1.9 U	16 J	4.1 J
Endosulfan II	UG/KG	3.8 U	3.8 U	4.1 UJ	3.9 UJ
Endosulfan sulfate	UG/KG	3.8 U	3.8 U	4.1 UJ	3.9 UJ
Endrin	UG/KG	3.8 U	3.8 U	4.1 UJ	3.9 UJ
Endrin aldehyde	UG/KG	3.8 U	3.8 U	4.1 UJ	3.9 UJ
Endrin ketone	UG/KG	3.8 U	3.8 U	4.1 UJ	3.9 UJ
Gamma-BHC/Lindane	UG/KG	1.9 U	1.9 U	2.1 UJ	2 UJ
Gamma-Chlordane	UG/KG	1.9 U	1.9 U	2.1 UJ	2 UJ
Heptachlor	UG/KG	1.9 U	1.9 U	2.1 UJ	2 UJ
Heptachlor epoxide	UG/KG	1.9 U	1.9 U	2.1 UJ	2 UJ
Methoxychlor	UG/KG	19 U	19 U	21 UJ	20 UJ
Toxaphene	UG/KG	190 U	190 U	210 UJ	200 UJ
Aroclor-1016	UG/KG	38 U	38 U	41 UJ	39 UJ
Aroclor-1221	UG/KG	76 U	76 U	84 UJ	79 UJ
Aroclor-1232	UG/KG	38 U	38 U	41 UJ	39 UJ
Aroclor-1242	UG/KG	38 U	38 U	41 UJ	39 UJ
Aroclor-1248	UG/KG	38 U	38 U	41 UJ	39 UJ
Aroclor-1254	UG/KG	38 U	38 U	41 UJ	39 UJ
Aroclor-1260	UG/KG	38 U	38 U	41 UJ	39 UJ

Metals

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	SB59-17	SB59-18	SB59-2	SB59-2
Matrix	SOIL	SOIL	SOIL	SOIL
Sample ID	59068	59127	SB59-2-02	SB59-2-04
Sample Depth to Top of Sample ⁽¹⁾	8	10	2	6
Sample Depth to Bottom of Sample ⁽¹⁾	9.2	11	4	7
Sample Date	10/23/1997	10/24/1997	5/26/1994	5/26/1994
QC Code	SA	SA	SA	SA
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI

Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	5400	9660	12500	9340
Antimony	MG/KG	0.55 UJ	0.64 UJ	0.84 J	0.26 J
Arsenic	MG/KG	2.9	3	6	3.8
Barium	MG/KG	35.8	71.7	93.4	66
Beryllium	MG/KG	0.16	0.32	0.67 J	0.42 J
Cadmium	MG/KG	0.08 U	0.09 U	0.9 J	0.41 J
Calcium	MG/KG	101000	95900	44500	65800
Chromium	MG/KG	9	14.2	21.1	15.5
Cobalt	MG/KG	5.9	7.1	11.7	9.1
Copper	MG/KG	17.4	18.6	28.1	19.7
Cyanide	MG/KG	0.61 UJ	0.58 UJ	0.56 U	0.59 U
Iron	MG/KG	12300	16500	24600	20900
Lead	MG/KG	5.9	19.6	50.3	12.9
Magnesium	MG/KG	14200	17200	8540	9190
Manganese	MG/KG	334	378	664	836
Mercury	MG/KG	0.05 U	0.07	0.08 J	0.04 J
Nickel	MG/KG	17.1	20.9	31.8	24.7
Potassium	MG/KG	936	1940	1690 J	1280 J
Selenium	MG/KG	0.76 U	0.88 U	1.3	0.49 J
Silver	MG/KG	0.21 U	0.24 U	0.32 J	0.08 UJ
Sodium	MG/KG	152	258	168 J	148 J
Thallium	MG/KG	0.77 UJ	0.9 UJ	0.4 U	0.29 U
Vanadium	MG/KG	9.9	19.1	24.2	16.4
Zinc	MG/KG	51.1	50	115	75.5

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
J = the reported value is an estimated concentration
UJ = the compound was not detected; the associated reporting limit is approximate
R = the data was rejected in the data validating process
NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	SB59-20	SB59-20	SB59-21	SB59-3	SB59-4	SB59-4	SB59-5	SB59-5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59107	59066	59067	SB59-3-04	SB59-4-05	SB59-4-10	SB59-5-03	SB59-5-06
	Sample Depth to Top of Sample ⁽¹⁾	4	4	0	6	8	10	4	10
	Sample Depth to Bottom of Sample ⁽¹⁾	4.5	4.5	1.1	8	10	20	6	12
	Sample Date	10/22/1997	10/22/1997	10/22/1997	5/25/1994	5/25/1994	5/25/1994	5/25/1994	5/25/1994
	QC Code	DU	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI	ESI	ESI
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 U	12 U	11 U	18 U	11 U	11 U	11 U
1,1,2,2-Tetrachloroethane	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG								
1,1,2-Trichloroethane	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
1,1-Dichloroethane	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
1,1-Dichloroethene	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
1,2,3-Trichloropropane	UG/KG								
1,2,4-Trichlorobenzene	UG/KG								
1,2-Dibromo-3-chloropropane	UG/KG								
1,2-Dibromoethane	UG/KG								
1,2-Dichlorobenzene	UG/KG								
1,2-Dichloroethane	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
1,2-Dichloroethene (total)	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
1,2-Dichloropropane	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
1,3-Dichlorobenzene	UG/KG								
1,3-Dichloropropane	UG/KG								
1,4-Dichlorobenzene	UG/KG								
Acetone	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Benzene	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Bromodichloromethane	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Bromoform	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Carbon disulfide	UG/KG		11 U	12 U	11 U	4 J	11 U	11 U	11 U
Carbon tetrachloride	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Chlorobenzene	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Chlorodibromomethane	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Chloroethane	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Chloroform	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Cis-1,2-Dichloroethene	UG/KG								
Cis-1,3-Dichloropropene	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Cyclohexane	UG/KG								
Dichlorodifluoromethane	UG/KG								
Ethyl benzene	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	SB59-20	SB59-20	SB59-21	SB59-3	SB59-4	SB59-4	SB59-5	SB59-5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59107	59066	59067	SB59-3-04	SB59-4-05	SB59-4-10	SB59-5-03	SB59-5-06
	Sample Depth to Top of Sample ⁽¹⁾	4	4	0	6	8	10	4	10
	Sample Depth to Bottom of Sample ⁽¹⁾	4.5	4.5	1.1	8	10	20	6	12
	Sample Date	10/22/1997	10/22/1997	10/22/1997	5/25/1994	5/25/1994	5/25/1994	5/25/1994	5/25/1994
	QC Code	DU	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI	ESI	ESI
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG								
Meta/Para Xylene	UG/KG								
Methyl Acetate	UG/KG								
Methyl Tertbutyl Ether	UG/KG								
Methyl bromide	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Methyl butyl ketone	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Methyl chloride	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Methyl cyclohexane	UG/KG								
Methyl ethyl ketone	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Methyl isobutyl ketone	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Methylene chloride	UG/KG		11 U	12 U	11 U	2 J	11 U	11 U	11 U
Ortho Xylene	UG/KG								
Styrene	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Tetrachloroethene	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Toluene	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Total BTEX	MG/KG	2.5 U	4	6.5					
Total Xylenes	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Trans-1,2-Dichloroethene	UG/KG								
Trans-1,3-Dichloropropene	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Trichloroethene	UG/KG		11 U	12 U	11 U	18 U	11 U	1 J	11 U
Trichlorofluoromethane	UG/KG								
Vinyl chloride	UG/KG		11 U	12 U	11 U	18 U	11 U	11 U	11 U
Semivolatile Organics									
1,1'-Biphenyl	UG/KG								
1,2,4-Trichlorobenzene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
1,2-Dichlorobenzene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
1,3-Dichlorobenzene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
1,4-Dichlorobenzene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
2,2'-oxybis(1-Chloropropane)	UG/KG				360 U	420 U	360 U	370 U	380 U
2,4,5-Trichlorophenol	UG/KG		160 U	160 U	880 U	1000 U	870 U	910 U	920 U
2,4,6-Trichlorophenol	UG/KG		66 UJ	66 UJ	360 U	420 U	360 U	370 U	380 U
2,4-Dichlorophenol	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
2,4-Dimethylphenol	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
2,4-Dinitrophenol	UG/KG		160 UJ	160 UJ	880 U	1000 U	870 U	910 U	920 U
2,4-Dinitrotoluene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
2,6-Dinitrotoluene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
2-Chloronaphthalene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
2-Chlorophenol	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
2-Methylnaphthalene	UG/KG		14 J	66 U	360 U	37 J	360 U	45 J	380 U
2-Methylphenol	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
2-Nitroaniline	UG/KG		160 U	160 U	880 U	1000 U	870 U	910 U	920 U
2-Nitrophenol	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	SB59-20	SB59-20	SB59-21	SB59-3	SB59-4	SB59-4	SB59-5	SB59-5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59107	59066	59067	SB59-3-04	SB59-4-05	SB59-4-10	SB59-5-03	SB59-5-06
	Sample Depth to Top of Sample ⁽¹⁾	4	4	0	6	8	10	4	10
	Sample Depth to Bottom of Sample ⁽¹⁾	4.5	4.5	1.1	8	10	20	6	12
	Sample Date	10/22/1997	10/22/1997	10/22/1997	5/25/1994	5/25/1994	5/25/1994	5/25/1994	5/25/1994
	QC Code	DU	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI	ESI	ESI
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG		66 UJ	66 UJ	360 U	420 U	360 U	370 U	380 U
3-Nitroaniline	UG/KG		160 UJ	160 UJ	880 U	1000 U	870 U	910 U	920 U
4,6-Dinitro-2-methylphenol	UG/KG		160 U	160 U	880 U	1000 U	870 U	910 U	920 U
4-Bromophenyl phenyl ether	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
4-Chloro-3-methylphenol	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
4-Chloroaniline	UG/KG		66 UJ	66 UJ	360 U	420 U	360 U	370 U	380 U
4-Chlorophenyl phenyl ether	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
4-Methylphenol	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
4-Nitroaniline	UG/KG		160 U	160 U	880 U	1000 U	870 U	910 U	920 U
4-Nitrophenol	UG/KG		160 U	160 U	880 U	1000 U	870 U	910 U	920 U
Acenaphthene	UG/KG		6.1 J	66 U	360 U	93 J	360 U	44 J	380 U
Acenaphthylene	UG/KG		66 U	66 U	360 U	52 J	360 U	190 J	380 U
Acetophenone	UG/KG								
Aniline	UG/KG								
Anthracene	UG/KG		8.4 J	66 U	360 U	250 J	360 U	410 J	380 U
Atrazine	UG/KG								
Benzaldehyde	UG/KG								
Benzo(a)anthracene	UG/KG		20 J	9.6 J	360 U	740	360 U	1400	380 U
Benzo(a)pyrene	UG/KG		22 J	8.1 J	360 U	360 J	360 U	1200 J	380 U
Benzo(b)fluoranthene	UG/KG		19 J	15 J	360 U	730	360 U	1100 J	380 U
Benzo(ghi)perylene	UG/KG		22 J	11 J	360 U	420 U	360 U	150 J	380 U
Benzo(k)fluoranthene	UG/KG		20 J	12 J	360 U	590	360 U	870 J	380 U
Benzoic Acid	UG/KG								
Bis(2-Chloroethoxy)methane	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Bis(2-Chloroethyl)ether	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Bis(2-Chloroisopropyl)ether	UG/KG		66 U	66 U					
Bis(2-Ethylhexyl)phthalate	UG/KG		16 J	21 J	360 U	420 U	360 U	370 U	380 U
Butylbenzylphthalate	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Caprolactam	UG/KG								
Carbazole	UG/KG		11 J	6.6 J	360 U	160 J	360 U	370 U	380 U
Chrysene	UG/KG		25 J	14 J	360 U	820	360 U	1400	380 U
Di-n-butylphthalate	UG/KG		5.5 J	4.8 J	360 U	120 J	360 U	370 U	380 U
Di-n-octylphthalate	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Dibenz(a,h)anthracene	UG/KG		4.7 J	66 U	360 U	160 J	360 U	300 J	380 U
Dibenzofuran	UG/KG		5.6 J	66 U	360 U	64 J	360 U	28 J	380 U
Diethyl phthalate	UG/KG		10 J	8.1 J	360 U	420 U	360 U	370 U	380 U
Dimethylphthalate	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Fluoranthene	UG/KG		54 J	28 J	360 U	1900	19 J	2300 J	380 U
Fluorene	UG/KG		8.6 J	66 U	360 U	100 J	360 U	90 J	380 U
Hexachlorobenzene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Hexachlorobutadiene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Hexachlorocyclopentadiene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Hexachloroethane	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Indeno(1,2,3-cd)pyrene	UG/KG		14 J	9.6 J	360 U	300 J	360 U	570 J	380 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	SB59-20	SB59-20	SB59-21	SB59-3	SB59-4	SB59-4	SB59-5	SB59-5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59107	59066	59067	SB59-3-04	SB59-4-05	SB59-4-10	SB59-5-03	SB59-5-06
	Sample Depth to Top of Sample ⁽¹⁾	4	4	0	6	8	10	4	10
	Sample Depth to Bottom of Sample ⁽¹⁾	4.5	4.5	1.1	8	10	20	6	12
	Sample Date	10/22/1997	10/22/1997	10/22/1997	5/25/1994	5/25/1994	5/25/1994	5/25/1994	5/25/1994
	QC Code	DU	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI	ESI	ESI
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
N-Nitrosodiphenylamine	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
N-Nitrosodipropylamine	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Naphthalene	UG/KG		19 J	66 U	360 U	100 J	360 U	44 J	380 U
Nitrobenzene	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Pentachlorophenol	UG/KG		160 UJ	160 UJ	880 U	1000 U	870 U	910 U	920 U
Phenanthrene	UG/KG		43 J	20 J	360 U	1100	360 U	1200 J	380 U
Phenol	UG/KG		66 U	66 U	360 U	420 U	360 U	370 U	380 U
Pyrene	UG/KG		48 J	21 J	360 U	940	28 J	2800	380 U
Pyridine	UG/KG								
Total Unknown PAHs as SV	MG/KG	3	0.7	0.6 U					
Pesticides/PCBs									
4,4'-DDD	UG/KG		3.7 U	4.2 U	3.6 UJ	450	3.6 UJ	22 J	3.8 U
4,4'-DDE	UG/KG		3.7 U	4.2 U	3.6 UJ	140	3.6 UJ	21	3.8 U
4,4'-DDT	UG/KG		3.7 U	4.2 U	3.6 UJ	350	3.6 UJ	23 J	3.8 U
Aldrin	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	3.9 U	2 U
Alpha-BHC	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	3.9 U	2 U
Alpha-Chlordane	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	3.9 U	2 U
Beta-BHC	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	3.9 U	2 U
Delta-BHC	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	3.9 U	2 U
Dieldrin	UG/KG		3.7 U	4.2 U	3.6 UJ	42 U	3.6 UJ	7.5 U	3.8 U
Endosulfan I	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	3.9 U	2 U
Endosulfan II	UG/KG		3.7 U	4.2 U	3.6 UJ	42 U	3.6 UJ	7.5 U	3.8 U
Endosulfan sulfate	UG/KG		3.7 U	4.2 U	3.6 UJ	42 U	3.6 UJ	7.5 U	3.8 U
Endrin	UG/KG		3.7 U	4.2 U	3.6 UJ	42 U	3.6 UJ	7.5 U	3.8 U
Endrin aldehyde	UG/KG		3.7 U	4.2 U	3.6 UJ	42 U	3.6 UJ	7.5 U	3.8 U
Endrin ketone	UG/KG		3.7 U	4.2 U	3.6 UJ	42 U	3.6 UJ	7.5 U	3.8 U
Gamma-BHC/Lindane	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	3.9 U	2 U
Gamma-Chlordane	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	2.2 J	2 U
Heptachlor	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	3.9 U	2 U
Heptachlor epoxide	UG/KG		1.9 U	2.2 U	1.9 UJ	22 U	1.8 UJ	3.9 U	2 U
Methoxychlor	UG/KG		19 U	22 U	19 UJ	220 U	18 UJ	39 U	20 U
Toxaphene	UG/KG		190 U	220 U	190 UJ	2200 U	180 UJ	390 U	200 U
Aroclor-1016	UG/KG		37 U	42 U	36 UJ	420 U	36 UJ	75 U	38 U
Aroclor-1221	UG/KG		75 U	85 U	74 UJ	850 U	73 UJ	150 U	77 U
Aroclor-1232	UG/KG		37 U	42 U	36 UJ	420 U	36 UJ	75 U	38 U
Aroclor-1242	UG/KG		37 U	42 U	36 UJ	420 U	36 UJ	75 U	38 U
Aroclor-1248	UG/KG		37 U	42 U	36 UJ	420 U	36 UJ	75 U	38 U
Aroclor-1254	UG/KG		37 U	42 U	36 UJ	420 U	36 UJ	75 U	38 U
Aroclor-1260	UG/KG		37 U	42 U	36 UJ	420 U	36 UJ	75 U	38 U
Metals									

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Facility	SB59-20	SB59-20	SB59-21	SB59-3	SB59-4	SB59-4	SB59-5	SB59-5	SB59-5
Location ID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Maxtrix	59107	59066	59067	SB59-3-04	SB59-4-05	SB59-4-10	SB59-5-03	SB59-5-06	SB59-5-06
Sample ID	4	4	0	6	8	10	4	10	10
Sample Depth to Top of Sample ⁽¹⁾	4.5	4.5	1.1	8	10	20	6	12	12
Sample Depth to Bottom of Sample ⁽¹⁾	10/22/1997	10/22/1997	10/22/1997	5/25/1994	5/25/1994	5/25/1994	5/25/1994	5/25/1994	5/25/1994
Sample Date	DU	SA	SA	SA	SA	SA	SA	SA	SA
QC Code	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI	ESI	ESI	ESI
Study ID									

Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG		10700	14300	8020	4200	7550	12800	7030
Antimony	MG/KG	0.63 UJ		0.68 UJ	0.15 UJ	424 J	0.22 UJ	0.2 UJ	0.18 UJ
Arsenic	MG/KG		3.9	5.2	4.4	3.8	3.7	5.5	5.1
Barium	MG/KG		88.2	167	62.9	304	21.1 J	81.9	36 J
Beryllium	MG/KG		0.38	0.44	0.39 J	0.37 J	0.38 J	0.61 J	0.42 J
Cadmium	MG/KG	0.09 U		0.09 U	0.52 J	3.2	0.42 J	0.91 J	0.61 J
Calcium	MG/KG		44000	5450	71100	214000	61700	62800	85200
Chromium	MG/KG		15.7	20.7	13.3	14.7	12.8	20.1	13.1
Cobalt	MG/KG		8.3	11.3	7.9	4 J	7.7 J	10.8	8.1 J
Copper	MG/KG		17.5	25	18.4	14.2	15.6	26	18.8
Cyanide	MG/KG		0.63 UJ	0.75 UJ	0.51 U	0.61 U	0.47 U	0.5 U	0.56 U
Iron	MG/KG		19100	24700	17600	6540	17300	24100	18100
Lead	MG/KG		9.3	58.6	9.3 J	139 J	9.5 J	42.1 J	12.3 J
Magnesium	MG/KG		9770	4300	18500	7980	14600	11500	34400
Manganese	MG/KG		407	1050	403	298	328	640	477
Mercury	MG/KG	0.05 U		0.32	0.03 J	0.11	0.03 J	0.15	0.04 J
Nickel	MG/KG		23.7	28.8	22.5	10.6	21.3	29.8	27
Potassium	MG/KG		1440	1600	1370 J	845 J	1100 J	1710 J	922 J
Selenium	MG/KG	0.87 U		1.5	0.26 U	0.28 J	0.96 J	0.53 J	0.31 U
Silver	MG/KG		0.24 U	0.26 U	0.11 UJ	0.11 J	0.15 UJ	0.14 UJ	0.13 UJ
Sodium	MG/KG		696	113 U	198 J	125 J	140 J	161 J	274 J
Thallium	MG/KG		0.89 UJ	0.97 UJ	0.24 U	0.22 U	0.34 U	0.32 U	0.29 U
Vanadium	MG/KG		18.8	23.1	13.6	13.9	12.1	23.2	13.3
Zinc	MG/KG		81.7	87	53.6	341	54.9	101	64.9

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	SB59-8	SB59-9	SB59-9	SB59-9	TP59-11A-2	TP59-13A-1	TP59-13C-1	TP59-15-5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59057	59059	59089	59085	59026	59010	59015	59035
	Sample Depth to Top of Sample ⁽¹⁾	0	2	4	4	4	3.5	3	6
	Sample Depth to Bottom of Sample ⁽¹⁾	2	3.7	5.1	5.1	4.5	4	3.5	6.5
	Sample Date	10/20/1997	10/21/1997	10/22/1997	10/22/1997	10/9/1997	10/8/1997	10/8/1997	10/10/1997
	QC Code	SA	SA	DU	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
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	13 U	10 U			11 U	120 U	11 U	12 U
1,1,2,2-Tetrachloroethane	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG								
1,1,2-Trichloroethane	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
1,1-Dichloroethane	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
1,1-Dichloroethene	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
1,2,3-Trichloropropane	UG/KG								
1,2,4-Trichlorobenzene	UG/KG								
1,2-Dibromo-3-chloropropane	UG/KG								
1,2-Dibromoethane	UG/KG								
1,2-Dichlorobenzene	UG/KG								
1,2-Dichloroethane	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
1,2-Dichloroethene (total)	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
1,2-Dichloropropane	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
1,3-Dichlorobenzene	UG/KG								
1,3-Dichloropropane	UG/KG								
1,4-Dichlorobenzene	UG/KG								
Acetone	UG/KG	13 U	10 U			7 U	120 U	11 U	12 U
Benzene	UG/KG	13 U	10 U			7 U	120 U	11 U	12 U
Bromodichloromethane	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Bromoform	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Carbon disulfide	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Carbon tetrachloride	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Chlorobenzene	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Chlorodibromomethane	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Chloroethane	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Chloroform	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Cis-1,2-Dichloroethene	UG/KG								
Cis-1,3-Dichloropropene	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Cyclohexane	UG/KG								
Dichlorodifluoromethane	UG/KG								
Ethyl benzene	UG/KG	13 U	10 U			11 U	110 J	11 U	12 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	SB59-8	SB59-9	SB59-9	SB59-9	TP59-11A-2	TP59-13A-1	TP59-13C-1	TP59-15-5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59057	59059	59089	59085	59026	59010	59015	59035
	Sample Depth to Top of Sample ⁽¹⁾	0	2	4	4	4	3.5	3	6
	Sample Depth to Bottom of Sample ⁽¹⁾	2	3.7	5.1	5.1	4.5	4	3.5	6.5
	Sample Date	10/20/1997	10/21/1997	10/22/1997	10/22/1997	10/9/1997	10/8/1997	10/8/1997	10/10/1997
	QC Code	SA	SA	DU	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG								
Meta/Para Xylene	UG/KG								
Methyl Acetate	UG/KG								
Methyl Tertbutyl Ether	UG/KG								
Methyl bromide	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Methyl butyl ketone	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Methyl chloride	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Methyl cyclohexane	UG/KG								
Methyl ethyl ketone	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Methyl isobutyl ketone	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Methylene chloride	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Ortho Xylene	UG/KG								
Styrene	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Tetrachloroethene	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Toluene	UG/KG	13 U	10 U			11 U	120 U	11 U	2 J
Total BTEX	MG/KG	6.3	4.6	4.1	2.5 U	2.5		9.5	6
Total Xylenes	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Trans-1,2-Dichloroethene	UG/KG								
Trans-1,3-Dichloropropene	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Trichloroethene	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Trichlorofluoromethane	UG/KG								
Vinyl chloride	UG/KG	13 U	10 U			11 U	120 U	11 U	12 U
Semivolatile Organics									
1,1'-Biphenyl	UG/KG								
1,2,4-Trichlorobenzene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
1,2-Dichlorobenzene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
1,3-Dichlorobenzene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
1,4-Dichlorobenzene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
2,2'-oxybis(1-Chloropropane)	UG/KG								
2,4,5-Trichlorophenol	UG/KG	200 U	170 U			3500 U	20000 U	180 U	3700 U
2,4,6-Trichlorophenol	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
2,4-Dichlorophenol	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
2,4-Dimethylphenol	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
2,4-Dinitrophenol	UG/KG	200 U	170 U			3500 U	20000 U	180 U	3700 U
2,4-Dinitrotoluene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
2,6-Dinitrotoluene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
2-Chloronaphthalene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
2-Chlorophenol	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
2-Methylnaphthalene	UG/KG	81 U	69 U			210 J	10000	76 U	100 J
2-Methylphenol	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
2-Nitroaniline	UG/KG	200 U	170 U			3500 U	20000 U	180 U	3700 U
2-Nitrophenol	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	SB59-8	SB59-9	SB59-9	SB59-9	TP59-11A-2	TP59-13A-1	TP59-13C-1	TP59-15-5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59057	59059	59089	59085	59026	59010	59015	59035
	Sample Depth to Top of Sample ⁽¹⁾	0	2	4	4	4	3.5	3	6
	Sample Depth to Bottom of Sample ⁽¹⁾	2	3.7	5.1	5.1	4.5	4	3.5	6.5
	Sample Date	10/20/1997	10/21/1997	10/22/1997	10/22/1997	10/9/1997	10/8/1997	10/8/1997	10/10/1997
	QC Code	SA	SA	DU	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	81 U	69 U			1400 U	8000 U	76 UJ	1500 U
3-Nitroaniline	UG/KG	200 U	170 U			3500 U	20000 U	180 UJ	3700 U
4,6-Dinitro-2-methylphenol	UG/KG	200 U	170 U			3500 U	20000 U	180 U	3700 U
4-Bromophenyl phenyl ether	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
4-Chloro-3-methylphenol	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
4-Chloroaniline	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
4-Chlorophenyl phenyl ether	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
4-Methylphenol	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
4-Nitroaniline	UG/KG	200 U	170 U			3500 U	20000 U	180 U	3700 U
4-Nitrophenol	UG/KG	200 U	170 U			3500 U	20000 U	180 U	3700 U
Acenaphthene	UG/KG	81 U	69 U			340 J	1600 J	76 U	270 J
Acenaphthylene	UG/KG	81 U	69 U			290 J	8000 U	76 U	130 J
Acetophenone	UG/KG								
Aniline	UG/KG								
Anthracene	UG/KG	81 U	69 U			1100 J	8000 U	76 U	390 J
Atrazine	UG/KG								
Benzaldehyde	UG/KG								
Benzo(a)anthracene	UG/KG	6.6 J	69 U			3500	8000 U	8.2 J	3200
Benzo(a)pyrene	UG/KG	7 J	69 U			4100	8000 U	10 J	3600
Benzo(b)fluoranthene	UG/KG	7.7 J	4.8 J			3400	8000 U	11 J	3200
Benzo(ghi)perylene	UG/KG	6.3 J	69 U			2400	8000 U	7.7 J	2300
Benzo(k)fluoranthene	UG/KG	8.4 J	69 U			3200	8000 U	10 J	3100
Benzoic Acid	UG/KG								
Bis(2-Chloroethoxy)methane	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Bis(2-Chloroethyl)ether	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Bis(2-Chloroisopropyl)ether	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Bis(2-Ethylhexyl)phthalate	UG/KG	69 J	24 J			1400 U	8000 U	7 J	1500 U
Butylbenzylphthalate	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1000 J
Caprolactam	UG/KG								
Carbazole	UG/KG	81 U	69 U			610 J	8000 U	76 U	590 J
Chrysene	UG/KG	7.8 J	69 U			3700	8000 U	12 J	4400
Di-n-butylphthalate	UG/KG	5.8 J	7.1 J			1400 U	8000 U	76 U	1500 U
Di-n-octylphthalate	UG/KG	11 J	69 U			1400 U	8000 U	76 U	1500 U
Dibenz(a,h)anthracene	UG/KG	81 U	69 U			890 J	8000 U	76 U	710 J
Dibenzofuran	UG/KG	81 U	69 U			230 J	1400 U	76 U	140 J
Diethyl phthalate	UG/KG	10 J	12 J			1400 U	8000 U	5.3 J	1500 U
Dimethylphthalate	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Fluoranthene	UG/KG	11 J	69 U			7300	8000 U	14 J	8600
Fluorene	UG/KG	81 U	69 U			640 J	3000 J	76 U	620 J
Hexachlorobenzene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Hexachlorobutadiene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Hexachlorocyclopentadiene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Hexachloroethane	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Indeno(1,2,3-cd)pyrene	UG/KG	6 J	69 U			2300	8000 U	7.5 J	2000

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	SB59-8	SB59-9	SB59-9	SB59-9	TP59-11A-2	TP59-13A-1	TP59-13C-1	TP59-15-5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59057	59059	59089	59085	59026	59010	59015	59035
	Sample Depth to Top of Sample ⁽¹⁾	0	2	4	4	4	3.5	3	6
	Sample Depth to Bottom of Sample ⁽¹⁾	2	3.7	5.1	5.1	4.5	4	3.5	6.5
	Sample Date	10/20/1997	10/21/1997	10/22/1997	10/22/1997	10/9/1997	10/8/1997	10/8/1997	10/10/1997
	QC Code	SA	SA	DU	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
N-Nitrosodiphenylamine	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
N-Nitrosodipropylamine	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Naphthalene	UG/KG	81 U	69 U			110 J	8000 U	76 U	1500 U
Nitrobenzene	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Pentachlorophenol	UG/KG	200 U	170 U			3500 U	20000 U	180 U	3700 UJ
Phenanthrene	UG/KG	6 J	69 U			5000	5200 J	8.9 J	6500
Phenol	UG/KG	81 U	69 U			1400 U	8000 U	76 U	1500 U
Pyrene	UG/KG	13 J	69 U			7000	8000 U	14 J	8000
Pyridine	UG/KG								
Total Unknown PAHs as SV	MG/KG	0.6 U	0.8	0.6 U	0.6 U	25 J		0.6 U	25 J
Pesticides/PCBs									
4,4'-DDD	UG/KG	4.1 U	3.5 U			13	26	3.8 U	3.8 U
4,4'-DDE	UG/KG	4.1 U	2.5 J			13	10	3.8 U	3.8 U
4,4'-DDT	UG/KG	4.1 U	3.9			12	4 U	3.8 U	3.8 U
Aldrin	UG/KG	2.1 U	1.8 U			1.8 U	2.1 U	2 U	2 U
Alpha-BHC	UG/KG	9	8.2 UJ			1.8 U	2.1 U	2 U	2 U
Alpha-Chlordane	UG/KG	2.1 U	1.8 U			1.1 J	17	2 U	2 U
Beta-BHC	UG/KG	3.6 J	3 J			1.8 U	2.1 U	2 U	2 U
Delta-BHC	UG/KG	1.4 J	1.1 J			1.8 U	2.1 U	2 U	2 U
Dieldrin	UG/KG	4.1 U	3.5 U			3.6 U	4 U	3.8 U	3.8 U
Endosulfan I	UG/KG	2.1 U	1.8 U			1.8 U	2.1 U	2 U	2 U
Endosulfan II	UG/KG	4.1 U	3.5 U			3.6 U	4 U	3.8 U	3.8 U
Endosulfan sulfate	UG/KG	4.1 U	3.5 U			3.6 U	4 U	3.8 U	3.8 U
Endrin	UG/KG	4.1 U	3.5 U			7.7	4 U	3.8 U	3.8 U
Endrin aldehyde	UG/KG	4.1 U	3.5 U			3.5 J	4 U	3.8 U	3.8 U
Endrin ketone	UG/KG	4.1 U	3.5 U			4.4	4 U	3.8 U	3.8 U
Gamma-BHC/Lindane	UG/KG	2.9 U	2.6 UJ			1.8 U	2.1 U	2 U	2 U
Gamma-Chlordane	UG/KG	2.1 U	1.8 U			1 J	18	2 U	2 U
Heptachlor	UG/KG	2.1 U	1.8 U			1.8 U	2.1 U	2 U	2 U
Heptachlor epoxide	UG/KG	2.1 U	1.8 U			1 J	2.1 U	2 U	2 U
Methoxychlor	UG/KG	21 U	18 U			18 U	21 U	20 U	20 U
Toxaphene	UG/KG	210 U	180 U			180 U	210 U	200 U	200 U
Aroclor-1016	UG/KG	41 U	35 U			36 U	40 U	38 U	38 U
Aroclor-1221	UG/KG	84 U	70 U			73 U	82 U	77 U	77 U
Aroclor-1232	UG/KG	41 U	35 U			36 U	40 U	38 U	38 U
Aroclor-1242	UG/KG	41 U	35 U			36 U	40 U	38 U	38 U
Aroclor-1248	UG/KG	41 U	35 U			36 U	40 U	38 U	38 U
Aroclor-1254	UG/KG	41 U	35 U			36 U	40 U	38 U	38 U
Aroclor-1260	UG/KG	41 U	35 U			36 U	40 U	38 U	38 U
Metals									

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	SB59-8	SB59-9	SB59-9	SB59-9	TP59-11A-2	TP59-13A-1	TP59-13C-1	TP59-15-5
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59057	59059	59089	59085	59026	59010	59015	59035
	Sample Depth to Top of Sample ⁽¹⁾	0	2	4	4	4	3.5	3	6
	Sample Depth to Bottom of Sample ⁽¹⁾	2	3.7	5.1	5.1	4.5	4	3.5	6.5
	Sample Date	10/20/1997	10/21/1997	10/22/1997	10/22/1997	10/9/1997	10/8/1997	10/8/1997	10/10/1997
	QC Code	SA	SA	DU	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	15200	7180			9950 J	9510 J	6630 J	11900 J
Antimony	MG/KG	0.69 UJ	0.58 UJ			0.56 UJ	0.51 UJ	0.6 UJ	0.62 UJ
Arsenic	MG/KG	5.2	3.8			3.5	4.8	3.6	4.1
Barium	MG/KG	192	47.9			77.8	33.2	33.6	72.6
Beryllium	MG/KG	0.36	0.25			0.39	0.46	0.25	0.45
Cadmium	MG/KG	0.1 U	0.08 U			0.08 U	0.07 U	0.08 U	0.09 U
Calcium	MG/KG	7390	91000			98900	8570	73900	29200
Chromium	MG/KG	20.7	11.9			16.4	17.5	11.6	18.4
Cobalt	MG/KG	12.5	8.1			9.5	13.8	9	8.9
Copper	MG/KG	28.4	18.7			36.1	27	15.8	28.1
Cyanide	MG/KG	0.65 UJ	0.53 UJ			0.58 U	0.65 U	0.57 U	0.61 U
Iron	MG/KG	26300	16100			18200	22200	15400	21300
Lead	MG/KG	55.5	8.5			65.2 J	17.6 J	11.1 J	47 J
Magnesium	MG/KG	4740	18300			8970 J	6250 J	7700 J	9520 J
Manganese	MG/KG	1150	385			442 J	285 J	340 J	496 J
Mercury	MG/KG	0.21	0.05 U			0.15	0.05 U	0.05 U	0.05 U
Nickel	MG/KG	28.5	21.4			26.8	35	21.5	24.4
Potassium	MG/KG	1770	1430			1540	1090	1000	1590
Selenium	MG/KG	1.4	0.79 U			0.78 U	0.71 U	0.83 U	0.86 U
Silver	MG/KG	0.26 U	0.22 U			0.25	0.2 U	0.23 U	0.24 U
Sodium	MG/KG	115 U	142			99.5	1150	385	92.5 U
Thallium	MG/KG	0.98 UJ	0.81 UJ			1.2 U	1.1 U	1.2 U	1.3 U
Vanadium	MG/KG	25.4	13.7			18.7	16	11.6	26.3
Zinc	MG/KG	86	61.2			90.9 J	97.2 J	69.7 J	83.6 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	TP59-16-1	TP59-17-3	TP59-2	TP59-5	TP59-6-2	TP59-8-2	TP59-9-2	TP59-9-2	TP59-9-2
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	59036	59044	TP59-2	TP59-5	59002	59050	59053	59052	59052
Sample Depth to Top of Sample ⁽¹⁾	3.5	3	7	2.5	6	1.5	2	2	2
Sample Depth to Bottom of Sample ⁽¹⁾	4	3.5	7	2.5	6.5	2	2.5	2.5	2.5
Sample Date	10/10/1997	10/13/1997	2/20/1994	6/8/1994	10/7/1997	10/13/1997	10/13/1997	10/13/1997	10/13/1997
QC Code	SA	SA	SA	SA	SA	SA	DU	SA	SA
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1

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	13 U	11 U	11 U	12 U	13 U	12 U		12 U
1,1,2,2-Tetrachloroethane	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG								
1,1,2-Trichloroethane	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
1,1-Dichloroethane	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
1,1-Dichloroethene	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
1,2,3-Trichloropropane	UG/KG								
1,2,4-Trichlorobenzene	UG/KG								
1,2-Dibromo-3-chloropropane	UG/KG								
1,2-Dibromoethane	UG/KG								
1,2-Dichlorobenzene	UG/KG								
1,2-Dichloroethane	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
1,2-Dichloroethene (total)	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
1,2-Dichloropropane	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
1,3-Dichlorobenzene	UG/KG								
1,3-Dichloropropane	UG/KG								
1,4-Dichlorobenzene	UG/KG								
Acetone	UG/KG	13 U	11 U	17 U	30	13 U	12 U		12 U
Benzene	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Bromodichloromethane	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Bromoform	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Carbon disulfide	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Carbon tetrachloride	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Chlorobenzene	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Chlorodibromomethane	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Chloroethane	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Chloroform	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Cis-1,2-Dichloroethene	UG/KG								
Cis-1,3-Dichloropropene	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Cyclohexane	UG/KG								
Dichlorodifluoromethane	UG/KG								
Ethyl benzene	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	TP59-16-1	TP59-17-3	TP59-2	TP59-5	TP59-6-2	TP59-8-2	TP59-9-2	TP59-9-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59036	59044	TP59-2	TP59-5	59002	59050	59053	59052
	Sample Depth to Top of Sample ⁽¹⁾	3.5	3	7	2.5	6	1.5	2	2
	Sample Depth to Bottom of Sample ⁽¹⁾	4	3.5	7	2.5	6.5	2	2.5	2.5
	Sample Date	10/10/1997	10/13/1997	2/20/1994	6/8/1994	10/7/1997	10/13/1997	10/13/1997	10/13/1997
	QC Code	SA	SA	SA	SA	SA	SA	DU	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG								
Meta/Para Xylene	UG/KG								
Methyl Acetate	UG/KG								
Methyl Tertbutyl Ether	UG/KG								
Methyl bromide	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Methyl butyl ketone	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Methyl chloride	UG/KG	13 U	11 U	11 U	3 J	13 U	12 U		12 U
Methyl cyclohexane	UG/KG								
Methyl ethyl ketone	UG/KG	30	11 U	11 U	12	36 J	12 U		12 U
Methyl isobutyl ketone	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Methylene chloride	UG/KG	13 U	11 U	11 U	1 J	13 U	12 U		12 U
Ortho Xylene	UG/KG								
Styrene	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Tetrachloroethene	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Toluene	UG/KG	13 U	2 J	11 U	2 J	13 U	12 U		12 U
Total BTEX	MG/KG	2.5 U	2.8			8	3.5	2.5 U	2.5 U
Total Xylenes	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Trans-1,2-Dichloroethene	UG/KG								
Trans-1,3-Dichloropropene	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Trichloroethene	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Trichlorofluoromethane	UG/KG								
Vinyl chloride	UG/KG	13 U	11 U	11 U	12 U	13 U	12 U		12 U
Semivolatile Organics									
1,1'-Biphenyl	UG/KG								
1,2,4-Trichlorobenzene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
1,2-Dichlorobenzene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
1,3-Dichlorobenzene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
1,4-Dichlorobenzene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
2,2'-oxybis(1-Chloropropane)	UG/KG								
2,4,5-Trichlorophenol	UG/KG	190 U	880 U	4500 U	940 U	220 U	360 U		370 U
2,4,6-Trichlorophenol	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
2,4-Dichlorophenol	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
2,4-Dimethylphenol	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
2,4-Dinitrophenol	UG/KG	190 U	880 U	4500 U	940 U	220 U	360 U		370 U
2,4-Dinitrotoluene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
2,6-Dinitrotoluene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
2-Chloronaphthalene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
2-Chlorophenol	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
2-Methylnaphthalene	UG/KG	16 J	970	400 J	390 U	17 J	14 J		10 J
2-Methylphenol	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
2-Nitroaniline	UG/KG	190 U	880 U	4500 U	940 U	220 U	360 U		370 U
2-Nitrophenol	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	TP59-16-1	TP59-17-3	TP59-2	TP59-5	TP59-6-2	TP59-8-2	TP59-9-2	TP59-9-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59036	59044	TP59-2	TP59-5	59002	59050	59053	59052
	Sample Depth to Top of Sample ⁽¹⁾	3.5	3	7	2.5	6	1.5	2	2
	Sample Depth to Bottom of Sample ⁽¹⁾	4	3.5	7	2.5	6.5	2	2.5	2.5
	Sample Date	10/10/1997	10/13/1997	2/20/1994	6/8/1994	10/7/1997	10/13/1997	10/13/1997	10/13/1997
	QC Code	SA	SA	SA	SA	SA	SA	DU	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	78 UJ	360 U	1800 U	390 U	89 UJ	150 U		150 U
3-Nitroaniline	UG/KG	190 UJ	880 U	4500 U	940 U	220 UJ	360 U		370 U
4,6-Dinitro-2-methylphenol	UG/KG	190 U	880 U	4500 U	940 U	220 U	360 U		370 U
4-Bromophenyl phenyl ether	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
4-Chloro-3-methylphenol	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
4-Chloroaniline	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
4-Chlorophenyl phenyl ether	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
4-Methylphenol	UG/KG	78 U	360 U	1800 U	390 U	83 J	150 U		150 U
4-Nitroaniline	UG/KG	190 U	880 U	4500 U	940 U	220 U	360 U		370 U
4-Nitrophenol	UG/KG	190 UJ	880 U	4500 U	940 U	220 U	360 U		370 U
Acenaphthene	UG/KG	19 J	510	870 J	390 U	29 J	18 J		44 J
Acenaphthylene	UG/KG	9.9 J	130 J	460 J	390 U	11 J	8 J		7.9 J
Acetophenone	UG/KG								
Aniline	UG/KG								
Anthracene	UG/KG	27 J	210 J	2100	390 U	61 J	43 J		88 J
Atrazine	UG/KG								
Benzaldehyde	UG/KG								
Benzo(a)anthracene	UG/KG	210	1000	4200	390 U	280	200		320
Benzo(a)pyrene	UG/KG	220	1300	4600 J	390 U	260	210		340
Benzo(b)fluoranthene	UG/KG	250	1000	4400 J	390 U	220 J	230		320
Benzo(ghi)perylene	UG/KG	160	900	1400 J	390 U	180	140 J		210
Benzo(k)fluoranthene	UG/KG	180	1200	4900 J	390 U	260	180		300
Benzoic Acid	UG/KG								
Bis(2-Chloroethoxy)methane	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Bis(2-Chloroethyl)ether	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Bis(2-Chloroisopropyl)ether	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Bis(2-Ethylhexyl)phthalate	UG/KG	17 J	360 U	1800 U	46 J	13 J	19 J		41 J
Butylbenzylphthalate	UG/KG	4.2 J	360 U	1800 U	390 U	89 U	150 U		150 U
Caprolactam	UG/KG								
Carbazole	UG/KG	34 J	150 J	1500 J	390 U	82 J	56 J		120 J
Chrysene	UG/KG	240	1100	4400	390 U	310	220		360
Di-n-butylphthalate	UG/KG	78 U	360 U	1800 U	390 U	8.2 J	12 J		80 J
Di-n-octylphthalate	UG/KG	5.6 J	360 U	1800 UJ	390 U	89 U	150 U		150 U
Dibenz(a,h)anthracene	UG/KG	74 J	350 J	1800 UJ	390 U	74 J	52 J		84 J
Dibenzofuran	UG/KG	78 U	440	1800 U	390 U	14 J	13 J		21 J
Diethyl phthalate	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Dimethylphthalate	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Fluoranthene	UG/KG	430	1900	10000	390 U	590	460		790
Fluorene	UG/KG	78 U	220 J	1300 J	390 U	27 J	18 J		46 J
Hexachlorobenzene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Hexachlorobutadiene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Hexachlorocyclopentadiene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Hexachloroethane	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Indeno(1,2,3-cd)pyrene	UG/KG	160	840	1500 J	390 U	180	140 J		200

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	TP59-16-1	TP59-17-3	TP59-2	TP59-5	TP59-6-2	TP59-8-2	TP59-9-2	TP59-9-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	59036	59044	TP59-2	TP59-5	59002	59050	59053	59052
	Sample Depth to Top of Sample ⁽¹⁾	3.5	3	7	2.5	6	1.5	2	2
	Sample Depth to Bottom of Sample ⁽¹⁾	4	3.5	7	2.5	6.5	2	2.5	2.5
	Sample Date	10/10/1997	10/13/1997	2/20/1994	6/8/1994	10/7/1997	10/13/1997	10/13/1997	10/13/1997
	QC Code	SA	SA	SA	SA	SA	SA	DU	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
N-Nitrosodiphenylamine	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
N-Nitrosodipropylamine	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Naphthalene	UG/KG	10 J	610	290 J	390 U	15 J	11 J		12 J
Nitrobenzene	UG/KG	78 U	360 U	1800 U	390 U	89 U	150 U		150 U
Pentachlorophenol	UG/KG	190 U	880 U	4500 U	940 U	220 U	360 U		370 U
Phenanthrene	UG/KG	160	830	8300	390 U	370	200		460
Phenol	UG/KG	78 U	360 U	1800 U	390 U	17 J	150 U		150 U
Pyrene	UG/KG	370	1600	12000		500	340		550
Pyridine	UG/KG								
Total Unknown PAHs as SV	MG/KG	0.6 U	25 J			0.6 U		4.8	22
Pesticides/PCBs									
4,4'-DDD	UG/KG	3.9 U	11 J	15	3.9 U	70	3.7 U		3.4 J
4,4'-DDE	UG/KG	3.9 U	15	26 J	3.9 U	48	10		80
4,4'-DDT	UG/KG	3.9 U	24	20 J	3.9 U	59	10		36
Aldrin	UG/KG	2 U	1.9 U	3.8 U	2 U	2.3 U	1.9 U		2 U
Alpha-BHC	UG/KG	2 U	1.9 U	3.8 U	2 U	2.3 U	1.9 U		2 U
Alpha-Chlordane	UG/KG	2 U	1.9 U	3.8 U	2 U	2.3 U	1.9 U		2 U
Beta-BHC	UG/KG	2 U	1.9 U	3.8 U	2 U	2.3 U	1.9 U		2 U
Delta-BHC	UG/KG	2 U	1.9 U	3.8 U	2 U	2.3 U	1.9 U		2 U
Dieldrin	UG/KG	3.9 U	3.6 U	7.3 U	3.9 U	4.4 U	1.8 J		3.8 U
Endosulfan I	UG/KG	2 U	1.9 U	3.8 U	2 U	2.3 U	1.9 U		2 U
Endosulfan II	UG/KG	3.9 U	3.6 U	7.1 J	3.9 U	4.4 U	3.7 U		3.8 U
Endosulfan sulfate	UG/KG	3.9 U	3.6 U	7.3 U	3.9 U	4.3 J	3.7 U		3.8 U
Endrin	UG/KG	3.9 U	6.2	7.3 U	3.9 U	4.4 U	3.7 U		3.8 U
Endrin aldehyde	UG/KG	3.9 U	3.7 J	6.3 J	3.9 U	4.4 U	3.7 U		3.8 U
Endrin ketone	UG/KG	3.9 U	3.3 J	7.3 U	3.9 U	4.4 U	3.7 U		3.8 U
Gamma-BHC/Lindane	UG/KG	2 U	1.9 U	3.8 U	2 U	2.3 U	1.9 U		2 U
Gamma-Chlordane	UG/KG	2 U	1 J	3.8 U	2 U	2.3 U	1.9 U		2 U
Heptachlor	UG/KG	2 U	1.9 U	3.8 U	2 U	2.3 U	1.9 U		2 U
Heptachlor epoxide	UG/KG	2 U	1.6 J	2.2 J	2 U	5.7 J	1.9 U		3 J
Methoxychlor	UG/KG	20 U	19 U	38 U	20 U	23 U	19 U		20 U
Toxaphene	UG/KG	200 U	190 U	380 U	200 U	230 U	190 U		200 U
Aroclor-1016	UG/KG	39 U	36 U	73 U	39 U	44 U	37 U		38 U
Aroclor-1221	UG/KG	80 U	74 U	150 U	79 U	90 U	75 U		78 U
Aroclor-1232	UG/KG	39 U	36 U	73 U	39 U	44 U	37 U		38 U
Aroclor-1242	UG/KG	39 U	36 U	73 U	39 U	44 U	37 U		38 U
Aroclor-1248	UG/KG	39 U	36 U	73 U	39 U	44 U	37 U		38 U
Aroclor-1254	UG/KG	39 U	36 U	73 U	39 U	44 U	37 U		38 U
Aroclor-1260	UG/KG	39 U	36 U	73 U	39 U	44 U	37 U		38 U
Metals									

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Facility	TP59-16-1	TP59-17-3	TP59-2	TP59-5	TP59-6-2	TP59-8-2	TP59-9-2	TP59-9-2	TP59-9-2
Location ID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Maxtrix	59036	59044	TP59-2	TP59-5	59002	59050	59053	59052	59052
Sample ID	3.5	3	7	2.5	6	1.5	2	2	2
Sample Depth to Top of Sample ⁽¹⁾	4	3.5	7	2.5	6.5	2	2.5	2.5	2.5
Sample Depth to Bottom of Sample ⁽¹⁾	10/10/1997	10/13/1997	2/20/1994	6/8/1994	10/7/1997	10/13/1997	10/13/1997	10/13/1997	10/13/1997
Sample Date	SA	SA	SA	SA	SA	SA	DU	SA	SA
QC Code	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Study ID									

Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	12400 J	12300 J	10200 J	8730 J	12600 J	12500 J		10700 J
Antimony	MG/KG	0.6 UJ	0.56 UJ	0.47 J	0.25 UJ	0.73 UJ	0.56 UJ		0.6 UJ
Arsenic	MG/KG	3.8	5.5	4.8 J	4.1	6	5.1		4.5
Barium	MG/KG	94.4	69.5	52.6 J	72 J	101	113		77.1
Beryllium	MG/KG	0.45	0.46	0.43 J	0.33 J	0.52	0.32		0.4
Cadmium	MG/KG	0.08 U	0.08 U	0.4 J	0.38 J	0.1 U	0.08 U		0.08 U
Calcium	MG/KG	5590	59600	42700 J	77700 J	28000	28200		25900
Chromium	MG/KG	18.9	21.2	16.9 J	13.2 J	18.8	18.6		15.8
Cobalt	MG/KG	9.8	12.6	9.1 J	6.3 J	10.6	11.7		8.9
Copper	MG/KG	20.2	30.2	24 J	17.2 J	25.1	25.3		21.1
Cyanide	MG/KG	0.66 U	0.66 U	0.55 U	0.45 U	0.72 U	0.48 U		0.71 U
Iron	MG/KG	22700	25800	19700 J	16800 J	25600	23200		19500
Lead	MG/KG	13.9 J	30.4 J	29.7 J	10.2	65.5 J	53.7 J		29.5 J
Magnesium	MG/KG	4810 J	12900 J	6380 J	15400 J	4600 J	5710 J		5940 J
Manganese	MG/KG	561 J	454 J	425 J	326 J	572 J	886 J		422 J
Mercury	MG/KG	0.05 U	0.05 U	0.04 J	0.05 JR	0.15	0.09		0.09
Nickel	MG/KG	29.5	41.4	25.3 J	21.1 J	25.4	27.8		23.1
Potassium	MG/KG	1610	1780	1350 J	1310	1490	1460		1180
Selenium	MG/KG	0.82 U	0.77 U	0.12 U	0.52 U	1 U	0.77		0.83 U
Silver	MG/KG	0.23 U	0.21 U	0.09 U	0.1 UJ	0.28 U	0.21 U		0.23 U
Sodium	MG/KG	355	155	116 J	169 J	134	83.1 U		89.6 U
Thallium	MG/KG	1.2 U	1.2 U	0.21 U	0.37 U	1.5 U	1.2 U		1.2 U
Vanadium	MG/KG	21.5	21.2	18.7 J	15.2 J	21.5	20.9		17.3
Zinc	MG/KG	72.6 J	83.8 J	72.3 J	52.5 J	114 J	105 J		68.8 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1
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	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,1,2,2-Tetrachloroethane	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,1,2-Trichloroethane	UG/KG								
1,1-Dichloroethane	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,1-Dichloroethene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,2,3-Trichloropropane	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,2,4-Trichlorobenzene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,2-Dibromo-3-chloropropane	UG/KG								
1,2-Dibromoethane	UG/KG								
1,2-Dichlorobenzene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,2-Dichloroethane	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,2-Dichloroethene (total)	UG/KG								
1,2-Dichloropropane	UG/KG								
1,3-Dichlorobenzene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,3-Dichloropropane	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
1,4-Dichlorobenzene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Acetone	UG/KG	24 U	23 U	22 U	23 U	4 J	7.1 J	23 U	20 J
Benzene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Bromodichloromethane	UG/KG								
Bromoform	UG/KG								
Carbon disulfide	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Carbon tetrachloride	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Chlorobenzene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Chlorodibromomethane	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Chloroethane	UG/KG	12 U	11 U	11 U	11 U	11 U	12 U	11 U	12 U
Chloroform	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Cis-1,2-Dichloroethene	UG/KG								
Cis-1,3-Dichloropropene	UG/KG								
Cyclohexane	UG/KG								
Dichlorodifluoromethane	UG/KG								
Ethyl benzene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG								
Meta/Para Xylene	UG/KG	6 U	5.7 U	5.6 U	5.1 J	5.6 U	5.9 U	5.7 U	5.9 U
Methyl Acetate	UG/KG								
Methyl Tertbutyl Ether	UG/KG								
Methyl bromide	UG/KG								
Methyl butyl ketone	UG/KG								
Methyl chloride	UG/KG								
Methyl cyclohexane	UG/KG								
Methyl ethyl ketone	UG/KG	12 U	11 U	11 UJ	11 U	11 U	12 U	11 U	12 U
Methyl isobutyl ketone	UG/KG	12 U	11 U	11 U	11 U	11 U	12 U	11 U	12 U
Methylene chloride	UG/KG	6 U	5.7 U	1.3 J	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Ortho Xylene	UG/KG	6 U	5.7 U	5.6 U	1.1 NJ	5.6 U	5.9 U	5.7 U	5.9 U
Styrene	UG/KG								
Tetrachloroethene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Toluene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Total BTEX	MG/KG								
Total Xylenes	UG/KG								
Trans-1,2-Dichloroethene	UG/KG	6 U	5.7 U	5.6 U	5.7 U	5.6 U	5.9 U	5.7 U	5.9 U
Trans-1,3-Dichloropropene	UG/KG								
Trichloroethene	UG/KG	6 U	1.6 J	1.6 J	4.5 J	4 J	5.9 U	5.7 U	1.4 J
Trichlorofluoromethane	UG/KG								
Vinyl chloride	UG/KG	12 U	11 U	11 U	11 U	11 UJ	12 UJ	11 U	12 U
Semivolatile Organics									
1,1'-Biphenyl	UG/KG								
1,2,4-Trichlorobenzene	UG/KG								
1,2-Dichlorobenzene	UG/KG								
1,3-Dichlorobenzene	UG/KG								
1,4-Dichlorobenzene	UG/KG								
2,2'-oxybis(1-Chloropropane)	UG/KG								
2,4,5-Trichlorophenol	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
2,4,6-Trichlorophenol	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
2,4-Dichlorophenol	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
2,4-Dimethylphenol	UG/KG								
2,4-Dinitrophenol	UG/KG	6100 U	9700 U	3800 U	5800 U	5700 U	6000 U	9600 U	10000 U
2,4-Dinitrotoluene	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
2,6-Dinitrotoluene	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
2-Chloronaphthalene	UG/KG								
2-Chlorophenol	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
2-Methylnaphthalene	UG/KG	220 J	1900 U	75 J	280 J	1100 U	1200 U	1900 U	2000 U
2-Methylphenol	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
2-Nitroaniline	UG/KG	6100 U	9700 U	3800 U	5800 U	5700 U	6000 U	9600 U	10000 U
2-Nitrophenol	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
3-Nitroaniline	UG/KG	6100 U	9700 U	3800 U	5800 U	5700 U	6000 U	9600 U	10000 U
4,6-Dinitro-2-methylphenol	UG/KG								
4-Bromophenyl phenyl ether	UG/KG								
4-Chloro-3-methylphenol	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
4-Chloroaniline	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
4-Chlorophenyl phenyl ether	UG/KG								
4-Methylphenol	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
4-Nitroaniline	UG/KG								
4-Nitrophenol	UG/KG	6100 U	9700 U	3800 U	5800 U	5700 U	6000 U	9600 U	10000 U
Acenaphthene	UG/KG	1200 U	320 J	150 J	330 J	300 J	140 J	1900 U	260 J
Acenaphthylene	UG/KG	120 J	1700 J	1100	1500	1600	650 J	1100 J	790 J
Acetophenone	UG/KG								
Aniline	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Anthracene	UG/KG	130 J	1400 J	790	1200	1300	580 J	900 J	920 J
Atrazine	UG/KG								
Benzaldehyde	UG/KG								
Benzo(a)anthracene	UG/KG	280 J	3200	2000	2500	3100	1300	2000	3100
Benzo(a)pyrene	UG/KG	350 J	3800	2800	3100	3900	1600	2300	3200
Benzo(b)fluoranthene	UG/KG	250 J	2700	2000	2200	2600	1100 J	1700 J	2500
Benzo(ghi)perylene	UG/KG	220 J	2900	2200	2400	2900	1200	1900 J	2000
Benzo(k)fluoranthene	UG/KG	280 J	2600	1900	2200	2800	1100 J	1500 J	2600
Benzoic Acid	UG/KG	6100 U	9700 UJ	3800 UJ	5800 UJ	5700 UJ	6000 UJ	9600 UJ	10000 U
Bis(2-Chloroethoxy)methane	UG/KG								
Bis(2-Chloroethyl)ether	UG/KG								
Bis(2-Chloroisopropyl)ether	UG/KG								
Bis(2-Ethylhexyl)phthalate	UG/KG	210 J	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Butylbenzylphthalate	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 UJ
Caprolactam	UG/KG								
Carbazole	UG/KG								
Chrysene	UG/KG	330 J	3200	2100	2500	3100	1200	1900	3200
Di-n-butylphthalate	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Di-n-octylphthalate	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Dibenz(a,h)anthracene	UG/KG	1200 U	900 J	630 J	710 J	940 J	400 J	510 J	710 J
Dibenzofuran	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Diethyl phthalate	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Dimethylphthalate	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Fluoranthene	UG/KG	560 J	6600	3900	4900	6200	2500	3900	6000
Fluorene	UG/KG	1200 U	320 J	150 NJ	430 J	310 J	190 J	220 J	310 J
Hexachlorobenzene	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Hexachlorobutadiene	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Hexachlorocyclopentadiene	UG/KG								
Hexachloroethane	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Indeno(1,2,3-cd)pyrene	UG/KG	200 J	2600 J	1900 J	2000 J	2600 J	1100 J	1700 J	1900 J

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
N-Nitrosodiphenylamine	UG/KG								
N-Nitrosodipropylamine	UG/KG								
Naphthalene	UG/KG	1200 U	1900 U	90 NJ	170 J	110 NJ	1200 U	1900 U	2000 U
Nitrobenzene	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Pentachlorophenol	UG/KG	6100 U	9700 U	3800 U	5800 U	5700 U	6000 U	9600 U	10000 U
Phenanthrene	UG/KG	350 J	3200	1600	2700	2800	1300	2000	2500
Phenol	UG/KG	1200 U	1900 U	740 U	1100 U	1100 U	1200 U	1900 U	2000 U
Pyrene	UG/KG	470 J	5400	3900	4900	5700	2200	3700	4900
Pyridine	UG/KG	6100 U	9700 U	3800 U	5800 U	5700 U	6000 U	9600 U	10000 U
Total Unknown PAHs as SV	MG/KG								
Pesticides/PCBs									
4,4'-DDD	UG/KG	38	19 U	23 J	100 J	110	160	160	37
4,4'-DDE	UG/KG	43	21	90 J	280	300	190	310	22 J
4,4'-DDT	UG/KG	42	19 U	55 J	310	470	410	570	20 U
Aldrin	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Alpha-BHC	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Alpha-Chlordane	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Beta-BHC	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Delta-BHC	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Dieldrin	UG/KG	20 U	19 U	18 U	19 U	37 U	39 U	75 U	20 U
Endosulfan I	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Endosulfan II	UG/KG	20 U	19 U	18 U	19 U	37 U	39 U	75 U	20 U
Endosulfan sulfate	UG/KG	20 U	19 U	18 U	19 U	37 U	39 U	75 U	20 U
Endrin	UG/KG	20 U	19 U	18 U	19 U	37 U	39 U	75 U	20 U
Endrin aldehyde	UG/KG	20 U	19 U	18 U	19 U	37 U	39 U	75 U	20 U
Endrin ketone	UG/KG	20 U	19 U	18 U	19 U	37 U	39 U	75 U	20 U
Gamma-BHC/Lindane	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Gamma-Chlordane	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Heptachlor	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Heptachlor epoxide	UG/KG	10 U	9.7 U	9.5 U	9.6 U	19 U	20 U	39 U	10 U
Methoxychlor	UG/KG	100 U	97 U	95 U	96 U	190 U	200 U	390 U	100 U
Toxaphene	UG/KG	200 U	190 U	180 U	190 U	370 U	390 U	750 U	200 U
Aroclor-1016	UG/KG	40 U	38 U	37 U	37 U	37 U	39 U	37 U	39 U
Aroclor-1221	UG/KG	40 U	38 U	37 U	37 U	37 U	39 U	37 U	39 U
Aroclor-1232	UG/KG	40 U	38 U	37 U	37 U	37 U	39 U	37 U	39 U
Aroclor-1242	UG/KG	40 U	38 U	37 U	37 U	37 U	39 U	37 U	39 U
Aroclor-1248	UG/KG	40 U	38 U	37 U	37 U	37 U	39 U	37 U	39 U
Aroclor-1254	UG/KG	40 U	38 U	37 U	37 U	37 U	39 U	37 U	39 U
Aroclor-1260	UG/KG	40 U	38 U	37 U	37 U	37 U	39 U	37 U	39 U
Metals									

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-004-7	WS-59-01-006-11	WS-59-01-006-2	WS-59-01-006-4	WS-59-01-006-5	WS-59-01-006-6	WS-59-01-006-8	WS-59-01-007-3	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	9670	11100	9720	10100	10600	11900	10000	10700
Antimony	MG/KG	3.5 UJ	3.4 UJ	3.2 UJ	3.4 UJ	3.3 UJ	3.4 UJ	3.3 UJ	3.4 UJ
Arsenic	MG/KG	4.3	5.2 J	4.1	5.4	5.4 J	5.4 J	5.3 J	5
Barium	MG/KG	85.1	93.9	78.5	84.8	85.1	105	85.4	87.5
Beryllium	MG/KG	0.25 J	0.34	0.2	0.2	0.26	0.23	0.23	0.29
Cadmium	MG/KG	0.39 J	0.69	0.46 J	0.61	0.68	0.68	0.7	0.7
Calcium	MG/KG	46500 J	53300	59200	53600	63500	37100	63200	44700
Chromium	MG/KG	15.6	20.1	15.8	19.4	19	20.3	18.1	19.4
Cobalt	MG/KG	7.5	10.8	9.3	10.5	11	11.2	9.9	9.5
Copper	MG/KG	21.8	28.4 J	22.1	27.6	33.6 J	46.9 J	33.5 J	29.2
Cyanide	MG/KG								
Iron	MG/KG	17400 J	20400	18400	19200	18900	20800	18400	19400
Lead	MG/KG	29.5 J	70.4	28.9	54.9	58.1	48.7	164	39.8 J
Magnesium	MG/KG	7000 J	12300	9840	8380	8610	6890	9330	7980
Manganese	MG/KG	582	526	476	529	522	575	462	451
Mercury	MG/KG	0.04	0.09	0.04	0.05	0.11	0.23	0.05	0.08
Nickel	MG/KG	21.5	30	25.4	28.6	30.7	30.7	27.4	28.7
Potassium	MG/KG	1240	1110	947	1100	1100	1180	1090	1100
Selenium	MG/KG	0.58 U	0.57 U	0.53 UJ	0.56 UJ	0.55 U	0.57 U	0.56 U	0.57 U
Silver	MG/KG	0.58 U	0.57 UJ	0.53 U	0.56 U	0.55 UJ	0.57 UJ	0.56 UJ	0.57 UJ
Sodium	MG/KG	173	197	107	105	173	222	194	461
Thallium	MG/KG	0.85 J	0.57 U	0.72 J	0.64 J	0.78 J	0.75 J	0.56 U	0.67 J
Vanadium	MG/KG	19.4	20	16.5	18.1	18.5	20.4	19.4	18.5
Zinc	MG/KG	75.8 J	123 J	78.8	104	114 J	115 J	135 J	133

Note(s):

(1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)

(2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
1,1,2,2-Tetrachloroethane	UG/KG	5.9 U	6 U	5.8 U	5 U	5 UJ	6 U	5.8 U	5.8 U	5.9 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.9 U	6 U	5.8 U	5 UJ	5 UJ	6 U	5.8 U	5.8 U	5.9 U
1,1,2-Trichloroethane	UG/KG				5 U	5 U	6 U			
1,1-Dichloroethane	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
1,1-Dichloroethene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
1,2,3-Trichloropropane	UG/KG	5.9 U	6 U	5.8 U				5.8 U	5.8 U	5.9 U
1,2,4-Trichlorobenzene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 UJ	6 U	5.8 U	5.8 U	5.9 U
1,2-Dibromo-3-chloropropane	UG/KG				5 U	5 UJ	6 U			
1,2-Dibromoethane	UG/KG				5 U	5 U	6 U			
1,2-Dichlorobenzene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 UJ	6 U	5.8 U	5.8 U	5.9 U
1,2-Dichloroethane	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG				5 U	5 U	6 U			
1,3-Dichlorobenzene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 UJ	6 U	5.8 U	5.8 U	5.9 U
1,3-Dichloropropane	UG/KG	5.9 U	6 U	5.8 U				5.8 U	5.8 U	5.9 U
1,4-Dichlorobenzene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 UJ	6 U	5.8 U	5.8 U	5.9 U
Acetone	UG/KG	5.2 J	24 U	23 U	5 U	5 U	44 NJ	23 U	23 U	24 U
Benzene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Bromodichloromethane	UG/KG				5 U	5 U	6 U			
Bromoform	UG/KG				5 U	5 U	6 U			
Carbon disulfide	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Carbon tetrachloride	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Chlorobenzene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Chlorodibromomethane	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Chloroethane	UG/KG	12 U	12 U	12 U	5 U	5 U	6 U	12 U	12 U	12 U
Chloroform	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Cis-1,2-Dichloroethene	UG/KG				5 U	5 U	6 U			
Cis-1,3-Dichloropropene	UG/KG				5 U	5 U	6 U			
Cyclohexane	UG/KG				5 U	5 U	6 U			
Dichlorodifluoromethane	UG/KG				5 U	5 U	6 U			
Ethyl benzene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG				5 U	5 U	6 U			
Meta/Para Xylene	UG/KG	5.9 U	6 U	5.8 U				5.8 U	5.8 U	5.9 U
Methyl Acetate	UG/KG				5 U	5 U	6 U			
Methyl Tertbutyl Ether	UG/KG				5 U	5 U	6 U			
Methyl bromide	UG/KG				5 U	5 U	6 U			
Methyl butyl ketone	UG/KG				5 U	5 U	6 U			
Methyl chloride	UG/KG				5 U	5 U	6 U			
Methyl cyclohexane	UG/KG				5 U	5 U	6 U			
Methyl ethyl ketone	UG/KG	12 U	12 U	12 U	5 U	5 U	5 J	12 U	12 U	12 U
Methyl isobutyl ketone	UG/KG	12 U	12 U	12 U	5 U	5 U	6 U	12 U	12 U	12 U
Methylene chloride	UG/KG	5.9 U	6 U	5.8 U	5 U	2 J	6 U	5.8 U	5.8 U	5.9 U
Ortho Xylene	UG/KG	5.9 U	6 U	5.8 U				5.8 U	5.8 U	5.9 U
Styrene	UG/KG				5 U	5 U	6 U			
Tetrachloroethene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Toluene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG				5 U	5 UJ	6 U			
Trans-1,2-Dichloroethene	UG/KG	5.9 U	6 U	5.8 U	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Trans-1,3-Dichloropropene	UG/KG				5 U	5 U	6 U			
Trichloroethene	UG/KG	2 J	6 U	2.6 J	5 U	5 U	6 U	5.8 U	5.8 U	5.9 U
Trichlorofluoromethane	UG/KG				5 U	5 U	6 U			
Vinyl chloride	UG/KG	12 U	12 U	12 U	5 U	5 U	6 U	12 U	12 U	12 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG				1900 U	1800 U	430 U			
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG				1900 U	1800 U	430 U			
2,4,5-Trichlorophenol	UG/KG	1900 U	4000 U	1900 U	4800 U	4600 U	1100 U	1900 U	1900 U	780 U
2,4,6-Trichlorophenol	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
2,4-Dichlorophenol	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
2,4-Dimethylphenol	UG/KG				1900 U	1800 U	430 U			
2,4-Dinitrophenol	UG/KG	10000 U	20000 U	9900 U	4800 U	4600 U	1100 U	9900 U	9900 U	4000 U
2,4-Dinitrotoluene	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
2,6-Dinitrotoluene	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
2-Chloronaphthalene	UG/KG				1900 U	1800 U	430 U			
2-Chlorophenol	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
2-Methylnaphthalene	UG/KG	1900 U	4000 U	340 J	1900 U	1800 U	95 J	370 J	260 J	780 U
2-Methylphenol	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
2-Nitroaniline	UG/KG	10000 U	20000 U	9900 U	4800 U	4600 U	1100 U	9900 U	9900 U	4000 U
2-Nitrophenol	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		I	I	I	I	I	I	I	I	I
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
3-Nitroaniline	UG/KG	10000 U	20000 U	9900 U	4800 U	4600 U	1100 U	9900 U	9900 U	4000 U
4,6-Dinitro-2-methylphenol	UG/KG				4800 U	4600 U	1100 U			
4-Bromophenyl phenyl ether	UG/KG				1900 U	1800 U	430 U			
4-Chloro-3-methylphenol	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
4-Chloroaniline	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
4-Chlorophenyl phenyl ether	UG/KG				1900 U	1800 U	430 U			
4-Methylphenol	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
4-Nitroaniline	UG/KG				4800 U	4600 U	1100 U			
4-Nitrophenol	UG/KG	10000 U	20000 U	9900 U	4800 U	4600 U	1100 U	9900 U	9900 U	4000 U
Acenaphthene	UG/KG	1900 U	4000 U	590 J	1900 U	1800 U	160 J	850 J	370 J	110 J
Acenaphthylene	UG/KG	850 J	690 J	740 J	900 J	710 J	360 J	1400 J	620 J	330 J
Acetophenone	UG/KG				1900 U	1800 U	430 U			
Aniline	UG/KG	1900 U	4000 U	1900 U				1900 U	1900 U	780 U
Anthracene	UG/KG	730 J	810 J	1400 J	750 J	640 J	660 J	3500	1100 J	370 J
Atrazine	UG/KG				1900 U	1800 U	430 U			
Benzaldehyde	UG/KG				1900 U	1800 U	430 U			
Benzo(a)anthracene	UG/KG	2000 J	2200 J	2900	2600	2200	1800 NJ	7800	2800	1100
Benzo(a)pyrene	UG/KG	2400	2500 J	3000	3000	2500	2100 J	7000	2900	1400
Benzo(b)fluoranthene	UG/KG	1800 J	2000 J	2100	3500	2900	2300 J	5200	2300	1100
Benzo(ghi)perylene	UG/KG	1600 J	1200 J	2000	1900	1600 J	1100 J	3900	1800 J	1000
Benzo(k)fluoranthene	UG/KG	1800 J	2000 J	2400	1500 J	1100 J	980 J	5600	2500	1100
Benzoic Acid	UG/KG	10000 U	20000 U	9900 U				9900 UJ	9900 UJ	4000 U
Bis(2-Chloroethoxy)methane	UG/KG				1900 U	1800 U	430 U			
Bis(2-Chloroethyl)ether	UG/KG				1900 U	1800 U	430 U			
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Butylbenzylphthalate	UG/KG	1900 UJ	4000 UJ	1900 U	1900 U	1800 U	430 U	1900 UJ	1900 UJ	780 UJ
Caprolactam	UG/KG				1900 U	1800 U	430 U			
Carbazole	UG/KG				1900 U	1800 U	110 J			
Chrysene	UG/KG	2000	2200 J	2900	2500	2100	1800 J	7500	2900	1300
Di-n-butylphthalate	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Di-n-octylphthalate	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Dibenz(a,h)anthracene	UG/KG	510 J	460 J	640 J	520 J	410 J	320 J	1400 J	620 J	310 J
Dibenzofuran	UG/KG	1900 U	4000 U	400 J	1900 U	1800 U	86 J	550 J	250 J	780 U
Diethyl phthalate	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Dimethylphthalate	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Fluoranthene	UG/KG	3700	4400	5600	3600	3100	3300 J	16000	5200	1800
Fluorene	UG/KG	1900 U	4000 U	690 J	1900 U	1800 U	240 J	1600 J	560 J	130 J
Hexachlorobenzene	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Hexachlorobutadiene	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Hexachlorocyclopentadiene	UG/KG				1900 U	1800 U	430 U			
Hexachloroethane	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Indeno(1,2,3-cd)pyrene	UG/KG	1500 J	1300 J	1800 J	1900	1600 J	1200 J	3700 J	1700 J	920 J

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
N-Nitrosodiphenylamine	UG/KG				1900 U	1800 U	430 U			
N-Nitrosodipropylamine	UG/KG				1900 U	1800 U	430 U			
Naphthalene	UG/KG	1900 U	4000 U	690 J	1900 U	1800 U	110 J	380 J	340 J	100 J
Nitrobenzene	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Pentachlorophenol	UG/KG	10000 U	20000 U	9900 U	4800 U	4600 U	1100 U	9900 U	9900 U	4000 U
Phenanthrene	UG/KG	1800 J	1700 J	4000	1500 J	1300 J	1500 J	11000	3400	1000
Phenol	UG/KG	1900 U	4000 U	1900 U	1900 U	1800 U	430 U	1900 U	1900 U	780 U
Pyrene	UG/KG	3200	3200 J	5100	5000	4200	3400 J	15000	5100	1700 J
Pyridine	UG/KG	10000 U	20000 U	9900 U				9900 U	9900 U	4000 U
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	19 U	22	56	9 J	6.5 J	10 NJ	22 J	30	20 U
4,4'-DDE	UG/KG	19 U	32	27	34 NJ	31 NJ	11 NJ	56	59	20 U
4,4'-DDT	UG/KG	19 U	34	78	22	38 J	4.9 J	32	19 U	20 U
Aldrin	UG/KG	10 U	10 U	9.9 U	2 U	1.8 U	2.2 U	10 U	9.9 U	10 U
Alpha-BHC	UG/KG	10 U	10 U	9.9 U	2 U	1.8 U	2.2 U	10 U	9.9 U	10 U
Alpha-Chlordane	UG/KG	10 U	10 U	9.9 U	16	21	2.2 U	10 U	9.9 U	10 U
Beta-BHC	UG/KG	10 U	10 U	9.9 U	2 U	1.8 U	2.2 U	10 U	9.9 U	10 U
Delta-BHC	UG/KG	10 U	10 U	9.9 U	2 U	1.8 U	2.2 U	10 U	9.9 U	10 U
Dieldrin	UG/KG	19 U	20 U	19 U	3.8 U	3.6 U	4.3 U	19 U	19 U	20 U
Endosulfan I	UG/KG	10 U	10 U	9.9 U	2 U	1.8 U	2.2 U	10 U	9.9 U	10 U
Endosulfan II	UG/KG	19 U	20 U	19 U	3.8 U	3.6 U	4.3 U	19 U	19 U	20 U
Endosulfan sulfate	UG/KG	19 U	20 U	19 U	3.8 U	3.6 U	4.3 U	19 U	19 U	20 U
Endrin	UG/KG	19 U	20 U	19 U	3.8 U	3.6 U	4.3 U	19 U	19 U	20 U
Endrin aldehyde	UG/KG	19 U	20 U	19 U	3.8 U	3.6 U	4.3 U	19 U	19 U	20 U
Endrin ketone	UG/KG	19 U	20 U	19 U	38	11 NJ	4.3 U	19 U	19 U	20 U
Gamma-BHC/Lindane	UG/KG	10 U	10 U	9.9 U	2 U	1.8 U	2.2 U	10 U	9.9 U	10 U
Gamma-Chlordane	UG/KG	10 U	10 U	9.9 U	7 J	11	2.2 U	10 U	9.9 U	10 U
Heptachlor	UG/KG	10 U	10 U	9.9 U	2 U	1.8 U	2.2 U	10 U	9.9 U	10 U
Heptachlor epoxide	UG/KG	10 U	10 U	9.9 U	2 U	1.8 U	2.2 U	10 U	9.9 U	10 U
Methoxychlor	UG/KG	100 U	100 U	99 U	20 UJ	18 UJ	22 U	99 U	99 U	100 U
Toxaphene	UG/KG	190 U	200 U	190 U	200 U	180 U	220 U	190 U	190 U	200 U
Aroclor-1016	UG/KG	39 U	40 U	38 U	38 U	36 U	44 U	39 U	38 U	39 U
Aroclor-1221	UG/KG	39 U	40 U	38 U	38 U	36 U	44 U	39 U	38 U	39 U
Aroclor-1232	UG/KG	39 U	40 U	38 U	38 U	36 U	44 U	39 U	38 U	39 U
Aroclor-1242	UG/KG	39 U	40 U	38 U	38 U	36 U	44 U	39 U	38 U	39 U
Aroclor-1248	UG/KG	39 U	40 U	38 U	38 U	36 U	44 U	39 U	38 U	39 U
Aroclor-1254	UG/KG	39 U	40 U	38 U	38 U	36 U	44 U	39 U	38 U	39 U
Aroclor-1260	UG/KG	39 U	40 U	38 U	38 U	36 U	44 U	39 U	38 U	39 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-007-4	WS-59-01-007-7	WS-59-01-007-9	WS-59-01-011-3	WS-59-01-011-4	WS-59-01-012-1	WS-59-01-013-1	WS-59-01-013-3	WS-59-01-013-4
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	10900	10900	11100	11200 J	11300 J	12600 J	11600	11900	12100
Antimony	MG/KG	3.4 UJ	3.4 UJ	3.5 UJ	2.7 J	8.9 J	1.8 J	3.3 U	3.4 U	3.3 U
Arsenic	MG/KG	4.7	4.2	4.7	6.8 J	6.4 J	6.5 J	4.7	5.1	4.6
Barium	MG/KG	91.3	97	90.7	94.2 J	90.5 J	112 J	102	108	89.9
Beryllium	MG/KG	0.29	0.35	0.32	0.6	0.57	0.67	0.34	0.36	0.4
Cadmium	MG/KG	0.8	0.64	0.7	0.47	0.52	0.53	0.4 J	0.4 J	0.33 J
Calcium	MG/KG	56100	32500	36400	41000	62300	19900 J	57400	31600	46400
Chromium	MG/KG	20	20	19.1	17.1 J	17.3 J	18.7 J	18.9	19.2	19.9
Cobalt	MG/KG	9.9	9.5	9.9	10.1 J	9 J	10.7 J	10.6	11.4	10.3
Copper	MG/KG	38.8	39.9	28.4	25.8 J	99.7 J	23.5 J	26.1	26.1	24.8
Cyanide	MG/KG									
Iron	MG/KG	19500	19000	20200	22100	20400	22600 J	20100	22300	23400
Lead	MG/KG	53.6 J	38.2 J	44.6 J	36.6 J	61.8 J	27.9 J	34.4 J	36.3 J	29.4 J
Magnesium	MG/KG	9650	6370	7130	6430 J	8940 J	6490 J	7180	6700	8210
Manganese	MG/KG	507	408	512	516 J	463 J	708 J	570	628	588
Mercury	MG/KG	0.12	0.07	0.07	0.07	0.06	0.07	0.1	0.06	0.05
Nickel	MG/KG	28.9	30	28.9	27 J	26 J	29.2 J	29.6	29.6	29.7
Potassium	MG/KG	1110	1140	1140	1110 J	1580 J	1340 J	1200	1300	1280
Selenium	MG/KG	0.57 U	0.57 U	0.58 U	0.43 U	0.45 U	0.49 U	0.6 J	0.56 U	0.55 U
Silver	MG/KG	0.57 UJ	0.57 UJ	0.58 UJ	0.85	0.51 J	1.1	0.55 U	0.56 U	0.55 U
Sodium	MG/KG	167	133	126	196 J	383 J	188 J	141	186	169
Thallium	MG/KG	0.57 U	0.57 U	0.67 J	0.22 U	0.22 U	0.25 U	0.99 J	0.92 J	0.88 J
Vanadium	MG/KG	19.5	19	20.5	18.1 J	19.9 J	21.9 J	21.1	22.5	20
Zinc	MG/KG	92.4	104	91.6	84 J	83.5 J	82 J	88.4 J	85.2 J	84.5 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
1,1,2,2-Tetrachloroethane	UG/KG	5.8 U	5.8 U	6.1 U	6 UJ	6 UJ	6 U	6 UJ	6.2 U	6 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
1,1,2-Trichloroethane	UG/KG				6 U	6 U	6 U	6 U		
1,1-Dichloroethane	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
1,1-Dichloroethene	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
1,2,3-Trichloropropane	UG/KG	5.8 U	5.8 U	6.1 U					6.2 U	6 U
1,2,4-Trichlorobenzene	UG/KG	5.8 U	5.8 U	6.1 U	6 UJ	6 UJ	6 U	6 UJ	6.2 U	6 U
1,2-Dibromo-3-chloropropane	UG/KG				6 UJ	6 UJ	6 U	6 UJ		
1,2-Dibromoethane	UG/KG				6 U	6 U	6 U	6 U		
1,2-Dichlorobenzene	UG/KG	5.8 U	5.8 U	6.1 U	6 UJ	6 UJ	6 U	6 UJ	6.2 U	6 U
1,2-Dichloroethane	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG				6 U	6 U	6 U	6 U		
1,3-Dichlorobenzene	UG/KG	5.8 U	5.8 U	6.1 U	6 UJ	6 UJ	6 U	6 UJ	6.2 U	6 U
1,3-Dichloropropane	UG/KG	5.8 U	5.8 U	6.1 U					6.2 U	6 U
1,4-Dichlorobenzene	UG/KG	5.8 U	5.8 U	6.1 U	6 UJ	6 UJ	6 U	6 UJ	6.2 U	6 U
Acetone	UG/KG	23 U	23 U	25 U	6 U	15 NJ	110 NJ	6 U	25 U	24 U
Benzene	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Bromodichloromethane	UG/KG				6 U	6 U	6 U	6 U		
Bromoform	UG/KG				6 U	6 U	6 U	6 U		
Carbon disulfide	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Carbon tetrachloride	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Chlorobenzene	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Chlorodibromomethane	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Chloroethane	UG/KG	12 U	12 U	12 U	6 U	6 U	6 U	6 U	12 U	12 U
Chloroform	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Cis-1,2-Dichloroethene	UG/KG				6 U	6 U	6 U	6 U		
Cis-1,3-Dichloropropene	UG/KG				6 U	6 U	6 U	6 U		
Cyclohexane	UG/KG				6 U	6 U	6 U	6 U		
Dichlorodifluoromethane	UG/KG				6 U	6 U	6 U	6 U		
Ethyl benzene	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG				6 U	6 U	6 U	6 U		
Meta/Para Xylene	UG/KG	5.8 U	5.8 U	6.1 U					6.2 U	6 U
Methyl Acetate	UG/KG				6 U	6 U	6 U	6 U		
Methyl Tertbutyl Ether	UG/KG				6 U	6 U	6 U	6 U		
Methyl bromide	UG/KG				6 U	6 U	6 U	6 U		
Methyl butyl ketone	UG/KG				6 U	6 U	6 U	6 U		
Methyl chloride	UG/KG				6 U	6 U	6 U	6 U		
Methyl cyclohexane	UG/KG				6 U	6 U	6 U	6 U		
Methyl ethyl ketone	UG/KG	12 U	12 U	12 U	6 U	6 U	8 J	6 U	12 U	12 U
Methyl isobutyl ketone	UG/KG	12 U	12 U	12 U	6 U	6 U	6 U	6 U	12 U	12 U
Methylene chloride	UG/KG	1.3 J	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Ortho Xylene	UG/KG	5.8 U	5.8 U	6.1 U					6.2 U	6 U
Styrene	UG/KG				6 U	6 U	6 U	6 U		
Tetrachloroethene	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Toluene	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG				6 UJ	6 UJ	6 U	6 UJ		
Trans-1,2-Dichloroethene	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Trans-1,3-Dichloropropene	UG/KG				6 U	6 U	6 U	6 U		
Trichloroethene	UG/KG	5.8 U	5.8 U	6.1 U	6 U	6 U	6 U	6 U	6.2 U	6 U
Trichlorofluoromethane	UG/KG				6 U	6 U	6 U	6 U		
Vinyl chloride	UG/KG	12 U	12 U	12 U	6 U	6 U	6 U	6 U	12 U	12 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG				400 U	400 U	410 U	410 U		
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG				400 U	400 U	410 U	410 U		
2,4,5-Trichlorophenol	UG/KG	1900 U	1900 U	810 U	1000 U	1000 U	1000 U	1000 U	2000 U	2000 U
2,4,6-Trichlorophenol	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
2,4-Dichlorophenol	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
2,4-Dimethylphenol	UG/KG				400 U	400 U	410 U	410 U		
2,4-Dinitrophenol	UG/KG	9900 U	9800 U	4200 U	1000 UJ	1000 UJ	1000 UJ	1000 U	11000 U	10000 U
2,4-Dinitrotoluene	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
2,6-Dinitrotoluene	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
2-Chloronaphthalene	UG/KG				400 U	400 U	410 U	410 U		
2-Chlorophenol	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
2-Methylnaphthalene	UG/KG	1900 U	1900 U	810 U	400 U	53 J	410 U	410 U	2000 U	2000 U
2-Methylphenol	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
2-Nitroaniline	UG/KG	9900 U	9800 U	4200 U	1000 U	1000 U	1000 U	1000 U	11000 U	10000 U
2-Nitrophenol	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	I	I	I	I	I	I	I	I	I	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	1900 U	1900 U	810 U	400 UJ	400 UJ	410 UJ	410 U	2000 U	2000 U
3-Nitroaniline	UG/KG	9900 U	9800 U	4200 U	1000 U	1000 U	1000 U	1000 U	11000 U	10000 U
4,6-Dinitro-2-methylphenol	UG/KG				1000 U	1000 U	1000 U	1000 U		
4-Bromophenyl phenyl ether	UG/KG				400 U	400 U	410 U	410 U		
4-Chloro-3-methylphenol	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
4-Chloroaniline	UG/KG	1900 U	1900 U	810 U	400 UJ	400 UJ	410 UJ	410 U	2000 U	2000 U
4-Chlorophenyl phenyl ether	UG/KG				400 U	400 U	410 U	410 U		
4-Methylphenol	UG/KG	1900 U	1900 U	810 U	54 J	400 U	410 U	410 U	2000 U	2000 U
4-Nitroaniline	UG/KG				1000 U	1000 U	1000 U	1000 U		
4-Nitrophenol	UG/KG	9900 U	9800 U	4200 U	1000 U	1000 U	1000 U	1000 U	11000 U	10000 U
Acenaphthene	UG/KG	1900 U	200 J	810 U	400 U	110 J	410 U	73 J	2000 U	2000 U
Acenaphthylene	UG/KG	470 J	540 J	280 J	170 J	330 J	120 J	180 J	300 J	430 J
Acetophenone	UG/KG				400 U	400 U	410 U	410 U		
Aniline	UG/KG	1900 U	1900 U	810 U					2000 U	2000 U
Anthracene	UG/KG	510 J	720 J	290 J	77 J	320 J	75 J	360 J	570 J	440 J
Atrazine	UG/KG				400 U	400 U	410 U	410 U		
Benzaldehyde	UG/KG				400 U	400 U	410 U	410 U		
Benzo(a)anthracene	UG/KG	1600 J	2300	1300	490 NJ	1400 NJ	270 J	1000 NJ	3000	1700 J
Benzo(a)pyrene	UG/KG	2000	2700	1400	650 J	2100 J	360 J	890	2700	2000
Benzo(b)fluoranthene	UG/KG	1700 J	2100	1200	830 J	2700 J	450 J	1100	2100	1500 J
Benzo(ghi)perylene	UG/KG	1500 J	2000	940	430 J	1100 J	220 J	380 J	1700 J	1200 J
Benzo(k)fluoranthene	UG/KG	1600 J	2300	1200	440 J	990 J	280 NJ	440	2500	1600 J
Benzoic Acid	UG/KG	9900 UJ	9800 UJ	4200 U					11000 U	10000 U
Bis(2-Chloroethoxy)methane	UG/KG				400 U	400 U	410 U	410 U		
Bis(2-Chloroethyl)ether	UG/KG				400 U	400 U	410 U	410 U		
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	1900 U	1900 U	810 U	110 NJ	84 NJ	150 J	49 J	2000 U	2000 U
Butylbenzylphthalate	UG/KG	1900 UJ	1900 UJ	810 UJ	400 UJ	400 UJ	410 UJ	410 U	2000 U	2000 U
Caprolactam	UG/KG				400 U	400 U	410 U	410 U		
Carbazole	UG/KG				400 U	78 J	46 J	55 J		
Chrysene	UG/KG	1800 J	2300	1300	550 J	1600 J	330 J	970	2900	1700 NJ
Di-n-butylphthalate	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
Di-n-octylphthalate	UG/KG	1900 U	1900 U	810 U	400 UJ	400 UJ	410 UJ	410 U	2000 U	2000 U
Dibenz(a,h)anthracene	UG/KG	460 J	650 J	320 J	100 J	320 J	66 J	120 J	580 J	390 J
Dibenzofuran	UG/KG	1900 U	1900 U	810 U	400 U	53 J	410 U	410 U	2000 U	2000 U
Diethyl phthalate	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
Dimethylphthalate	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
Fluoranthene	UG/KG	2900	4100	2900	590	1700	430	2300	4600	2800
Fluorene	UG/KG	1900 U	200 J	110 J	44 J	140 J	47 J	100 J	2000 U	2000 U
Hexachlorobenzene	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
Hexachlorobutadiene	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
Hexachlorocyclopentadiene	UG/KG				400 U	400 U	410 U	410 U		
Hexachloroethane	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
Indeno(1,2,3-cd)pyrene	UG/KG	1300 J	1900 J	880 J	380 J	1100 J	200 J	450	1500 J	1100 J

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
N-Nitrosodiphenylamine	UG/KG				400 U	400 U	410 U	410 U		
N-Nitrosodipropylamine	UG/KG				400 U	400 U	410 U	410 U		
Naphthalene	UG/KG	1900 U	1900 U	810 U	49 J	63 J	55 J	410 U	2000 U	2000 U
Nitrobenzene	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
Pentachlorophenol	UG/KG	9900 U	9800 U	4200 U	1000 U	1000 U	1000 U	1000 U	11000 U	10000 U
Phenanthrene	UG/KG	1300 J	1800 J	1500	240 J	780	270 J	900	1700 J	880 J
Phenol	UG/KG	1900 U	1900 U	810 U	400 U	400 U	410 U	410 U	2000 U	2000 U
Pyrene	UG/KG	2600	3500	2300 J	1100 J	2300	780 J	2100	5100	2600
Pyridine	UG/KG	9900 U	9800 U	4200 U					11000 U	10000 U
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	19 U	19 U	20 U	11 J	10 NJ	12	16 J	20 U	20 U
4,4'-DDE	UG/KG	23	19 U	20 U	56 J	18 NJ	38 J	19	20 U	20 U
4,4'-DDT	UG/KG	26	39	20 U	8.6	4 U	8	34	20 U	20 U
Aldrin	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Alpha-BHC	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Alpha-Chlordane	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Beta-BHC	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Delta-BHC	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Dieldrin	UG/KG	19 U	19 U	20 U	4 U	4 U	4.1 U	4.1 U	20 U	20 U
Endosulfan I	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Endosulfan II	UG/KG	19 U	19 U	20 U	4 U	4 U	4.1 U	4.1 U	20 U	20 U
Endosulfan sulfate	UG/KG	19 U	19 U	20 U	4 U	4 U	4.1 U	4.1 U	20 U	20 U
Endrin	UG/KG	19 U	19 U	20 U	4 U	4 U	4.1 U	4.1 U	20 U	20 U
Endrin aldehyde	UG/KG	19 U	19 U	20 U	4 U	4 U	4.1 U	4.1 U	20 U	20 U
Endrin ketone	UG/KG	19 U	19 U	20 U	4 U	4 U	4.1 U	4.1 U	20 U	20 U
Gamma-BHC/Lindane	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Gamma-Chlordane	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Heptachlor	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Heptachlor epoxide	UG/KG	10 U	9.8 U	10 U	2 U	2.1 U	2.1 U	2.1 U	11 U	10 U
Methoxychlor	UG/KG	99 U	98 U	100 U	20 U	21 U	21 U	21 U	110 U	100 U
Toxaphene	UG/KG	190 U	190 U	200 U	200 U	210 U	210 U	210 U	200 U	200 U
Aroclor-1016	UG/KG	38 U	38 U	40 U	40 U	41 U	42 U	41 U	41 U	40 U
Aroclor-1221	UG/KG	38 U	38 U	40 U	40 U	41 U	42 U	41 U	41 U	40 U
Aroclor-1232	UG/KG	38 U	38 U	40 U	40 U	41 U	42 U	41 U	41 U	40 U
Aroclor-1242	UG/KG	38 U	38 U	40 U	40 U	41 U	42 U	41 U	41 U	40 U
Aroclor-1248	UG/KG	38 U	38 U	40 U	40 U	41 U	42 U	41 U	41 U	40 U
Aroclor-1254	UG/KG	38 U	38 U	40 U	40 U	41 U	42 U	41 U	41 U	40 U
Aroclor-1260	UG/KG	77	38 U	40 U	40 U	41 U	42 U	41 U	41 U	40 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-013-5	WS-59-01-013-6	WS-59-01-013-7	WS-59-01-014-1	WS-59-01-014-2	WS-59-01-014-3	WS-59-01-014-4	WS-59-01-015-1	WS-59-01-015-10
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	11700	11300	12200	12800 J	13000 J	14100 J	12300 J	11800	9840
Antimony	MG/KG	3.4 U	3.3 U	3.6 U	1.9 J	1.6 J	1.8 J	1.7 J	3.7 UJ	3.6 UJ
Arsenic	MG/KG	6	4.6	4.8	6.5 J	6.2 J	7.2 J	5.7 J	5	4.2
Barium	MG/KG	105	94.6	131	109 J	106 J	153 J	139 J	102	91.3
Beryllium	MG/KG	0.4	0.34	0.35	0.71	0.66	0.77	0.67	0.29	0.29
Cadmium	MG/KG	0.58	0.39 J	0.42 J	0.6	0.53	0.63	0.52	0.69	0.65
Calcium	MG/KG	38600	34300	15100	25700 J	35400 J	19700 J	16400 J	27800	65400
Chromium	MG/KG	23.4	19.3	19.2	18.9 J	20 J	19.9 J	17.7 J	19.3	16
Cobalt	MG/KG	11.7	10.4	11.1	10.1 J	11 J	10.9 J	9.6 J	11.2	8.5
Copper	MG/KG	305	40.6	25	28.3 J	28.7 J	28 J	24.4 J	26.6	26.1
Cyanide	MG/KG									
Iron	MG/KG	25400	21000	20500	21800 J	21800 J	23700 J	20400 J	22400	19400
Lead	MG/KG	84.6 J	42 J	32 J	29.5 J	34.5 J	27.8 J	27 J	21.1 J	27.4 J
Magnesium	MG/KG	8040	8630	5780	7370 J	8410 J	5600 J	5510 J	8170	7780
Manganese	MG/KG	655	588	679	797 J	528 J	828 J	703 J	617	466
Mercury	MG/KG	0.07	0.06	0.09	0.08	0.05	0.07 J	0.09 J	0.08	0.06
Nickel	MG/KG	33	29.4	31.9	28.9 J	32.8 J	31.8 J	26.3 J	31.4	25.5
Potassium	MG/KG	1320	1230	1290	1400 J	1400 J	1470 J	1270 J	1210	1060
Selenium	MG/KG	0.78 J	0.55 U	0.6 U	0.48 U	0.41 U	0.46 U	0.4 U	0.61 UJ	0.59 UJ
Silver	MG/KG	0.57 U	0.55 U	0.6 U	0.96	0.7	1.1	0.96	0.61 UJ	0.59 UJ
Sodium	MG/KG	182	203	249	244 J	245 J	281 J	341 J	300	267
Thallium	MG/KG	0.96 J	0.87 J	0.93 J	0.24 U	0.2 U	0.23 U	0.2 U	0.84 J	0.63 J
Vanadium	MG/KG	21.2	21	22.2	21.8 J	22.5 J	22.7 J	20 J	19.4	16.4
Zinc	MG/KG	120 J	91.1 J	85.6 J	88.1 J	87.5 J	96.2 J	88.6 J	74.5 J	67.5 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-9	WS-59-01-015-9
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-9	WS-59-01-015-9
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
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	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,1,2,2-Tetrachloroethane	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,1,2-Trichloroethane	UG/KG									
1,1-Dichloroethane	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,1-Dichloroethene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,2,3-Trichloropropane	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,2,4-Trichlorobenzene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,2-Dibromo-3-chloropropane	UG/KG									
1,2-Dibromoethane	UG/KG									
1,2-Dichlorobenzene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,2-Dichloroethane	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG									
1,3-Dichlorobenzene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,3-Dichloropropane	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
1,4-Dichlorobenzene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Acetone	UG/KG	24 U	24 U	15 J	23 U	24 U	24 U	24 U	25 U	24 U
Benzene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Bromodichloromethane	UG/KG									
Bromoform	UG/KG									
Carbon disulfide	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Carbon tetrachloride	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Chlorobenzene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Chlorodibromomethane	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Chloroethane	UG/KG	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Chloroform	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Cis-1,2-Dichloroethene	UG/KG									
Cis-1,3-Dichloropropene	UG/KG									
Cyclohexane	UG/KG									
Dichlorodifluoromethane	UG/KG									
Ethyl benzene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-7	WS-59-01-015-9
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-7	WS-59-01-015-9
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG									
Meta/Para Xylene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Methyl Acetate	UG/KG									
Methyl Tertbutyl Ether	UG/KG									
Methyl bromide	UG/KG									
Methyl butyl ketone	UG/KG									
Methyl chloride	UG/KG									
Methyl cyclohexane	UG/KG									
Methyl ethyl ketone	UG/KG	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Methyl isobutyl ketone	UG/KG	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Methylene chloride	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Ortho Xylene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Styrene	UG/KG									
Tetrachloroethene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Toluene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG									
Trans-1,2-Dichloroethene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Trans-1,3-Dichloropropene	UG/KG									
Trichloroethene	UG/KG	6 U	5.9 U	5.9 U	5.8 U	5.9 U	6 U	6 U	6.2 U	5.9 U
Trichlorofluoromethane	UG/KG									
Vinyl chloride	UG/KG	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG									
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG									
2,4,5-Trichlorophenol	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
2,4,6-Trichlorophenol	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
2,4-Dichlorophenol	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
2,4-Dimethylphenol	UG/KG									
2,4-Dinitrophenol	UG/KG	10000 U	10000 U	10000 U	9800 U	10000 U	10000 U	10000 U	11000 U	10000 U
2,4-Dinitrotoluene	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
2,6-Dinitrotoluene	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
2-Chloronaphthalene	UG/KG									
2-Chlorophenol	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
2-Methylnaphthalene	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	330 J
2-Methylphenol	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
2-Nitroaniline	UG/KG	10000 U	10000 U	10000 U	9800 U	10000 U	10000 U	10000 U	11000 U	10000 U
2-Nitrophenol	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-7	WS-59-01-015-9
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-7	WS-59-01-015-9
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
3-Nitroaniline	UG/KG	10000 U	10000 U	10000 U	9800 U	10000 U	10000 U	10000 U	11000 U	10000 U
4,6-Dinitro-2-methylphenol	UG/KG									
4-Bromophenyl phenyl ether	UG/KG									
4-Chloro-3-methylphenol	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
4-Chloroaniline	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
4-Chlorophenyl phenyl ether	UG/KG									
4-Methylphenol	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
4-Nitroaniline	UG/KG									
4-Nitrophenol	UG/KG	10000 U	10000 U	10000 U	9800 U	10000 U	10000 U	10000 U	11000 U	10000 U
Acenaphthene	UG/KG	2000 U	260 J	390 J	350 J	2000 U	2000 U	230 J	2000 U	2000 U
Acenaphthylene	UG/KG	920 J	590 J	1300 J	1400 J	440 J	540 J	580 J	350 J	660 J
Acetophenone	UG/KG									
Aniline	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Anthracene	UG/KG	610 J	590 J	1200 J	1400 J	450 J	640 J	930 J	550 J	560 J
Atrazine	UG/KG									
Benzaldehyde	UG/KG									
Benzo(a)anthracene	UG/KG	1900 J	1800 J	3100	3600	1900 J	2200	2700	1700 J	1900 J
Benzo(a)pyrene	UG/KG	2300	2100 J	3600	3800	2000	2500	2900	1800 J	2400
Benzo(b)fluoranthene	UG/KG	1800 J	1600 J	2900	2900	1700 J	2000 J	2200	1400 J	1900 J
Benzo(ghi)perylene	UG/KG	1500 J	1400 J	1900 J	1900	1400 J	1700 J	1900 J	1100 J	1500 J
Benzo(k)fluoranthene	UG/KG	1800 J	1700 J	3000	3100	1700 J	2100	2300	1400 J	1800 J
Benzoic Acid	UG/KG	10000 U	10000 U	10000 U	9800 U	10000 U	10000 U	10000 U	11000 U	10000 U
Bis(2-Chloroethoxy)methane	UG/KG									
Bis(2-Chloroethyl)ether	UG/KG									
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Butylbenzylphthalate	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Caprolactam	UG/KG									
Carbazole	UG/KG									
Chrysene	UG/KG	1900 NJ	1800 J	3500	3600	1900 NJ	2300	2700 NJ	1800 NJ	2000
Di-n-butylphthalate	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Di-n-octylphthalate	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Dibenz(a,h)anthracene	UG/KG	450 J	430 J	660 J	660 J	410 J	500 J	590 J	360 J	490 J
Dibenzofuran	UG/KG	2000 U	1900 U	240 J	210 J	2000 U	2000 U	2000 U	2000 U	2000 U
Diethyl phthalate	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Dimethylphthalate	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Fluoranthene	UG/KG	3200	3000 J	7000	7000	3500	3600	4700	3400	3100
Fluorene	UG/KG	2000 U	280 J	510 J	530 J	2000 U	2000 U	310 J	2000 U	2000 U
Hexachlorobenzene	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Hexachlorobutadiene	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Hexachlorocyclopentadiene	UG/KG									
Hexachloroethane	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Indeno(1,2,3-cd)pyrene	UG/KG	1400 J	1200 J	1800 J	1800 J	1200 J	1600 J	1800 J	1100 J	1400 J

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-9
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-9
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
N-Nitrosodiphenylamine	UG/KG									
N-Nitrosodipropylamine	UG/KG									
Naphthalene	UG/KG	260 J	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Nitrobenzene	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Pentachlorophenol	UG/KG	10000 U	10000 U	10000 U	9800 U	10000 U	10000 U	10000 U	11000 U	10000 U
Phenanthrene	UG/KG	1400 J	1600 J	4300	3300	960 J	1200 J	2400	1400 J	1100 J
Phenol	UG/KG	2000 U	1900 U	1900 U	1900 U	2000 U	2000 U	2000 U	2000 U	2000 U
Pyrene	UG/KG	3200	3400 J	5900 J	6400 J	3100	3700	4200	2900	3000
Pyridine	UG/KG	10000 U	10000 U	10000 U	9800 U	10000 U	10000 U	10000 U	11000 U	10000 U
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	36 J	19 UJ	89	39 J	20 U	20 U	20 U	20 U	20 U
4,4'-DDE	UG/KG	20 U	20	39 J	25	20 U	20 U	20 U	30	21
4,4'-DDT	UG/KG	30 J	20 J	92	38 J	26 J	22 J	26 J	52 J	29 J
Aldrin	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Alpha-BHC	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Alpha-Chlordane	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Beta-BHC	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Delta-BHC	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Dieldrin	UG/KG	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U
Endosulfan I	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Endosulfan II	UG/KG	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U
Endosulfan sulfate	UG/KG	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U
Endrin	UG/KG	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U
Endrin aldehyde	UG/KG	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U
Endrin ketone	UG/KG	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U
Gamma-BHC/Lindane	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Gamma-Chlordane	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Heptachlor	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Heptachlor epoxide	UG/KG	10 U	10 U	10 U	9.8 U	10 U	10 U	10 U	11 U	10 U
Methoxychlor	UG/KG	100 U	100 U	100 U	98 U	100 U	100 U	100 U	110 U	100 U
Toxaphene	UG/KG	200 U	190 U	190 U	190 U	200 U	200 U	200 U	200 U	200 U
Aroclor-1016	UG/KG	39 U	39 U	39 U	38 U	39 U	40 U	40 U	41 U	39 U
Aroclor-1221	UG/KG	39 U	39 U	39 U	38 U	39 U	40 U	40 U	41 U	39 U
Aroclor-1232	UG/KG	39 U	39 U	39 U	38 U	39 U	40 U	40 U	41 U	39 U
Aroclor-1242	UG/KG	39 U	39 U	39 U	38 U	39 U	40 U	40 U	41 U	39 U
Aroclor-1248	UG/KG	39 U	39 U	39 U	38 U	39 U	40 U	40 U	41 U	39 U
Aroclor-1254	UG/KG	39 U	39 U	39 U	38 U	39 U	40 U	40 U	41 U	39 U
Aroclor-1260	UG/KG	39 U	39 U	39 U	38 U	39 U	40 U	40 U	41 U	39 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-9
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-015-11	WS-59-01-015-13	WS-59-01-015-18	WS-59-01-015-19	WS-59-01-015-2	WS-59-01-015-5	WS-59-01-015-6	WS-59-01-015-7	WS-59-01-015-9
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	10200	10900	12900	11200	10400	11700	10800	10900	9880
Antimony	MG/KG	11.1 J	14.3 J	7.9	3.2 U	3.5 UJ	3.6 UJ	3.6 UJ	3.6 UJ	3.4 UJ
Arsenic	MG/KG	4.7	5.8 J	4.3	4.7	4.9	4.1	4.1	4.8	3.9
Barium	MG/KG	104	109	135	96.5	95.4	111	102	112	89.4
Beryllium	MG/KG	0.29	0.5	0.4	0.3	0.29	0.34	0.33	0.31	0.26
Cadmium	MG/KG	0.66	0.41 J	0.59	0.48 J	0.39 J	0.7	0.67	0.81	0.62
Calcium	MG/KG	41600	48800	63200	86800	54200	33200	26300	37100	41800
Chromium	MG/KG	16.9	20.7 J	20.4	17.9	17.7	19.1	18	17	16.6
Cobalt	MG/KG	9	11.5	9.9	10	8.2	9.8	9.8	10.2	9.1
Copper	MG/KG	22.8	42.1 J	32.6	30.8	23.3	27.9	26.2	27.7	23.5
Cyanide	MG/KG									
Iron	MG/KG	19800	24200	21500	20100	20400	22500	19900	19400	20100
Lead	MG/KG	31.8 J	52.4 J	57.7 J	80.8 J	21.4 J	28.8 J	30.5 J	33.7 J	23.7 J
Magnesium	MG/KG	7200	9820 J	7630	8930	7720	6820	7200	6480	8540
Manganese	MG/KG	446	1010 J	568	492	529	590	539	577	463
Mercury	MG/KG	0.02 J	0.06	0.08	0.04	0.05	0.07	0.07	0.07	0.09
Nickel	MG/KG	25	35.7 J	27.5	27.7	22.8	29.3	27.4	27.1	26.2
Potassium	MG/KG	1020	1140	1210	1150	1140	1280	1120	1300	1050
Selenium	MG/KG	0.57 UJ	1.1 UJ	0.57 U	0.54 U	0.59 UJ	0.6 UJ	0.59 UJ	0.84 J	0.57 UJ
Silver	MG/KG	0.57 UJ	0.57 U	0.57 U	0.54 U	0.59 UJ	0.6 UJ	0.59 UJ	0.61 UJ	0.57 UJ
Sodium	MG/KG	120	240 J	130	106	243	294	267	343	222
Thallium	MG/KG	0.57 U	0.93 J	0.91 J	0.86 J	0.59 U	0.73 J	0.59 U	0.65 J	0.62 J
Vanadium	MG/KG	17.9	19.3	22	20	18.2	18.6	18.6	20.5	16.3
Zinc	MG/KG	80.6 J	137 J	115 J	77.6 J	74.7 J	86.7 J	83.6 J	80.6 J	67.8 J

Note(s):

(1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)

(2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
1,1,2,2-Tetrachloroethane	UG/KG	5.7 UJ	5.9 U	5.8 UJ	5.9 UJ	5.8 U	6 UJ	5.9 U	5.8 U	5.8 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.7 U	5.9 U	5.8 UJ	5.9 UJ	5.8 U	6 U	5.9 U	5.8 U	5.8 U
1,1,2-Trichloroethane	UG/KG									
1,1-Dichloroethane	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
1,1-Dichloroethene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
1,2,3-Trichloropropane	UG/KG	5.7 UJ	5.9 U	5.8 U	5.9 U	5.8 U	6 UJ	5.9 U	5.8 U	5.8 U
1,2,4-Trichlorobenzene	UG/KG	5.7 UJ	5.9 U	5.8 U	5.9 U	5.8 U	6 UJ	5.9 U	5.8 U	5.8 U
1,2-Dibromo-3-chloropropane	UG/KG									
1,2-Dibromoethane	UG/KG									
1,2-Dichlorobenzene	UG/KG	5.7 UJ	5.9 U	5.8 U	5.9 U	5.8 U	6 UJ	5.9 U	5.8 U	5.8 U
1,2-Dichloroethane	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG									
1,3-Dichlorobenzene	UG/KG	5.7 UJ	5.9 U	5.8 U	5.9 U	5.8 U	6 UJ	5.9 U	5.8 U	5.8 U
1,3-Dichloropropane	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
1,4-Dichlorobenzene	UG/KG	5.7 UJ	5.9 U	5.8 U	5.9 U	5.8 U	6 UJ	5.9 U	5.8 U	5.8 U
Acetone	UG/KG	24	24 U	23 U	23 U	23 U	32	24 U	23 U	23 U
Benzene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Bromodichloromethane	UG/KG									
Bromoform	UG/KG									
Carbon disulfide	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Carbon tetrachloride	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Chlorobenzene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Chlorodibromomethane	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Chloroethane	UG/KG	11 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Chloroform	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Cis-1,2-Dichloroethene	UG/KG									
Cis-1,3-Dichloropropene	UG/KG									
Cyclohexane	UG/KG									
Dichlorodifluoromethane	UG/KG									
Ethyl benzene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG									
Meta/Para Xylene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Methyl Acetate	UG/KG									
Methyl Tertbutyl Ether	UG/KG									
Methyl bromide	UG/KG									
Methyl butyl ketone	UG/KG									
Methyl chloride	UG/KG									
Methyl cyclohexane	UG/KG									
Methyl ethyl ketone	UG/KG	11 U	12 U	12 U	12 U	12 U	3 J	12 U	12 U	12 U
Methyl isobutyl ketone	UG/KG	11 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Methylene chloride	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Ortho Xylene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Styrene	UG/KG									
Tetrachloroethene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.1 J	6 U	5.9 U	6.4	5.8 J
Toluene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG									
Trans-1,2-Dichloroethene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Trans-1,3-Dichloropropene	UG/KG									
Trichloroethene	UG/KG	5.7 U	5.9 U	5.8 U	5.9 U	5.8 U	6 U	5.9 U	5.8 U	5.8 U
Trichlorofluoromethane	UG/KG									
Vinyl chloride	UG/KG	11 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG									
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG									
2,4,5-Trichlorophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
2,4,6-Trichlorophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
2,4-Dichlorophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
2,4-Dimethylphenol	UG/KG									
2,4-Dinitrophenol	UG/KG	5900 UJ	6100 UJ	5900 UJ	6000 U	5900 U	10000 UJ	6000 UJ	9900 U	9800 U
2,4-Dinitrotoluene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
2,6-Dinitrotoluene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
2-Chloronaphthalene	UG/KG									
2-Chlorophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
2-Methylnaphthalene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
2-Methylphenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
2-Nitroaniline	UG/KG	5900 U	6100 U	5900 U	6000 U	5900 U	10000 U	6000 U	9900 U	9800 U
2-Nitrophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2	WS-59-01-017-2
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2	WS-59-01-017-2
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
3-Nitroaniline	UG/KG	5900 U	6100 U	5900 U	6000 U	5900 U	10000 U	6000 U	9900 U	9800 U
4,6-Dinitro-2-methylphenol	UG/KG									
4-Bromophenyl phenyl ether	UG/KG									
4-Chloro-3-methylphenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
4-Chloroaniline	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
4-Chlorophenyl phenyl ether	UG/KG									
4-Methylphenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
4-Nitroaniline	UG/KG									
4-Nitrophenol	UG/KG	5900 U	6100 U	5900 U	6000 U	5900 U	10000 U	6000 U	9900 U	9800 U
Acenaphthene	UG/KG	1100 U	1200 U	1200 U	120 J	290 J	2000 U	1200 U	1900 U	1900 U
Acenaphthylene	UG/KG	1100 U	130 J	230 J	160 J	1400	2000 U	240 J	360 J	540 J
Acetophenone	UG/KG									
Aniline	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Anthracene	UG/KG	220 J	350 J	250 J	350 J	1100 J	2000 U	240 J	440 J	630 J
Atrazine	UG/KG									
Benzaldehyde	UG/KG									
Benzo(a)anthracene	UG/KG	700 J	1100 J	780 J	1000 J	3100	390 J	810 J	1100 J	1900 J
Benzo(a)pyrene	UG/KG	670 J	940 J	870 J	1000 J	3600	390 J	910 J	1500 J	2100
Benzo(b)fluoranthene	UG/KG	570 J	740 J	670 J	870 J	2600	380 J	700 J	1300 J	1700 J
Benzo(ghi)perylene	UG/KG	500 J	580 J	590 J	680 J	2300	320 J	680 J	1000 J	1300 J
Benzo(k)fluoranthene	UG/KG	630 J	840 J	720 J	900 J	2700	350 J	760 J	1200 J	1800 J
Benzoic Acid	UG/KG	5900 U	6100 U	5900 U	6000 U	5900 U	10000 U	6000 U	9900 U	9800 U
Bis(2-Chloroethoxy)methane	UG/KG									
Bis(2-Chloroethyl)ether	UG/KG									
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Butylbenzylphthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Caprolactam	UG/KG									
Carbazole	UG/KG									
Chrysene	UG/KG	710 J	1100 J	860 J	1200	3000	450 J	900 J	1300 J	2100
Di-n-butylphthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Di-n-octylphthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Dibenz(a,h)anthracene	UG/KG	160 J	190 J	150 NJ	210 J	740 J	2000 U	200 J	340 J	420 J
Dibenzofuran	UG/KG	1100 U	1200 U	1200 U	1200 U	160 J	2000 U	1200 U	1900 U	1900 U
Diethyl phthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Dimethylphthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Fluoranthene	UG/KG	1400	2600	1600	2600	5500	730 J	1500	2400	4400
Fluorene	UG/KG	1100 U	1200 U	1200 U	1200 U	300 J	2000 U	1200 U	1900 U	1900 U
Hexachlorobenzene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Hexachlorobutadiene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Hexachlorocyclopentadiene	UG/KG									
Hexachloroethane	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Indeno(1,2,3-cd)pyrene	UG/KG	450 J	580 J	530 J	640 J	2100 J	280 J	590 J	950 J	1300 J

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
N-Nitrosodiphenylamine	UG/KG									
N-Nitrosodipropylamine	UG/KG									
Naphthalene	UG/KG	1100 U	1200 U	1200 U	1200 U	150 J	2000 U	1200 U	1900 U	1900 U
Nitrobenzene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Pentachlorophenol	UG/KG	5900 U	6100 U	5900 U	6000 U	5900 U	10000 U	6000 U	9900 U	9800 U
Phenanthrene	UG/KG	810 J	1300	640 J	1400	2500	370 J	680 J	1400 J	2200
Phenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	2000 U	1200 U	1900 U	1900 U
Pyrene	UG/KG	1100 J	1900	1200 J	1800	4700	680 J	1400	1700 J	3000
Pyridine	UG/KG	5900 U	6100 U	5900 U	6000 U	5900 U	10000 U	6000 U	9900 U	9800 U
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	95 U	98 U	96 U	97 U	95 U	99 U	98 U	96 U	95 U
4,4'-DDE	UG/KG	95 U	98 U	96 U	97 U	95 U	99 U	98 U	96 U	95 U
4,4'-DDT	UG/KG	95 U	98 U	96 U	97 U	95 U	99 U	98 U	96 U	95 U
Aldrin	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Alpha-BHC	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Alpha-Chlordane	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Beta-BHC	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Delta-BHC	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Dieldrin	UG/KG	95 U	98 U	96 U	97 U	95 U	99 U	98 U	96 U	95 U
Endosulfan I	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Endosulfan II	UG/KG	95 U	98 U	96 U	97 U	95 U	99 U	98 U	96 U	95 U
Endosulfan sulfate	UG/KG	95 U	98 U	96 U	97 U	95 U	99 U	98 U	96 U	95 U
Endrin	UG/KG	95 U	98 U	96 U	97 U	95 U	99 U	98 U	96 U	95 U
Endrin aldehyde	UG/KG	95 U	98 U	96 U	97 U	95 U	99 U	98 U	96 U	95 U
Endrin ketone	UG/KG	95 U	98 U	96 U	97 U	95 U	99 U	98 U	96 U	95 U
Gamma-BHC/Lindane	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Gamma-Chlordane	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Heptachlor	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Heptachlor epoxide	UG/KG	49 U	50 U	49 U	50 U	49 U	51 U	50 U	50 U	49 U
Methoxychlor	UG/KG	490 U	500 U	490 U	500 U	490 U	510 U	500 U	500 U	490 U
Toxaphene	UG/KG	950 U	980 U	960 U	970 U	950 U	990 U	980 U	960 U	950 U
Aroclor-1016	UG/KG	38 U	39 U	38 U	39 U	38 U	40 U	39 U	38 U	38 U
Aroclor-1221	UG/KG	38 U	39 U	38 U	39 U	38 U	40 U	39 U	38 U	38 U
Aroclor-1232	UG/KG	38 U	39 U	38 U	39 U	38 U	40 U	39 U	38 U	38 U
Aroclor-1242	UG/KG	38 U	39 U	38 U	39 U	38 U	40 U	39 U	38 U	38 U
Aroclor-1248	UG/KG	38 U	39 U	38 U	39 U	38 U	40 U	39 U	38 U	38 U
Aroclor-1254	UG/KG	38 U	39 U	38 U	39 U	38 U	40 U	39 U	38 U	38 U
Aroclor-1260	UG/KG	38 U	39 U	38 U	39 U	38 U	40 U	39 U	38 U	38 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-016-11	WS-59-01-016-12	WS-59-01-016-15	WS-59-01-016-16	WS-59-01-016-17	WS-59-01-016-7	WS-59-01-016-8	WS-59-01-017-1	WS-59-01-017-2
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	10500	11000	10200	11200	10200	11700	11700	10800	10100
Antimony	MG/KG	3.2 UJ	3.3 UJ	3.5 UJ	3.5 UJ	3.3 UJ	3.5 UJ	3.5 UJ	3.5 UJ	3.4 UJ
Arsenic	MG/KG	4.1	4.3	4.6	5.2	4.2	5.1	5.4	4.1	4.8
Barium	MG/KG	80.2	98	83	89.5	74.2	105	101	78.9	70.2
Beryllium	MG/KG	0.38	0.37	0.29	0.37	0.29	0.35	0.41	0.3	0.27
Cadmium	MG/KG	0.66	0.65	0.59	0.74	0.6	1.5	0.8	0.61	0.7
Calcium	MG/KG	43700	30700	81300 J	40200	71100	53300	46800	40800	65700
Chromium	MG/KG	18.4	17.6	16.8	18.7	16.9	19.7	20.3	18.2	20.6
Cobalt	MG/KG	10	9	9.2	11	8.6	10.9	11.2	9.2	9.2
Copper	MG/KG	27.3 J	25 J	22.2 J	26.1 J	223 J	28.8 J	29.6 J	26.4 J	29 J
Cyanide	MG/KG									
Iron	MG/KG	20900	20700	18900	22200	18000	22400	23300	19600	19800
Lead	MG/KG	33.5 J	27.5 J	26 J	32.3 J	43.3 J	43.3 J	43.2 J	37.3 J	63.4 J
Magnesium	MG/KG	6570	10700	7810	7520	9530	7860	7850	7680	9030
Manganese	MG/KG	455	524	459	600	569	626	824	420	422
Mercury	MG/KG	0.07	0.07	0.06	0.06	0.07	0.1	0.08	0.08	0.21
Nickel	MG/KG	31.5	26.6	25.8	30.4	49.5	32	30.2	26.3	24.9
Potassium	MG/KG	1220	1210	1230	1260	1080	1480	1360	1110	1210
Selenium	MG/KG	0.54 UJ	0.55 UJ	0.58 U	0.58 U	0.55 U	0.58 U	0.59 U	0.58 U	0.57 U
Silver	MG/KG	0.54 U	0.55 U	0.64 J	0.58 U	0.85 J	0.58 U	0.59 U	0.58 U	0.57 U
Sodium	MG/KG	435	644	414 J	546	125	819	548	198	165
Thallium	MG/KG	0.65 J	0.6 J	0.61 J	0.58 U	0.55 U	0.63 J	0.6 J	0.58 U	0.57 U
Vanadium	MG/KG	18.6	18.7	18.5	21	19.1	20.2	21.1	20.9	19.5
Zinc	MG/KG	80.5 J	88.9 J	64 J	77 J	66.9 J	85.6 J	91.7 J	72.4 J	82.6 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-02-002-1	WS-59-02-002-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-02-002-1	WS-59-02-002-1
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
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	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
1,1,2,2-Tetrachloroethane	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 UJ	6 UJ	5.6 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
1,1,2-Trichloroethane	UG/KG							6 U	6 U	
1,1-Dichloroethane	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
1,1-Dichloroethene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
1,2,3-Trichloropropane	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U			5.6 U
1,2,4-Trichlorobenzene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U			5.6 U
1,2-Dibromo-3-chloropropane	UG/KG							6 UJ	6 UJ	5.6 U
1,2-Dibromoethane	UG/KG							6 UJ	6 UJ	
1,2-Dichlorobenzene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 UJ	6 UJ	5.6 U
1,2-Dichloroethane	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG							6 U	6 U	
1,3-Dichlorobenzene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 UJ	6 UJ	5.6 U
1,3-Dichloropropane	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U			5.6 U
1,4-Dichlorobenzene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 UJ	6 UJ	5.6 U
Acetone	UG/KG	23 UJ	24 UJ	24 UJ	24 UJ	23 UJ	23 UJ	6 UJ	6 UJ	23 U
Benzene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Bromodichloromethane	UG/KG							6 U	6 U	
Bromoform	UG/KG							6 U	6 U	
Carbon disulfide	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Carbon tetrachloride	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Chlorobenzene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Chlorodibromomethane	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Chloroethane	UG/KG	12 U	12 U	12 U	12 U	11 U	11 U	6 U	6 U	11 U
Chloroform	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Cis-1,2-Dichloroethene	UG/KG							6 U	6 U	
Cis-1,3-Dichloropropene	UG/KG							6 U	6 U	
Cyclohexane	UG/KG							6 U	6 U	
Dichlorodifluoromethane	UG/KG							6 U	6 U	
Ethyl benzene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-02-002-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-02-002-1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG							6 U	6 U	
Meta/Para Xylene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U			5.6 U
Methyl Acetate	UG/KG							6 U	6 U	
Methyl Tertbutyl Ether	UG/KG							6 UJ	6 UJ	
Methyl bromide	UG/KG							6 UJ	6 UJ	
Methyl butyl ketone	UG/KG							6 UJ	6 UJ	
Methyl chloride	UG/KG							6 U	6 U	
Methyl cyclohexane	UG/KG							6 U	6 U	
Methyl ethyl ketone	UG/KG	12 U	2.3 J	12 U	12 U	11 U	11 U	6 U	6 U	11 U
Methyl isobutyl ketone	UG/KG	12 U	12 U	12 U	12 U	11 U	11 U	6 UJ	6 UJ	11 U
Methylene chloride	UG/KG	4.9 J	3.9 J	4 J	3.8 J	3.6 J	5.7 U	6 UJ	6 UJ	5.6 U
Ortho Xylene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U			5.6 U
Styrene	UG/KG							6 U	6 U	
Tetrachloroethene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Toluene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG							6 UJ	6 UJ	
Trans-1,2-Dichloroethene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Trans-1,3-Dichloropropene	UG/KG							6 U	6 U	
Trichloroethene	UG/KG	5.8 U	5.9 U	5.9 U	5.9 U	5.6 U	5.7 U	6 U	6 U	5.6 U
Trichlorofluoromethane	UG/KG							6 U	6 U	
Vinyl chloride	UG/KG	12 U	12 U	12 U	12 U	11 U	11 U	6 U	6 U	11 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG							380 U	370 U	
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG							380 U	370 U	
2,4,5-Trichlorophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	950 U	930 U	370 U
2,4,6-Trichlorophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
2,4-Dichlorophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
2,4-Dimethylphenol	UG/KG							380 U	370 U	
2,4-Dinitrophenol	UG/KG	5900 U	6000 UJ	6000 U	6000 UJ	5700 UJ	9700 UJ	950 U	930 U	1900 U
2,4-Dinitrotoluene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
2,6-Dinitrotoluene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
2-Chloronaphthalene	UG/KG							380 U	370 U	
2-Chlorophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
2-Methylnaphthalene	UG/KG	190 J	290 J	160 J	410 J	1100 U	200 J	100 J	120 J	370 U
2-Methylphenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
2-Nitroaniline	UG/KG	5900 U	6000 U	6000 U	6000 U	5700 U	9700 U	950 U	930 U	1900 U
2-Nitrophenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-01-018-8	WS-59-02-002-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-01-018-8	WS-59-02-002-1
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
3-Nitroaniline	UG/KG	5900 U	6000 U	6000 U	6000 U	5700 U	9700 U	950 U	930 U	1900 U
4,6-Dinitro-2-methylphenol	UG/KG							950 U	930 U	
4-Bromophenyl phenyl ether	UG/KG							380 U	370 U	
4-Chloro-3-methylphenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
4-Chloroaniline	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
4-Chlorophenyl phenyl ether	UG/KG							380 U	370 U	
4-Methylphenol	UG/KG	1100 U	1200 U	1200 U	130 J	1100 U	1900 U	380 U	370 U	370 U
4-Nitroaniline	UG/KG							950 U	930 U	
4-Nitrophenol	UG/KG	5900 U	6000 U	6000 U	6000 U	5700 U	9700 U	950 U	930 U	1900 U
Acenaphthene	UG/KG	340 J	170 J	1200 U	320 J	1100 U	200 J	89 J	45 J	370 U
Acenaphthylene	UG/KG	880 J	450 J	200 J	1200 U	190 J	340 J	86 J	91 J	370 U
Acetophenone	UG/KG							380 U	370 U	
Aniline	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U			370 U
Anthracene	UG/KG	970 J	570 J	170 J	200 J	210 J	520 J	160 J	120 J	370 U
Atrazine	UG/KG							380 U	370 U	
Benzaldehyde	UG/KG							380 U	370 U	
Benzo(a)anthracene	UG/KG	2600	1400	420 J	340 J	620 J	1400 J	480 J	320 J	370 U
Benzo(a)pyrene	UG/KG	2800	1500	470 J	290 J	660 J	1400 J	500	360 J	370 U
Benzo(b)fluoranthene	UG/KG	2100	1200	410 J	270 J	500 J	1200 J	670	480	370 U
Benzo(ghi)perylene	UG/KG	1600	1100 J	320 J	210 J	480 J	920 J	280 J	240 J	370 U
Benzo(k)fluoranthene	UG/KG	2000	1200 J	430 J	290 J	530 J	1100 J	260 J	200 J	370 U
Benzoic Acid	UG/KG	5900 U	6000 U	6000 U	6000 U	5700 U	9700 U			1900 U
Bis(2-Chloroethoxy)methane	UG/KG							380 U	370 U	
Bis(2-Chloroethyl)ether	UG/KG							380 U	370 U	
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	220 J	100 J	84 J	370 U
Butylbenzylphthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Caprolactam	UG/KG							380 U	370 U	
Carbazole	UG/KG							120 J	370 U	
Chrysene	UG/KG	2900	1600	480 J	360 J	730 J	1700 J	570	380	370 U
Di-n-butylphthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Di-n-octylphthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Dibenz(a,h)anthracene	UG/KG	530 J	220 J	1200 U	1200 U	150 J	270 J	74 J	54 J	370 U
Dibenzofuran	UG/KG	130 NJ	1200 U	1200 U	180 NJ	1100 U	1900 U	59 J	38 J	370 U
Diethyl phthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Dimethylphthalate	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Fluoranthene	UG/KG	4900	3600	850 J	930 J	1500 J	3500	1000	650	370 U
Fluorene	UG/KG	350 J	180 NJ	150 NJ	310 NJ	120 NJ	290 J	87 J	55 J	370 U
Hexachlorobenzene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Hexachlorobutadiene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Hexachlorocyclopentadiene	UG/KG							380 U	370 U	
Hexachloroethane	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Indeno(1,2,3-cd)pyrene	UG/KG	1500 J	970 J	310 J	190 J	400 J	820 J	320 J	240 J	370 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-02-002-1	WS-59-02-002-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-02-002-1	WS-59-02-002-1
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
N-Nitrosodiphenylamine	UG/KG							380 U	370 U	370 U
N-Nitrosodipropylamine	UG/KG							380 U	370 U	370 U
Naphthalene	UG/KG	130 J	1200 U	150 J	1000 J	1100 U	290 J	380 U	370 U	370 U
Nitrobenzene	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Pentachlorophenol	UG/KG	5900 U	6000 U	6000 U	6000 U	5700 U	9700 U	950 U	930 U	1900 U
Phenanthrene	UG/KG	2000	1400	510 J	940 J	840 J	2400	630	390	370 U
Phenol	UG/KG	1100 U	1200 U	1200 U	1200 U	1100 U	1900 U	380 U	370 U	370 U
Pyrene	UG/KG	4100	2500	610 J	560 J	1000 J	2500	920	640	370 U
Pyridine	UG/KG	5900 U	6000 U	6000 U	6000 U	5700 U	9700 U	380 U	370 U	1900 U
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	26	20 U	34	73	19 U	38	35	35	19 U
4,4'-DDE	UG/KG	19 U	28	22	55 J	19 U	48 J	55 NJ	62 J	19 U
4,4'-DDT	UG/KG	24 J	20 U	19 U	24	19	19 U	17	13	19 U
Aldrin	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	2 U	3.8 U	9.6 U
Alpha-BHC	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	2 U	3.8 U	9.6 U
Alpha-Chlordane	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	2 U	3.8 U	9.6 U
Beta-BHC	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	2 U	3.8 U	9.6 U
Delta-BHC	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	2 U	3.8 U	9.6 U
Dieldrin	UG/KG	19 U	20 U	19 U	20 U	19 U	19 U	3.8 U	7.3 U	19 U
Endosulfan I	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	2 U	3.8 U	9.6 U
Endosulfan II	UG/KG	19 U	20 U	19 U	20 U	19 U	19 U	3.8 U	7.3 U	19 U
Endosulfan sulfate	UG/KG	19 U	20 U	19 U	20 U	19 U	19 U	3.8 U	7.3 U	19 U
Endrin	UG/KG	19 U	20 U	19 U	20 U	19 U	19 U	3.8 U	7.3 U	19 U
Endrin aldehyde	UG/KG	19 U	20 U	19 U	20 U	19 U	19 U	3.8 U	7.3 U	19 U
Endrin ketone	UG/KG	19 U	20 U	19 U	20 U	19 U	19 U	3.8 U	7.3 U	19 U
Gamma-BHC/Lindane	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	2 U	3.8 U	9.6 U
Gamma-Chlordane	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	12 J	3.8 U	9.6 U
Heptachlor	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	2 U	3.8 U	9.6 U
Heptachlor epoxide	UG/KG	9.9 U	10 U	10 U	10 U	9.6 U	9.7 U	2 U	3.8 U	9.6 U
Methoxychlor	UG/KG	99 U	100 U	100 U	100 U	96 U	97 U	20 U	38 U	96 U
Toxaphene	UG/KG	190 U	200 U	190 U	200 U	190 U	190 U	200 U	380 U	190 U
Aroclor-1016	UG/KG	38 U	39 U	39 U	39 U	37 U	38 U	38 U	37 U	37 U
Aroclor-1221	UG/KG	38 U	39 U	39 U	39 U	37 U	38 U	38 U	37 U	37 U
Aroclor-1232	UG/KG	38 U	39 U	39 U	39 U	37 U	38 U	38 U	37 U	37 U
Aroclor-1242	UG/KG	38 U	39 U	39 U	39 U	37 U	38 U	38 U	37 U	37 U
Aroclor-1248	UG/KG	38 U	39 U	39 U	39 U	37 U	38 U	38 U	37 U	37 U
Aroclor-1254	UG/KG	38 U	39 U	39 U	39 U	37 U	38 U	38 U	37 U	37 U
Aroclor-1260	UG/KG	38 U	39 U	39 U	39 U	37 U	38 U	38 U	37 U	37 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-02-002-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-018-1	WS-59-01-018-2	WS-59-01-018-3	WS-59-01-018-4	WS-59-01-018-5	WS-59-01-018-6	WS-59-01-018-7	WS-59-01-018-8	WS-59-02-002-1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	11900	12600	10500	10000	8790	10300	11700 J	9960 J	10100
Antimony	MG/KG	3.4 UJ	3.5 UJ	3.4 UJ	3.6 UJ	3.2 UJ	3.4 UJ	2.1 J	1.7 J	3.3 UJ
Arsenic	MG/KG	5.1 J	4.7 J	4.7 J	4.1 J	3.6 J	4.4 J	5.6 J	4.7 J	5.5
Barium	MG/KG	91.6	90.7	89.2	80.6	69.7	73.9	82.2 J	69.3 J	94.5
Beryllium	MG/KG	0.3	0.3	0.16	0.11 J	0.05 U	0.16	0.66	0.52	0.23
Cadmium	MG/KG	0.83	0.82	0.67	0.58 J	0.55	1.1	0.78	0.74	0.27 U
Calcium	MG/KG	39300 J	32100 J	55200 J	54000 J	75600 J	42100 J	36200 J	60700 J	46800
Chromium	MG/KG	19.9	20.2	16.8	17.6	13.8	21.3	22 J	17.7 J	16
Cobalt	MG/KG	10.4	9.7	8.8	8.2	6.9	9.1	10.2 J	8.6 J	11.3
Copper	MG/KG	31.7	30.1	27.8	26.9	21.2	36.5	40.8 J	32.8 J	23.4
Cyanide	MG/KG									
Iron	MG/KG	22800	23500	19900	18500	16000	19300	19400 J	20200 J	21500 J
Lead	MG/KG	56.2	40.6	39.9	31.1	22.6	67.7	71.6 J	55.1 J	18.3 J
Magnesium	MG/KG	7970	7550	12700	9830	19700	8910	7970 J	10200 J	15400
Manganese	MG/KG	532	533	588	454	460	490	496 J	496 J	725
Mercury	MG/KG	0.09	0.07	0.07	0.08	0.04	0.08	0.09	0.11	0.06
Nickel	MG/KG	27.6	28.5	24.8	24.5	17.6	26.2	32.1 J	25.6 J	28
Potassium	MG/KG	1180	1220	1270	1230	1180	1260	1110 J	1060 J	1020
Selenium	MG/KG	0.57 U	0.59 U	0.56 U	0.59 U	0.53 U	0.56 U	0.43 J	0.39 U	0.55 U
Silver	MG/KG	0.57 U	0.59 U	0.56 U	0.59 U	0.53 U	0.56 U	0.23 J	0.1 U	0.55 U
Sodium	MG/KG	270	860	1150	1620	833	1140	991 J	672 J	175
Thallium	MG/KG	0.57 U	0.59 U	0.58 J	0.59 U	0.54 J	0.56 U	0.2 U	0.2 U	0.73 J
Vanadium	MG/KG	22.1	20.3	19.1	18.7	17.1	22.7	21.5 J	18.6 J	18.6
Zinc	MG/KG	105 J	79.3 J	80.4 J	69.9 J	107 J	89.4 J	113 J	82.3 J	64.6 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,1,2,2-Tetrachloroethane	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,1,2-Trichloroethane	UG/KG									
1,1-Dichloroethane	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,1-Dichloroethene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,2,3-Trichloropropane	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,2,4-Trichlorobenzene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,2-Dibromo-3-chloropropane	UG/KG									
1,2-Dibromoethane	UG/KG									
1,2-Dichlorobenzene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,2-Dichloroethane	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG									
1,3-Dichlorobenzene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,3-Dichloropropane	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
1,4-Dichlorobenzene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Acetone	UG/KG	23 U	22 U	23 U	23 U	23 U	23 U	22 U	23 U	22 U
Benzene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Bromodichloromethane	UG/KG									
Bromoform	UG/KG									
Carbon disulfide	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Carbon tetrachloride	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Chlorobenzene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Chlorodibromomethane	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Chloroethane	UG/KG	11 U	11 U	11 U	11 U	11 U	11 U	11 U	12 U	11 U
Chloroform	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Cis-1,2-Dichloroethene	UG/KG									
Cis-1,3-Dichloropropene	UG/KG									
Cyclohexane	UG/KG									
Dichlorodifluoromethane	UG/KG									
Ethyl benzene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG									
Meta/Para Xylene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Methyl Acetate	UG/KG									
Methyl Tertbutyl Ether	UG/KG									
Methyl bromide	UG/KG									
Methyl butyl ketone	UG/KG									
Methyl chloride	UG/KG									
Methyl cyclohexane	UG/KG									
Methyl ethyl ketone	UG/KG	11 U	11 U	11 U	11 U	11 U	11 U	11 U	12 U	11 U
Methyl isobutyl ketone	UG/KG	11 U	11 U	11 U	11 U	11 U	11 U	11 U	12 U	11 U
Methylene chloride	UG/KG	5.7 U	5.6 U	1.5 J	1.7 J	1.5 J	1.6 J	5.6 U	1.3 J	5.6 U
Ortho Xylene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Styrene	UG/KG									
Tetrachloroethene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Toluene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG									
Trans-1,2-Dichloroethene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Trans-1,3-Dichloropropene	UG/KG									
Trichloroethene	UG/KG	5.7 U	5.6 U	5.7 U	5.7 U	5.7 U	5.7 U	5.6 U	5.8 U	5.6 U
Trichlorofluoromethane	UG/KG									
Vinyl chloride	UG/KG	11 U	11 U	11 U	11 U	11 U	11 U	11 U	12 U	11 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG									
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG									
2,4,5-Trichlorophenol	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 U
2,4,6-Trichlorophenol	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 U
2,4-Dichlorophenol	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 U
2,4-Dimethylphenol	UG/KG									
2,4-Dinitrophenol	UG/KG	1900 U	1900 U	1900 U	1900 U	2000 U	1900 U	1900 U	2000 U	1900 U
2,4-Dinitrotoluene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
2,6-Dinitrotoluene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
2-Chloronaphthalene	UG/KG									
2-Chlorophenol	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 U
2-Methylnaphthalene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
2-Methylphenol	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 U
2-Nitroaniline	UG/KG	1900 U	1900 U	1900 U	1900 U	2000 U	1900 U	1900 U	2000 U	1900 UJ
2-Nitrophenol	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
3-Nitroaniline	UG/KG	1900 U	1900 U	1900 U	1900 U	2000 U	1900 U	1900 U	2000 U	1900 UJ
4,6-Dinitro-2-methylphenol	UG/KG									
4-Bromophenyl phenyl ether	UG/KG									
4-Chloro-3-methylphenol	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 U
4-Chloroaniline	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
4-Chlorophenyl phenyl ether	UG/KG									
4-Methylphenol	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 U
4-Nitroaniline	UG/KG									
4-Nitrophenol	UG/KG	1900 U	1900 U	1900 U	1900 U	2000 U	1900 U	1900 U	2000 U	1900 U
Acenaphthene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Acenaphthylene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Acetophenone	UG/KG									
Aniline	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Anthracene	UG/KG	370 U	370 U	380 U	48 J	380 U	380 U	370 U	380 U	58 J
Atrazine	UG/KG									
Benzaldehyde	UG/KG									
Benzo(a)anthracene	UG/KG	370 U	370 U	54 J	130 J	380 U	44 J	110 J	380 U	210 J
Benzo(a)pyrene	UG/KG	370 U	370 U	49 J	120 J	380 U	46 J	120 J	380 U	180 J
Benzo(b)fluoranthene	UG/KG	370 U	370 U	45 J	100 J	380 U	42 J	110 J	380 U	160 J
Benzo(ghi)perylene	UG/KG	370 U	370 U	380 U	68 J	380 U	380 U	80 J	380 U	120 J
Benzo(k)fluoranthene	UG/KG	370 U	370 U	46 J	110 J	380 U	42 J	110 J	380 U	160 J
Benzoic Acid	UG/KG	1900 U	1900 UJ	1900 UJ	1900 UJ	2000 UJ	1900 UJ	1900 UJ	2000 UJ	1900 UJ
Bis(2-Chloroethoxy)methane	UG/KG									
Bis(2-Chloroethyl)ether	UG/KG									
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Butylbenzylphthalate	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Caprolactam	UG/KG									
Carbazole	UG/KG									
Chrysene	UG/KG	370 U	370 U	71 J	130 J	380 U	51 J	130 J	380 U	240 J
Di-n-butylphthalate	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Di-n-octylphthalate	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Dibenz(a,h)anthracene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Dibenzofuran	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Diethyl phthalate	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Dimethylphthalate	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Fluoranthene	UG/KG	370 U	370 U	120 J	300 J	380 U	85 J	220 J	71 J	380 J
Fluorene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Hexachlorobenzene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Hexachlorobutadiene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Hexachlorocyclopentadiene	UG/KG									
Hexachloroethane	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Indeno(1,2,3-cd)pyrene	UG/KG	370 U	370 U	380 U	66 J	380 U	380 U	74 J	380 U	120 J

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
N-Nitrosodiphenylamine	UG/KG									
N-Nitrosodipropylamine	UG/KG									
Naphthalene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Nitrobenzene	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 UJ
Pentachlorophenol	UG/KG	1900 U	1900 U	1900 U	1900 U	2000 U	1900 U	1900 U	2000 U	1900 U
Phenanthrene	UG/KG	370 U	370 U	110 J	200 J	380 U	45 J	94 J	62 J	190 J
Phenol	UG/KG	370 U	370 U	380 U	380 U	380 U	380 U	370 U	380 U	370 U
Pyrene	UG/KG	370 U	370 U	100 J	220 J	380 U	73 J	180 J	58 J	340 J
Pyridine	UG/KG	1900 U	1900 U	1900 U	1900 U	2000 U	1900 U	1900 U	2000 U	1900 UJ
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
4,4'-DDE	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	47	19 U	19 U
4,4'-DDT	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	84	19 U	19 U
Aldrin	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Alpha-BHC	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Alpha-Chlordane	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Beta-BHC	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Delta-BHC	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Dieldrin	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Endosulfan I	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Endosulfan II	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Endosulfan sulfate	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Endrin	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Endrin aldehyde	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Endrin ketone	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Gamma-BHC/Lindane	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Gamma-Chlordane	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Heptachlor	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Heptachlor epoxide	UG/KG	9.6 U	9.5 U	9.7 U	9.7 U	9.8 U	9.7 U	9.5 U	9.9 U	9.6 U
Methoxychlor	UG/KG	96 U	95 U	97 U	97 U	98 U	97 U	95 U	99 U	96 U
Toxaphene	UG/KG	190 U	190 U	190 U	190 U	190 U	190 U	190 U	190 U	190 U
Aroclor-1016	UG/KG	37 U	37 U	38 U	38 U	38 U	38 U	37 U	38 U	37 U
Aroclor-1221	UG/KG	37 U	37 U	38 U	38 U	38 U	38 U	37 U	38 U	37 U
Aroclor-1232	UG/KG	37 U	37 U	38 U	38 U	38 U	38 U	37 U	38 U	37 U
Aroclor-1242	UG/KG	37 U	37 U	38 U	38 U	38 U	38 U	37 U	38 U	37 U
Aroclor-1248	UG/KG	37 U	37 U	38 U	38 U	38 U	38 U	37 U	38 U	37 U
Aroclor-1254	UG/KG	37 U	37 U	38 U	38 U	38 U	38 U	37 U	38 U	37 U
Aroclor-1260	UG/KG	37 U	37 U	38 U	38 U	38 U	38 U	37 U	38 U	37 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-02-002-2	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-02-002-2	WS-59-02-002-3	WS-59-02-003-1	WS-59-02-003-2	WS-59-02-003-3	WS-59-02-003-4	WS-59-02-003-5	WS-59-02-004-1	WS-59-03-001-1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	10300	8950	8530	11700	10500	10800	11500	7740	11600
Antimony	MG/KG	3.4 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.4 UJ	3.3 UJ	3.2 UJ	3.3 UJ	3.3 UJ
Arsenic	MG/KG	4.6	4.6	5.3	5.5	4.9	4.6	5.1	6.9	5.2
Barium	MG/KG	84.2	76.2	63.3	98.6	99.5	79.4	106	54	98.7
Beryllium	MG/KG	0.2	0.18	0.15	0.27	0.26	0.21	0.22	0.12	0.5
Cadmium	MG/KG	0.28 U	0.27 U	0.27 U	0.28 U	0.28 U	0.27 U	0.26 U	0.28 U	0.28 U
Calcium	MG/KG	43500	43200	56800	30200	33600	19000	21500	71500	33200
Chromium	MG/KG	17.1	15.2	14.5	19	17.3	18	17.7	14.1	17.8
Cobalt	MG/KG	9.2	8.6	7.9	9.8	11.1	8.9	10.9	6.9	7.5
Copper	MG/KG	25.7	22.3	23.2	29	26	23.4	23.8	22.6	20.9
Cyanide	MG/KG									
Iron	MG/KG	22700 J	19400 J	19400 J	23400 J	21900 J	20700 J	21600 J	17300 J	22200 J
Lead	MG/KG	20.1 J	15 J	21.1 J	29.3 J	24.7 J	20.2 J	26.6 J	11.7 J	21 J
Magnesium	MG/KG	8390	10400	8650	6930	9220	6340	6140	15700	7880
Manganese	MG/KG	394	403	317	413	661	320	749	349	315 J
Mercury	MG/KG	0.06	0.05	0.09	0.1	0.07	0.07	0.07	0.03 J	0.07
Nickel	MG/KG	27.3	25.7	25.1	32.1	28.9	28.1	26.7	22.4	25.2
Potassium	MG/KG	1130	966	995	1240	1040	1010	1190	932	1070
Selenium	MG/KG	0.56 U	0.54 U	0.55 U	0.55 U	0.56 U	0.55 U	0.53 U	0.55 U	0.56 U
Silver	MG/KG	0.56 U	0.54 U	0.55 U	0.55 U	0.56 U	0.55 U	0.53 U	0.55 U	0.56 U
Sodium	MG/KG	152	123	229	124	122	199	66.3	545	117
Thallium	MG/KG	0.64 J	0.54 U	0.55 U	0.74 J	0.74 J	0.55 U	0.84 J	0.55 U	0.56 U
Vanadium	MG/KG	18.4	16.3	16.6	20.7	18.8	18.1	20.7	14.4	19.8
Zinc	MG/KG	73.8 J	67.7 J	94.3 J	88.5 J	74.2 J	81.6 J	74.5 J	65.7 J	79.4 J

Note(s):

(1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)

(2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 UJ	6 UJ	5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 UJ	6 UJ	5 UJ
1,1,2-Trichloroethane	UG/KG							5 U	6 U	5 U
1,1-Dichloroethane	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
1,1-Dichloroethene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
1,2,3-Trichloropropane	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U		6 U	5 U
1,2,4-Trichlorobenzene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U			5 U
1,2-Dibromo-3-chloropropane	UG/KG							5 UJ	6 UJ	5 U
1,2-Dibromoethane	UG/KG							5 UJ	6 UJ	5 U
1,2-Dichlorobenzene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
1,2-Dichloroethane	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
1,2-Dichloroethene (total)	UG/KG									
1,2-Dichloropropane	UG/KG							5 U	6 U	5 U
1,3-Dichlorobenzene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 UJ	6 UJ	5 U
1,3-Dichloropropane	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U			
1,4-Dichlorobenzene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 UJ	6 UJ	5 U
Acetone	UG/KG	23 U	23 U	23 U	23 U	23 U	23 U	5 U	6 U	5 U
Benzene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Bromodichloromethane	UG/KG							5 U	6 U	5 U
Bromoform	UG/KG							5 U	6 U	5 U
Carbon disulfide	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Carbon tetrachloride	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Chlorobenzene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Chlorodibromomethane	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Chloroethane	UG/KG	11 U	12 U	11 U	11 U	11 U	11 U	5 U	6 U	5 U
Chloroform	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Cis-1,2-Dichloroethene	UG/KG							5 U	6 U	5 U
Cis-1,3-Dichloropropene	UG/KG							5 U	6 U	5 U
Cyclohexane	UG/KG							5 U	6 U	5 U
Dichlorodifluoromethane	UG/KG							5 U	6 U	5 U
Ethyl benzene	UG/KG	2.3 J	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG							5 U	6 U	5 U
Meta/Para Xylene	UG/KG	8.4	5.8 UJ	5.7 U	5.7 U	5.7 U	5.7 U			
Methyl Acetate	UG/KG							5 U	6 U	5 U
Methyl Tertbutyl Ether	UG/KG							5 U	6 U	5 U
Methyl bromide	UG/KG							5 U	6 U	5 U
Methyl butyl ketone	UG/KG							5 U	6 U	5 U
Methyl chloride	UG/KG							5 U	6 U	5 U
Methyl cyclohexane	UG/KG							5 U	6 U	5 U
Methyl ethyl ketone	UG/KG	11 U	12 U	11 U	11 U	11 U	11 U	5 U	6 U	5 U
Methyl isobutyl ketone	UG/KG	11 U	12 U	11 U	11 U	11 U	11 U	5 U	6 U	5 U
Methylene chloride	UG/KG	1.7 J	1.5 J	1.7 J	1.4 J	1.5 J	1.4 J	5 U	6 U	5 U
Ortho Xylene	UG/KG	3.1 J	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U			
Styrene	UG/KG							5 U	6 U	5 U
Tetrachloroethene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Toluene	UG/KG	4 J	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG							5 UJ	6 UJ	5 U
Trans-1,2-Dichloroethene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Trans-1,3-Dichloropropene	UG/KG							5 U	6 U	5 U
Trichloroethene	UG/KG	5.7 U	5.8 U	5.7 U	5.7 U	5.7 U	5.7 U	5 U	6 U	5 U
Trichlorofluoromethane	UG/KG							5 U	6 U	5 U
Vinyl chloride	UG/KG	11 U	12 U	11 U	11 U	11 U	11 U	5 U	6 U	5 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG							350 U	370 U	370 U
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,3-Dichlorobenzene	UG/KG									
1,4-Dichlorobenzene	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG							350 U	370 U	370 U
2,4,5-Trichlorophenol	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	890 U	940 U	920 U
2,4,6-Trichlorophenol	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
2,4-Dichlorophenol	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
2,4-Dimethylphenol	UG/KG							350 U	370 U	370 U
2,4-Dinitrophenol	UG/KG	1900 U	2000 U	1900 U	1900 U	1900 U	1900 U	890 U	940 U	920 U
2,4-Dinitrotoluene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
2,6-Dinitrotoluene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
2-Chloronaphthalene	UG/KG							350 U	370 U	370 U
2-Chlorophenol	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
2-Methylnaphthalene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
2-Methylphenol	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
2-Nitroaniline	UG/KG	1900 U	2000 U	1900 U	1900 U	1900 U	1900 U	890 U	940 U	920 U
2-Nitrophenol	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
3-Nitroaniline	UG/KG	1900 U	2000 U	1900 U	1900 U	1900 U	1900 U	890 U	940 U	920 U
4,6-Dinitro-2-methylphenol	UG/KG							890 U	940 U	920 U
4-Bromophenyl phenyl ether	UG/KG							350 U	370 U	370 U
4-Chloro-3-methylphenol	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
4-Chloroaniline	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
4-Chlorophenyl phenyl ether	UG/KG							350 U	370 U	370 U
4-Methylphenol	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
4-Nitroaniline	UG/KG							890 U	940 U	920 U
4-Nitrophenol	UG/KG	1900 U	2000 U	1900 U	1900 U	1900 U	1900 U	890 U	940 U	920 U
Acenaphthene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Acenaphthylene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Acetophenone	UG/KG							350 U	370 U	370 U
Aniline	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U			
Anthracene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	130 J	370 U
Atrazine	UG/KG							350 U	370 U	370 U
Benzaldehyde	UG/KG							350 U	370 U	370 U
Benzo(a)anthracene	UG/KG	380 U	59 J	380 U	380 U	380 U	380 U	70 J	130 J	370 U
Benzo(a)pyrene	UG/KG	380 U	61 J	380 U	380 U	380 U	41 J	75 J	140 J	370 U
Benzo(b)fluoranthene	UG/KG	380 U	61 J	380 U	380 U	380 U	41 J	97 J	200 J	370 U
Benzo(ghi)perylene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	43 J	96 J	370 U
Benzo(k)fluoranthene	UG/KG	380 U	50 J	380 U	380 U	380 U	380 U	43 J	72 J	370 U
Benzoic Acid	UG/KG	1900 U	2000 U	1900 U	1900 U	1900 U	1900 U			
Bis(2-Chloroethoxy)methane	UG/KG							350 U	370 U	370 U
Bis(2-Chloroethyl)ether	UG/KG							350 U	370 U	370 U
Bis(2-Chloroisopropyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	52 J	370 U
Butylbenzylphthalate	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Caprolactam	UG/KG							350 U	370 U	370 U
Carbazole	UG/KG							350 U	370 U	370 U
Chrysene	UG/KG	380 U	69 J	380 U	380 U	380 U	46 J	76 J	150 J	370 U
Di-n-butylphthalate	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Di-n-octylphthalate	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Dibenz(a,h)anthracene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Dibenzofuran	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Diethyl phthalate	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Dimethylphthalate	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Fluoranthene	UG/KG	380 U	110 J	380 U	380 U	380 U	70 J	160 J	250 J	43 J
Fluorene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Hexachlorobenzene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Hexachlorobutadiene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Hexachlorocyclopentadiene	UG/KG							350 U	370 U	370 U
Hexachloroethane	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Indeno(1,2,3-cd)pyrene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	45 J	93 J	370 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
N-Nitrosodiphenylamine	UG/KG							350 U	370 U	370 U
N-Nitrosodipropylamine	UG/KG							350 U	370 U	370 U
Naphthalene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Nitrobenzene	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Pentachlorophenol	UG/KG	1900 U	2000 U	1900 U	1900 U	1900 U	1900 U	890 U	940 U	920 U
Phenanthrene	UG/KG	380 U	73 J	380 U	380 U	380 U	380 U	82 J	130 J	370 U
Phenol	UG/KG	380 U	380 U	380 U	380 U	380 U	380 U	350 U	370 U	370 U
Pyrene	UG/KG	380 U	100 J	380 U	380 U	380 U	60 J	130 J	260 J	42 J
Pyridine	UG/KG	1900 U	2000 U	1900 U	1900 U	1900 U	1900 U			
Total Unknown PAHs as SV	MG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	13	26 J	3.6 U
4,4'-DDE	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	12 J	52 J	3.6 U
4,4'-DDT	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	12	70 J	3.6 U
Aldrin	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	1.8 U	3.9 U	1.8 U
Alpha-BHC	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	1.8 U	3.9 U	1.8 U
Alpha-Chlordane	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	20 J	34 J	1.8 U
Beta-BHC	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	1.8 U	3.9 U	1.8 U
Delta-BHC	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	1.8 U	3.9 U	1.8 U
Dieldrin	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	3.6 U	7.5 U	3.6 U
Endosulfan I	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	1.8 U	3.9 U	1.8 U
Endosulfan II	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	3.6 U	7.5 U	3.6 U
Endosulfan sulfate	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	3.6 U	7.5 U	3.6 U
Endrin	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	3.6 U	7.5 U	3.6 U
Endrin aldehyde	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	3.6 U	7.5 U	3.6 U
Endrin ketone	UG/KG	19 U	19 U	19 U	19 U	19 U	19 U	3.6 U	7.5 U	3.6 U
Gamma-BHC/Lindane	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	1.8 U	3.9 U	1.8 U
Gamma-Chlordane	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	18	24 J	1.8 U
Heptachlor	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	1.8 U	3.9 UJ	1.8 U
Heptachlor epoxide	UG/KG	9.7 U	9.9 U	9.7 U	9.7 U	9.7 U	9.7 U	1.8 U	3.9 U	1.8 U
Methoxychlor	UG/KG	97 U	99 U	97 U	97 U	97 U	97 U	18 U	39 U	18 UJ
Toxaphene	UG/KG	190 U	190 U	190 U	190 U	190 U	190 U	180 U	390 U	180 U
Aroclor-1016	UG/KG	38 U	38 U	38 U	38 U	38 U	38 U	36 U	38 U	36 U
Aroclor-1221	UG/KG	38 U	38 U	38 U	38 U	38 U	38 U	36 U	38 U	36 U
Aroclor-1232	UG/KG	38 U	38 U	38 U	38 U	38 U	38 U	36 U	38 U	36 U
Aroclor-1242	UG/KG	38 U	38 U	38 U	38 U	38 U	38 U	36 U	38 U	36 U
Aroclor-1248	UG/KG	38 U	38 U	38 U	38 U	38 U	38 U	36 U	38 U	36 U
Aroclor-1254	UG/KG	38 U	38 U	38 U	38 U	38 U	38 U	36 U	38 U	36 U
Aroclor-1260	UG/KG	38 U	38 U	38 U	38 U	38 U	38 U	36 U	38 U	36 U
Metals										

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-03-001-2	WS-59-03-001-3	WS-59-03-002-1	WS-59-03-002-2	WS-59-03-002-3	WS-59-03-002-4	WS-59-04-010-1	WS-59-04-010-10	WS-59-04-010-11
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	10400	11000	10700	11700	10700	11200	13100 J	12200 J	7740 J
Antimony	MG/KG	3.3 UJ	3.4 UJ	3.4 UJ	3.4 UJ	3.3 UJ	3.4 UJ	1.9 J	1.3 J	1.2 J
Arsenic	MG/KG	4.6	4.9	5.1	5.3	4.5	4.6	5.5 J	6.1 J	4.8 J
Barium	MG/KG	90.4	94.7	84	107	93.3	101	83.1 J	99.7 J	57.9 J
Beryllium	MG/KG	0.33	0.29	0.27	0.34	0.39	0.43	0.61	0.6	0.39
Cadmium	MG/KG	0.28 U	0.28 U	0.3 J	0.28 U	0.28 U	0.31 J	0.29 J	0.55	0.24 J
Calcium	MG/KG	28800	50900	42200	30700	55200	63400	9880	31600 J	67000
Chromium	MG/KG	16.6	17.6	18	18.1	16.6	17.5	20.7 J	18.5 J	11.5 J
Cobalt	MG/KG	7.8	7.9	9.5	8.4	7.7	8.2	7.7 J	8.1 J	8.7 J
Copper	MG/KG	28	21.7	21.8	24.7	22.7	23	25.3 J	33.6 J	20.1 J
Cyanide	MG/KG									
Iron	MG/KG	20200	21800	23200	22300	20500	21100	22100	20700	16500
Lead	MG/KG	20.5 J	19.5 J	20 J	24.4 J	17.7 J	24.4 J	16.5 J	39 J	9 J
Magnesium	MG/KG	6570	9690	10200	7720	12200	12100	5240 J	7630 J	12000 J
Manganese	MG/KG	360	361	375	327	366	464	307 J	459 J	455 J
Mercury	MG/KG	0.06	0.05	0.06	0.09	0.05	0.06	0.23 J	0.29 J	0.06
Nickel	MG/KG	25.7	25.9	28.9	26.2	25.3	26.8	29.7 J	24.8 J	21 J
Potassium	MG/KG	1060	1100	1030	1020	964	1100	1460 J	1570 J	1070 J
Selenium	MG/KG	0.55 U	0.57 U	0.57 U	0.56 U	0.56 U	0.56 U	0.44 U	0.41 U	0.37 U
Silver	MG/KG	0.55 U	0.57 U	0.57 U	0.56 U	0.56 U	0.56 U	2.3	2.8	0.29 J
Sodium	MG/KG	94	113	89.8	84.9	101	323	118 J	104 J	145 J
Thallium	MG/KG	0.55 U	0.6 J	0.57 U	0.56 U	0.56 U	0.56 U	0.22 U	0.21 U	0.18 U
Vanadium	MG/KG	17.3	18.8	18.8	19.6	17.8	19.5	20.4 J	21.3 J	12.8 J
Zinc	MG/KG	83.7 J	79.1 J	97.5 J	85.6 J	76.3 J	70.3 J	83.5 J	92.7 J	47.8 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Volatile Organics								
1,1,1-Trichloroethane	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	5.7 U
1,1,2,2-Tetrachloroethane	UG/KG	6 R	6 UJ	6 UJ	5 R	5 R	6 U	5.7 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 UJ	6 UJ	6 U	5 U	5 U	6 UJ	5.7 U
1,1,2-Trichloroethane	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
1,1-Dichloroethane	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	5.7 U
1,1-Dichloroethene	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	5.7 U
1,2,3-Trichloropropane	UG/KG							5.7 U
1,2,4-Trichlorobenzene	UG/KG	6 R	6 UJ	6 UJ	5 R	5 R	6 U	5.7 U
1,2-Dibromo-3-chloropropane	UG/KG	6 R	6 UJ	6 UJ	5 R	5 R	6 U	
1,2-Dibromoethane	UG/KG	6 UJ	6 U	6 UJ	5 UJ	5 UJ	6 U	
1,2-Dichlorobenzene	UG/KG	6 R	6 UJ	6 UJ	5 R	5 R	6 U	5.7 U
1,2-Dichloroethane	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	5.7 U
1,2-Dichloroethene (total)	UG/KG							
1,2-Dichloropropane	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
1,3-Dichlorobenzene	UG/KG	6 R	6 UJ	6 UJ	5 R	5 R	6 U	5.7 U
1,3-Dichloropropane	UG/KG							5.7 U
1,4-Dichlorobenzene	UG/KG	6 R	6 UJ	6 UJ	5 R	5 R	6 U	5.7 U
Acetone	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	23 U
Benzene	UG/KG	6 UJ	6 U	1 J	5 U	1 J	6 U	5.7 U
Bromodichloromethane	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
Bromoform	UG/KG	6 UJ	6 U	6 UJ	5 UJ	5 UJ	6 U	
Carbon disulfide	UG/KG	6 UJ	6 U	1 J	5 U	3 J	6 U	5.7 U
Carbon tetrachloride	UG/KG	6 UJ	6 U	6 U	5 UJ	5 U	6 U	5.7 U
Chlorobenzene	UG/KG	6 UJ	6 U	6 UJ	5 UJ	5 UJ	6 U	5.7 U
Chlorodibromomethane	UG/KG	6 UJ	6 U	6 UJ	5 UJ	5 UJ	6 U	5.7 U
Chloroethane	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	11 U
Chloroform	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	5.7 U
Cis-1,2-Dichloroethene	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
Cis-1,3-Dichloropropene	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
Cyclohexane	UG/KG	6 UJ	6 U	3 J	5 U	3 J	6 U	
Dichlorodifluoromethane	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
Ethyl benzene	UG/KG	6 UJ	6 U	6 UJ	5 UJ	5 UJ	6 U	5.7 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
Sample Depth to Top of Sample ⁽¹⁾		0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾		0	0	0	0	0	0	0
Sample Date		5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code		SA	SA	SA	SA	SA	SA	SA
Study ID		ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isopropylbenzene	UG/KG	6 UJ	6 U	6 UJ	5 UJ	5 UJ	6 U	
Meta/Para Xylene	UG/KG							5.7 U
Methyl Acetate	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
Methyl Tertbutyl Ether	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
Methyl bromide	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
Methyl butyl ketone	UG/KG	6 UJ	6 U	6 UJ	5 UJ	5 UJ	6 U	
Methyl chloride	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
Methyl cyclohexane	UG/KG	6 UJ	6 U	5 J	5 U	4 J	6 U	
Methyl ethyl ketone	UG/KG	6 UJ	6 U	6 U	5 UJ	5 U	6 U	11 U
Methyl isobutyl ketone	UG/KG	6 UJ	6 U	6 U	5 UJ	5 U	6 U	11 U
Methylene chloride	UG/KG	6 UJ	6 U	6 U	4 J	5 U	6 U	5.7 U
Ortho Xylene	UG/KG							5.7 U
Styrene	UG/KG	6 UJ	6 U	6 UJ	5 UJ	5 UJ	6 U	
Tetrachloroethene	UG/KG	6 UJ	6 U	6 UJ	5 UJ	5 UJ	6 U	5.7 U
Toluene	UG/KG	6 UJ	6 U	8	5 U	4 J	6 U	5.7 U
Total BTEX	MG/KG							
Total Xylenes	UG/KG	6 R	6 UJ	2 J	5 R	1 J	6 U	
Trans-1,2-Dichloroethene	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	5.7 U
Trans-1,3-Dichloropropene	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	
Trichloroethene	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	5.7 U
Trichlorofluoromethane	UG/KG	6 UJ	6 U	6 U	6 J	6 U	6 U	
Vinyl chloride	UG/KG	6 UJ	6 U	6 U	5 U	5 U	6 U	11 U
Semivolatile Organics								
1,1'-Biphenyl	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
1,2,4-Trichlorobenzene	UG/KG							
1,2-Dichlorobenzene	UG/KG							
1,3-Dichlorobenzene	UG/KG							
1,4-Dichlorobenzene	UG/KG							
2,2'-oxybis(1-Chloropropane)	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
2,4,5-Trichlorophenol	UG/KG	950 U	920 U	1900 U	920 U	940 U	920 U	380 U
2,4,6-Trichlorophenol	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
2,4-Dichlorophenol	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
2,4-Dimethylphenol	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
2,4-Dinitrophenol	UG/KG	950 U	920 U	1900 U	920 UJ	940 UJ	920 U	1900 U
2,4-Dinitrotoluene	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
2,6-Dinitrotoluene	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
2-Chloronaphthalene	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
2-Chlorophenol	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
2-Methylnaphthalene	UG/KG	380 U	110 J	150 J	65 J	370 U	370 U	380 U
2-Methylphenol	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
2-Nitroaniline	UG/KG	950 U	920 U	1900 U	920 U	940 U	920 U	1900 U
2-Nitrophenol	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U

Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
3,3'-Dichlorobenzidine	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
3-Nitroaniline	UG/KG	950 U	920 U	1900 U	920 U	940 U	920 U	1900 U
4,6-Dinitro-2-methylphenol	UG/KG	950 U	920 U	1900 U	920 UJ	940 UJ	920 U	
4-Bromophenyl phenyl ether	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
4-Chloro-3-methylphenol	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
4-Chloroaniline	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
4-Chlorophenyl phenyl ether	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
4-Methylphenol	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
4-Nitroaniline	UG/KG	950 U	920 U	1900 U	920 U	940 U	920 U	
4-Nitrophenol	UG/KG	950 U	920 U	1900 U	920 U	940 U	920 U	1900 U
Acenaphthene	UG/KG	380 U	310 J	610 J	290 J	60 J	65 J	380 U
Acenaphthylene	UG/KG	380 U	91 J	750 U	37 J	370 U	370 U	380 U
Acetophenone	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
Aniline	UG/KG							380 U
Anthracene	UG/KG	94 J	580	1200	570	130 J	180 J	380 U
Atrazine	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
Benzaldehyde	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
Benzo(a)anthracene	UG/KG	77 J	1100	2000	1300	360 J	690	66 J
Benzo(a)pyrene	UG/KG	78 J	990	1800	1200	330 J	660	380 U
Benzo(b)fluoranthene	UG/KG	100 J	1200	2100	1400	400	830	66 J
Benzo(ghi)perylene	UG/KG	42 J	480	850	600	190 J	330 J	380 U
Benzo(k)fluoranthene	UG/KG	40 J	470	920	530	170 J	340 J	76 J
Benzoic Acid	UG/KG							1900 U
Bis(2-Chloroethoxy)methane	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
Bis(2-Chloroethyl)ether	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
Bis(2-Chloroisopropyl)ether	UG/KG							
Bis(2-Ethylhexyl)phthalate	UG/KG	42 J	42 NJ	750 U	58 NJ	39 NJ	65 J	380 U
Butylbenzylphthalate	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
Caprolactam	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
Carbazole	UG/KG	380 U	320 J	690 J	330 J	78 J	93 J	
Chrysene	UG/KG	82 J	990	1900	1200 NJ	330 J	620	86 J
Di-n-butylphthalate	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
Di-n-octylphthalate	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
Dibenz(a,h)anthracene	UG/KG	380 U	140 J	270 J	190 J	56 J	94 J	380 U
Dibenzofuran	UG/KG	380 U	200 J	410 J	170 J	370 U	370 U	380 U
Diethyl phthalate	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
Dimethylphthalate	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
Fluoranthene	UG/KG	170 J	2200	4400	2300	670	1200	110 J
Fluorene	UG/KG	380 U	300 J	600 J	280 J	55 J	64 J	380 U
Hexachlorobenzene	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
Hexachlorobutadiene	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
Hexachlorocyclopentadiene	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	
Hexachloroethane	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
Indeno(1,2,3-cd)pyrene	UG/KG	47 J	530	970	690	200 J	380	40 J

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Isophorone	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
N-Nitrosodiphenylamine	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	370 U
N-Nitrosodipropylamine	UG/KG	380 U	360 U	750 U	370 UJ	370 UJ	370 U	370 U
Naphthalene	UG/KG	380 U	420	430 J	180 J	370 U	370 U	380 U
Nitrobenzene	UG/KG	380 U	360 U	750 UJ	370 U	370 U	370 U	380 U
Pentachlorophenol	UG/KG	950 U	920 U	1900 U	920 U	940 U	920 U	1900 U
Phenanthrene	UG/KG	95 J	2100	4400	1900	450	610	380 U
Phenol	UG/KG	380 U	360 U	750 U	370 U	370 U	370 U	380 U
Pyrene	UG/KG	140 J	1900	3500	2300	630	1200	120 J
Pyridine	UG/KG							1900 U
Total Unknown PAHs as SV	MG/KG							
Pesticides/PCBs								
4,4'-DDD	UG/KG	2.5 J	3.7 U	11	9.8	9.2 J	8.6	19 U
4,4'-DDE	UG/KG	3.1 J	10 J	24 J	16 NJ	8.1 NJ	6.4 NJ	19 U
4,4'-DDT	UG/KG	2.4 J	19	16	19	10	20	19 U
Aldrin	UG/KG	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	9.7 U
Alpha-BHC	UG/KG	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	9.7 U
Alpha-Chlordane	UG/KG	3.4 J	1.9 U	1.9 U	1.8 U	1.9 U	12	9.7 U
Beta-BHC	UG/KG	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	9.7 U
Delta-BHC	UG/KG	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	9.7 U
Dieldrin	UG/KG	3.8 U	3.7 U	3.8 U	3.6 U	3.7 U	3.7 U	19 U
Endosulfan I	UG/KG	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	9.7 U
Endosulfan II	UG/KG	3.8 U	3.7 U	3.8 U	3.6 U	3.7 U	3.7 U	19 U
Endosulfan sulfate	UG/KG	3.8 U	3.7 U	3.8 U	3.6 U	3.7 U	3.7 U	19 U
Endrin	UG/KG	3.8 U	3.7 U	3.8 U	3.6 U	3.7 U	3.7 U	19 U
Endrin aldehyde	UG/KG	3.8 U	3.7 U	3.8 U	3.6 U	3.7 U	3.7 U	19 U
Endrin ketone	UG/KG	3.8 U	3.7 U	3.8 U	3.6 U	3.7 U	3.7 U	19 U
Gamma-BHC/Lindane	UG/KG	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	9.7 U
Gamma-Chlordane	UG/KG	3.6 J	1.9 U	14 J	8	9.8 J	9.1	9.7 U
Heptachlor	UG/KG	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	9.7 U
Heptachlor epoxide	UG/KG	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	9.7 U
Methoxychlor	UG/KG	19 U	19 U	19 U	18 U	19 U	19 UJ	9.7 U
Toxaphene	UG/KG	190 U	190 U	190 U	180 U	190 U	190 U	190 U
Aroclor-1016	UG/KG	38 U	37 U	38 U	36 U	38 U	37 U	38 U
Aroclor-1221	UG/KG	38 U	37 U	38 U	36 U	38 U	37 U	38 U
Aroclor-1232	UG/KG	38 U	37 U	38 U	36 U	38 U	37 U	38 U
Aroclor-1242	UG/KG	38 U	37 U	38 U	36 U	38 U	37 U	38 U
Aroclor-1248	UG/KG	38 U	37 U	38 U	36 U	38 U	37 U	38 U
Aroclor-1254	UG/KG	38 U	37 U	38 U	36 U	38 U	37 U	38 U
Aroclor-1260	UG/KG	38 U	37 U	38 U	36 U	38 U	37 U	38 U
Metals								

**Table D-1
SEAD-59 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-04-010-3	WS-59-04-010-4	WS-59-04-010-5	WS-59-04-010-6	WS-59-04-010-7	WS-59-04-010-9	WS-59-OTHERC-001-1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Aluminum	MG/KG	10500 J	11400 J	12200	9710	7840	7710 J	13900
Antimony	MG/KG	1.5 J	2.2 J	2 J	1.8 J	1.1 J	1.3 J	3.3 UJ
Arsenic	MG/KG	5.6 J	6.5 J	8.4	4.9	5	3.9 J	5.9
Barium	MG/KG	74.7 J	81.6 J	90.3	84.2	65.3	97.9 J	130
Beryllium	MG/KG	0.5	0.59	0.63	0.47	0.4	0.38	0.53
Cadmium	MG/KG	0.33	0.38	0.54	0.49	0.46	0.38	0.46 J
Calcium	MG/KG	51900	57700	30400	46600	79200	81300	13900
Chromium	MG/KG	15.5 J	16.9 J	20.4 J	25.3 J	13.5 J	13.4 J	20.2
Cobalt	MG/KG	7.7 J	9.9 J	10.1 J	8.1 J	6.8 J	6.7 J	11.7
Copper	MG/KG	23.2 J	25.5 J	35.3	35.6	34.8	31.3 J	25.4
Cyanide	MG/KG							
Iron	MG/KG	19000	23600	24600 J	19700 J	17900 J	17200	25100 J
Lead	MG/KG	12.7 J	22.3 J	31 J	26.2 J	25 J	38.2 J	42.7 J
Magnesium	MG/KG	12800 J	7840 J	7590 J	9500 J	15500 J	19100 J	4280
Manganese	MG/KG	504 J	529 J	519 J	411 J	368 J	362 J	771 J
Mercury	MG/KG	0.14	0.27 J	0.42 J	0.95 J	0.51 J	0.4 J	0.16
Nickel	MG/KG	25 J	27 J	31.6 J	26.2 J	21.3 J	20.6 J	25.5
Potassium	MG/KG	1390 J	1640 J	1380	1140	1090	1030 J	1180
Selenium	MG/KG	0.44 U	0.45 U	0.43 U	0.43 U	0.43 U	0.37 U	0.56 U
Silver	MG/KG	0.94	0.8	2.1	2.6	2.1	1.9 J	0.56 U
Sodium	MG/KG	132 J	119 J	97.1	112	137	147 J	228
Thallium	MG/KG	0.22 U	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U	0.83 J
Vanadium	MG/KG	17.7 J	20.4 J	21.4	16.4	14.7	13.5 J	25
Zinc	MG/KG	60.7 J	75 J	87.4 J	81.3 J	72.9 J	61.6 J	86.1 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
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	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
1,1,2,2-Tetrachloroethane	UG/KG	5.7 UJ	5.7 U	5.8 U	5.7 U	5.5 UJ	5.5 U	5.7 U	5.7 R	5.8 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
1,1,2-Trichloroethane	UG/KG									
1,1-Dichloroethane	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
1,1-Dichloroethene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
1,2,3-Trichloropropane	UG/KG	5.7 UJ	5.7 U	5.8 U	5.7 U	5.5 UJ	5.5 U	5.7 U	5.7 R	5.8 U
1,2,4-Trichlorobenzene	UG/KG	5.7 UJ	5.7 U	5.8 U	5.7 U	5.5 UJ	5.5 U	5.7 U	5.7 R	5.8 U
1,2-Dibromo-3-chloropropane	UG/KG									
1,2-Dibromoethane	UG/KG									
1,2-Dichlorobenzene	UG/KG	5.7 UJ	5.7 U	5.8 U	5.7 U	5.5 UJ	5.5 U	5.7 U	5.7 R	5.8 U
1,2-Dichloroethane	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
1,2-Dichloropropane	UG/KG									
1,3-Dichlorobenzene	UG/KG	5.7 UJ	5.7 U	5.8 U	5.7 U	5.5 UJ	5.5 U	5.7 U	5.7 R	5.8 U
1,3-Dichloropropane	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 UJ	5.8 U
1,4-Dichlorobenzene	UG/KG	5.7 UJ	5.7 U	5.8 U	5.7 U	5.5 UJ	5.5 U	5.7 U	5.7 R	5.8 U
Acetone	UG/KG	23 U	23 U	23 U	23 U	22 U	46	4.8 J	5.4 J	25
Benzene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
Bromodichloromethane	UG/KG									
Bromoform	UG/KG									
Carbon disulfide	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
Carbon tetrachloride	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
Chlorobenzene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 UJ	5.8 U
Chlorodibromomethane	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 UJ	5.8 U
Chloroethane	UG/KG	11 U	11 U	12 U	11 U	11 U	11 U	11 U	11 U	12 U
Chloroform	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
Cis-1,2-Dichloroethene	UG/KG									
Cis-1,3-Dichloropropene	UG/KG									
Cyclohexane	UG/KG									
Dichlorodifluoromethane	UG/KG									
Ethyl benzene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 UJ	5.8 U
Isopropylbenzene	UG/KG									
Meta/Para Xylene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 UJ	5.8 U
Methyl Acetate	UG/KG									
Methyl Tertbutyl Ether	UG/KG									
Methyl bromide	UG/KG									
Methyl butyl ketone	UG/KG									
Methyl chloride	UG/KG									

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl cyclohexane	UG/KG									
Methyl ethyl ketone	UG/KG	11 U	11 U	12 U	11 U	11 U	11 U	11 U	11 U	2.7 J
Methyl isobutyl ketone	UG/KG	11 U	11 U	12 U	11 U	11 U	11 U	11 U	11 U	12 U
Methylene chloride	UG/KG	1.4 J	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
Ortho Xylene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 UJ	5.8 U
Styrene	UG/KG									
Tetrachloroethene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 UJ	5.8 U
Toluene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 UJ	5.8 U
Total Xylenes	UG/KG									
Trans-1,2-Dichloroethene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	5.5 U	5.5 U	5.7 U	5.7 U	5.8 U
Trans-1,3-Dichloropropene	UG/KG									
Trichloroethene	UG/KG	5.7 U	5.7 U	5.8 U	5.7 U	2.7 J	5.5 U	1.1 J	1.7 J	5.8 U
Trichlorofluoromethane	UG/KG									
Vinyl chloride	UG/KG	11 U	11 U	12 U	11 U	11 U	11 U	11 UJ	11 UJ	12 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG									
2,2'-oxybis(1-Chloropropane)	UG/KG									
2,4,5-Trichlorophenol	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
2,4,6-Trichlorophenol	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
2,4-Dichlorophenol	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
2,4-Dimethylphenol	UG/KG									
2,4-Dinitrophenol	UG/KG	9600 U	3900 U	2000 U	9600 U	9300 U	9400 U	9700 U	19000 UJ	9900 U
2,4-Dinitrotoluene	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
2,6-Dinitrotoluene	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
2-Chloronaphthalene	UG/KG									
2-Chlorophenol	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
2-Methylnaphthalene	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	210 J	3800 U	1200 J
2-Methylphenol	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
2-Nitroaniline	UG/KG	9600 U	3900 U	2000 U	9600 U	9300 U	9400 U	9700 U	19000 U	9900 U
2-Nitrophenol	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
3,3'-Dichlorobenzidine	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
3-Nitroaniline	UG/KG	9600 U	3900 U	2000 U	9600 U	9300 U	9400 U	9700 U	19000 U	9900 U
4,6-Dinitro-2-methylphenol	UG/KG									
4-Bromophenyl phenyl ether	UG/KG									
4-Chloro-3-methylphenol	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
4-Chloroaniline	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
4-Chlorophenyl phenyl ether	UG/KG									
4-Methylphenol	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
4-Nitroaniline	UG/KG									
4-Nitrophenol	UG/KG	9600 U	3900 U	2000 U	9600 U	9300 U	9400 U	9700 U	19000 U	9900 U
Acenaphthene	UG/KG	200 J	110 J	380 U	360 J	330 J	520 J	460 J	440 J	720 J
Acenaphthylene	UG/KG	1300 J	690 J	180 J	2400	3300	2500	2000	1600 J	2700
Acetophenone	UG/KG									
Aniline	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Anthracene	UG/KG	1000 J	730 J	150 J	2300	2400	2400	1900	2000 J	2800
Atrazine	UG/KG									

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Benzaldehyde	UG/KG									
Benzo(a)anthracene	UG/KG	2000	1700	440	5500	5300	5300	4300	5600	5200
Benzo(a)pyrene	UG/KG	2400 J	1800	500	6000	6400 J	6900	5400	7400	5400
Benzo(b)fluoranthene	UG/KG	1600 J	1200	400	4000	4300	4600	3900	5400	3600
Benzo(ghi)perylene	UG/KG	1800 J	910	400	4100	4500	4800	4200	4900	3300
Benzo(k)fluoranthene	UG/KG	1600 J	1300	380 J	4300	4100	4300	3700	5400	3600
Benzoic Acid	UG/KG	9600 UJ	3900 U	2000 U	9600 U	9300 UJ	9400 U	9700 UJ	19000 U	9900 UJ
Bis(2-Chloroethoxy)methane	UG/KG									
Bis(2-Chloroethyl)ether	UG/KG									
Bis(2-Ethylhexyl)phthalate	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Butylbenzylphthalate	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Caprolactam	UG/KG									
Carbazole	UG/KG									
Chrysene	UG/KG	2000	1700	460	5300	5100	5400	4400	5700	5000
Di-n-butylphthalate	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Di-n-octylphthalate	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Dibenz(a,h)anthracene	UG/KG	560 J	310 J	120 J	1400 J	1500 J	1600 J	1400 J	1500 J	1100 J
Dibenzofuran	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	210 J	1900 U	3800 U	490 J
Diethyl phthalate	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Dimethylphthalate	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Fluoranthene	UG/KG	3600 J	2900	840	9900	9600 J	11000	8900	9500	11000
Fluorene	UG/KG	1900 U	160 J	380 U	510 J	470 J	490 J	500 J	560 J	1300 J
Hexachlorobenzene	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Hexachlorobutadiene	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Hexachlorocyclopentadiene	UG/KG									
Hexachloroethane	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Indeno(1,2,3-cd)pyrene	UG/KG	1600 J	860	350 J	3600 J	4000 J	4500 J	3600 J	4700 J	3000 J
Isophorone	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
N-Nitrosodiphenylamine	UG/KG									
N-Nitrosodipropylamine	UG/KG									
Naphthalene	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	240 NJ	3800 U	1000 J
Nitrobenzene	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Pentachlorophenol	UG/KG	9600 U	3900 U	2000 U	9600 U	9300 U	9400 U	9700 U	19000 U	9900 U
Phenanthrene	UG/KG	1700 J	1600	370 J	5200	5200	5200	4400	4900	7800
Phenol	UG/KG	1900 U	760 U	380 U	1900 U	1800 U	1800 U	1900 U	3800 U	1900 U
Pyrene	UG/KG	3500 J	2500	820	9500	9000 J	9600	7400	8900	9800
Pyridine	UG/KG	9600 U	3900 U	2000 U	9600 U	9300 U	9400 U	9700 U	19000 U	9900 U
Pesticides/PCBs										
4,4'-DDD	UG/KG	120 J	25 J	19 U	23	18 UJ	20	49	90	28
4,4'-DDE	UG/KG	260 J	100	96	140 J	18 UJ	110 J	100	230	28
4,4'-DDT	UG/KG	520 J	150	78	110	18 UJ	52 J	130	190	51
Aldrin	UG/KG	38 U	9.7 U	9.9 U	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U
Alpha-BHC	UG/KG	38 U	9.7 U	9.9 U	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U
Alpha-Chlordane	UG/KG	38 U	9.7 U	23 J	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U
Beta-BHC	UG/KG	38 U	9.7 U	9.9 U	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U
Delta-BHC	UG/KG	38 U	9.7 U	9.9 U	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dieldrin	UG/KG	75 U	19 U	19 U	19 U	18 U	18 U	19 U	19 U	19 U
Endosulfan I	UG/KG	38 U	9.7 U	9.9 U	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U
Endosulfan II	UG/KG	75 U	19 U	19 U	19 U	18 U	18 U	19 U	19 U	19 U
Endosulfan sulfate	UG/KG	75 U	19 U	19 U	19 U	18 U	18 U	19 U	19 U	19 U
Endrin	UG/KG	75 U	19 U	19 U	19 U	18 U	18 U	19 U	19 U	19 U
Endrin aldehyde	UG/KG	75 U	19 U	19 U	19 U	18 U	18 U	19 U	19 U	19 U
Endrin ketone	UG/KG	75 U	19 U	19 U	19 U	18 U	18 U	19 U	19 U	19 U
Gamma-BHC/Lindane	UG/KG	38 U	9.7 U	9.9 U	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U
Gamma-Chlordane	UG/KG	38 U	9.7 U	21 J	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U
Heptachlor	UG/KG	38 U	9.7 U	9.9 U	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U
Heptachlor epoxide	UG/KG	38 U	9.7 U	9.9 U	9.6 U	9.3 U	9.4 U	9.7 U	9.7 U	10 U
Methoxychlor	UG/KG	380 U	97 U	99 U	96 U	93 U	94 U	97 U	97 U	99 U
Toxaphene	UG/KG	750 U	190 U	190 U	190 U	180 U	180 U	190 U	190 U	190 U
Aroclor-1016	UG/KG	37 U	38 U	38 U	37 U	36 U	36 U	38 U	38 U	39 U
Aroclor-1221	UG/KG	37 U	38 U	38 U	37 U	36 U	36 U	38 U	38 U	39 U
Aroclor-1232	UG/KG	37 U	38 U	38 U	37 U	36 U	36 U	38 U	38 U	39 U
Aroclor-1242	UG/KG	37 U	38 U	38 U	37 U	36 U	36 U	38 U	38 U	39 U
Aroclor-1248	UG/KG	37 U	38 U	38 U	37 U	36 U	36 U	38 U	38 U	39 U
Aroclor-1254	UG/KG	37 U	38 U	38 U	37 U	36 U	36 U	38 U	38 U	39 U
Aroclor-1260	UG/KG	37 U	38 U	38 U	37 U	36 U	36 U	38 U	38 U	39 U
Metals										
Aluminum	MG/KG	9910	11000	13400	9740	10700	11900	10900	11400	10800
Antimony	MG/KG	3.4 UJ	3.4 UJ	3.4 UJ	3.4 UJ	3.2 UJ	3.3 UJ	3.3 UJ	3.4 UJ	3.4 UJ
Arsenic	MG/KG	5.8 J	4.1	5.4	4.5	4.8 J	5.1	5.1 J	5.8 J	4.8 J
Barium	MG/KG	85.1	88.1	128	93.5	80.1	99.5	88.6	90.8	98
Beryllium	MG/KG	0.27	0.69	0.16	0.2	0.27	0.21	0.34	0.58	0.36
Cadmium	MG/KG	0.61	0.28 U	0.67	0.57 J	0.66	0.43 J	0.73	0.76	0.62
Calcium	MG/KG	52900	25000	17500	45300	59000	70600	46900	41200	41600
Chromium	MG/KG	17	19	20.6	25.6	18.8	19.1	22.5	21.3	19.4
Cobalt	MG/KG	10.2	8.6	10.2	9.1	10.4	10.5	11.3	13.9	10.1
Copper	MG/KG	28.2 J	30.5 J	31.8	32.3	29.1 J	31.3	32.5 J	43.6 J	37.4 J
Iron	MG/KG	18100	20600	22200	18800	19600	21500	21300	21200	18800
Lead	MG/KG	50.9	55.3 J	38.1	82.9	69.1	56.7	77	51.8	64.6
Magnesium	MG/KG	9070	5680	6320	7410	8020	8340	7390	7690	7170
Manganese	MG/KG	461	387	529	451	529	642	547	476	479
Mercury	MG/KG	0.06	0.08	0.1	0.06	0.04	0.05	0.07	0.08	0.04
Nickel	MG/KG	26.9	25.5	26.5	26.3	30	26.5	33.8	36.1	28
Potassium	MG/KG	1060	1180	1320	1060	1050	1190	1120	1200	1120
Selenium	MG/KG	0.57 U	0.57 U	0.56 U	0.57 UJ	0.53 U	0.54 UJ	0.55 U	0.57 U	0.56 U
Silver	MG/KG	0.57 UJ	0.57 U	0.6 J	0.57 U	0.53 UJ	0.54 U	0.55 UJ	0.57 UJ	1.1 J
Sodium	MG/KG	178	111	68.5	93	148	107	225	192 J	151 J
Thallium	MG/KG	0.57 U	0.57 U	0.87 J	0.57 U	0.53 U	0.69 J	0.55 U	0.65 J	0.69 J
Vanadium	MG/KG	18.6	20.1	23	17.1	18.3	20.6	19.5	19.9	18.9
Zinc	MG/KG	135 J	81.9 J	87.9	89.8	87.2 J	110	106 J	185 J	84 J

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1	WS-59-01-007-1
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	FD-59-WS-03	WS-59-01-005-4	WS-59-01-005-5	WS-59-01-006-1	WS-59-01-006-12	WS-59-01-006-3	WS-59-01-006-7	WS-59-01-006-9	WS-59-01-007-1	WS-59-01-007-1
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
J = the reported value is an estimated concentration
UJ = the compound was not detected; the associated reporting limit is approximate
R = the data was rejected in the data validating process
NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	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	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,1,2,2-Tetrachloroethane	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,1,2-Trichloroethane	UG/KG										
1,1-Dichloroethane	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,1-Dichloroethene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,2,3-Trichloropropane	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,2,4-Trichlorobenzene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,2-Dibromo-3-chloropropane	UG/KG										
1,2-Dibromoethane	UG/KG										
1,2-Dichlorobenzene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,2-Dichloroethane	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,2-Dichloropropane	UG/KG										
1,3-Dichlorobenzene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,3-Dichloropropane	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
1,4-Dichlorobenzene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Acetone	UG/KG	17 J	23 U	22 U	5.1 J	22 U	25	5.8 J	23 U	23 U	24 U
Benzene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Bromodichloromethane	UG/KG										
Bromoform	UG/KG										
Carbon disulfide	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Carbon tetrachloride	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Chlorobenzene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Chlorodibromomethane	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Chloroethane	UG/KG	11 U	12 U	11 U	12 U	11 U	11 U	11 U	12 U	11 U	12 U
Chloroform	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Cis-1,2-Dichloroethene	UG/KG										
Cis-1,3-Dichloropropene	UG/KG										
Cyclohexane	UG/KG										
Dichlorodifluoromethane	UG/KG										
Ethyl benzene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Isopropylbenzene	UG/KG										
Meta/Para Xylene	UG/KG	5.6 U	5.8 U	5.6 U	2.3 J	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Methyl Acetate	UG/KG										
Methyl Tertbutyl Ether	UG/KG										
Methyl bromide	UG/KG										
Methyl butyl ketone	UG/KG										
Methyl chloride	UG/KG										

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl cyclohexane	UG/KG										
Methyl ethyl ketone	UG/KG	4.6 J	12 U	11 U	2.6 J	11 U	11 U	11 U	12 U	11 U	12 U
Methyl isobutyl ketone	UG/KG	11 U	12 U	11 U	12 U	11 U	11 U	11 U	12 U	11 U	12 U
Methylene chloride	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Ortho Xylene	UG/KG	5.6 U	5.8 U	5.6 U	1.6 J	1 J	5.7 U	5.7 U	5.8 U	1.4 J	1.7 J
Styrene	UG/KG										
Tetrachloroethene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Toluene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Total Xylenes	UG/KG										
Trans-1,2-Dichloroethene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	5.6 U	5.9 U
Trans-1,3-Dichloropropene	UG/KG										
Trichloroethene	UG/KG	5.6 U	5.8 U	5.6 U	5.8 U	5.6 U	5.7 U	5.7 U	5.8 U	1.4 J	5.9 U
Trichlorofluoromethane	UG/KG										
Vinyl chloride	UG/KG	11 U	12 U	11 U	12 U	11 U	11 U	11 U	12 U	11 U	12 U
Semivolatile Organics											
1,1'-Biphenyl	UG/KG										
2,2'-oxybis(1-Chloropropane)	UG/KG										
2,4,5-Trichlorophenol	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
2,4,6-Trichlorophenol	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
2,4-Dichlorophenol	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
2,4-Dimethylphenol	UG/KG										
2,4-Dinitrophenol	UG/KG	9500 U	9900 U	9600 U	9900 U	19000 U	9700 UJ	9700 U	9900 U	19000 U	10000 U
2,4-Dinitrotoluene	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
2,6-Dinitrotoluene	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
2-Chloronaphthalene	UG/KG										
2-Chlorophenol	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
2-Methylnaphthalene	UG/KG	1800 U	1900 U	290 J	860 J	600 J	240 J	1900 U	1900 U	3700 U	610 J
2-Methylphenol	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
2-Nitroaniline	UG/KG	9500 U	9900 U	9600 U	9900 U	19000 U	9700 U	9700 U	9900 U	19000 U	10000 U
2-Nitrophenol	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
3,3'-Dichlorobenzidine	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
3-Nitroaniline	UG/KG	9500 U	9900 U	9600 U	9900 U	19000 U	9700 U	9700 U	9900 U	19000 U	10000 U
4,6-Dinitro-2-methylphenol	UG/KG										
4-Bromophenyl phenyl ether	UG/KG										
4-Chloro-3-methylphenol	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
4-Chloroaniline	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
4-Chlorophenyl phenyl ether	UG/KG										
4-Methylphenol	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
4-Nitroaniline	UG/KG										
4-Nitrophenol	UG/KG	9500 U	9900 U	9600 U	9900 U	19000 U	9700 U	9700 U	9900 U	19000 U	10000 U
Acenaphthene	UG/KG	250 J	370 J	580 J	780 J	1500 J	340 J	370 J	410 J	780 J	630 J
Acenaphthylene	UG/KG	960 J	1300 J	2200	1600 J	3500 J	1100 J	1500 J	1200 J	3000 J	1500 J
Acetophenone	UG/KG										
Aniline	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Anthracene	UG/KG	880 J	1300 J	2300	2200	6600	1400 J	1300 J	1600 J	3100 J	2500
Atrazine	UG/KG										

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Benzaldehyde	UG/KG										
Benzo(a)anthracene	UG/KG	2200	3000	5400	3800	13000	4300	3600	3400	6900	5400
Benzo(a)pyrene	UG/KG	2700	3100	5900	4300	14000	4600	4400	3600	8200	5800
Benzo(b)fluoranthene	UG/KG	2000	2300	4300	2900	9800	3300	3200	2800	5800	3900
Benzo(ghi)perylene	UG/KG	1700 J	1600 J	2900	2100	6800	2600	3000	2000	4200	3300
Benzo(k)fluoranthene	UG/KG	2000	2400	4500	3200	11000	3400	3400	2700	6300	3900
Benzoic Acid	UG/KG	9500 U	9900 U	9600 U	9900 U	19000 U	9700 U	9700 U	9900 U	19000 U	10000 U
Bis(2-Chloroethoxy)methane	UG/KG										
Bis(2-Chloroethyl)ether	UG/KG										
Bis(2-Ethylhexyl)phthalate	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Butylbenzylphthalate	UG/KG	1800 UJ	1900 UJ	1900 UJ	1900 UJ	3700 UJ	1900 U	1900 U	1900 UJ	3700 UJ	2000 U
Caprolactam	UG/KG										
Carbazole	UG/KG										
Chrysene	UG/KG	2300	3200	5400	3800	13000	4200	3600	3300	7000	5400 J
Di-n-butylphthalate	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Di-n-octylphthalate	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Dibenz(a,h)anthracene	UG/KG	550 J	550 J	1100 J	780 J	2500 J	870 J	940 J	740 J	1600 J	1200 J
Dibenzofuran	UG/KG	1800 U	1900 U	380 J	630 J	900 J	190 J	200 J	270 J	460 J	440 J
Diethyl phthalate	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Dimethylphthalate	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Fluoranthene	UG/KG	4400	7500	11000	8100	29000	7600	7000	7200	14000	9300
Fluorene	UG/KG	240 J	420 J	810 J	1400 J	2300 J	470 J	460 J	730 J	1100 J	1100 J
Hexachlorobenzene	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Hexachlorobutadiene	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Hexachlorocyclopentadiene	UG/KG										
Hexachloroethane	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Indeno(1,2,3-cd)pyrene	UG/KG	1600 J	1600 J	2800 J	2000 J	7000 J	2500 J	2600 J	2000 J	4100 J	3100 J
Isophorone	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
N-Nitrosodiphenylamine	UG/KG										
N-Nitrosodipropylamine	UG/KG										
Naphthalene	UG/KG	1800 U	220 NJ	500 J	1200 J	880 J	260 J	200 J	1900 U	440 NJ	510 J
Nitrobenzene	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Pentachlorophenol	UG/KG	9500 U	9900 U	9600 U	9900 U	19000 U	9700 U	9700 U	9900 U	19000 U	10000 U
Phenanthrene	UG/KG	2200	4000	6000	6400	17000	3000	3600	4800	7700	7100
Phenol	UG/KG	1800 U	1900 U	1900 U	1900 U	3700 U	1900 U	1900 U	1900 U	3700 U	2000 U
Pyrene	UG/KG	3500	5600	9300	6300	19000	6500	7100	6100	11000	9000
Pyridine	UG/KG	9500 U	9900 U	9600 U	9900 U	19000 U	9700 U	9700 U	9900 U	19000 U	10000 U
Pesticides/PCBs											
4,4'-DDD	UG/KG	19	30	29	65	27	19 U	53	26	21	29
4,4'-DDE	UG/KG	22	52 J	35	96 J	47	50	47	42 J	29	21
4,4'-DDT	UG/KG	20	34	29	95	59	52	32	33	43	37 J
Aldrin	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U
Alpha-BHC	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U
Alpha-Chlordane	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U
Beta-BHC	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U
Delta-BHC	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dieldrin	UG/KG	18 U	19 U	19 U	19 U	18 U	19 U	19 U	19 U	20 U	
Endosulfan I	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U
Endosulfan II	UG/KG	18 U	19 U	19 U	19 U	18 U	19 U	19 U	19 U	19 U	20 U
Endosulfan sulfate	UG/KG	18 U	19 U	19 U	19 U	18 U	19 U	19 U	19 U	19 U	20 U
Endrin	UG/KG	18 U	19 U	19 U	19 U	18 U	19 U	19 U	19 U	19 U	20 U
Endrin aldehyde	UG/KG	18 U	19 U	19 U	19 U	18 U	19 U	19 U	19 U	19 U	20 U
Endrin ketone	UG/KG	18 U	19 U	19 U	19 U	18 U	19 U	19 U	19 U	19 U	20 U
Gamma-BHC/Lindane	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U
Gamma-Chlordane	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U
Heptachlor	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U
Heptachlor epoxide	UG/KG	9.5 U	9.9 U	9.6 U	9.9 U	9.5 U	9.7 U	9.7 U	10 U	9.6 U	10 U
Methoxychlor	UG/KG	95 U	99 U	96 U	99 U	95 U	97 U	97 U	99 U	96 U	100 U
Toxaphene	UG/KG	180 U	190 U	190 U	190 U	180 U	190 U	190 U	190 U	190 U	200 U
Aroclor-1016	UG/KG	37 U	38 U	37 U	38 U	37 U	38 U	38 U	38 U	37 U	39 U
Aroclor-1221	UG/KG	37 U	38 U	37 U	38 U	37 U	38 U	38 U	38 U	37 U	39 U
Aroclor-1232	UG/KG	37 U	38 U	37 U	38 U	37 U	38 U	38 U	38 U	37 U	39 U
Aroclor-1242	UG/KG	37 U	38 U	37 U	38 U	37 U	38 U	38 U	38 U	37 U	39 U
Aroclor-1248	UG/KG	37 U	38 U	37 U	38 U	37 U	38 U	38 U	38 U	37 U	39 U
Aroclor-1254	UG/KG	37 U	38 U	37 U	38 U	37 U	38 U	38 U	38 U	37 U	39 U
Aroclor-1260	UG/KG	37 U	38 U	37 U	38 U	37 U	38 U	38 U	38 U	37 U	39 U
Metals											
Aluminum	MG/KG	8340	8800	10400	11000	10700	11300	10700	10900	9580	12200
Antimony	MG/KG	3.2 UJ	3.4 UJ	3.3 UJ	3.5 UJ	3.3 UJ	3.4 UJ	3.3 UJ	3.4 UJ	3.2 UJ	3.5 UJ
Arsenic	MG/KG	4.4	4.6	5.9	5	4.6	5 J	4.5	4.9	4.8	5.2
Barium	MG/KG	74.7	69.7	81.4	87.8	78.5	89.6	84.9	95.4	81.5	101
Beryllium	MG/KG	0.21	0.28	0.3	0.4	0.38	0.38	0.28	0.32	0.27	0.36 J
Cadmium	MG/KG	0.7	0.64	0.72	0.72	0.72	0.66	0.76	0.64	0.66	0.52 J
Calcium	MG/KG	94200	64700	59200	39800	54000	33400	53300	36800	82600	33800 J
Chromium	MG/KG	21.4	17.7	18	19.2	19.6	31.8	19.9	18.7	17.6	20.5
Cobalt	MG/KG	8.1	8.2	13.9	11.5	11	11.5	10.4	9.7	10.8	10.3
Copper	MG/KG	27.3	25.9	36.2	38.3	30.8	31.4 J	28.2	33.9	26.9	29.4
Iron	MG/KG	16100	16500	20900	21200	20900	20300	19300	19800	18200	21900
Lead	MG/KG	66.2 J	47.9 J	59.4 J	45.5 J	32.7 J	42.9	77.5 J	38.8 J	37.4 J	33.9 J
Magnesium	MG/KG	8830	9950	10200	7750	10200	7020	8370	7020	10300	7700 J
Manganese	MG/KG	438	419	453	499	510	474	475	459	560	416
Mercury	MG/KG	0.1	0.07	0.05	0.07	0.04	0.08	0.05	0.05	0.06	0.11
Nickel	MG/KG	26.5	26.3	56.6	31.2	33.3	31.7	33.2	27.9	28.7	30.7
Potassium	MG/KG	939	949	1090	1110	1120	1150	1090	1080	1080	1490
Selenium	MG/KG	0.53 U	0.56 UJ	0.55 UJ	0.58 UJ	0.69 J	0.56 U	0.56 U	0.57 U	0.54 U	0.59 U
Silver	MG/KG	0.53 UJ	0.56 UJ	0.55 UJ	0.58 UJ	0.55 UJ	0.56 J	0.56 UJ	0.57 UJ	0.54 UJ	0.59 U
Sodium	MG/KG	121	136	123	118	106	237 J	115	110	128	174
Thallium	MG/KG	0.53 U	0.67 J	0.6 J	0.58 U	0.6 J	0.56 U	0.56 U	0.57 U	0.59 J	0.78 J
Vanadium	MG/KG	35.4	23.2	20.8	21.2	18.6	19.4	20.2	21.1	18.7	22.9
Zinc	MG/KG	90.8	87.4	78.6	98.1	85.5	113 J	88.9	88.5	77.9	118 J

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-007-10	WS-59-01-007-11	WS-59-01-007-12	WS-59-01-007-13	WS-59-01-007-14	WS-59-01-007-2	WS-59-01-007-5	WS-59-01-007-6	WS-59-01-007-8	WS-59-01-008-1	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	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	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
1,1,2,2-Tetrachloroethane	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.6 U	5.8 U	5 UJ	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
1,1,2-Trichloroethane	UG/KG			5 U	6 UJ						6 U
1,1-Dichloroethane	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
1,1-Dichloroethene	UG/KG	5.6 U	5.8 U	1 J	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
1,2,3-Trichloropropane	UG/KG	5.6 U	5.8 U			5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	
1,2,4-Trichlorobenzene	UG/KG	5.6 U	5.8 U			5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	
1,2-Dibromo-3-chloropropane	UG/KG			5 U	6 UJ						6 UJ
1,2-Dibromoethane	UG/KG			5 U	6 UJ						6 U
1,2-Dichlorobenzene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 UJ
1,2-Dichloroethane	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
1,2-Dichloropropane	UG/KG			5 U	6 UJ						6 U
1,3-Dichlorobenzene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 UJ
1,3-Dichloropropane	UG/KG	5.6 U	5.8 U			5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	
1,4-Dichlorobenzene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 UJ
Acetone	UG/KG	22 U	23 U	5 U	6 UJ	23 U	22 U	23 U	22 U	24 U	69 NJ
Benzene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Bromodichloromethane	UG/KG			5 U	6 UJ						6 U
Bromoform	UG/KG			5 U	6 UJ						6 U
Carbon disulfide	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Carbon tetrachloride	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Chlorobenzene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Chlorodibromomethane	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Chloroethane	UG/KG	11 U	12 U	5 U	6 UJ	11 U	11 U	12 U	11 U	12 U	6 U
Chloroform	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Cis-1,2-Dichloroethene	UG/KG			5 U	6 UJ						6 U
Cis-1,3-Dichloropropene	UG/KG			5 U	6 UJ						6 U
Cyclohexane	UG/KG			5 U	6 UJ						6 U
Dichlorodifluoromethane	UG/KG			5 U	6 UJ						6 U
Ethyl benzene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Isopropylbenzene	UG/KG			5 U	6 UJ						6 U
Meta/Para Xylene	UG/KG	5.6 U	5.8 U			5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	
Methyl Acetate	UG/KG			5 U	6 UJ						6 U
Methyl Tertbutyl Ether	UG/KG			5 U	6 UJ						6 U
Methyl bromide	UG/KG			5 U	6 UJ						6 U
Methyl butyl ketone	UG/KG			5 U	6 UJ						6 U
Methyl chloride	UG/KG			5 U	6 UJ						6 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl cyclohexane	UG/KG			5 U	6 UJ						6 U
Methyl ethyl ketone	UG/KG	11 U	12 U	5 U	6 UJ	11 U	11 U	12 U	11 U	12 U	7 J
Methyl isobutyl ketone	UG/KG	11 U	12 U	5 U	6 UJ	11 U	11 U	12 U	11 U	12 U	6 U
Methylene chloride	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Ortho Xylene	UG/KG	5.6 U	5.8 U			5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	
Styrene	UG/KG			5 U	6 UJ						6 U
Tetrachloroethene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Toluene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Total Xylenes	UG/KG			3 J	6 UJ						6 UJ
Trans-1,2-Dichloroethene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Trans-1,3-Dichloropropene	UG/KG			5 U	6 UJ						6 U
Trichloroethene	UG/KG	5.6 U	5.8 U	5 U	6 UJ	5.7 U	5.6 U	5.8 U	5.6 U	5.9 U	6 U
Trichlorofluoromethane	UG/KG			5 U	6 UJ						6 U
Vinyl chloride	UG/KG	11 U	12 U	5 U	6 UJ	11 U	11 U	12 U	11 U	12 U	6 U
Semivolatile Organics											
1,1'-Biphenyl	UG/KG			1800 U	1900 U						59 J
2,2'-oxybis(1-Chloropropane)	UG/KG			1800 U	1900 U						380 U
2,4,5-Trichlorophenol	UG/KG	3700 U	1900 U	4500 U	4700 U	750 U	1900 U	3800 U	1800 U	2000 U	950 U
2,4,6-Trichlorophenol	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
2,4-Dichlorophenol	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
2,4-Dimethylphenol	UG/KG			1800 U	1900 U						380 U
2,4-Dinitrophenol	UG/KG	19000 U	9900 U	4500 U	4700 U	3900 U	9600 U	20000 U	9500 U	10000 U	950 UJ
2,4-Dinitrotoluene	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
2,6-Dinitrotoluene	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
2-Chloronaphthalene	UG/KG			1800 U	1900 U						380 U
2-Chlorophenol	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
2-Methylnaphthalene	UG/KG	3700 U	570 J	940 J	240 J	750 U	490 J	3800 U	580 J	210 J	300 J
2-Methylphenol	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
2-Nitroaniline	UG/KG	19000 U	9900 U	4500 U	4700 U	3900 U	9600 U	20000 U	9500 U	10000 U	950 U
2-Nitrophenol	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
3,3'-Dichlorobenzidine	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 UJ
3-Nitroaniline	UG/KG	19000 U	9900 U	4500 U	4700 U	3900 U	9600 U	20000 U	9500 U	10000 U	950 U
4,6-Dinitro-2-methylphenol	UG/KG			4500 U	4700 U						950 U
4-Bromophenyl phenyl ether	UG/KG			1800 U	1900 U						380 U
4-Chloro-3-methylphenol	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
4-Chloroaniline	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 UJ
4-Chlorophenyl phenyl ether	UG/KG			1800 U	1900 U						380 U
4-Methylphenol	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
4-Nitroaniline	UG/KG			4500 U	4700 U						950 U
4-Nitrophenol	UG/KG	19000 U	9900 U	4500 U	4700 U	3900 U	9600 U	20000 U	9500 U	10000 U	950 U
Acenaphthene	UG/KG	530 J	660 J	1200 J	420 J	120 J	560 J	900 J	1300 J	520 J	440
Acenaphthylene	UG/KG	2700 J	2200	1600 J	1400 J	620 J	1700 J	3200 J	3300	2600	930
Acetophenone	UG/KG			1800 U	1900 U						380 U
Aniline	UG/KG	3700 U	1900 U			750 U	1900 U	3800 U	1800 U	2000 U	
Anthracene	UG/KG	2400 J	2900	4100	2300	540 J	2200	4300	4900	2500	1500
Atrazine	UG/KG			1800 U	1900 U						380 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	
Benzaldehyde	UG/KG			1800 U	1900 U					380 U	
Benzo(a)anthracene	UG/KG	8400	7800	8200	6900	1600	5800	14000	12000	7700	5700 NJ
Benzo(a)pyrene	UG/KG	11000	9400	9500	7400	1900	6300	16000	15000	9900	5700
Benzo(b)fluoranthene	UG/KG	7300	6700	10000	8100	1600	4600	11000	11000	7700	6500
Benzo(ghi)perylene	UG/KG	6400	5500	5400	4200	1000	3100	8000	7000	5200	2700 J
Benzo(k)fluoranthene	UG/KG	7200	6500	4200	3200	1600	5100	13000	11000	7600	3200
Benzoic Acid	UG/KG	19000 U	9900 U			3900 UJ	9600 UJ	20000 UJ	9500 UJ	10000 UJ	
Bis(2-Chloroethoxy)methane	UG/KG			1800 U	1900 U						380 U
Bis(2-Chloroethyl)ether	UG/KG			1800 U	1900 U						380 U
Bis(2-Ethylhexyl)phthalate	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	130 NJ
Butylbenzylphthalate	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 UJ
Caprolactam	UG/KG			1800 U	1900 U						380 U
Carbazole	UG/KG			1100 J	320 J						240 J
Chrysene	UG/KG	8500	7900	8000	6600	1600	5900	13000	12000	7700	5600
Di-n-butylphthalate	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
Di-n-octylphthalate	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 UJ
Dibenz(a,h)anthracene	UG/KG	2200 J	1900 J	1600 J	1200 J	330 J	1100 J	2800 J	2600 J	1900 J	820 J
Dibenzofuran	UG/KG	3700 U	460 J	950 J	230 J	750 U	420 J	510 J	770 J	240 J	260 J
Diethyl phthalate	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
Dimethylphthalate	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
Fluoranthene	UG/KG	14000	14000	13000	12000	2900	10000	23000	21000	12000	7300
Fluorene	UG/KG	700 J	1200 J	1900	700 J	140 J	880 J	1200 J	1800 J	700 J	690
Hexachlorobenzene	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
Hexachlorobutadiene	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
Hexachlorocyclopentadiene	UG/KG			1800 U	1900 U						380 U
Hexachloroethane	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
Indeno(1,2,3-cd)pyrene	UG/KG	5900 J	5200 J	5800	4500	1000 J	3000 J	8000 J	7000 J	5100 J	2600 J
Isophorone	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
N-Nitrosodiphenylamine	UG/KG			1800 U	1900 U						380 U
N-Nitrosodipropylamine	UG/KG			1800 U	1900 U						380 U
Naphthalene	UG/KG	3700 U	370 J	1100 J	260 J	750 U	520 J	400 J	570 J	270 J	350 J
Nitrobenzene	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
Pentachlorophenol	UG/KG	19000 U	9900 U	4500 U	4700 U	3900 U	9600 U	20000 U	9500 U	10000 U	950 U
Phenanthrene	UG/KG	4500	7600	12000	5200	1400	6400	9500	12000	4600	3400
Phenol	UG/KG	3700 U	1900 U	1800 U	1900 U	750 U	1900 U	3800 U	1800 U	2000 U	380 U
Pyrene	UG/KG	13000	12000	13000	14000	2600	8900	20000	18000	11000	9300
Pyridine	UG/KG	19000 U	9900 U			3900 U	9600 U	20000 U	9500 U	10000 U	
Pesticides/PCBs											
4,4'-DDD	UG/KG	19	43	60 J	15 J	95	70	35	48	20 U	9.3 NJ
4,4'-DDE	UG/KG	18 U	19 U	36 NJ	28 NJ	51 J	130	71	120	51	24 NJ
4,4'-DDT	UG/KG	33 J	35	110 J	38 J	70 J	160	110 J	120	45 J	7
Aldrin	UG/KG	9.5 U	10 U	9.2 U	1.9 U	9.6 U	9.6 U	9.9 U	9.5 U	10 U	2 U
Alpha-BHC	UG/KG	9.5 U	10 U	9.2 U	4.4	9.6 U	9.6 U	9.9 U	9.5 U	10 U	2 U
Alpha-Chlordane	UG/KG	9.5 U	10 U	9.2 U	15	9.6 U	18 J	9.9 U	27 J	10 U	2 U
Beta-BHC	UG/KG	9.5 U	10 U	9.2 U	1.9 U	9.6 U	9.6 U	9.9 U	9.5 U	10 U	2 U
Delta-BHC	UG/KG	9.5 U	10 U	9.2 U	1.9 U	9.6 U	9.6 U	9.9 U	9.5 U	10 U	2 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dieldrin	UG/KG	18 U	19 U	18 U	3.8 U	19 U	19 U	18 U	20 U	19 U	3.8 U
Endosulfan I	UG/KG	9.5 U	10 U	9.2 U	1.9 U	9.6 U	9.6 U	9.9 U	9.5 U	10 U	2 U
Endosulfan II	UG/KG	18 U	19 U	18 U	3.8 U	19 U	19 U	19 U	18 U	20 U	3.8 U
Endosulfan sulfate	UG/KG	18 U	19 U	18 U	3.8 U	19 U	19 U	19 U	18 U	20 U	3.8 U
Endrin	UG/KG	18 U	19 U	18 U	3.8 U	19 U	19 U	19 U	18 U	20 U	3.8 U
Endrin aldehyde	UG/KG	18 U	19 U	18 U	3.8 U	19 U	19 U	19 U	18 U	20 U	3.8 U
Endrin ketone	UG/KG	18 U	19 U	18 U	15 J	19 U	19 U	19 U	18 U	20 U	3.8 U
Gamma-BHC/Lindane	UG/KG	9.5 U	10 U	9.2 U	1.9 U	9.6 U	9.6 U	9.9 U	9.5 U	10 U	2 U
Gamma-Chlordane	UG/KG	9.5 U	10 U	9.2 U	7.9	9.6 U	15	9.9 U	21 J	10 U	2 U
Heptachlor	UG/KG	9.5 U	10 U	9.2 UJ	1.9 UJ	9.6 U	9.6 U	9.9 U	9.5 U	10 U	2 U
Heptachlor epoxide	UG/KG	9.5 U	10 U	9.2 U	1.9 U	9.6 U	9.6 U	9.9 U	9.5 U	10 U	2 U
Methoxychlor	UG/KG	95 U	99 U	92 U	19 U	96 U	96 U	99 U	95 U	100 U	20 U
Toxaphene	UG/KG	180 U	190 U	920 U	190 U	190 U	190 U	190 U	180 U	200 U	200 U
Aroclor-1016	UG/KG	37 U	39 U	36 U	38 U	37 U	37 U	38 U	37 U	39 U	38 U
Aroclor-1221	UG/KG	37 U	39 U	36 U	38 U	37 U	37 U	38 U	37 U	39 U	38 U
Aroclor-1232	UG/KG	37 U	39 U	36 U	38 U	37 U	37 U	38 U	37 U	39 U	38 U
Aroclor-1242	UG/KG	37 U	39 U	36 U	38 U	37 U	37 U	38 U	37 U	39 U	38 U
Aroclor-1248	UG/KG	37 U	39 U	36 U	38 U	37 U	37 U	38 U	37 U	39 U	38 U
Aroclor-1254	UG/KG	37 U	39 U	36 U	38 U	37 U	37 U	38 U	37 U	39 U	38 U
Aroclor-1260	UG/KG	37 U	39 U	36 U	38 U	37 U	37 U	38 U	37 U	39 U	38 U
Metals											
Aluminum	MG/KG	11100	10500	12300 J	12600 J	9220	9890	7260	10300	11200	10800 J
Antimony	MG/KG	3.2 UJ	3.5 UJ	1.9 J	1.3 J	15.6 J	3.2 UJ	3.5 UJ	3.4 UJ	3.5 UJ	1.7 J
Arsenic	MG/KG	4.9	4.1	5.4 J	5.8 J	3.6 J	4.7 J	3.9 J	4 J	4.7 J	5 J
Barium	MG/KG	82.6	115	84.7 J	104 J	97.6	75.5	53.6	80.1	114	71.2 J
Beryllium	MG/KG	0.34 J	0.14 J	0.61	0.63	0.22	0.34	0.24	0.38	0.41	0.57
Cadmium	MG/KG	0.62	0.41 J	0.46	0.46	0.35 J	0.33 J	0.29 J	0.37 J	0.6	0.48
Calcium	MG/KG	49700 J	68800 J	52200 J	32900 J	46100	51600	44700	61900	34400	86700 J
Chromium	MG/KG	20.5	16.7	19.9 J	19 J	15.4 J	17.4 J	15.3 J	18.4 J	19.4 J	18.6 J
Cobalt	MG/KG	10.3	8.4	10.1 J	8.5 J	8.5	10.6	7.7	11.2	12.6	10.1 J
Copper	MG/KG	27.2	25	25.6 J	26.4 J	25.3 J	26.8 J	18.4 J	44.7 J	26.8 J	27.5 J
Iron	MG/KG	26500	18800 J	23100	21700	17000	20300	16300	19900	23200	22700 J
Lead	MG/KG	34.8 J	28.1 J	33.4 J	34.2 J	41.5 J	34.2 J	40.9 J	49.4 J	32.9 J	35.7 J
Magnesium	MG/KG	11300 J	26600 J	7240 J	6890 J	10800	9720	8370	8540	7680	8010 J
Manganese	MG/KG	466	619	499 J	446 J	452	456	361	475	1080	489 J
Mercury	MG/KG	0.04	0.05	0.04	0.07	0.08	0.05	0.06	0.06	0.07	0.05
Nickel	MG/KG	32	24.6	31 J	26.1 J	23.8 J	29.4 J	22.5 J	33.5 J	36.1 J	32.8 J
Potassium	MG/KG	1290	1420	1580 J	1360 J	936	1060	781	1100	1150	1340 J
Selenium	MG/KG	0.54 U	0.58 U	0.37 U	0.41 U	1.1 UJ	1.1 UJ	1.2 UJ	1.1 UJ	1.2 UJ	0.43 U
Silver	MG/KG	0.54 U	0.58 U	0.56	0.93	0.55 U	0.56 U	0.55 U	0.52 U	0.56 U	0.11 U
Sodium	MG/KG	134	137	200 J	199 J	240	206	129	115	148	163 J
Thallium	MG/KG	0.61 J	0.74 J	0.19 U	0.21 U	0.67 J	0.56 J	0.58 U	0.64 J	0.93 J	0.22 U
Vanadium	MG/KG	22.5	20.4	22 J	21.8 J	16.1	17.7	13.4	18.4	20.3	18 J
Zinc	MG/KG	84.5 J	75 J	73.7 J	78.4 J	96 J	80.4 J	57 J	89.3 J	80.9 J	69.3 J

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-008-2	WS-59-01-008-3	WS-59-01-011-1	WS-59-01-011-2	WS-59-01-011-5	WS-59-01-011-6	WS-59-01-011-7	WS-59-01-011-8	WS-59-01-011-9	WS-59-01-012-2	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	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	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,1,2,2-Tetrachloroethane	UG/KG	5.6 U	5.7 U	5 UJ	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,1,2-Trichloroethane	UG/KG			5 U							
1,1-Dichloroethane	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,1-Dichloroethene	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,2,3-Trichloropropane	UG/KG	5.6 U	5.7 U		6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,2,4-Trichlorobenzene	UG/KG	5.6 U	5.7 U		6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,2-Dibromo-3-chloropropane	UG/KG			5 UJ							
1,2-Dibromoethane	UG/KG			5 U							
1,2-Dichlorobenzene	UG/KG	5.6 U	5.7 U	5 UJ	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,2-Dichloroethane	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,2-Dichloropropane	UG/KG			5 U							
1,3-Dichlorobenzene	UG/KG	5.6 U	5.7 U	5 UJ	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,3-Dichloropropane	UG/KG	5.6 U	5.7 U		6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
1,4-Dichlorobenzene	UG/KG	5.6 U	5.7 U	5 UJ	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Acetone	UG/KG	22 U	23 U	11 NJ	24 U	23 U	23 U	23 U	23 U	25 U	24 U
Benzene	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Bromodichloromethane	UG/KG			5 U							
Bromoform	UG/KG			5 U							
Carbon disulfide	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Carbon tetrachloride	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Chlorobenzene	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Chlorodibromomethane	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Chloroethane	UG/KG	11 U	11 U	5 U	12 U	12 U	11 U	11 U	11 U	12 U	12 U
Chloroform	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Cis-1,2-Dichloroethene	UG/KG			5 U							
Cis-1,3-Dichloropropene	UG/KG			5 U							
Cyclohexane	UG/KG			5 U							
Dichlorodifluoromethane	UG/KG			5 U							
Ethyl benzene	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Isopropylbenzene	UG/KG			5 U							
Meta/Para Xylene	UG/KG	5.6 U	5.7 U		6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Methyl Acetate	UG/KG			5 U							
Methyl Tertbutyl Ether	UG/KG			5 U							
Methyl bromide	UG/KG			5 U							
Methyl butyl ketone	UG/KG			5 U							
Methyl chloride	UG/KG			5 U							

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl cyclohexane	UG/KG			5 U							
Methyl ethyl ketone	UG/KG	11 U	11 U	5 U	12 U	12 U	11 U	11 U	11 U	12 U	12 U
Methyl isobutyl ketone	UG/KG	11 U	11 U	5 U	12 U	12 U	11 U	11 U	11 U	12 U	12 U
Methylene chloride	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Ortho Xylene	UG/KG	5.6 U	5.7 U		6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Styrene	UG/KG			5 U							
Tetrachloroethene	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Toluene	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Total Xylenes	UG/KG			5 UJ							
Trans-1,2-Dichloroethene	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Trans-1,3-Dichloropropene	UG/KG			5 U							
Trichloroethene	UG/KG	5.6 U	5.7 U	5 U	6 U	5.8 U	5.7 U	5.7 U	5.7 U	6.1 U	5.9 U
Trichlorofluoromethane	UG/KG			5 U							
Vinyl chloride	UG/KG	11 U	11 U	5 U	12 U	12 U	11 U	11 U	11 U	12 U	12 U
Semivolatile Organics											
1,1'-Biphenyl	UG/KG			370 U							
2,2'-oxybis(1-Chloropropane)	UG/KG			370 U							
2,4,5-Trichlorophenol	UG/KG	1800 U	1900 U	930 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
2,4,6-Trichlorophenol	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
2,4-Dichlorophenol	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
2,4-Dimethylphenol	UG/KG			370 U							
2,4-Dinitrophenol	UG/KG	9500 U	9600 U	930 U	10000 U	9900 U	9700 U	9800 U	9600 U	2100 U	10000 U
2,4-Dinitrotoluene	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
2,6-Dinitrotoluene	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
2-Chloronaphthalene	UG/KG			370 U							
2-Chlorophenol	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
2-Methylnaphthalene	UG/KG	710 J	200 J	39 J	2000 U	1900 U	440 J	1900 U	210 J	140 J	1900 U
2-Methylphenol	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
2-Nitroaniline	UG/KG	9500 U	9600 U	930 U	10000 U	9900 U	9700 U	9800 U	9600 U	2100 U	10000 U
2-Nitrophenol	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
3,3'-Dichlorobenzidine	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
3-Nitroaniline	UG/KG	9500 U	9600 U	930 U	10000 U	9900 U	9700 U	9800 U	9600 U	2100 U	10000 U
4,6-Dinitro-2-methylphenol	UG/KG			930 U							
4-Bromophenyl phenyl ether	UG/KG			370 U							
4-Chloro-3-methylphenol	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
4-Chloroaniline	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
4-Chlorophenyl phenyl ether	UG/KG			370 U							
4-Methylphenol	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
4-Nitroaniline	UG/KG			930 U							
4-Nitrophenol	UG/KG	9500 U	9600 U	930 U	10000 U	9900 U	9700 U	9800 U	9600 U	2100 U	10000 U
Acenaphthene	UG/KG	850 J	480 J	370 U	340 J	360 J	380 J	450 J	520 J	46 J	1900 U
Acenaphthylene	UG/KG	3000	1000 J	97 J	1500 J	1400 J	1300 J	1800 J	2000	130 J	1400 J
Acetophenone	UG/KG			370 U							
Aniline	UG/KG	1800 U	1900 U		2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Anthracene	UG/KG	3400	1700 J	110 J	1600 J	1600 J	1500 J	2000	2300	120 J	990 J
Atrazine	UG/KG			370 U							

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Benzaldehyde	UG/KG			370 U							
Benzo(a)anthracene	UG/KG	10000	4600	370 NJ	4200	4000	3400	5400	5600	460	4200
Benzo(a)pyrene	UG/KG	16000	5100	430	4800	4300	4000	5400	5900	550	6200
Benzo(b)fluoranthene	UG/KG	11000	3900	550	3600	3200	2700	3600	4500	410	4700
Benzo(ghi)perylene	UG/KG	7600	3400	280 J	2900	2500	2400	2800	2700	400 J	4200
Benzo(k)fluoranthene	UG/KG	13000	4000	200 J	3800	3300	3000	4300	4900	420	4700
Benzoic Acid	UG/KG	9500 UJ	9600 UJ		10000 UJ	9900 UJ	9700 U	9800 U	9600 U	2100 UJ	10000 U
Bis(2-Chloroethoxy)methane	UG/KG			370 U							
Bis(2-Chloroethyl)ether	UG/KG			370 U							
Bis(2-Ethylhexyl)phthalate	UG/KG	1800 U	1900 U	110 J	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Butylbenzylphthalate	UG/KG	1800 U	1900 UJ	370 U	2000 U	1900 U	1900 UJ	1900 UJ	1900 UJ	410 UJ	1900 U
Caprolactam	UG/KG			370 U							
Carbazole	UG/KG			42 J							
Chrysene	UG/KG	11000	4700	420	4300	3900	3400	5300	5400	480	4300 NJ
Di-n-butylphthalate	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Di-n-octylphthalate	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Dibenz(a,h)anthracene	UG/KG	2900 J	1100 J	73 J	880 J	780 J	770 J	890 J	1000 J	120 J	1300 J
Dibenzofuran	UG/KG	650 J	310 J	370 U	240 J	240 J	310 J	320 J	330 J	410 U	1900 U
Diethyl phthalate	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Dimethylphthalate	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Fluoranthene	UG/KG	20000	7800	660	7700	7000	5700	10000	11000	680	5000
Fluorene	UG/KG	1300 J	690 J	370 U	490 J	570 J	690 J	740 J	800 J	51 NJ	1900 U
Hexachlorobenzene	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Hexachlorobutadiene	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Hexachlorocyclopentadiene	UG/KG			370 U							
Hexachloroethane	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Indeno(1,2,3-cd)pyrene	UG/KG	7800 J	3200 J	290 J	2600 J	2300 J	2200 J	2600 J	2700 J	360 J	3800 J
Isophorone	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
N-Nitrosodiphenylamine	UG/KG			370 U							
N-Nitrosodipropylamine	UG/KG			370 U							
Naphthalene	UG/KG	840 J	290 J	46 J	2000 U	1900 U	520 J	220 NJ	280 NJ	54 J	1900 U
Nitrobenzene	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Pentachlorophenol	UG/KG	9500 U	9600 U	660 J	10000 U	9900 U	9700 U	9800 U	9600 U	2100 U	10000 U
Phenanthrene	UG/KG	8100	4500	250 J	4800	4400	4200	5100	5600	280 J	1400 J
Phenol	UG/KG	1800 U	1900 U	370 U	2000 U	1900 U	1900 U	1900 U	1900 U	410 U	1900 U
Pyrene	UG/KG	22000	7800	650	8200	7400	6600 J	10000 J	9400 J	730	5200
Pyridine	UG/KG	9500 U	9600 U		10000 U	9900 U	9700 U	9800 U	9600 U	2100 U	10000 U
Pesticides/PCBs											
4,4'-DDD	UG/KG	51 J	34 J	24	450	36	21 J	76	19 U	20 U	19 U
4,4'-DDE	UG/KG	160	43	49	86 J	31 J	19 U	61 J	19 U	20 U	19 U
4,4'-DDT	UG/KG	92 J	33 J	45	520	55	22 J	60 J	19 U	20 U	19 U
Aldrin	UG/KG	9.5 U	9.6 U	1.9 U	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U
Alpha-BHC	UG/KG	9.5 U	9.6 U	1.9 U	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U
Alpha-Chlordane	UG/KG	9.5 U	9.6 U	3.4	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U
Beta-BHC	UG/KG	9.5 U	9.6 U	13 NJ	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U
Delta-BHC	UG/KG	9.5 U	9.6 U	1.9 U	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dieldrin	UG/KG	18 U	19 U	3.7 U	20 U	19 U	19 U	19 U	20 U	19 U	19 U
Endosulfan I	UG/KG	9.5 U	9.6 U	1.9 U	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U
Endosulfan II	UG/KG	18 U	19 U	3.7 U	20 U	19 U	19 U	19 U	19 U	20 U	19 U
Endosulfan sulfate	UG/KG	18 U	19 U	3.7 U	20 U	19 U	19 U	19 U	19 U	20 U	19 U
Endrin	UG/KG	18 U	19 U	3.7 U	20 U	19 U	19 U	19 U	19 U	20 U	19 U
Endrin aldehyde	UG/KG	18 U	19 U	3.7 U	20 U	19 U	19 U	19 U	19 U	20 U	19 U
Endrin ketone	UG/KG	18 U	19 U	3.7 U	20 U	19 U	19 U	19 U	19 U	20 U	19 U
Gamma-BHC/Lindane	UG/KG	9.5 U	9.6 U	1.9 U	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U
Gamma-Chlordane	UG/KG	9.5 U	9.6 U	1.9 U	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U
Heptachlor	UG/KG	9.5 U	9.6 U	1.9 U	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U
Heptachlor epoxide	UG/KG	9.5 U	9.6 U	1.9 U	10 U	9.9 U	9.7 U	9.8 U	9.6 U	10 U	10 U
Methoxychlor	UG/KG	95 U	96 U	19 U	100 U	99 U	97 U	98 U	96 U	100 U	100 U
Toxaphene	UG/KG	180 U	190 U	190 U	200 U	190 U	190 U	190 U	190 U	200 U	190 U
Aroclor-1016	UG/KG	37 U	37 U	37 U	39 U	38 U	38 U	38 U	37 U	41 U	39 U
Aroclor-1221	UG/KG	37 U	37 U	37 U	39 U	38 U	38 U	38 U	37 U	41 U	39 U
Aroclor-1232	UG/KG	37 U	37 U	37 U	39 U	38 U	38 U	38 U	37 U	41 U	39 U
Aroclor-1242	UG/KG	37 U	37 U	37 U	39 U	38 U	38 U	38 U	37 U	41 U	39 U
Aroclor-1248	UG/KG	37 U	37 U	37 U	39 U	38 U	38 U	38 U	37 U	41 U	39 U
Aroclor-1254	UG/KG	37 U	37 U	37 U	39 U	38 U	38 U	38 U	37 U	41 U	39 U
Aroclor-1260	UG/KG	37 U	37 U	37 U	39 U	38 U	38 U	38 U	37 U	41 U	39 U
Metals											
Aluminum	MG/KG	10200	12000	10700 J	11400	10100	12100	11000	12400	11400	10600
Antimony	MG/KG	3.2 UJ	3.3 U	1.7 J	43.9 J	3.7 J	12	3.4 U	3.6 UJ	3.4 UJ	3.4 UJ
Arsenic	MG/KG	4.9 J	5	7.3 J	4.5 J	4.1 J	4.5	4.9	5.1	4.8	4.8
Barium	MG/KG	77.9	97.6	101 J	135	93.3	91.6	133	104	107	84.7
Beryllium	MG/KG	0.42	0.38	0.58	0.32	0.32	0.4	0.3	0.41	0.27	0.33
Cadmium	MG/KG	0.6	0.52 J	0.54	0.89	0.36 J	0.55 J	0.57 J	0.51 J	0.64	0.73
Calcium	MG/KG	46300	42900	41300 J	38300	69600	76800	96100	66700	17600	29600
Chromium	MG/KG	17.6 J	22	18.2 J	19.9 J	15.5 J	27.7	18.1	21.5	18.6	18.2
Cobalt	MG/KG	12.6	11.1	10.1 J	10.1	8.8	11.1	9.8	12.1	10.4	10.3
Copper	MG/KG	30 J	29.5	25 J	24.8 J	22.6 J	36.2	32.3	37.4	24.3	24.9
Iron	MG/KG	20800	23200	24500 J	20800	18600	22700	19800	23700	23200	21900
Lead	MG/KG	42.4 J	44.1 J	33.4 J	195 J	31.2 J	149 J	61.6 J	65.4 J	20.5 J	27.8 J
Magnesium	MG/KG	7890	9440	7060 J	7250	6890	7820	15600	8980	4890	7020
Manganese	MG/KG	534	528	632 J	471	646	591	536	557	734	467
Mercury	MG/KG	0.08	0.05	0.07 J	0.06	0.06	0.04	0.05	0.07	0.05	0.08
Nickel	MG/KG	33.4 J	34.2	29.1 J	27.5 J	23.3 J	31.6	26.5	34.3	27.7	29.8
Potassium	MG/KG	1160	1320	1100 J	1070	949	1260	1200	1290	1200	1140
Selenium	MG/KG	1.1 UJ	0.72 J	0.43 U	1.2 UJ	1.1 UJ	0.55 U	0.57 U	0.57 U	0.61 UJ	0.56 UJ
Silver	MG/KG	0.56 U	0.55 U	0.74	0.57 U	0.55 U	0.55 U	0.57 U	0.57 U	0.61 UJ	0.56 UJ
Sodium	MG/KG	103	191	294 J	92.4	106	110	131	125	252	221
Thallium	MG/KG	0.68 J	0.76 J	0.22 U	0.88 J	0.98 J	0.99 J	0.95 J	0.85 J	0.94 J	0.65 J
Vanadium	MG/KG	18	22.3	19 J	19.3	17.3	20.3	21.3	22.9	18.7	18.7
Zinc	MG/KG	106 J	98.4 J	78.1 J	127 J	82.7 J	97.4 J	81.9 J	99.6 J	77.6 J	80.5 J

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-012-3	WS-59-01-013-2	WS-59-01-014-5	WS-59-01-015-14	WS-59-01-015-15	WS-59-01-015-16	WS-59-01-015-17	WS-59-01-015-20	WS-59-01-015-3	WS-59-01-015-4	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	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	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,1,2,2-Tetrachloroethane	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.8 U	5.7 U	5.8 U	1.5 J	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,1,2-Trichloroethane	UG/KG										
1,1-Dichloroethane	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,1-Dichloroethene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,2,3-Trichloropropane	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,2,4-Trichlorobenzene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,2-Dibromo-3-chloropropane	UG/KG										
1,2-Dibromoethane	UG/KG										
1,2-Dichlorobenzene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,2-Dichloroethane	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,2-Dichloropropane	UG/KG										
1,3-Dichlorobenzene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,3-Dichloropropane	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
1,4-Dichlorobenzene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Acetone	UG/KG	23 U	23 U	20 J	23 U	23 U	24 U	23 U	24 U	23 U	23 U
Benzene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Bromodichloromethane	UG/KG										
Bromoform	UG/KG										
Carbon disulfide	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Carbon tetrachloride	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Chlorobenzene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Chlorodibromomethane	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Chloroethane	UG/KG	12 U	11 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Chloroform	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Cis-1,2-Dichloroethene	UG/KG										
Cis-1,3-Dichloropropene	UG/KG										
Cyclohexane	UG/KG										
Dichlorodifluoromethane	UG/KG										
Ethyl benzene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Isopropylbenzene	UG/KG										
Meta/Para Xylene	UG/KG	5.8 U	5.7 U	2.2 J	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Methyl Acetate	UG/KG										
Methyl Tertbutyl Ether	UG/KG										
Methyl bromide	UG/KG										
Methyl butyl ketone	UG/KG										
Methyl chloride	UG/KG										

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl cyclohexane	UG/KG										
Methyl ethyl ketone	UG/KG	12 U	11 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Methyl isobutyl ketone	UG/KG	12 U	11 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Methylene chloride	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Ortho Xylene	UG/KG	5.8 U	5.7 U	1.9 J	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Styrene	UG/KG										
Tetrachloroethene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.4 J	5.3 J	6 U	6.7	5.8 U
Toluene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Total Xylenes	UG/KG										
Trans-1,2-Dichloroethene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Trans-1,3-Dichloropropene	UG/KG										
Trichloroethene	UG/KG	5.8 U	5.7 U	5.8 U	5.8 U	5.8 U	5.9 U	5.8 U	6 U	5.8 U	5.8 U
Trichlorofluoromethane	UG/KG										
Vinyl chloride	UG/KG	12 U	11 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Semivolatile Organics											
1,1'-Biphenyl	UG/KG										
2,2'-oxybis(1-Chloropropane)	UG/KG										
2,4,5-Trichlorophenol	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
2,4,6-Trichlorophenol	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
2,4-Dichlorophenol	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
2,4-Dimethylphenol	UG/KG										
2,4-Dinitrophenol	UG/KG	9900 U	9800 U	9900 UJ	5900 UJ	5900 UJ	10000 U	9800 U	6100 U	9800 U	5900 U
2,4-Dinitrotoluene	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
2,6-Dinitrotoluene	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
2-Chloronaphthalene	UG/KG										
2-Chlorophenol	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
2-Methylnaphthalene	UG/KG	1900 U	230 J	1900 U	270 J	270 J	1900 U	1900 U	150 J	1900 U	1200 U
2-Methylphenol	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
2-Nitroaniline	UG/KG	9900 U	9800 U	9900 U	5900 U	5900 U	10000 U	9800 U	6100 U	9800 U	5900 U
2-Nitrophenol	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
3,3'-Dichlorobenzidine	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
3-Nitroaniline	UG/KG	9900 U	9800 U	9900 U	5900 U	5900 U	10000 U	9800 U	6100 U	9800 U	5900 U
4,6-Dinitro-2-methylphenol	UG/KG										
4-Bromophenyl phenyl ether	UG/KG										
4-Chloro-3-methylphenol	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
4-Chloroaniline	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
4-Chlorophenyl phenyl ether	UG/KG										
4-Methylphenol	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
4-Nitroaniline	UG/KG										
4-Nitrophenol	UG/KG	9900 U	9800 U	9900 U	5900 U	5900 U	10000 U	9800 U	6100 U	9800 U	5900 U
Acenaphthene	UG/KG	1900 U	1100 J	500 J	490 J	580 J	1900 U	210 J	360 J	270 J	210 J
Acenaphthylene	UG/KG	1200 J	1600 J	1200 J	1200	1800	200 J	310 J	1600	3400	800 J
Acetophenone	UG/KG										
Aniline	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Anthracene	UG/KG	910 J	5200	1800 J	1600	3900	280 J	540 J	1500	2200	830 J
Atrazine	UG/KG										

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Benzaldehyde	UG/KG										
Benzo(a)anthracene	UG/KG	3700	8200	3800	3600	8400	860 J	1100 J	3800	6800	2700
Benzo(a)pyrene	UG/KG	4200	7600	3600	3700	7300	950 J	1200 J	4600	8500	2900
Benzo(b)fluoranthene	UG/KG	3200	6400	2500	2800	5300	750 J	1000 J	3400	6400	2300
Benzo(ghi)perylene	UG/KG	2600	3400	2100	2200	3700	670 J	770 J	2100	5200	1400
Benzo(k)fluoranthene	UG/KG	3400	6700	2800	3100	5800	790 J	910 J	3800	6500	2500
Benzoic Acid	UG/KG	9900 U	9800 U	9900 U	5900 U	5900 U	10000 U	9800 U	6100 U	9800 U	5900 U
Bis(2-Chloroethoxy)methane	UG/KG										
Bis(2-Chloroethyl)ether	UG/KG										
Bis(2-Ethylhexyl)phthalate	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Butylbenzylphthalate	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Caprolactam	UG/KG										
Carbazole	UG/KG										
Chrysene	UG/KG	3600 NJ	9000	3700	3500	7900	940 J	1200 J	3900	7500	2700
Di-n-butylphthalate	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Di-n-octylphthalate	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Dibenz(a,h)anthracene	UG/KG	840 J	1200 J	730 J	660 J	1300 J	210 J	250 J	760 J	1800 J	510 J
Dibenzofuran	UG/KG	1900 U	700 J	320 J	320 J	480 J	1900 U	1900 U	210 J	1900 U	1200 U
Diethyl phthalate	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Dimethylphthalate	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Fluoranthene	UG/KG	6100	18000	7600	7300	18000	1800 J	2300	7300	12000	5400
Fluorene	UG/KG	250 NJ	1300 J	780 J	700 J	1300	1900 U	260 J	520 J	310 J	200 J
Hexachlorobenzene	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Hexachlorobutadiene	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Hexachlorocyclopentadiene	UG/KG										
Hexachloroethane	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Indeno(1,2,3-cd)pyrene	UG/KG	2400 J	3400 J	2000 J	2100 J	3700 J	560 J	740 J	2100 J	5000 J	1400 J
Isophorone	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
N-Nitrosodiphenylamine	UG/KG										
N-Nitrosodipropylamine	UG/KG										
Naphthalene	UG/KG	1900 U	210 J	250 J	340 J	240 J	1900 U	1900 U	140 J	1900 U	1200 U
Nitrobenzene	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Pentachlorophenol	UG/KG	9900 U	9800 U	9900 U	5900 U	5900 U	10000 U	9800 U	6100 U	9800 U	5900 U
Phenanthrene	UG/KG	1900 J	6100	4300	4300	11000	840 J	1600 J	3100	3300	2200
Phenol	UG/KG	1900 U	1900 U	1900 U	1100 U	1200 U	1900 U	1900 U	1200 U	1900 U	1200 U
Pyrene	UG/KG	6000	15000 J	6800	6000	14000	1300 J	1700 J	6300 J	9700	4300 J
Pyridine	UG/KG	9900 U	9800 U	9900 U	5900 U	5900 U	10000 U	9900 U	6100 U	9800 U	5900 U
Pesticides/PCBs											
4,4'-DDD	UG/KG	19 U	95 U	96 U	96 U	96 U	97 U	95 U	98 U	95 U	96 U
4,4'-DDE	UG/KG	19 U	95 U	96 U	96 U	96 U	97 U	95 U	98 U	95 U	96 U
4,4'-DDT	UG/KG	27 J	95 U	96 U	96 U	96 U	97 U	95 U	98 U	95 U	96 U
Aldrin	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U
Alpha-BHC	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U
Alpha-Chlordane	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U
Beta-BHC	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U
Delta-BHC	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3
	Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dieldrin	UG/KG	19 U	95 U	96 U	96 U	96 U	97 U	95 U	98 U	95 U	96 U
Endosulfan I	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U
Endosulfan II	UG/KG	19 U	95 U	96 U	96 U	96 U	97 U	95 U	98 U	95 U	96 U
Endosulfan sulfate	UG/KG	19 U	95 U	96 U	96 U	96 U	97 U	95 U	98 U	95 U	96 U
Endrin	UG/KG	19 U	95 U	96 U	96 U	96 U	97 U	95 U	98 U	95 U	96 U
Endrin aldehyde	UG/KG	19 U	95 U	96 U	96 U	96 U	97 U	95 U	98 U	95 U	96 U
Endrin ketone	UG/KG	19 U	95 U	96 U	96 U	96 U	97 U	95 U	98 U	95 U	96 U
Gamma-BHC/Lindane	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U
Gamma-Chlordane	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U
Heptachlor	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U
Heptachlor epoxide	UG/KG	9.9 U	49 U	50 U	49 U	50 U	50 U	49 U	51 U	49 U	49 U
Methoxychlor	UG/KG	99 U	490 U	500 U	490 U	500 U	490 U	510 U	490 U	490 U	490 U
Toxaphene	UG/KG	190 U	950 U	960 U	960 U	960 U	970 U	950 U	980 U	950 U	960 U
Aroclor-1016	UG/KG	38 U	38 U	39 U	38 U	38 U	39 U	38 U	39 U	38 U	38 U
Aroclor-1221	UG/KG	38 U	38 U	39 U	38 U	38 U	39 U	38 U	39 U	38 U	38 U
Aroclor-1232	UG/KG	38 U	38 U	39 U	38 U	38 U	39 U	38 U	39 U	38 U	38 U
Aroclor-1242	UG/KG	38 U	38 U	39 U	38 U	38 U	39 U	38 U	39 U	38 U	38 U
Aroclor-1248	UG/KG	38 U	38 U	39 U	38 U	38 U	39 U	38 U	39 U	38 U	38 U
Aroclor-1254	UG/KG	38 U	38 U	39 U	38 U	38 U	39 U	38 U	39 U	38 U	38 U
Aroclor-1260	UG/KG	38 U	38 U	39 U	38 U	38 U	39 U	38 U	39 U	38 U	38 U
Metals											
Aluminum	MG/KG	11100	10100	10500	11200	11200	10800	10800	11600	9200	10600
Antimony	MG/KG	3.3 UJ	3.3 UJ	5.9 J	3.4 UJ	3.5 UJ	3.5 UJ	3.4 UJ	3.5 UJ	3.4 UJ	3.5 UJ
Arsenic	MG/KG	4.7	4.2	4	4.1	4.6	4.6	4.3	5.2	3.9	4.9
Barium	MG/KG	99.9	76.1	93.1	90.3	78.9	85	92.4	90.3	74	86.4
Beryllium	MG/KG	0.34	0.36	0.33	0.4	0.3	0.3	0.38	0.41	0.25	0.38
Cadmium	MG/KG	0.72	0.73	0.72	0.72	0.78	0.97	0.73	0.7	0.66	0.69
Calcium	MG/KG	40500	59200	42500	58200	46000	42800	41200	45700	100000	66200
Chromium	MG/KG	19.7	17.3	16.9	19.3	29.7	35	19.3	19.4	16.4	17.2
Cobalt	MG/KG	10	9.2	9.2	9.9	9.6	9.2	9.3	12.3	7.6	9.2
Copper	MG/KG	26.1	26.3 J	37.7 J	44.1 J	25.6 J	51.8 J	36.4 J	28.8 J	28.7 J	26.5 J
Iron	MG/KG	21100	19800	19400	19300	22400	20200	19800	23000	16300	20300
Lead	MG/KG	39.7 J	41.9 J	1440 J	51.5 J	84.6 J	129 J	41.7 J	45.8 J	44.8 J	31.8 J
Magnesium	MG/KG	7900	9270	8130	8530	7860	9170	8050	7260	7730	9530
Manganese	MG/KG	513	567	489	455	435	459	457	556	391	466
Mercury	MG/KG	0.08	0.08	0.27	0.15	0.04	0.51	0.29	0.1	0.28	0.05
Nickel	MG/KG	28.5	27.3	25.1	30.9	26.4	27.3	28	30.7	22.4	25.6
Potassium	MG/KG	1140	1150	1220	1170	1200	1240	1170	1230	1090	1120
Selenium	MG/KG	0.55 UJ	0.56 U	0.56 U	0.57 U	0.58 U	0.58 U	0.57 U	0.59 U	0.56 U	0.58 U
Silver	MG/KG	0.55 UJ	0.56 U	0.56 U	0.57 U	0.58 U	4.7	1.2 J	0.59 U	0.56 U	0.58 U
Sodium	MG/KG	211	151	330	236	239	398	455	129	178	312
Thallium	MG/KG	0.55 U	0.56 U	0.56 J	0.65 J	0.58 U	0.58 U	0.57 U	0.59 U	0.56 U	0.58 U
Vanadium	MG/KG	19.3	18.2	18.9	19.3	20.1	20.8	20.5	20	19	18.6
Zinc	MG/KG	76.3 J	88.3 J	82.5 J	92.8 J	72.7 J	157 J	93 J	82.2 J	79 J	76.5 J

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	WS-59-01-015-8	WS-59-01-016-1	WS-59-01-016-10	WS-59-01-016-13	WS-59-01-016-14	WS-59-01-016-18	WS-59-01-016-19	WS-59-01-016-2	WS-59-01-016-20	WS-59-01-016-3	
Sample Depth to Top of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
	Sample Depth to Top of Sample	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Volatile Organics						
1,1,1-Trichloroethane	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 UJ
1,1,2-Trichloroethane	UG/KG					5 U
1,1-Dichloroethane	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
1,1-Dichloroethene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
1,2,3-Trichloropropane	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	
1,2,4-Trichlorobenzene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
1,2-Dibromo-3-chloropropane	UG/KG					5 U
1,2-Dibromoethane	UG/KG					5 U
1,2-Dichlorobenzene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
1,2-Dichloroethane	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
1,2-Dichloropropane	UG/KG					5 U
1,3-Dichlorobenzene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
1,3-Dichloropropane	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	
1,4-Dichlorobenzene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Acetone	UG/KG	23 U	34	23 U	14 J	5 U
Benzene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Bromodichloromethane	UG/KG					5 U
Bromoform	UG/KG					5 U
Carbon disulfide	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Carbon tetrachloride	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Chlorobenzene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Chlorodibromomethane	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Chloroethane	UG/KG	12 U	12 U	11 U	11 U	5 U
Chloroform	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Cis-1,2-Dichloroethene	UG/KG					5 U
Cis-1,3-Dichloropropene	UG/KG					5 U
Cyclohexane	UG/KG					5 U
Dichlorodifluoromethane	UG/KG					5 U
Ethyl benzene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Isopropylbenzene	UG/KG					5 U
Meta/Para Xylene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	
Methyl Acetate	UG/KG					5 U
Methyl Terbutyl Ether	UG/KG					5 U
Methyl bromide	UG/KG					5 U
Methyl butyl ketone	UG/KG					5 U
Methyl chloride	UG/KG					5 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
	Sample Depth to Top of Sample	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl cyclohexane	UG/KG					5 U
Methyl ethyl ketone	UG/KG	12 U	2.9 J	11 U	11 U	5 U
Methyl isobutyl ketone	UG/KG	12 U	12 U	11 U	11 U	5 U
Methylene chloride	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Ortho Xylene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	
Styrene	UG/KG					5 U
Tetrachloroethene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Toluene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Total Xylenes	UG/KG					5 U
Trans-1,2-Dichloroethene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Trans-1,3-Dichloropropene	UG/KG					5 U
Trichloroethene	UG/KG	5.8 U	5.9 U	5.7 U	5.7 U	5 U
Trichlorofluoromethane	UG/KG					5 U
Vinyl chloride	UG/KG	12 U	12 U	11 U	11 U	5 U
Semivolatile Organics						
1,1'-Biphenyl	UG/KG					370 U
2,2'-oxybis(1-Chloropropane)	UG/KG					370 U
2,4,5-Trichlorophenol	UG/KG	1100 U	2000 U	1900 U	1900 U	930 U
2,4,6-Trichlorophenol	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
2,4-Dichlorophenol	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
2,4-Dimethylphenol	UG/KG					370 U
2,4-Dinitrophenol	UG/KG	5900 U	10000 U	9700 UJ	9700 UJ	930 U
2,4-Dinitrotoluene	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
2,6-Dinitrotoluene	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
2-Chloronaphthalene	UG/KG					370 U
2-Chlorophenol	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
2-Methylnaphthalene	UG/KG	1100 U	310 J	240 J	210 J	370 U
2-Methylphenol	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
2-Nitroaniline	UG/KG	5900 U	10000 U	9700 U	9700 U	930 U
2-Nitrophenol	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
3,3'-Dichlorobenzidine	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
3-Nitroaniline	UG/KG	5900 U	10000 U	9700 U	9700 U	930 U
4,6-Dinitro-2-methylphenol	UG/KG					930 U
4-Bromophenyl phenyl ether	UG/KG					370 U
4-Chloro-3-methylphenol	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
4-Chloroaniline	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
4-Chlorophenyl phenyl ether	UG/KG					370 U
4-Methylphenol	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
4-Nitroaniline	UG/KG					930 U
4-Nitrophenol	UG/KG	5900 U	10000 U	9700 U	9700 U	930 U
Acenaphthene	UG/KG	1100 U	620 J	550 J	2400	370 U
Acenaphthylene	UG/KG	380 J	1500 J	1600 J	2200	370 U
Acetophenone	UG/KG					370 U
Aniline	UG/KG	1100 U	2000 U	1900 U	1900 U	
Anthracene	UG/KG	280 J	2300	2400	4600	120 J
Atrazine	UG/KG					370 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
	Sample Depth to Top of Sample	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Benzaldehyde	UG/KG					370 U
Benzo(a)anthracene	UG/KG	900 J	4400	5000	7700	86 NJ
Benzo(a)pyrene	UG/KG	1000 J	4400	4700	6700	85 J
Benzo(b)fluoranthene	UG/KG	850 J	3300	3100	4900	110 J
Benzo(ghi)perylene	UG/KG	530 J	2000	3000	4000	52 J
Benzo(k)fluoranthene	UG/KG	930 J	3700	3700	5500	48 J
Benzoic Acid	UG/KG	5900 U	10000 U	9700 U	9700 U	
Bis(2-Chloroethoxy)methane	UG/KG					370 U
Bis(2-Chloroethyl)ether	UG/KG					370 U
Bis(2-Ethylhexyl)phthalate	UG/KG	1100 U	2000 U	1900 U	1900 U	97 J
Butylbenzylphthalate	UG/KG	1100 UJ	2000 UJ	1900 U	1900 U	370 U
Caprolactam	UG/KG					370 U
Carbazole	UG/KG					370 U
Chrysene	UG/KG	970 J	4300	4900	7600	87 J
Di-n-butylphthalate	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
Di-n-octylphthalate	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
Dibenz(a,h)anthracene	UG/KG	180 J	700 J	960 J	1400 J	370 U
Dibenzofuran	UG/KG	1100 U	540 J	420 J	1300 J	370 U
Diethyl phthalate	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
Dimethylphthalate	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
Fluoranthene	UG/KG	1700	9900	10000	18000	170 J
Fluorene	UG/KG	1100 U	1100 J	1200 J	3100	370 U
Hexachlorobenzene	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
Hexachlorobutadiene	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
Hexachlorocyclopentadiene	UG/KG					370 U
Hexachloroethane	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
Indeno(1,2,3-cd)pyrene	UG/KG	530 J	2000 J	2700 J	3800 J	55 J
Isophorone	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
N-Nitrosodiphenylamine	UG/KG					370 U
N-Nitrosodipropylamine	UG/KG					370 U
Naphthalene	UG/KG	1100 U	360 J	280 J	290 J	370 U
Nitrobenzene	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
Pentachlorophenol	UG/KG	5900 U	10000 U	9700 U	9700 U	930 U
Phenanthrene	UG/KG	780 J	6900	7400	13000	120 J
Phenol	UG/KG	1100 U	2000 U	1900 U	1900 U	370 U
Pyrene	UG/KG	1400 J	8300 J	11000	16000	160 J
Pyridine	UG/KG	5900 U	10000 U	9700 U	9700 U	
Pesticides/PCBs						
4,4'-DDD	UG/KG	96 U	98 U	94 U	94 U	6
4,4'-DDE	UG/KG	96 U	98 U	94 U	94 U	2.4 J
4,4'-DDT	UG/KG	96 U	98 U	94 U	94 U	6.1 J
Aldrin	UG/KG	49 U	51 U	48 U	48 U	1.9 U
Alpha-BHC	UG/KG	49 U	51 U	48 U	48 U	1.9 U
Alpha-Chlordane	UG/KG	49 U	51 U	48 U	48 U	16 J
Beta-BHC	UG/KG	49 U	51 U	48 U	48 U	1.9 U
Delta-BHC	UG/KG	49 U	51 U	48 U	48 U	1.9 U

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
	Sample Depth to Top of Sample	0	0	0	0	0
	Sample Depth to Bottom of Sample	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dieldrin	UG/KG	96 U	98 U	94 U	94 U	3.7 U
Endosulfan I	UG/KG	49 U	51 U	48 U	48 U	1.9 U
Endosulfan II	UG/KG	96 U	98 U	94 U	94 U	3.7 U
Endosulfan sulfate	UG/KG	96 U	98 U	94 U	94 U	3.7 U
Endrin	UG/KG	96 U	98 U	94 U	94 U	3.7 U
Endrin aldehyde	UG/KG	96 U	98 U	94 U	94 U	3.7 U
Endrin ketone	UG/KG	96 U	98 U	94 U	94 U	3.7 U
Gamma-BHC/Lindane	UG/KG	49 U	51 U	48 U	48 U	1.9 U
Gamma-Chlordane	UG/KG	49 U	51 U	48 U	48 U	15
Heptachlor	UG/KG	49 U	51 U	48 U	48 U	1.9 U
Heptachlor epoxide	UG/KG	49 U	51 U	48 U	48 U	1.9 U
Methoxychlor	UG/KG	490 U	510 U	480 U	480 U	19 U
Toxaphene	UG/KG	960 U	980 U	940 U	940 U	190 U
Aroclor-1016	UG/KG	38 U	39 U	38 U	38 U	37 U
Aroclor-1221	UG/KG	38 U	39 U	38 U	38 U	37 U
Aroclor-1232	UG/KG	38 U	39 U	38 U	38 U	37 U
Aroclor-1242	UG/KG	38 U	39 U	38 U	38 U	37 U
Aroclor-1248	UG/KG	38 U	39 U	38 U	38 U	37 U
Aroclor-1254	UG/KG	38 U	39 U	38 U	38 U	37 U
Aroclor-1260	UG/KG	38 U	39 U	38 U	38 U	37 U
Metals						
Aluminum	MG/KG	11000	11500	9410	10900	6830 J
Antimony	MG/KG	3.4 UJ	4.6 J	3.4 UJ	3.3 UJ	0.96 J
Arsenic	MG/KG	5	6.8	4.2	4.4	3.7 J
Barium	MG/KG	86.5	126	94.4	85	62.7 J
Beryllium	MG/KG	0.39	0.41	0.26	0.37	0.35
Cadmium	MG/KG	0.68	1.2	1.1	0.77	0.4
Calcium	MG/KG	43600	56900	72100	60200	72900
Chromium	MG/KG	18.5	20.7	16.1	19.3	11.4 J
Cobalt	MG/KG	11.2	10.9	8.8	9.4	6.1 J
Copper	MG/KG	26.5 J	42.5 J	33.6 J	31.1 J	32.5 J
Iron	MG/KG	22500	26300	18300	20600	14900
Lead	MG/KG	29.4 J	75.3 J	59.7 J	61.8 J	15.4 J
Magnesium	MG/KG	7450	6490	13900	7580	15700 J
Manganese	MG/KG	515	1220	574	512	321 J
Mercury	MG/KG	0.12	0.07	0.1	0.14	0.52 J
Nickel	MG/KG	30.3	26.1	24.1	27	19.1 J
Potassium	MG/KG	1230	1260	1120	1200	1200 J
Selenium	MG/KG	0.56 U	0.56 U	0.56 U	0.27 U	0.45 U
Silver	MG/KG	0.56 U	0.56 U	0.56 U	0.55 U	4.1 J
Sodium	MG/KG	525	123	178	176	140 J
Thallium	MG/KG	0.56 U	0.79 J	0.56 U	0.55 U	0.22 U
Vanadium	MG/KG	19.4	23.7	17.6	19.1	13.7 J
Zinc	MG/KG	90.5 J	109 J	75.4 J	91.5 J	63.2 J

Table D-2
SEAD-59 STOCKPILE SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
Location ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	WS-59-01-016-4	WS-59-01-016-5	WS-59-01-016-6	WS-59-01-016-9	WS-59-04-010-8
Sample Depth to Top of Sample	0	0	0	0	0
Sample Depth to Bottom of Sample	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1

Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
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Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-1	MW59-2	MW59-2	MW59-3	MW59-3	MW59-3
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592000	592001	592006	592002	592007DUP	592007
	Sample Depth to Top of Sample	8.86	12.93	0	8.04	0	0
	Sample Depth to Bottom of Sample	8.86	12.93	0	8.04	0	0
	Sample Date	4/6/2004	4/6/2004	8/31/2004	4/5/2004	8/30/2004	8/30/2004
	QC Code	SA	SA	SA	SA	DU	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	1	2	1	2	2
Parameter	Units	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		0.5 U
1,1,1-Trichloroethane	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.44 J
1,1,2,2-Tetrachloroethane	UG/L	0.5 U	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		0.5 U
1,1-Dichloroethane	UG/L	0.5 U	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		0.5 U
1,1-Dichloropropene	UG/L	0.5 U	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		0.5 U
1,2,3-Trichloropropane	UG/L	0.5 U	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		0.5 U
1,2,4-Trimethylbenzene	UG/L	0.5 U	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		0.5 U
1,2-Dibromoethane	UG/L	0.5 U	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		0.5 U
1,2-Dichloroethane	UG/L	0.5 U	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		0.5 U
1,3,5-Trimethylbenzene	UG/L	0.5 U	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		0.5 U
1,3-Dichloropropane	UG/L	0.5 U	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		0.5 U
2,2-Dichloropropane	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
2-Chlorotoluene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Acetone	UG/L						
Benzene	UG/L	0.5 U	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		0.5 U
Bromochloromethane	UG/L	0.5 U	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		0.5 U
Bromoform	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Carbon disulfide	UG/L						
Carbon tetrachloride	UG/L	0.5 U	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		0.5 U
Chlorodibromomethane	UG/L	0.5 U	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		0.5 U
Chloroform	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Cis-1,2-Dichloroethene	UG/L	0.5 U	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		0.5 U
Dichlorodifluoromethane	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-1	MW59-2	MW59-2	MW59-3	MW59-3	MW59-3
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592000	592001	592006	592002	592007DUP	592007
	Sample Depth to Top of Sample	8.86	12.93	0	8.04	0	0
	Sample Depth to Bottom of Sample	8.86	12.93	0	8.04	0	0
	Sample Date	4/6/2004	4/6/2004	8/31/2004	4/5/2004	8/30/2004	8/30/2004
	QC Code	SA	SA	SA	SA	DU	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	1	2	1	2	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Ethyl benzene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Isopropylbenzene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Meta/Para Xylene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl bromide	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl butyl ketone	UG/L						
Methyl chloride	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Methyl ethyl ketone	UG/L						
Methyl isobutyl ketone	UG/L						
Methylene bromide	UG/L	0.5 U	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		0.5 U
Naphthalene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Ortho Xylene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Propylbenzene	UG/L	0.5 U	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		0.5 U
Tetrachloroethene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Toluene	UG/L	0.5 U	0.5 U	0.5 U	0.27 J		0.5 U
Total Xylenes	UG/L	0.5 U	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		0.5 U
Trans-1,3-Dichloropropene	UG/L	0.5 U	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		0.5 U
Trichlorofluoromethane	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Vinyl acetate	UG/L	1 U	1 U	1 U	1 U		1 U
Vinyl chloride	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Semivolatle Organics							
n-Butylbenzene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
p-Chlorotoluene	UG/L	0.5 U	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		0.5 U
sec-Butylbenzene	UG/L	0.5 U	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		0.5 U
1,2,4-Trichlorobenzene	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
1,2-Dichlorobenzene	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
1,2-Diphenylhydrazine	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 UJ
1,3-Dichlorobenzene	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
1,4-Dichlorobenzene	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
2,2'-oxybis(1-Chloropropane)	UG/L						
2,4,5-Trichlorophenol	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
2,4,6-Trichlorophenol	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
2,4-Dichlorophenol	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
2,4-Dimethylphenol	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
2,4-Dinitrophenol	UG/L	20 U	19.8 U	21.5 U	19.4 U		19.4 U
2,4-Dinitrotoluene	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
2,6-Dichlorophenol	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
2,6-Dinitrotoluene	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
2-Chloronaphthalene	UG/L	1 U	0.99 U	1.1 U	0.97 U		0.97 U
2-Chlorophenol	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-1	MW59-2	MW59-2	MW59-3	MW59-3	MW59-3
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592000	592001	592006	592002	592007DUP	592007
	Sample Depth to Top of Sample	8.86	12.93	0	8.04	0	0
	Sample Depth to Bottom of Sample	8.86	12.93	0	8.04	0	0
	Sample Date	4/6/2004	4/6/2004	8/31/2004	4/5/2004	8/30/2004	8/30/2004
	QC Code	SA	SA	SA	SA	DU	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	1	2	1	2	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Methylnaphthalene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
2-Methylphenol	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
2-Nitroaniline	UG/L	10 U	9.9 U	10.8 UJ	9.7 U	9.7 U	9.7 U
2-Nitrophenol	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
3,3'-Dichlorobenzidine	UG/L	10 U	9.9 U	10.8 U	9.7 UJ	9.7 U	9.7 U
3-Nitroaniline	UG/L	10 U	9.9 U	10.8 UJ	9.7 U	9.7 U	9.7 U
4,6-Dinitro-2-methylphenol	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
4-Bromophenyl phenyl ether	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
4-Chloro-3-methylphenol	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
4-Chloroaniline	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
4-Chlorophenyl phenyl ether	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
4-Methylphenol	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
4-Nitroaniline	UG/L	10 U	9.9 U	10.8 UJ	9.7 U	9.7 U	9.7 U
4-Nitrophenol	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Acenaphthene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
Acenaphthylene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
Acetophenone	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Anthracene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
Benzidine	UG/L	50 U	49.5 U	53.8 U	48.5 U	48.5 U	48.5 U
Benzo(a)anthracene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
Benzo(a)pyrene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
Benzo(b)fluoranthene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 UJ	0.97 UJ
Benzo(ghi)perylene	UG/L	1 UJ	0.99 UJ	1.1 UJ	0.97 U	0.97 U	0.97 U
Benzo(k)fluoranthene	UG/L	1 UJ	0.99 UJ	1.1 U	0.97 U	0.97 U	0.97 U
Benzoic Acid	UG/L	20 UJ	19.8 UJ	21.5 U	19.4 U	19.4 UJ	19.4 UJ
Benzyl alcohol	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Bis(2-Chloroethoxy)methane	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Bis(2-Chloroethyl)ether	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Bis(2-Chloroisopropyl)ether	UG/L	10 UJ	9.9 UJ	10.8 U	9.7 U	9.7 UJ	9.7 UJ
Bis(2-Ethylhexyl)phthalate	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Butylbenzylphthalate	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Carbazole	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Chrysene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
Di-n-butylphthalate	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Di-n-octylphthalate	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Dibenz(a,h)anthracene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
Dibenzofuran	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Diethyl phthalate	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Dimethylphthalate	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Diphenylamine	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Fluoranthene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
Fluorene	UG/L	1 U	0.99 U	1.1 U	0.97 U	0.97 U	0.97 U
Hexachlorobenzene	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Hexachlorobutadiene	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U
Hexachlorocyclopentadiene	UG/L						
Hexachloroethane	UG/L	10 U	9.9 U	10.8 U	9.7 U	9.7 U	9.7 U

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-1	MW59-2	MW59-2	MW59-3	MW59-3	MW59-3
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592000	592001	592006	592002	592007DUP	592007
	Sample Depth to Top of Sample	8.86	12.93	0	8.04	0	0
	Sample Depth to Bottom of Sample	8.86	12.93	0	8.04	0	0
	Sample Date	4/6/2004	4/6/2004	8/31/2004	4/5/2004	8/30/2004	8/30/2004
	QC Code	SA	SA	SA	SA	DU	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	1	2	1	2	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Indeno(1,2,3-cd)pyrene	UG/L	1 UJ	0.99 UJ	1.1 U	0.97 U		0.97 U
Isophorone	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
N-Nitrosodimethylamine	UG/L	10 UJ	9.9 UJ	10.8 U	9.7 U		9.7 U
N-Nitrosodiphenylamine	UG/L						
N-Nitrosodipropylamine	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
N-Nitrosopyrrolidine	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
Naphthalene	UG/L	1 U	0.99 U	1.1 U	0.97 U		0.97 U
Nitrobenzene	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
Pentachlorophenol	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
Phenanthrene	UG/L	1 U	0.99 U	1.1 U	0.97 U		0.97 U
Phenol	UG/L	10 U	9.9 U	10.8 U	9.7 U		9.7 U
Pyrene	UG/L	1 U	0.99 U	1.1 U	0.97 U		0.97 U
Pesticides/PCBs							
4,4'-DDD	UG/L	0.0392 U	0.0377 U	0.0392 U	0.0396 UJ		0.0381 U
4,4'-DDE	UG/L	0.008 J	0.0377 U	0.0392 U	0.0396 UJ		0.0381 U
4,4'-DDT	UG/L	0.0392 U	0.0377 U	0.0392 U	0.042 J		0.0381 U
Aldrin	UG/L	0.0196 U	0.0189 U	0.0196 U	0.0198 UJ		0.019 U
Alpha-BHC	UG/L	0.0196 U	0.0189 U	0.0196 U	0.0198 UJ		0.019 U
Alpha-Chlordane	UG/L						
Beta-BHC	UG/L	0.0196 U	0.0189 U	0.0196 U	0.0198 UJ		0.019 U
Chlordane	UG/L	0.245 U	0.236 U	0.245 U	0.248 UJ		0.238 UJ
Delta-BHC	UG/L	0.0196 U	0.0189 U	0.0196 U	0.0198 UJ		0.019 UJ
Dieldrin	UG/L	0.0392 U	0.0377 U	0.0392 U	0.0396 UJ		0.0381 U
Endosulfan I	UG/L	0.0196 U	0.0189 U	0.0196 U	0.0198 UJ		0.019 U
Endosulfan II	UG/L	0.0392 U	0.0377 U	0.0392 U	0.0396 UJ		0.0381 U
Endosulfan sulfate	UG/L	0.0392 U	0.0377 U	0.0392 U	0.0396 UJ		0.0381 U
Endrin	UG/L	0.0392 U	0.0377 U	0.0392 U	0.0396 UJ		0.0381 U
Endrin aldehyde	UG/L	0.0392 U	0.0377 U	0.0392 U	0.0396 UJ		0.0381 U
Endrin ketone	UG/L	0.0392 U	0.0377 U	0.0392 U	0.0396 UJ		0.0381 U
Gamma-BHC/Lindane	UG/L	0.0196 U	0.0189 U	0.0196 U	0.0198 UJ		0.019 U
Gamma-Chlordane	UG/L						
Heptachlor	UG/L	0.0196 UJ	0.0189 UJ	0.0196 U	0.0198 UJ		0.019 U
Heptachlor epoxide	UG/L	0.0196 U	0.0189 U	0.0196 U	0.0198 UJ		0.019 U
Methoxychlor	UG/L	0.196 U	0.189 U	0.196 U	0.198 UJ		0.19 U
Toxaphene	UG/L	0.98 U	0.943 U	0.98 U	0.99 UJ		0.952 U
Aroclor-1016	UG/L	0.49 U	0.472 U	0.49 U	0.495 UJ		0.476 U
Aroclor-1221	UG/L	0.49 U	0.472 U	0.49 U	0.495 UJ		0.476 U
Aroclor-1232	UG/L	0.49 U	0.472 U	0.49 U	0.495 UJ		0.476 U
Aroclor-1242	UG/L	0.49 U	0.472 U	0.49 U	0.495 UJ		0.476 U
Aroclor-1248	UG/L	0.49 U	0.472 U	0.49 U	0.495 UJ		0.476 U
Aroclor-1254	UG/L	0.49 U	0.472 U	0.49 U	0.495 UJ		0.476 U
Aroclor-1260	UG/L	0.49 U	0.472 U	0.49 U	0.495 UJ		0.476 U
Metals							
Aluminum	UG/L	100	26.8 J	73.8	165	372 J	336 J
Antimony	UG/L	5.49 J	6.58 J	10 U	8.6 J	10 U	10 U
Arsenic	UG/L	4.47 U	2.24 U	5 U	22.4 U	5 U	5 U

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-1	MW59-2	MW59-2	MW59-3	MW59-3	MW59-3
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592000	592001	592006	592002	592007DUP	592007
	Sample Depth to Top of Sample	8.86	12.93	0	8.04	0	0
	Sample Depth to Bottom of Sample	8.86	12.93	0	8.04	0	0
	Sample Date	4/6/2004	4/6/2004	8/31/2004	4/5/2004	8/30/2004	8/30/2004
	QC Code	SA	SA	SA	SA	DU	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	1	2	1	2	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Barium	UG/L	54.7	80.1	132	120	80.4	80.3
Beryllium	UG/L	0.158 U	0.158 U	5 U	0.158 U	5 U	5 U
Cadmium	UG/L	0.518 J	0.313 U	5 U	0.313 U	0.725 J	0.91 J
Calcium	UG/L	125000	102000	131000	169000	101000	102000
Chromium	UG/L	0.503 U	0.503 U	0.72 J	0.503 U	5 U	5 U
Cobalt	UG/L	0.775 J	0.541 U	1.2 J	0.541 U	5 U	5 U
Copper	UG/L	1.39 U	1.39 U	5 U	2.04 J	1.7 J	1.9 J
Cyanide	UG/L						
Iron	UG/L	252	83.7	60.9 J	321	414	385
Lead	UG/L	1.72 U	1.72 U	1.7 J	1.72 U	5 U	5 U
Magnesium	UG/L	22800	22000	28800	20800	12600	12700
Manganese	UG/L	221	9.11	33.7	21.7	45.4	46.3 J
Mercury	UG/L	0.047 U	0.047 U	0.2 U	0.047 U	0.0639 J	0.2 U
Nickel	UG/L	4.98	0.69 U	0.84 J	0.812 J	3.01 J	1.5 J
Potassium	UG/L	1500 J	817 J	1120	1790 J	1700	1710
Selenium	UG/L	2.81 U	2.81 U	5.2 R	2.81 U	5 R	5 R
Silver	UG/L	0.835 U	0.835 U	5 U	0.835 U	5 U	5 U
Sodium	UG/L	35400	22000	36300	304000	227000	233000
Thallium	UG/L	10 U	10 U	20 U	10 U	20 U	20 U
Vanadium	UG/L	0.606 U	0.606 U	5 U	0.606 U	5 U	5 U
Zinc	UG/L	3.21 J	3.44 J	1.5 J	13.2	7.99	9.9

Note(s):

(1) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-3	MW59-4	MW59-6	MW59-6	MW59-7	MW59-8
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592010	592003	592004	592009	592005	592008
	Sample Depth to Top of Sample	0	8.43	12.45	0	0	0
	Sample Depth to Bottom of Sample	0	8.43	12.45	0	0	0
	Sample Date	8/30/2004	4/6/2004	4/5/2004	8/30/2004	8/31/2004	8/30/2004
	QC Code	SA	SA	SA	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		2	1	1	2	2	2
Parameter	Units	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	0.5 U	0.5 U
1,1,1-Trichloroethane	UG/L	0.46 J	0.5 U	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	0.5 U	0.5 U
1,1,2-Trichloroethane	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
1,1-Dichloroethene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
1,2,3-Trichlorobenzene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
1,2,4-Trichlorobenzene	UG/L	0.5 U	0.5 U	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	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	0.5 U	0.5 U
1,2-Dibromoethane	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
1,2-Dichloroethane	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
1,3,5-Trimethylbenzene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
1,3-Dichloropropane	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
2,2-Dichloropropane	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone	UG/L						
Benzene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Bromochloromethane	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Bromoform	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	UG/L						
Carbon tetrachloride	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Chlorodibromomethane	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Chloroform	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Cis-1,2-Dichloroethene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Dichlorodifluoromethane	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-3	MW59-4	MW59-6	MW59-6	MW59-7	MW59-8
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592010	592003	592004	592009	592005	592008
	Sample Depth to Top of Sample	0	8.43	12.45	0	0	0
	Sample Depth to Bottom of Sample	0	8.43	12.45	0	0	0
	Sample Date	8/30/2004	4/6/2004	4/5/2004	8/30/2004	8/31/2004	8/30/2004
	QC Code	SA	SA	SA	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		2	1	1	2	2	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Ethyl benzene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Isopropylbenzene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Meta/Para Xylene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl bromide	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl butyl ketone	UG/L						
Methyl chloride	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl ethyl ketone	UG/L						
Methyl isobutyl ketone	UG/L						
Methylene bromide	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Naphthalene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ortho Xylene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Propylbenzene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Tetrachloroethene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Total Xylenes	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Trans-1,3-Dichloropropene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
Trichlorofluoromethane	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl acetate	UG/L	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Semivolatle Organics							
n-Butylbenzene	UG/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Chlorotoluene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
sec-Butylbenzene	UG/L	0.5 U	0.5 U	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	0.5 U	0.5 U
1,2,4-Trichlorobenzene	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
1,2-Dichlorobenzene	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
1,2-Diphenylhydrazine	UG/L	10 UJ	10 U	9.9 U	10.4 UJ	10 U	10.2 UJ
1,3-Dichlorobenzene	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
1,4-Dichlorobenzene	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
2,2'-oxybis(1-Chloropropane)	UG/L						
2,4,5-Trichlorophenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
2,4,6-Trichlorophenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
2,4-Dichlorophenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
2,4-Dimethylphenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
2,4-Dinitrophenol	UG/L	20 U	20 U	19.8 U	20.8 U	20 UJ	20.4 U
2,4-Dinitrotoluene	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
2,6-Dichlorophenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
2,6-Dinitrotoluene	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
2-Chloronaphthalene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
2-Chlorophenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-3	MW59-4	MW59-6	MW59-6	MW59-7	MW59-8
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592010	592003	592004	592009	592005	592008
	Sample Depth to Top of Sample	0	8.43	12.45	0	0	0
	Sample Depth to Bottom of Sample	0	8.43	12.45	0	0	0
	Sample Date	8/30/2004	4/6/2004	4/5/2004	8/30/2004	8/31/2004	8/30/2004
	QC Code	SA	SA	SA	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		2	1	1	2	2	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2-Methylnaphthalene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
2-Methylphenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
2-Nitroaniline	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
2-Nitrophenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
3,3'-Dichlorobenzidine	UG/L	10 U	10 U	9.9 UJ	10.4 U	10 U	10.2 U
3-Nitroaniline	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
4,6-Dinitro-2-methylphenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
4-Bromophenyl phenyl ether	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
4-Chloro-3-methylphenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
4-Chloroaniline	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
4-Chlorophenyl phenyl ether	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
4-Methylphenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
4-Nitroaniline	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
4-Nitrophenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
Acenaphthene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Acenaphthylene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Acetophenone	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Anthracene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Benzidine	UG/L	50 U	50 U	49.5 U	52.1 U	50 U	51 U
Benzo(a)anthracene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Benzo(a)pyrene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Benzo(b)fluoranthene	UG/L	1 UJ	1 U	0.99 U	1 UJ	1 U	1 UJ
Benzo(ghi)perylene	UG/L	1 U	1 UJ	0.99 U	1 U	1 UJ	1 U
Benzo(k)fluoranthene	UG/L	1 U	1 UJ	0.99 U	1 U	1 U	1 U
Benzoic Acid	UG/L	20 UJ	20 UJ	19.8 U	20.8 UJ	20 U	20.4 UJ
Benzyl alcohol	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Bis(2-Chloroethoxy)methane	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Bis(2-Chloroethyl)ether	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Bis(2-Chloroisopropyl)ether	UG/L	10 UJ	10 UJ	9.9 U	10.4 UJ	10 U	10.2 UJ
Bis(2-Ethylhexyl)phthalate	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Butylbenzylphthalate	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Carbazole	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Chrysene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Di-n-butylphthalate	UG/L	10 U	10 U	9.9 U	10.4 U	2.3 J	10.2 U
Di-n-octylphthalate	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Dibenz(a,h)anthracene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Dibenzofuran	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Diethyl phthalate	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Dimethylphthalate	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Diphenylamine	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Fluoranthene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Fluorene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Hexachlorobenzene	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Hexachlorobutadiene	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Hexachlorocyclopentadiene	UG/L						
Hexachloroethane	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-3	MW59-4	MW59-6	MW59-6	MW59-7	MW59-8
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592010	592003	592004	592009	592005	592008
	Sample Depth to Top of Sample	0	8.43	12.45	0	0	0
	Sample Depth to Bottom of Sample	0	8.43	12.45	0	0	0
	Sample Date	8/30/2004	4/6/2004	4/5/2004	8/30/2004	8/31/2004	8/30/2004
	QC Code	SA	SA	SA	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		2	1	1	2	2	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Indeno(1,2,3-cd)pyrene	UG/L	1 U	1 UJ	0.99 U	1 U	1 U	1 U
Isophorone	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
N-Nitrosodimethylamine	UG/L	10 U	10 UJ	9.9 U	10.4 U	10 U	10.2 U
N-Nitrosodiphenylamine	UG/L						
N-Nitrosodipropylamine	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
N-Nitrosopyrrolidine	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Naphthalene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Nitrobenzene	UG/L	10 U	10 U	9.9 U	10.4 U	10 U	10.2 U
Pentachlorophenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
Phenanthrene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Phenol	UG/L	10 U	10 U	9.9 U	10.4 U	10 UJ	10.2 U
Pyrene	UG/L	1 U	1 U	0.99 U	1 U	1 U	1 U
Pesticides/PCBs							
4,4'-DDD	UG/L	0.04 U	0.0385 U	0.0385 U	0.0388 U	0.0388 U	0.0385 U
4,4'-DDE	UG/L	0.04 U	0.0385 U	0.008 J	0.0388 U	0.0388 U	0.0385 U
4,4'-DDT	UG/L	0.04 U	0.0385 U	0.0385 UJ	0.0388 U	0.0388 U	0.0385 U
Aldrin	UG/L	0.02 U	0.0192 U	0.0192 U	0.0194 U	0.0194 U	0.0192 U
Alpha-BHC	UG/L	0.02 U	0.0192 U	0.0192 U	0.0194 U	0.0194 U	0.0192 U
Alpha-Chlordane	UG/L						
Beta-BHC	UG/L	0.02 U	0.0192 U	0.0192 U	0.0194 U	0.0194 U	0.0192 U
Chlordane	UG/L	0.25 UJ	0.24 U	0.24 U	0.243 UJ	0.243 U	0.24 UJ
Delta-BHC	UG/L	0.02 UJ	0.0192 U	0.0192 U	0.0194 UJ	0.0194 U	0.0192 UJ
Dieldrin	UG/L	0.04 U	0.0385 U	0.0385 U	0.0388 U	0.0388 U	0.0385 U
Endosulfan I	UG/L	0.02 U	0.0192 U	0.0192 U	0.0194 U	0.0194 U	0.0192 U
Endosulfan II	UG/L	0.04 U	0.0385 U	0.0385 U	0.0388 U	0.0388 U	0.0385 U
Endosulfan sulfate	UG/L	0.04 U	0.0385 U	0.0385 U	0.0388 U	0.0388 U	0.0385 U
Endrin	UG/L	0.04 U	0.0385 U	0.0385 U	0.0388 U	0.0388 U	0.0385 U
Endrin aldehyde	UG/L	0.04 U	0.0385 U	0.0385 U	0.0388 U	0.0388 U	0.0385 U
Endrin ketone	UG/L	0.04 U	0.0385 U	0.0385 U	0.0388 U	0.0388 U	0.0385 U
Gamma-BHC/Lindane	UG/L	0.02 U	0.0192 U	0.0192 U	0.0194 U	0.0194 U	0.0192 U
Gamma-Chlordane	UG/L						
Heptachlor	UG/L	0.02 U	0.0192 UJ	0.0192 U	0.0194 U	0.0194 U	0.0192 U
Heptachlor epoxide	UG/L	0.02 U	0.0192 U	0.0192 U	0.0194 U	0.0194 U	0.0192 U
Methoxychlor	UG/L	0.2 U	0.192 U	0.192 U	0.194 U	0.194 U	0.192 U
Toxaphene	UG/L	1 U	0.962 U	0.962 U	0.971 U	0.971 U	0.962 U
Aroclor-1016	UG/L	0.5 U	0.481 U	0.481 U	0.485 U	0.485 U	0.481 U
Aroclor-1221	UG/L	0.5 U	0.481 U	0.481 U	0.485 U	0.485 U	0.481 U
Aroclor-1232	UG/L	0.5 U	0.481 U	0.481 U	0.485 U	0.485 U	0.481 U
Aroclor-1242	UG/L	0.5 U	0.481 U	0.481 U	0.485 U	0.485 U	0.481 U
Aroclor-1248	UG/L	0.5 U	0.481 U	0.481 U	0.485 U	0.485 U	0.481 U
Aroclor-1254	UG/L	0.5 U	0.481 U	0.481 U	0.485 U	0.485 U	0.481 U
Aroclor-1260	UG/L	0.5 U	0.481 U	0.481 U	0.485 U	0.485 U	0.481 U
Metals							
Aluminum	UG/L	103 J	14.7 U	3250	288	50.8 J	179
Antimony	UG/L	10 U	5.08 U	8.34 J	10 U	10 U	10 U
Arsenic	UG/L	5 U	22.4 U	2.24 U	5 U	5 U	5 U

Table D-3
SEAD-59 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59	SEAD-59
	Location ID	MW59-3	MW59-4	MW59-6	MW59-6	MW59-7	MW59-8
	Maxtrix	GW	GW	GW	GW	GW	GW
	Sample ID	592010	592003	592004	592009	592005	592008
	Sample Depth to Top of Sample	0	8.43	12.45	0	0	0
	Sample Depth to Bottom of Sample	0	8.43	12.45	0	0	0
	Sample Date	8/30/2004	4/6/2004	4/5/2004	8/30/2004	8/31/2004	8/30/2004
	QC Code	SA	SA	SA	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		2	1	1	2	2	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Barium	UG/L	80.7	62.5	60.2	55.8	69.6	98.3
Beryllium	UG/L	5 U	0.158 U	0.158 U	5 U	5 U	5 U
Cadmium	UG/L	0.89 J	0.335 J	0.404 J	5 U	5 U	5 U
Calcium	UG/L	103000	127000	158000	146000	107000	138000
Chromium	UG/L	1.2 J	0.503 U	3.54	5 U	0.53 J	1.4 J
Cobalt	UG/L	5 U	0.541 U	2.92	0.68 J	5 U	5 U
Copper	UG/L	5 U	1.42 J	4.65 J	5 U	5 U	5 U
Cyanide	UG/L						
Iron	UG/L	146	184	3680	484	242	666
Lead	UG/L	5 U	1.72 U	1.72 U	2.5 J	4.4 J	2.4 J
Magnesium	UG/L	12900	21100	27900	27100	23700	21700
Manganese	UG/L	20.9 J	91.4	314	191	135	294
Mercury	UG/L	0.2 U	0.047 U	0.047 U	0.2 U	0.2 U	0.2 U
Nickel	UG/L	2 J	0.69 U	6.08	3.6	5 U	5.5
Potassium	UG/L	1630	1190 J	2400 J	1470	2320	1830
Selenium	UG/L	5 R	2.81 U	2.81 U	5 R	5 U	4.2 J
Silver	UG/L	5 U	0.835 U	0.835 U	5 U	5 U	5 U
Sodium	UG/L	236000	53200	50100	49000	235000	148000
Thallium	UG/L	20 U	10 U	10 U	20 U	20 U	20 U
Vanadium	UG/L	0.89 J	0.606 U	5.26	5 U	5 U	5 U
Zinc	UG/L	5.6	2.78 J	11.1	2.5 J	2 J	2 J

Note(s):

(1) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	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	5 U	5 U	5 U	5 U	5 U	5 U	6 U	2 NJ	6 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 UJ	6 UJ	5 UJ
1,1,2-Trichloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,1-Dichloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,1-Dichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,2,3-Trichloropropane	UG/KG										
1,2,4-Trichlorobenzene	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,2-Dibromo-3-chloropropane	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,2-Dibromoethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,2-Dichlorobenzene	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,2-Dichloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,2-Dichloroethene (total)	UG/KG										
1,2-Dichloropropane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,3-Dichlorobenzene	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,3-Dichloropropane	UG/KG										
1,4-Dichlorobenzene	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
Acetone	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	4 NJ	54 J	4 NJ	5 U
Benzene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Bromodichloromethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Bromoform	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Carbon disulfide	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 J	6 U	5 U
Carbon tetrachloride	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Chlorobenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Chlorodibromomethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Chloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Chloroform	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Cis-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Cis-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Cyclohexane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Dichlorodifluoromethane	UG/KG	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	6 U	5 UJ	6 U	5 UJ
Ethyl benzene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Isopropylbenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Meta/Para Xylene	UG/KG										
Methyl Acetate	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl Tertbutyl Ether	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl bromide	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 UJ	5 UJ	6 UJ	5 U
Methyl butyl ketone	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl chloride	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl cyclohexane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	3 J	6 U	5 U
Methyl ethyl ketone	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl isobutyl ketone	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methylene chloride	UG/KG	5 U	5 U	6 U	5 U	5 U	5 U	6 U	7 U	6 U	9 U
Ortho Xylene	UG/KG										
Styrene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Tetrachloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Toluene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	1 J	6 U	5 U
Total BTEX	MG/KG										
Total Xylenes	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
Trans-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Trans-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Trichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Trichlorofluoromethane	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 UJ	6 UJ	5 UJ
Vinyl chloride	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Semivolatile Organics											
1,1'-Biphenyl	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
1,2,4-Trichlorobenzene	UG/KG										
1,2-Dichlorobenzene	UG/KG										
1,3-Dichlorobenzene	UG/KG										
1,4-Dichlorobenzene	UG/KG										
2,2'-oxybis(1-Chloropropane)	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,4,5-Trichlorophenol	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
2,4,6-Trichlorophenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,4-Dichlorophenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,4-Dimethylphenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,4-Dinitrophenol	UG/KG	1000 UJ	880 U	900 U	920 UJ	890 UJ	870 UJ	1000 UJ	2700 UJ	1000 UJ	920 UJ
2,4-Dinitrotoluene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,6-Dinitrotoluene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Chloronaphthalene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Chlorophenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Methylnaphthalene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Methylphenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Nitroaniline	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
2-Nitrophenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
3,3'-Dichlorobenzidine	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 U	360 U
3-Nitroaniline	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
4,6-Dinitro-2-methylphenol	UG/KG	1000 UJ	880 U	900 U	920 UJ	890 UJ	870 UJ	1000 U	2700 UJ	1000 U	920 U
4-Bromophenyl phenyl ether	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
4-Chloro-3-methylphenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
4-Chloroaniline	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 UJ	360 UJ
4-Chlorophenyl phenyl ether	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
4-Methylphenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
4-Nitroaniline	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
4-Nitrophenol	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
Acenaphthene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	57 J	1100 U	400 U	360 U
Acenaphthylene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	120 J	190 J	400 U	360 U
Acetophenone	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Aniline	UG/KG										
Anthracene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	260 J	320 J	140 J	360 U
Atrazine	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Benzaldehyde	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Benzo(a)anthracene	UG/KG	55 J	350 U	360 U	61 J	41 J	50 J	1300 J	3100	470	360 U
Benzo(a)pyrene	UG/KG	58 J	350 U	360 U	52 J	37 J	45 J	1400 J	2900	400	38 J
Benzo(b)fluoranthene	UG/KG	85 J	350 U	360 U	69 NJ	55 NJ	64 NJ	1600 J	3600	690	54 NJ
Benzo(ghi)perylene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	810 J	1200	180 J	360 U
Benzo(k)fluoranthene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	1200 J	2100	270 J	360 U
Benzoic Acid	UG/KG										
Bis(2-Chloroethoxy)methane	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Bis(2-Chloroethyl)ether	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Bis(2-Chloroisopropyl)ether	UG/KG										
Bis(2-Ethylhexyl)phthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 U	360 U
Butylbenzylphthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 U	360 U
Caprolactam	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Carbazole	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	120 J	1100 U	400 U	360 U
Chrysene	UG/KG	67 J	350 U	360 U	67 J	52 J	58 J	1800 J	3000	620	47 J
Di-n-butylphthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Di-n-octylphthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 U	360 U
Dibenz(a,h)anthracene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	200 J	330 J	61 J	360 U
Dibenzofuran	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Diethyl phthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Dimethylphthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Fluoranthene	UG/KG	120 J	350 U	360 U	110 J	99 J	110 J	2200	4200	740	70 J
Fluorene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	81 J	1100 U	400 U	360 U
Hexachlorobenzene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Hexachlorobutadiene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Hexachlorocyclopentadiene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Hexachloroethane	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Indeno(1,2,3-cd)pyrene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	730 J	1200	190 J	360 U
Isophorone	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
N-Nitrosodiphenylamine	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
N-Nitrosodipropylamine	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Naphthalene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Nitrobenzene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
Phenanthrene	UG/KG	56 J	350 U	360 U	67 J	48 J	56 J	1200	810 J	320 J	360 U
Phenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Pyrene	UG/KG	110 J	350 U	360 U	110 J	84 J	98 J	3000	5800	1000	78 J
Pyridine	UG/KG										
Pesticides/PCBs											
4,4'-DDD	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	17	3.6 U	40 U	3.6 U
4,4'-DDE	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	16 NJ	6.8 J	190	3.6 U
4,4'-DDT	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	14 J	3.6 U	82	3.6 U
Aldrin	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Alpha-BHC	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 UJ
Alpha-Chlordane	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Beta-BHC	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Delta-BHC	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Dieldrin	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endosulfan I	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Endosulfan II	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endosulfan sulfate	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endrin	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endrin aldehyde	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endrin ketone	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Gamma-BHC/Lindane	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Gamma-Chlordane	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Heptachlor	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Heptachlor epoxide	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Methoxychlor	UG/KG	20 U	18 U	18 U	19 U	18 U	18 U	21 U	18 U	210 U	19 U
Toxaphene	UG/KG	200 U	180 U	180 U	190 U	180 U	180 U	210 U	180 U	2100 U	190 U
Aroclor-1016	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1221	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1232	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1242	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1248	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1254	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1260	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	200 J	36 U	41 U	37 U
Metals											
Aluminum	MG/KG	14600 J	6120 J	7660 J	13400 J	10800 J	7920 J	8110 J	13300 J	9640 J	8650 J
Antimony	MG/KG	1.8 J	0.96 J	1.3 J	1.6 J	1.5 J	1 J	11.5 J	1.6 J	3.8 J	0.88 J
Arsenic	MG/KG	4.6	4.3	4.9	5.2	6.2	5.2	6.2 J	5.9	6.7 J	4.9 J
Barium	MG/KG	114 J	54.9 J	47 J	119 J	61.9 J	54.1 J	78.1 J	80.1 J	82.2 J	56.2 J
Beryllium	MG/KG	0.82	0.31	0.42	0.76	0.56	0.39	0.46	0.67	0.51	0.42
Cadmium	MG/KG	0.3 J	0.17 J	0.2 J	0.3 J	0.29 J	0.19 J	0.39	0.27 J	0.39	0.27 J

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Calcium	MG/KG	6940 J	79800 J	83200 J	10300 J	32200 J	55000 J	36700 J	9130 J	47800 J	54700 J
Chromium	MG/KG	22.7 J	10 J	12.4 J	22.1 J	16.3 J	11.9 J	14 J	19 J	15.5 J	13.7 J
Cobalt	MG/KG	11.4 J	6.1 J	6.4 J	8.8 J	8.4 J	8.5 J	8.2 J	11.2 J	9.2 J	8.1 J
Copper	MG/KG	25.8 J	18.7 J	20.1 J	26.1 J	19.7 J	18.9 J	35.5 J	21.8 J	48.8 J	21.4 J
Cyanide	MG/KG										
Iron	MG/KG	25600	13200	15300	24900	20700	18300	15900 J	22800	20000 J	19700 J
Lead	MG/KG	17.4 J	7.4 J	12.7 J	19.1 J	13.5 J	11.9 J	635 J	17.9 J	452 J	17.9 J
Magnesium	MG/KG	4890 J	15300 J	9380 J	5580 J	8350 J	9620 J	8170 J	4880 J	7260 J	11100 J
Manganese	MG/KG	488 J	373 J	541 J	297 J	476 J	481 J	456 J	473 J	498 J	407 J
Mercury	MG/KG	0.07	0.02 J	0.02 J	0.05	0.04	0.03 J	0.43 J	0.06	1 J	0.02 J
Nickel	MG/KG	35.4 J	18 J	20.5 J	32.6 J	24.1 J	21.2 J	25.3 J	27 J	26.6 J	25 J
Potassium	MG/KG	1620	878	910	1260	965	863	960 J	969	1110 J	869 J
Selenium	MG/KG	0.45 U	0.41 U	0.43 U	0.42 U	0.43 U	0.39 U	0.46 U	0.4 U	0.47 U	0.41 U
Silver	MG/KG	1.6	0.1 U	0.4 J	1.4	0.92	0.41 J	0.74 J	1.2	0.55 J	0.32 J
Sodium	MG/KG	79.7	143	145	60.4	94.6	112	71.6 J	48.4	68.7	94.1 J
Thallium	MG/KG	0.22 U	0.2 U	0.22 U	0.21 U	0.21 U	0.2 U	0.23 U	0.2 U	0.24 U	0.21 U
Vanadium	MG/KG	20.4 J	11.3 J	12.9 J	19.6 J	17.2 J	12.9 J	15 J	19.9 J	24 J	13.4 J
Zinc	MG/KG	88.7	45.3	57.6	81.9	69.8	56.8	128 J	70	83.3 J	56 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	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	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,1,2-Trichloroethane	UG/KG	6 U								5 U	5 U
1,1-Dichloroethane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,1-Dichloroethene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,2,3-Trichloropropane	UG/KG		5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U		
1,2,4-Trichlorobenzene	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
1,2-Dibromo-3-chloropropane	UG/KG	6 UJ								5 UJ	5 UJ
1,2-Dibromoethane	UG/KG	6 U								5 U	5 U
1,2-Dichlorobenzene	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
1,2-Dichloroethane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,2-Dichloroethene (total)	UG/KG										
1,2-Dichloropropane	UG/KG	6 U								5 U	5 U
1,3-Dichlorobenzene	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
1,3-Dichloropropane	UG/KG		5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U		
1,4-Dichlorobenzene	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
Acetone	UG/KG	6 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U	5 U	5 U
Benzene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Bromodichloromethane	UG/KG	6 U								5 U	5 U
Bromoform	UG/KG	6 U								5 U	5 U
Carbon disulfide	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Carbon tetrachloride	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Chlorobenzene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Chlorodibromomethane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Chloroethane	UG/KG	6 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	5 U	5 U
Chloroform	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Cis-1,2-Dichloroethene	UG/KG	6 U								5 U	5 U
Cis-1,3-Dichloropropene	UG/KG	6 U								5 U	5 U
Cyclohexane	UG/KG	6 U								5 U	5 U
Dichlorodifluoromethane	UG/KG	6 UJ								5 U	5 U
Ethyl benzene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Isopropylbenzene	UG/KG	6 U								5 U	5 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	
Meta/Para Xylene	UG/KG		5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U		
Methyl Acetate	UG/KG	6 U								5 U	
Methyl Tertbutyl Ether	UG/KG	6 U								5 U	
Methyl bromide	UG/KG	6 U								5 U	
Methyl butyl ketone	UG/KG	6 U								5 U	
Methyl chloride	UG/KG	6 U								5 U	
Methyl cyclohexane	UG/KG	6 U								5 U	
Methyl ethyl ketone	UG/KG	6 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	5 U	
Methyl isobutyl ketone	UG/KG	6 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	5 U	
Methylene chloride	UG/KG	11 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	
Ortho Xylene	UG/KG		5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U		
Styrene	UG/KG	6 U								5 U	
Tetrachloroethene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	
Toluene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	
Total BTEX	MG/KG										
Total Xylenes	UG/KG	6 UJ								5 UJ	
Trans-1,2-Dichloroethene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	
Trans-1,3-Dichloropropene	UG/KG	6 U								5 U	
Trichloroethene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	
Trichlorofluoromethane	UG/KG	6 U								5 U	
Vinyl chloride	UG/KG	6 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	5 U	
Semivolatile Organics											
1,1'-Biphenyl	UG/KG	390 U								360 U	370 U
1,2,4-Trichlorobenzene	UG/KG										
1,2-Dichlorobenzene	UG/KG										
1,3-Dichlorobenzene	UG/KG										
1,4-Dichlorobenzene	UG/KG										
2,2'-oxybis(1-Chloropropane)	UG/KG	390 U								360 U	370 U
2,4,5-Trichlorophenol	UG/KG	990 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	900 U	940 U
2,4,6-Trichlorophenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2,4-Dichlorophenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2,4-Dimethylphenol	UG/KG	390 U								360 U	370 U
2,4-Dinitrophenol	UG/KG	990 UJ	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
2,4-Dinitrotoluene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2,6-Dinitrotoluene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2-Chloronaphthalene	UG/KG	390 U								360 U	370 U
2-Chlorophenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2-Methylnaphthalene	UG/KG	390 U	61 J	360 U	360 U	360 U	1800 U	770 J	370 U	360 U	370 U
2-Methylphenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2-Nitroaniline	UG/KG	990 U	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
2-Nitrophenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
3,3'-Dichlorobenzidine	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
3-Nitroaniline	UG/KG	990 U	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
4,6-Dinitro-2-methylphenol	UG/KG	990 U								900 U	940 U
4-Bromophenyl phenyl ether	UG/KG	390 U								360 U	370 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	
4-Chloro-3-methylphenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
4-Chloroaniline	UG/KG	390 UJ	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
4-Chlorophenyl phenyl ether	UG/KG	390 U									
4-Methylphenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
4-Nitroaniline	UG/KG	990 U									
4-Nitrophenol	UG/KG	990 U	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
Acenaphthene	UG/KG	390 U	300 J	360 U	360 U	360 U	1800 U	1500 J	370 U	40 J	80 J
Acenaphthylene	UG/KG	390 U	360 U	120 J	360 U	360 U	1800	1500 J	44 J	33 J	85 J
Acetophenone	UG/KG	390 U									
Aniline	UG/KG		360 U	360 U	360 U	360 U	1800 U	1800 U	370 U		
Anthracene	UG/KG	390 U	570	77 J	360 U	360 U	1100 J	5000	370 U	110 J	220 J
Atrazine	UG/KG	390 U									
Benzaldehyde	UG/KG	390 U									
Benzo(a)anthracene	UG/KG	390 U	1000	310 J	360 U	360 U	4700	10000	130 J	410	500
Benzo(a)pyrene	UG/KG	390 U	800	500	360 U	360 U	6500	9000	170 J	410	450
Benzo(b)fluoranthene	UG/KG	390 U	570	520	40 J	360 U	5900	6700	140 J	540	640
Benzo(ghi)perylene	UG/KG	390 U	380	590	360 U	360 U	5800	5200	120 J	230 J	300 J
Benzo(k)fluoranthene	UG/KG	390 U	670	460	360 U	360 U	5500	7700	140 J	200 J	230 J
Benzoic Acid	UG/KG		1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U		
Bis(2-Chloroethoxy)methane	UG/KG	390 U									
Bis(2-Chloroethyl)ether	UG/KG	390 U									
Bis(2-Chloroisopropyl)ether	UG/KG										
Bis(2-Ethylhexyl)phthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	83 J
Butylbenzylphthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Caprolactam	UG/KG	390 U									
Carbazole	UG/KG	390 U									
Chrysene	UG/KG	390 U	880	510	45 J	360 U	6300	10000	150 J	410 NJ	490
Di-n-butylphthalate	UG/KG	390 U	360 U	360 U	41 J	70 J	1800 U	1800 U	370 U	360 U	370 U
Di-n-octylphthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Dibenz(a,h)anthracene	UG/KG	390 U	170 J	140 J	360 U	360 U	1700 J	1900 J	44 J	67 J	75 J
Dibenzofuran	UG/KG	390 U	140 J	360 U	360 U	360 U	1800 U	1400 J	370 U	23 J	41 J
Diethyl phthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Dimethylphthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Fluoranthene	UG/KG	390 U	2000	370 J	50 J	360 U	7700	27000	200 J	770	930
Fluorene	UG/KG	390 U	250 J	360 U	360 U	360 U	1800 U	2500	370 U	36 J	72 J
Hexachlorobenzene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Hexachlorobutadiene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Hexachlorocyclopentadiene	UG/KG	390 U									
Hexachloroethane	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Indeno(1,2,3-cd)pyrene	UG/KG	390 U	420 J	450 J	360 U	360 U	4900 J	5200 J	110 J	260 J	300 J
Isophorone	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
N-Nitrosodiphenylamine	UG/KG	390 U									
N-Nitrosodipropylamine	UG/KG	390 U									
Naphthalene	UG/KG	390 U	86 J	360 U	360 U	360 U	1800 U	1100 J	370 U	360 U	370 U
Nitrobenzene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG	990 U	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
Phenanthrene	UG/KG	390 U	1700	71 J	360 U	360 U	1300 J	25000	81 J	290 J	550
Phenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Pyrene	UG/KG	390 U	1500	400	43 J	360 U	8100	20000	200 J	730	860
Pyridine	UG/KG		1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U		
Pesticides/PCBs											
4,4'-DDD	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	4.2
4,4'-DDE	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	9.2 J	29 J
4,4'-DDT	UG/KG	3.9 U	22 U	22 U	22 U	22 U	59	22 J	22 U	6.8 NJ	17
Aldrin	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Alpha-BHC	UG/KG	2 UJ	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 UJ	1.9 U
Alpha-Chlordane	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Beta-BHC	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Delta-BHC	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Dieldrin	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endosulfan I	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Endosulfan II	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endosulfan sulfate	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endrin	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endrin aldehyde	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endrin ketone	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Gamma-BHC/Lindane	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Gamma-Chlordane	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Heptachlor	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Heptachlor epoxide	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Methoxychlor	UG/KG	20 U	110 U	110 U	110 U	110 U	110 U	110 U	110 U	18 U	19 U
Toxaphene	UG/KG	200 U	220 U	220 U	220 U	220 U	210 U	210 U	220 U	180 U	190 U
Aroclor-1016	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1221	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1232	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1242	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1248	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1254	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1260	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	120	37 U	36 U	38 U
Metals											
Aluminum	MG/KG	10600 J	10300	12200	12600	13500	10000	6370	12100	10200 J	12900 J
Antimony	MG/KG	1.4 J	3.1 UJ	3.2 UJ	3.1 UJ	3.3 UJ	3.2 UJ	3.2 UJ	3.3 UJ	1.4 J	2.2 J
Arsenic	MG/KG	6.2 J	5.1	6.4	4.5	5.1	8	11.8	5.3	5.7	6.9
Barium	MG/KG	70.3 J	86.7	68.3	80	115	114	59.2	75.4	64.4 J	88.9 J
Beryllium	MG/KG	0.55	0.33	0.35	0.46	0.44	0.31	0.11	0.4	0.53	0.63
Cadmium	MG/KG	0.34 J	0.26 U	0.27 U	0.26 U	0.32 J	0.7	0.49 J	0.28 U	0.24 J	0.28 J

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Calcium	MG/KG	33800 J	22400	6860	11600	14100	47400	66300	11800	29500	30800
Chromium	MG/KG	15.3 J	16.9	21	18.8	19.5	37.1	18.5	19.3	15.7 J	19.2 J
Cobalt	MG/KG	9.6 J	9.6	11.1	8.6	11.5	10.3	8.2	10.6	8.9	10.3
Copper	MG/KG	20.1 J	22.2	21.7	17.2	16.4	67.7	32.3	21.2	22 J	29.4 J
Cyanide	MG/KG										
Iron	MG/KG	20900 J	21300	26300	21800	25500	28300	15600	23300	20100 J	24400 J
Lead	MG/KG	14.3 J	17.1	18.6	21.5	12.4	169	188	16.1	14.7 J	48.3 J
Magnesium	MG/KG	9110 J	6630	4440	3800	4400	4940	14300	5490	8470 J	7320 J
Manganese	MG/KG	575 J	516	538	467	1040	641	460	488	539 J	634 J
Mercury	MG/KG	0.03 J	0.05	0.03	0.05	0.03	0.11	0.04	0.04	0.07	0.07
Nickel	MG/KG	25.7 J	27.1	31.3	24.2	26.8	28.6	29.6	30.3	25.1 J	29.2 J
Potassium	MG/KG	918 J	1050	1170	918	1090	1150	1020	1020	886	1210
Selenium	MG/KG	0.46 U	0.52 U	0.53 U	0.52 U	0.55 U	0.53 U	1.3	0.56 U	0.37 U	0.41 U
Silver	MG/KG	0.75 J	0.52 U	0.53 U	0.52 U	0.55 U	0.53 U	0.53 U	0.56 U	0.73	1.1
Sodium	MG/KG	73.8 J	65.8	42.5 J	45.3 J	43.1 J	141	139	40.3 J	76.2	62.5
Thallium	MG/KG	0.23 U	0.71 J	0.67 J	0.71 J	1 J	1 J	0.68 J	0.75 J	0.19 U	0.21 U
Vanadium	MG/KG	16.5 J	16.8	20.1	19.9	21.5	19.4	16.4	20	15.7 J	19.2 J
Zinc	MG/KG	64.5 J	62.6	89.9	69.3	75.7	161	357	66.5	62.8 J	95.4 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	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	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
1,1,2,2-Tetrachloroethane	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 U	5 U		5.5 U	5.5 U	5 UJ	5 UJ	5 UJ	6 U	6.1 U
1,1,2-Trichloroethane	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
1,1-Dichloroethane	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
1,1-Dichloroethene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
1,2,3-Trichloropropane	UG/KG				5.5 U	5.5 U				6 U	6.1 U
1,2,4-Trichlorobenzene	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
1,2-Dibromo-3-chloropropane	UG/KG	5 UJ	5 UJ				5 UJ	5 R	5 R	6 U	6.1 U
1,2-Dibromoethane	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 UJ	6.1 U
1,2-Dichlorobenzene	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
1,2-Dichloroethane	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
1,2-Dichloroethene (total)	UG/KG										
1,2-Dichloropropane	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	6.1 U
1,3-Dichlorobenzene	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
1,3-Dichloropropane	UG/KG				5.5 U	5.5 U				6 U	6.1 U
1,4-Dichlorobenzene	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
Acetone	UG/KG	5 U	5 U		22 U	22 U	30 J	35 J	37 J	4 NJ	24 UJ
Benzene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Bromodichloromethane	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	6.1 U
Bromoform	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 UJ	6.1 U
Carbon disulfide	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Carbon tetrachloride	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 UJ	6.1 U
Chlorobenzene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 UJ	5 UJ	6 U	6.1 U
Chlorodibromomethane	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 UJ	5 UJ	6 U	6.1 U
Chloroethane	UG/KG	5 U	5 U		11 U	11 U	5 U	5 U	5 U	6 U	12 U
Chloroform	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Cis-1,2-Dichloroethene	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	6.1 U
Cis-1,3-Dichloropropene	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	6.1 U
Cyclohexane	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	6.1 U
Dichlorodifluoromethane	UG/KG	5 U	5 U				5 UJ	5 UJ	5 UJ	6 U	6.1 U
Ethyl benzene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 UJ	5 UJ	6 U	6.1 U
Isopropylbenzene	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 U	6.1 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	CL-71-E2-WE1
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	CL-71-E2-WE1
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Meta/Para Xylene	UG/KG				5.5 U	5.5 U					6.1 U
Methyl Acetate	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl Tertbutyl Ether	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl bromide	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl butyl ketone	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 UJ	
Methyl chloride	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl cyclohexane	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl ethyl ketone	UG/KG	5 U	5 U		11 U	11 U	5 U	5 U	5 U	6 UJ	12 U
Methyl isobutyl ketone	UG/KG	5 U	5 U		11 U	11 U	5 U	5 U	5 U	6 UJ	12 U
Methylene chloride	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	6 U	1 J	6.1 U
Ortho Xylene	UG/KG				5.5 U	5.5 U					6.1 U
Styrene	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 U	
Tetrachloroethene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 UJ	5 UJ	6 U	6.1 U
Toluene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Total BTEX	MG/KG										
Total Xylenes	UG/KG	5 UJ	5 UJ				5 UJ	5 R	5 R	6 U	
Trans-1,2-Dichloroethene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Trans-1,3-Dichloropropene	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Trichloroethene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Trichlorofluoromethane	UG/KG	5 U	5 U				5 UJ	5 UJ	5 UJ	6 UJ	
Vinyl chloride	UG/KG	5 U	5 U		11 U	11 U	5 U	5 U	5 U	6 U	12 U
Semivolatile Organics											
1,1'-Biphenyl	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
1,2,4-Trichlorobenzene	UG/KG										
1,2-Dichlorobenzene	UG/KG										
1,3-Dichlorobenzene	UG/KG										
1,4-Dichlorobenzene	UG/KG										
2,2'-oxybis(1-Chloropropane)	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
2,4,5-Trichlorophenol	UG/KG	880 U	900 U	5500 U	360 U	360 U	920 U	900 U	870 U	970 U	2000 U
2,4,6-Trichlorophenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2,4-Dichlorophenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2,4-Dimethylphenol	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
2,4-Dinitrophenol	UG/KG	880 UJ	900 U	29000 UJ	1900 U	1900 U	920 UJ	900 UJ	870 UJ	970 UJ	10000 U
2,4-Dinitrotoluene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2,6-Dinitrotoluene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2-Chloronaphthalene	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
2-Chlorophenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2-Methylnaphthalene	UG/KG	81 J	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2-Methylphenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2-Nitroaniline	UG/KG	880 U	900 U	29000 U	1900 U	1900 U	920 U	900 U	870 U	970 U	10000 U
2-Nitrophenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
3,3'-Dichlorobenzidine	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
3-Nitroaniline	UG/KG	880 U	900 U	29000 U	1900 U	1900 U	920 U	900 U	870 U	970 U	10000 U
4,6-Dinitro-2-methylphenol	UG/KG	880 U	900 U				920 UJ	900 UJ	870 UJ	970 U	
4-Bromophenyl phenyl ether	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	
4-Chloro-3-methylphenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
4-Chloroaniline	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
4-Chlorophenyl phenyl ether	UG/KG	350 U	360 U		360 U	360 U	370 U	360 U	340 U	390 U	
4-Methylphenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
4-Nitroaniline	UG/KG	880 U	900 U	900 U			920 U	900 U	870 U	970 U	
4-Nitrophenol	UG/KG	880 U	900 U	29000 U	1900 U	1900 U	920 U	900 U	870 U	970 U	10000 U
Acenaphthene	UG/KG	340 J	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	420 J
Acenaphthylene	UG/KG	39 J	360 U	5500 U	360 U	360 U	73 J	360 U	37 J	390 U	1200 J
Acetophenone	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Aniline	UG/KG			5500 U	360 U	360 U					2000 U
Anthracene	UG/KG	640	360 U	5500 U	360 U	360 U	45 J	360 U	36 J	94 J	1800 J
Atrazine	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Benzaldehyde	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Benzo(a)anthracene	UG/KG	1300	40 J	1600 J	360 U	360 U	300 J	130 J	140 J	330 J	9000
Benzo(a)pyrene	UG/KG	1100	51 J	1500 J	360 U	360 U	390	150 J	180 J	250 J	8800
Benzo(b)fluoranthene	UG/KG	1500	83 J	1300 J	360 U	360 U	720	310 J	400	380 J	7400
Benzo(ghi)perylene	UG/KG	530	40 J	1000 J	360 U	360 U	260 J	110 J	130 J	110 J	5300
Benzo(k)fluoranthene	UG/KG	560	360 U	1300 J	360 U	360 U	370	170 J	190 J	170 J	8000
Benzoic Acid	UG/KG			29000 U	1900 U	1900 U					10000 U
Bis(2-Chloroethoxy)methane	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Bis(2-Chloroethyl)ether	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Bis(2-Chloroisopropyl)ether	UG/KG										
Bis(2-Ethylhexyl)phthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Butylbenzylphthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Caprolactam	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Carbazole	UG/KG	540	360 U				370 U	360 U	340 U	77 J	
Chrysene	UG/KG	1300	49 J	2000 J	360 U	360 U	490	240 J	280 J	360 J	10000
Di-n-butylphthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Di-n-octylphthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Dibenz(a,h)anthracene	UG/KG	160 J	360 U	5500 U	360 U	360 U	65 J	360 U	340 U	390 U	2000 J
Dibenzofuran	UG/KG	240 J	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	210 J
Diethyl phthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Dimethylphthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Fluoranthene	UG/KG	3600	82 J	3900 J	360 U	360 U	440	280 J	270 J	690	22000
Fluorene	UG/KG	350 J	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	540 J
Hexachlorobenzene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Hexachlorobutadiene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Hexachlorocyclopentadiene	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Hexachloroethane	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Indeno(1,2,3-cd)pyrene	UG/KG	630	39 J	970 J	360 U	360 U	250 J	100 J	130 J	110 J	5400 J
Isophorone	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
N-Nitrosodiphenylamine	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
N-Nitrosodipropylamine	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Naphthalene	UG/KG	250 J	360 U	1000 J	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Nitrobenzene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	
Pentachlorophenol	UG/KG	880 U	900 U	29000 U	1900 U	1900 U	920 U	900 U	870 U	970 U	10000 U
Phenanthrene	UG/KG	2700	34 J	2100 J	360 U	360 U	60 J	78 J	60 J	400	12000
Phenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Pyrene	UG/KG	2800	77 J	2700 J	360 U	360 U	440	250 J	250 J	730	17000
Pyridine	UG/KG			29000 U	1900 U	1900 U					10000 U
Pesticides/PCBs											
4,4'-DDD	UG/KG	3.5 U	35 U	37 U	22 U	22 U	4.7 NJ	3.6 U	3.8 J	3.9 J	20 U
4,4'-DDE	UG/KG	12 NJ	170	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	8.3 NJ	20 U
4,4'-DDT	UG/KG	7.7 J	54	110	22 U	22 U	7.2	3.6 U	3.4 U	9 J	20 U
Aldrin	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Alpha-BHC	UG/KG	1.8 UJ	18 UJ	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Alpha-Chlordane	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Beta-BHC	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Delta-BHC	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Dieldrin	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endosulfan I	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Endosulfan II	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endosulfan sulfate	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endrin	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endrin aldehyde	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endrin ketone	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Gamma-BHC/Lindane	UG/KG	1.8 U	18 UJ	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Gamma-Chlordane	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Heptachlor	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Heptachlor epoxide	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	3.2 NJ	2 U	10 U
Methoxychlor	UG/KG	18 U	180 U	190 U	110 U	110 U	19 U	18 U	18 U	20 U	100 U
Toxaphene	UG/KG	180 U	1800 U	370 U	220 U	220 U	190 U	180 U	180 U	200 U	200 U
Aroclor-1016	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1221	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1232	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1242	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1248	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1254	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1260	UG/KG	36 U	36 U	80	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Metals											
Aluminum	MG/KG	12300 J	11900 J	6680	13800	13000	14300 J	13200 J	13600 J	12600 J	12900
Antimony	MG/KG	2.1 J	1.4 J	6.9	3.3 UJ	3.2 UJ	1.5 J	1.8 J	2.3 J	1.2 J	3.6 UJ
Arsenic	MG/KG	6.9	6.4	4.5	5.7	5.4	6.7	6.6	6.6	7.1 J	5.2 J
Barium	MG/KG	85.7 J	82.6 J	59.9	89.4	85.4	136 J	87.7 J	92.6 J	79.7 J	72.4
Beryllium	MG/KG	0.65	0.6	0.13	0.51	0.46	0.85	0.69	0.71	0.64	0.36
Cadmium	MG/KG	0.37	0.26 J	0.42 J	0.27 U	0.27 U	0.36	0.29 J	0.3 J	0.31 J	0.3 U

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Calcium	MG/KG	31000	26800	59600	9420	9090	7460 J	7370 J	11500 J	21300 J	22100
Chromium	MG/KG	18.8 J	16.9 J	14.9	20.6	19.1	20.5 J	19.1 J	19.6 J	19.1 J	19.3
Cobalt	MG/KG	10.4	9.7	6.3	12.4	11.2	11.1 J	10.4 J	9.3 J	10.3 J	11.1
Copper	MG/KG	26.9 J	25.6 J	61.4	18.3	16.2	22.4 J	20.1 J	24.5 J	25.1 J	17.6
Cyanide	MG/KG										
Iron	MG/KG	23300 J	22500 J	15000	26100	24000	25300	24300	24000	26000 J	23700 J
Lead	MG/KG	42.8 J	17.5 J	568	12.2	12.1	18.7 J	16.8 J	25.1 J	28.7 J	11.4
Magnesium	MG/KG	6620 J	8450 J	11800	4370	3800	4220 J	3980 J	3890 J	6420 J	4320
Manganese	MG/KG	563 J	582 J	296	753	741	737 J	742 J	679 J	621 J	647
Mercury	MG/KG	0.08	0.04	0.3	0.03	0.04	0.1	0.06	0.04	0.04 J	0.04 J
Nickel	MG/KG	28.1 J	25.6 J	19.4	29.1	25.4	26.7 J	24.5 J	24.3 J	30.8 J	26.4
Potassium	MG/KG	1120	1020	834	961	901	1150	815	901	1020 J	859
Selenium	MG/KG	0.38 U	0.38 U	0.54 U	0.55 U	0.54 U	0.44 U	0.4 U	0.4 U	0.47 U	0.6 U
Silver	MG/KG	0.86	0.96	0.55 U	0.55 U	0.54 U	1.8	1.7	1.6	1 J	0.6 U
Sodium	MG/KG	67.8	65.8	77.9	33.2 J	35.6 J	53.9	46.4	51.6	51.1	43.8 J
Thallium	MG/KG	0.19 U	0.19 U	0.55 U	0.95 J	1.1 J	0.22 U	0.2 U	0.2 U	0.23 U	0.64 J
Vanadium	MG/KG	20.8 J	18.7 J	15.7	20	19.8	20.6 J	19.1 J	20 J	18.9 J	19.3
Zinc	MG/KG	81.6 J	63 J	157 J	75.4	66	76.3	69.2	83.1	73.4 J	68.6 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STE
	Units	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
Volatile Organics											
1,1,1-Trichloroethane	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
1,1,2,2-Tetrachloroethane	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 UJ	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,1,2-Trichloroethane	UG/KG	6 U								13 U	12
1,1-Dichloroethane	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
1,1-Dichloroethene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
1,2,3-Trichloropropane	UG/KG		5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,2,4-Trichlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,2-Dibromo-3-chloropropane	UG/KG	6 U									
1,2-Dibromoethane	UG/KG	6 U									
1,2-Dichlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,2-Dichloroethane	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
1,2-Dichloroethene (total)	UG/KG									13 U	12
1,2-Dichloropropane	UG/KG	6 U								13 U	12
1,3-Dichlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,3-Dichloropropane	UG/KG		5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,4-Dichlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
Acetone	UG/KG	6 U	23 UJ	24 UJ	24 UJ	23 UJ	23 UJ	24 UJ	24 UJ	13 U	12
Benzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	2 J	12
Bromodichloromethane	UG/KG	6 U								13 U	12
Bromoform	UG/KG	6 U								13 U	12
Carbon disulfide	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
Carbon tetrachloride	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
Chlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
Chlorodibromomethane	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
Chloroethane	UG/KG	6 U	12 U	12 U	12 U	11 U	12 U	12 U	12 U	13 U	12
Chloroform	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
Cis-1,2-Dichloroethene	UG/KG	6 U									
Cis-1,3-Dichloropropene	UG/KG	6 U								13 U	12
Cyclohexane	UG/KG	6 U									
Dichlorodifluoromethane	UG/KG	6 U									
Ethyl benzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
Isopropylbenzene	UG/KG	6 U									

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STE
		1	1	1	1	1	1	1	1		
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
Meta/Para Xylene	UG/KG		5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
Methyl Acetate	UG/KG	6 U									
Methyl Tertbutyl Ether	UG/KG	6 U									
Methyl bromide	UG/KG	6 UJ								13 U	12
Methyl butyl ketone	UG/KG	6 U								13 U	12
Methyl chloride	UG/KG	6 U								13 U	12
Methyl cyclohexane	UG/KG	6 U									
Methyl ethyl ketone	UG/KG	6 U	12 U	12 U	12 U	11 U	12 U	12 U	12 U	13 U	12
Methyl isobutyl ketone	UG/KG	6 U	12 U	12 U	12 U	11 U	12 U	12 U	12 U	13 U	12
Methylene chloride	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	2 J	12
Ortho Xylene	UG/KG	5.8 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
Styrene	UG/KG	6 U								13 U	12
Tetrachloroethene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
Toluene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	4 J	12
Total BTEX	MG/KG										
Total Xylenes	UG/KG	6 U								13 U	12
Trans-1,2-Dichloroethene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
Trans-1,3-Dichloropropene	UG/KG	6 U								13 U	12
Trichloroethene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12
Trichlorofluoromethane	UG/KG	6 UJ									
Vinyl chloride	UG/KG	6 U	12 U	12 U	12 U	11 U	12 U	12 U	12 U	13 U	12
Semivolatile Organics											
1,1'-Biphenyl	UG/KG	400 U									
1,2,4-Trichlorobenzene	UG/KG									300 U	93
1,2-Dichlorobenzene	UG/KG									300 U	93
1,3-Dichlorobenzene	UG/KG									300 U	93
1,4-Dichlorobenzene	UG/KG									300 U	93
2,2'-oxybis(1-Chloropropane)	UG/KG	400 U									
2,4,5-Trichlorophenol	UG/KG	1000 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	720 U	220
2,4,6-Trichlorophenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
2,4-Dichlorophenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
2,4-Dimethylphenol	UG/KG	400 U								300 U	93
2,4-Dinitrophenol	UG/KG	1000 UJ	9900 U	2000 U	2000 UJ	1900 UJ	2000 UJ	2000 UJ	6000 U	720 U	220
2,4-Dinitrotoluene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
2,6-Dinitrotoluene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
2-Chloronaphthalene	UG/KG	400 U								300 U	93
2-Chlorophenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
2-Methylnaphthalene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	72 J	8.6
2-Methylphenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
2-Nitroaniline	UG/KG	1000 U	9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U	720 U	220
2-Nitrophenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
3,3'-Dichlorobenzidine	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
3-Nitroaniline	UG/KG	1000 U	9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U	720 U	220
4,6-Dinitro-2-methylphenol	UG/KG	1000 U								720 U	220
4-Bromophenyl phenyl ether	UG/KG	400 U								300 U	93

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STE
		1	1	1	1	1	1	1	1		
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
4-Chloro-3-methylphenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
4-Chloroaniline	UG/KG	400 UJ	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
4-Chlorophenyl phenyl ether	UG/KG	400 U								300 U	93
4-Methylphenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
4-Nitroaniline	UG/KG	1000 U								720 U	220
4-Nitrophenol	UG/KG	1000 U	9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U	720 U	220
Acenaphthene	UG/KG	400 U	1400 J	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	22
Acenaphthylene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
Acetophenone	UG/KG	400 U									
Aniline	UG/KG		1900 U	390 U	390 U	370 U	380 U	400 U	1200 U		
Anthracene	UG/KG	400 U	3900	390 U	390 U	370 U	380 U	400 U	1200 U	68 J	47
Atrazine	UG/KG	400 U									
Benzaldehyde	UG/KG	400 U									
Benzo(a)anthracene	UG/KG	400 U	9100	390 U	390 U	370 U	380 U	400 U	240 J	500	220
Benzo(a)pyrene	UG/KG	400 U	6100	390 U	390 U	370 U	380 U	400 U	250 J	550	220
Benzo(b)fluoranthene	UG/KG	400 U	5000	390 U	390 U	370 U	380 U	400 U	300 J	750	280
Benzo(ghi)perylene	UG/KG	400 U	3300	390 U	390 U	370 U	380 U	400 U	230 J	370	140
Benzo(k)fluoranthene	UG/KG	400 U	5500	390 U	390 U	370 U	380 U	400 U	290 J	750	250
Benzoic Acid	UG/KG		9900 U	2000 U	2000 UJ	1900 UJ	2000 UJ	2000 UJ	6000 UJ		
Bis(2-Chloroethoxy)methane	UG/KG	400 U								300 U	93
Bis(2-Chloroethyl)ether	UG/KG	400 U								300 U	93
Bis(2-Chloroisopropyl)ether	UG/KG									300 U	93
Bis(2-Ethylhexyl)phthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	39 J	400 U	1200 U	300 U	93
Butylbenzylphthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
Caprolactam	UG/KG	400 U									
Carbazole	UG/KG	400 U									
Chrysene	UG/KG	400 U	8800 J	390 U	390 U	370 U	380 U	43 J	370 J	110 J	75
Di-n-butylphthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	930	290
Di-n-octylphthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
Dibenz(a,h)anthracene	UG/KG	400 U	1400 J	390 U	390 U	370 U	380 U	400 U	1200 U	130 J	51
Dibenzofuran	UG/KG	400 U	260 J	390 U	390 U	370 U	380 U	400 U	1200 U	100 J	13
Diethyl phthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
Dimethylphthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
Fluoranthene	UG/KG	400 U	22000	390 U	390 U	370 U	380 U	58 J	640 J	1100	480
Fluorene	UG/KG	400 U	770 J	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	18
Hexachlorobenzene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
Hexachlorobutadiene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
Hexachlorocyclopentadiene	UG/KG	400 U								300 U	93
Hexachloroethane	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
Indeno(1,2,3-cd)pyrene	UG/KG	400 U	3300 J	390 U	390 U	370 U	380 U	400 U	190 J	360	140
Isophorone	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
N-Nitrosodiphenylamine	UG/KG	400 U								300 U	93
N-Nitrosodipropylamine	UG/KG	400 U								300 U	93
Naphthalene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	78 J	93
Nitrobenzene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STE
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
Pentachlorophenol	UG/KG	1000 U	9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U	720 U	220
Phenanthrene	UG/KG	400 U	15000 U	390 U	390 U	370 U	380 U	400 U	210 J	440	210
Phenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93
Pyrene	UG/KG	400 U	17000 U	390 U	390 U	370 U	380 U	400 U	400 J	900	380
Pyridine	UG/KG		9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U		
Pesticides/PCBs											
4,4'-DDD	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	5.9	4.6
4,4'-DDE	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	88	22
4,4'-DDT	UG/KG	4 U	19 U	120	20 U	19 U	19 U	20 U	19 U	54	25
Aldrin	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4
Alpha-BHC	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.2 J	2.4
Alpha-Chlordane	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4
Beta-BHC	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4
Delta-BHC	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4
Dieldrin	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	4.4 U	4.6
Endosulfan I	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4
Endosulfan II	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	4.4 U	4.6
Endosulfan sulfate	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	2.7 J	4.6
Endrin	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	6.3	4.6
Endrin aldehyde	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	4.8	9.1
Endrin ketone	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	7.7	17
Gamma-BHC/Lindane	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4
Gamma-Chlordane	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	1.2 J	2.4
Heptachlor	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4
Heptachlor epoxide	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	4.3	2.4
Methoxychlor	UG/KG	20 U	99 U	100 U	100 U	96 U	98 U	100 U	100 U	23 U	24
Toxaphene	UG/KG	200 U	190 U	200 U	200 U	190 U	190 U	200 U	190 U	230 U	240
Aroclor-1016	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46
Aroclor-1221	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	90 U	94
Aroclor-1232	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46
Aroclor-1242	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46
Aroclor-1248	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46
Aroclor-1254	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46
Aroclor-1260	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46
Metals											
Aluminum	MG/KG	13900 J	11500	10900	14200	11400	15000	14900	11000	7250	9080
Antimony	MG/KG	1.8 J	3.3 UJ	3.4 UJ	3.5 UJ	3.4 UJ	3.5 UJ	3.5 UJ	3.5 UJ	1.9 J	0.95
Arsenic	MG/KG	7.5 J	4.7 J	5.2 J	4.9 J	4.5 J	5 J	5.9 J	4.8 J	4.9	7.4
Barium	MG/KG	71.7 J	66	94.8	90.6	82.9	85.2	116	55.5	51.2 J	53.4
Beryllium	MG/KG	0.64	0.36	0.34	0.35	0.21	0.41	0.43	0.27	0.26 J	0.25
Cadmium	MG/KG	0.27 J	0.28 U	0.33	0.53 J	0.55 J	0.55 J	0.71	0.53 J	0.08 UJ	0.08

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STE
		1	1	1	1	1	1	1	1		
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
Calcium	MG/KG	11000 J	32800	32400	6040 J	34500 J	6060 J	18800 J	70700 J	35100	11100
Chromium	MG/KG	19.3 J	20.4	18.7	19.8	16.3	22.2	21.3	15	13.4 J	14.2
Cobalt	MG/KG	11.9 J	10.9	8.8	10.4	8.6	9.7	13.9	9.9	7.4	8.7
Copper	MG/KG	19.4 J	38.9	23.3	19.1	20.7	20.3	22.6	16.5	47.7 J	28.8
Cyanide	MG/KG									0.67 U	0.74
Iron	MG/KG	27200 J	23100 J	20300 J	26100	22000	29700	27900	19400	31800	24100
Lead	MG/KG	10.9 J	363	99.2	12.1	12.9	13	17.8	19.8	185 J	28.5
Magnesium	MG/KG	4550 J	8350	8730	4730	11100	4520	7040	6780	5050	4170
Manganese	MG/KG	771 J	453	503	849	555	470	1330	615	383 J	554
Mercury	MG/KG	0.04 J	0.07	0.06	0.04	0.03 J	0.04 J	0.04	0.03 J	0.14 J	0.07
Nickel	MG/KG	29 J	33.2	24.4	26.8	22.5	29.5	30	20.1	19.9	110
Potassium	MG/KG	810 J	1110	1150	970	992	1100	1100	908	1330	1030
Selenium	MG/KG	0.47 U	0.55 U	0.56 U	0.58 U	0.56 U	0.58 U	0.58 U	0.58 U	0.58 U	1.8
Silver	MG/KG	1.4 J	0.55 U	0.56 U	0.58 U	0.56 U	0.58 U	0.58 U	0.58 U	0.54 UJ	0.57
Sodium	MG/KG	39.9	68.6	50.1 J	37.2 J	70	46.4 J	49.2 J	78.4	215	636
Thallium	MG/KG	0.24 U	0.57 J	0.67 J	0.6 J	0.56 U	0.58 U	0.83 J	0.58 U	1.6 U	1.7
Vanadium	MG/KG	17.9 J	19.1	20.7	20.3	18.3	21.1	21.6	19.3	16	13.7
Zinc	MG/KG	66.4 J	97.1 J	97.5 J	66.7 J	59.5 J	79.1 J	71.3 J	51.8 J	95.3 J	1740

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	SS71-11	SS71-12	SS71-13	SS71-14	SS71-15	SS71-16	SS71-17	SS71-18
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71024	71023	71027	71025	71032	71021	71030	71022
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Sample Date	11/20/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID:P	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units (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 U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
1,1,2,2-Tetrachloroethane	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG								
1,1,2-Trichloroethane	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
1,1-Dichloroethane	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
1,1-Dichloroethene	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
1,2,3-Trichloropropane	UG/KG								
1,2,4-Trichlorobenzene	UG/KG								
1,2-Dibromo-3-chloropropane	UG/KG								
1,2-Dibromoethane	UG/KG								
1,2-Dichlorobenzene	UG/KG								
1,2-Dichloroethane	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
1,2-Dichloroethene (total)	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
1,2-Dichloropropane	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
1,3-Dichlorobenzene	UG/KG								
1,3-Dichloropropane	UG/KG								
1,4-Dichlorobenzene	UG/KG								
Acetone	UG/KG U	11 U	11 U	18 U	74	13 U	12 U	11 U	11 U
Benzene	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Bromodichloromethane	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Bromoform	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Carbon disulfide	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Carbon tetrachloride	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Chlorobenzene	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Chlorodibromomethane	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Chloroethane	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Chloroform	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Cis-1,2-Dichloroethene	UG/KG								
Cis-1,3-Dichloropropene	UG/KG U	11 U	11 U	18 U	12 U	13 U	12 U	11 U	11 U
Cyclohexane	UG/KG								
Dichlorodifluoromethane	UG/KG								
Ethyl benzene	UG/KG U	11 U	11 U	4 J	12 U	13 U	12 U	11 U	11 U
Isopropylbenzene	UG/KG								

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	SS71-11	SS71-12	SS71-13	SS71-14	SS71-15	SS71-16	SS71-17	SS71-18	SS71-18
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	71024	71023	71027	71025	71032	71021	71030	71022	71022
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Sample Date	11/20/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997	11/20/1997
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID:P	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	(Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Meta/Para Xylene	UG/KG								
Methyl Acetate	UG/KG								
Methyl Terbutyl Ether	UG/KG								
Methyl bromide	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Methyl butyl ketone	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Methyl chloride	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Methyl cyclohexane	UG/KG								
Methyl ethyl ketone	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Methyl isobutyl ketone	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Methylene chloride	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Ortho Xylene	UG/KG								
Styrene	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Tetrachloroethene	UG/KG U		11 U	11 U	18 U	12 U	13 U	33	11 U
Toluene	UG/KG U		4 J	4 J	9 J	12 U	2 J	12 U	16
Total BTEX	MG/KG								
Total Xylenes	UG/KG U		11 U	11 U	11 J	12 U	13 U	12 U	11 U
Trans-1,2-Dichloroethene	UG/KG								
Trans-1,3-Dichloropropene	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Trichloroethene	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Trichlorofluoromethane	UG/KG								
Vinyl chloride	UG/KG U		11 U	11 U	18 U	12 U	13 U	12 U	11 U
Semivolatile Organics									
1,1'-Biphenyl	UG/KG								
1,2,4-Trichlorobenzene	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
1,2-Dichlorobenzene	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
1,3-Dichlorobenzene	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
1,4-Dichlorobenzene	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
2,2'-oxybis(1-Chloropropane)	UG/KG								
2,4,5-Trichlorophenol	UG/KG U		180000 U	56000 U	170000 U	220 U	20000 U	94000 U	85000 U
2,4,6-Trichlorophenol	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
2,4-Dichlorophenol	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
2,4-Dimethylphenol	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
2,4-Dinitrophenol	UG/KG U		180000 U	56000 U	170000 U	220 U	20000 U	94000 U	85000 U
2,4-Dinitrotoluene	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
2,6-Dinitrotoluene	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
2-Chloronaphthalene	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
2-Chlorophenol	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
2-Methylnaphthalene	UG/KG J		5300 J	4000 J	19000 J	23 J	8400 U	39000 U	5100 J
2-Methylphenol	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
2-Nitroaniline	UG/KG U		180000 U	56000 U	170000 U	220 U	20000 U	94000 U	85000 U
2-Nitrophenol	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
3,3'-Dichlorobenzidine	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U
3-Nitroaniline	UG/KG U		180000 U	56000 U	170000 U	220 U	20000 U	94000 U	85000 U
4,6-Dinitro-2-methylphenol	UG/KG U		180000 U	56000 U	170000 U	220 U	20000 U	94000 U	85000 U
4-Bromophenyl phenyl ether	UG/KG U		72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	SS71-11	SS71-12	SS71-13	SS71-14	SS71-15	SS71-16	SS71-17	SS71-18
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71024	71023	71027	71025	71032	71021	71030	71022
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Sample Date	11/20/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID:P	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
4-Chloro-3-methylphenol	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
4-Chloroaniline	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
4-Chlorophenyl phenyl ether	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
4-Methylphenol	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
4-Nitroaniline	UG/KG U	180000 U	56000 U	170000 U	220 U	20000 U	94000 U	85000 U	2200 U
4-Nitrophenol	UG/KG U	180000 U	56000 U	170000 U	220 U	20000 U	94000 U	85000 U	2200 U
Acenaphthene	UG/KG J	28000 J	12000 J	42000 J	10 J	1600 J	6400 J	30000 J	230 J
Acenaphthylene	UG/KG U	72000 U	23000 U	70000 U	20 J	8400 U	39000 U	35000 U	900 U
Acetophenone	UG/KG								
Aniline	UG/KG								
Anthracene	UG/KG J	100000	32000	100000	380	7900 J	30000 J	77000	390 J
Atrazine	UG/KG								
Benzaldehyde	UG/KG								
Benzo(a)anthracene	UG/KG	150000	38000	100000	360	18000	91000	120000	2200
Benzo(a)pyrene	UG/KG	120000	34000	80000	350	16000	70000	96000	2100
Benzo(b)fluoranthene	UG/KG	88000	21000 J	63000 J	830	14000	59000	78000	4000
Benzo(ghi)perylene	UG/KG	62000 J	19000 J	42000 J	220	12000	36000 J	46000	1300
Benzo(k)fluoranthene	UG/KG	130000	39000	76000	89 U	19000	74000	93000	900 U
Benzoic Acid	UG/KG								
Bis(2-Chloroethoxy)methane	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Bis(2-Chloroethyl)ether	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Bis(2-Chloroisopropyl)ether	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Bis(2-Ethylhexyl)phthalate	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Butylbenzylphthalate	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Caprolactam	UG/KG								
Carbazole	UG/KG J	39000 J	20000 J	77000	150	5100 J	9300 J	47000	780 J
Chrysene	UG/KG	150000	37000	90000	560	20000	82000	110000	2800
Di-n-butylphthalate	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Di-n-octylphthalate	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Dibenz(a,h)anthracene	UG/KG J	25000 J	8200 J	17000 J	83 J	3600 J	16000 J	21000 J	440 J
Dibenzofuran	UG/KG J	14000 J	10000 J	38000 J	31 J	680 J	3000 J	23000 J	110 J
Diethyl phthalate	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Dimethylphthalate	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Fluoranthene	UG/KG	440000	96000	240000	480	37000	190000	270000	5300
Fluorene	UG/KG J	35000 J	19000 J	62000 J	47 J	1900 J	7300 J	39000	190 J
Hexachlorobenzene	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Hexachlorobutadiene	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Hexachlorocyclopentadiene	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Hexachloroethane	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Indeno(1,2,3-cd)pyrene	UG/KG	65000 J	19000 J	38000 J	190	11000	36000 J	45000	1200
Isophorone	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
N-Nitrosodiphenylamine	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
N-Nitrosodipropylamine	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U
Naphthalene	UG/KG U	6000 J	8000 J	46000 J	31 J	8400 U	39000 U	5500 J	88 J
Nitrobenzene	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	SS71-11	SS71-12	SS71-13	SS71-14	SS71-15	SS71-16	SS71-17	SS71-18	
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sample ID	71024	71023	71027	71025	71032	71021	71030	71022	
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
	Sample Date	11/20/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997	
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	
	Study ID:P	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	
Parameter	Units (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG U	180000 U	56000 U	170000 U	220 U	20000 U	94000 U	85000 U	2200 U	
Phenanthrene	UG/KG	280000	98000	290000	210	24000	92000	240000	2800	
Phenol	UG/KG U	72000 U	23000 U	70000 U	89 U	8400 U	39000 U	35000 U	900 U	
Pyrene	UG/KG	280000	74000	200000	520	35000	170000	220000	4700	
Pyridine	UG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG U	26 J	35 U	57	4.4 U	110	53	240	3.1 J	
4,4'-DDE	UG/KG	26 J	35 U	35 U	18	440	360	810	20	
4,4'-DDT	UG/KG	43	35 U	40	21	910	1300	1300	46	
Aldrin	UG/KG U	19 U	18 U	18 U	2.3 U	22 U	20 U	18 U	1.8 U	
Alpha-BHC	UG/KG U	19 U	18 U	18 U	2.3 U	22 U	20 U	18 J	1.2 J	
Alpha-Chlordane	UG/KG U	19 U	18 U	18 U	2.3 U	22 U	20 U	18 U	1.8 U	
Beta-BHC	UG/KG U	21	18 U	32	2.3 U	21 J	11 J	35	1.9	
Delta-BHC	UG/KG U	19 U	18 U	18 U	2.3 U	22 U	20 U	18 U	1.8 U	
Dieldrin	UG/KG U	37 U	35 U	35 U	3.4 J	42 U	39 U	35 U	3.6 U	
Endosulfan I	UG/KG U	15 J	18 U	15 J	2.3 U	13 J	20 U	18 U	1.5 J	
Endosulfan II	UG/KG U	37 U	35 U	35 U	4.4 U	52	39 U	35 U	3.6 U	
Endosulfan sulfate	UG/KG U	37 U	48	110	4.4 U	110	39 U	35 U	12	
Endrin	UG/KG U	55	35 U	22 J	8.1	53	120	53	2.7 J	
Endrin aldehyde	UG/KG	70	34 J	22 J	5.2	110	61	53	7.8	
Endrin ketone	UG/KG	160	35 U	87	14	130	140	180	12	
Gamma-BHC/Lindane	UG/KG U	19 U	18 U	18 U	2.3 U	22 U	20 U	18 U	1.8 U	
Gamma-Chlordane	UG/KG U	19 U	18 U	18 U	2.3 U	22 U	22	48	1.5 J	
Heptachlor	UG/KG U	19 U	18 U	18 U	2.3 U	22 U	20 U	18 U	1.8 U	
Heptachlor epoxide	UG/KG U	17 J	18 U	9.8 J	2.3 U	28	24	180	3.1	
Methoxychlor	UG/KG U	270	210	250	39	140 J	200	240	11 J	
Toxaphene	UG/KG U	1900 U	1800 U	1800 U	230 U	2200 U	2000 U	1800 U	180 U	
Aroclor-1016	UG/KG U	370 U	350 U	350 U	44 U	420 U	390 U	350 U	36 U	
Aroclor-1221	UG/KG U	740 U	700 U	710 U	90 U	850 U	790 U	710 U	73 U	
Aroclor-1232	UG/KG U	370 U	350 U	350 U	44 U	420 U	390 U	350 U	36 U	
Aroclor-1242	UG/KG U	370 U	350 U	350 U	44 U	420 U	390 U	350 U	36 U	
Aroclor-1248	UG/KG U	370 U	350 U	350 U	44 U	420 U	390 U	350 U	36 U	
Aroclor-1254	UG/KG U	370 U	350 U	350 U	44 U	420 U	390 U	350 U	36 U	
Aroclor-1260	UG/KG U	370 U	350 U	350 U	44 U	420 U	390 U	350 U	36 U	
Metals										
Aluminum	MG/KG	2900	2450	1890	10500	4230	4690	1910	1710	
Antimony	MG/KG UJ	0.98 J	0.7 UJ	0.63 UJ	0.85 UJ	1.8 J	19.3 J	0.67 UJ	0.75 J	
Arsenic	MG/KG	5.8	3.2	3.5	4.1	5.9	9.8	3.5	2.1	
Barium	MG/KG J	50.5 J	88.1 J	65.1 J	58.8 J	40.4 J	179 J	127 J	20.9 J	
Beryllium	MG/KG	0.08	0.08	0.05	0.31	0.19	0.08	0.07	0.08	
Cadmium	MG/KG UJ	5.2 J	0.06 UJ	0.05 UJ	0.07 UJ	12.1 J	3.1 J	0.06 UJ	1.5 J	

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	
	Location ID	SS71-11	SS71-12	SS71-13	SS71-14	SS71-15	SS71-16	SS71-17	SS71-18	
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sample ID	71024	71023	71027	71025	71032	71021	71030	71022	
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
	Sample Date	11/20/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997	11/21/1997	11/20/1997	
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	
	Study ID:P 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	
Parameter	Units	(Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	
Calcium	MG/KG		205000	222000	190000	295000	192000	245000	221000	222000
Chromium	MG/KG	J	19.1 J	5.8 J	4.2 J	16.5 J	23.1 J	33.2 J	5.3 J	21.4 J
Cobalt	MG/KG		5.6	4.3	3.7	10	7.8	9.8	4.3	3.3
Copper	MG/KG	J	24.8 J	5.4 J	5.9 J	19.5 J	40.3 J	134 J	7.4 J	19.8 J
Cyanide	MG/KG	U	0.59 U	0.59 U	0.53 U	0.71 U	0.63 U	0.59 U	0.56 U	0.63 U
Iron	MG/KG		19100	5990	6220	19600	18400	36100	6420	8260
Lead	MG/KG	J	92.8 J	16.9 J	11.4 J	33.3 J	212 J	3470 J	15.6 J	205 J
Magnesium	MG/KG		24500	34300	33800	59300	11800	10800	33300	11300
Manganese	MG/KG	J	361 J	286 J	306 J	640 J	389 J	534 J	277 J	202 J
Mercury	MG/KG	UJ	0.29 J	0.05 UJ	0.05 UJ	0.07 J	0.06 UJ	2.7 J	0.05 UJ	0.05 UJ
Nickel	MG/KG		18.2	11.9	10.7	20.8	27.3	32.6	11.1	8.7
Potassium	MG/KG		1190	1370	903	1540	1120	1020	849	671
Selenium	MG/KG	J	0.99 UJ	0.94 UJ	0.85 UJ	1.3 J	1.1 UJ	1.8 J	0.9 UJ	0.9 UJ
Silver	MG/KG	UJ	2.2 J	0.42 UJ	0.38 UJ	0.51 UJ	0.6 J	0.44 J	0.4 UJ	0.4 UJ
Sodium	MG/KG		324	257	224	233	573	314	302	208
Thallium	MG/KG	U	1.3 U	1.3 U	1.1 U	1.5 U	1.5 U	1.3 U	1.2 U	1.2 U
Vanadium	MG/KG		14.8	10	6.9	17.8	20.1	17.3	7.4	8.8
Zinc	MG/KG	J	201 J	44.7 J	44.4 J	389 J	1810 J	351 J	43.4 J	73.1 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	SS71-19	SS71-2	SS71-20	SS71-3	SS71-4	SS71-5	SS71-6	SS71-8	SS71-9
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71020	71014	71031	71015	71016	71029	71028	71019	71018
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Sample Date	11/20/1997	11/19/1997	11/21/1997	11/19/1997	11/19/1997	11/21/1997	11/21/1997	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
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	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
1,1,2,2-Tetrachloroethane	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG									
1,1,2-Trichloroethane	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
1,1-Dichloroethane	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
1,1-Dichloroethene	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
1,2,3-Trichloropropane	UG/KG									
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dibromo-3-chloropropane	UG/KG									
1,2-Dibromoethane	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,2-Dichloroethane	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
1,2-Dichloroethene (total)	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
1,2-Dichloropropane	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
1,3-Dichlorobenzene	UG/KG									
1,3-Dichloropropane	UG/KG									
1,4-Dichlorobenzene	UG/KG									
Acetone	UG/KG	13 U	8 J	13 U	12 U	12 U	11 U	11 U	12 U	12
Benzene	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Bromodichloromethane	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Bromoform	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Carbon disulfide	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Carbon tetrachloride	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Chlorobenzene	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Chlorodibromomethane	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Chloroethane	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Chloroform	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Cis-1,2-Dichloroethene	UG/KG									
Cis-1,3-Dichloropropene	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Cyclohexane	UG/KG									
Dichlorodifluoromethane	UG/KG									
Ethyl benzene	UG/KG	13 U	15 U	4 J	12 U	12 U	11 U	11 U	12 U	12
Isopropylbenzene	UG/KG									

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	SS71-19	SS71-2	SS71-20	SS71-3	SS71-4	SS71-5	SS71-6	SS71-8	SS71-9	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	71020	71014	71031	71015	71016	71029	71028	71019	71018	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Sample Date	11/20/1997	11/19/1997	11/21/1997	11/19/1997	11/19/1997	11/21/1997	11/21/1997	11/19/1997	11/19/1997	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STE	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
Meta/Para Xylene	UG/KG									
Methyl Acetate	UG/KG									
Methyl Tertbutyl Ether	UG/KG									
Methyl bromide	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Methyl butyl ketone	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Methyl chloride	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Methyl cyclohexane	UG/KG									
Methyl ethyl ketone	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Methyl isobutyl ketone	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Methylene chloride	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Ortho Xylene	UG/KG									
Styrene	UG/KG	13 U	15 U	1 J	12 U	12 U	11 U	11 U	12 U	12
Tetrachloroethene	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Toluene	UG/KG	13 U	15 U	7 J	12 U	12 U	5 J	11 U	12 U	12
Total BTEX	MG/KG									
Total Xylenes	UG/KG	13 U	15 U	9 J	12 U	12 U	11 U	11 U	12 U	12
Trans-1,2-Dichloroethene	UG/KG									
Trans-1,3-Dichloropropene	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Trichloroethene	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Trichlorofluoromethane	UG/KG									
Vinyl chloride	UG/KG	13 U	15 U	13 U	12 U	12 U	11 U	11 U	12 U	12
Semivolatile Organics										
1,1'-Biphenyl	UG/KG									
1,2,4-Trichlorobenzene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
1,2-Dichlorobenzene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
1,3-Dichlorobenzene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
1,4-Dichlorobenzene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
2,2'-oxybis(1-Chloropropane)	UG/KG									
2,4,5-Trichlorophenol	UG/KG	6800 U	2100 U	2000 U	410 U	190 U	3600 U	44000 U	1000 U	220
2,4,6-Trichlorophenol	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
2,4-Dichlorophenol	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
2,4-Dimethylphenol	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
2,4-Dinitrophenol	UG/KG	6800 U	2100 U	2000 U	410 U	190 U	3600 U	44000 U	1000 U	220
2,4-Dinitrotoluene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
2,6-Dinitrotoluene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
2-Chloronaphthalene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
2-Chlorophenol	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
2-Methylnaphthalene	UG/KG	2800 U	880 U	800 U	15 J	9.4 J	1500 U	18000 U	430 U	9.6
2-Methylphenol	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
2-Nitroaniline	UG/KG	6800 U	2100 U	2000 U	410 U	190 U	3600 U	44000 U	1000 U	220
2-Nitrophenol	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
3,3'-Dichlorobenzidine	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
3-Nitroaniline	UG/KG	6800 U	2100 U	2000 U	410 U	190 U	3600 U	44000 U	1000 U	220
4,6-Dinitro-2-methylphenol	UG/KG	6800 U	2100 U	2000 U	410 U	190 U	3600 U	44000 U	1000 U	220
4-Bromophenyl phenyl ether	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	SS71-19	SS71-2	SS71-20	SS71-3	SS71-4	SS71-5	SS71-6	SS71-8	SS71-9
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71020	71014	71031	71015	71016	71029	71028	71019	71018
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Sample Date	11/20/1997	11/19/1997	11/21/1997	11/19/1997	11/19/1997	11/21/1997	11/21/1997	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STE
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
4-Chloro-3-methylphenol	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
4-Chloroaniline	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
4-Chlorophenyl phenyl ether	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
4-Methylphenol	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
4-Nitroaniline	UG/KG	6800 U	2100 U	2000 U	410 U	190 U	3600 U	44000 U	1000 U	220
4-Nitrophenol	UG/KG	6800 U	2100 U	2000 U	410 U	190 U	3600 U	44000 U	1000 U	220
Acenaphthene	UG/KG	510 J	69 J	160 J	52 J	5.5 J	290 J	2600 J	96 J	38
Acenaphthylene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	73 J	22
Acetophenone	UG/KG									
Aniline	UG/KG									
Anthracene	UG/KG	1000 J	170 J	440 J	120 J	12 J	590 J	10000 J	240 J	70
Atrazine	UG/KG									
Benzaldehyde	UG/KG									
Benzo(a)anthracene	UG/KG	4500	1100	2100	570	70 J	3200	42000	880	310
Benzo(a)pyrene	UG/KG	4400	1300	2000	540	83	3400	47000	1100	360
Benzo(b)fluoranthene	UG/KG	4600	1200	1900	950	130	4300	56000	1400	810
Benzo(ghi)perylene	UG/KG	2600 J	820 J	1200	310	69 J	2300	31000	940	220
Benzo(k)fluoranthene	UG/KG	4700	1600	2000	170 U	80 U	4500	47000	1400	89
Benzoic Acid	UG/KG									
Bis(2-Chloroethoxy)methane	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Bis(2-Chloroethyl)ether	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Bis(2-Chloroisopropyl)ether	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Bis(2-Ethylhexyl)phthalate	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Butylbenzylphthalate	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Caprolactam	UG/KG									
Carbazole	UG/KG	1700 J	350 J	680 J	160 J	15 J	1300 J	16000 J	510	160
Chrysene	UG/KG	5500	1600	2400	660	80	6200	64000	1600	500
Di-n-butylphthalate	UG/KG	140 J	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	6.4
Di-n-octylphthalate	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Dibenz(a,h)anthracene	UG/KG	1100 J	300 J	430 J	120 J	29 J	760 J	12000 J	340 J	93
Dibenzofuran	UG/KG	270 J	64 J	89 J	22 J	80 U	190 J	1300 J	75 J	21
Diethyl phthalate	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Dimethylphthalate	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Fluoranthene	UG/KG	12000	3000	4300	1200	140	12000	110000	2400	710
Fluorene	UG/KG	570 J	67 J	160 J	36 J	4.7 J	290 J	3200 J	100 J	31
Hexachlorobenzene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Hexachlorobutadiene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Hexachlorocyclopentadiene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Hexachloroethane	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Indeno(1,2,3-cd)pyrene	UG/KG	2500 J	780 J	1100	310	57 J	2100	28000	780	200
Isophorone	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
N-Nitrosodiphenylamine	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
N-Nitrosodipropylamine	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89
Naphthalene	UG/KG	2800 U	880 U	800 U	11 J	10 J	1500 U	18000 U	430 U	15
Nitrobenzene	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	SS71-19	SS71-2	SS71-20	SS71-3	SS71-4	SS71-5	SS71-6	SS71-8	SS71-9	
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sample ID	71020	71014	71031	71015	71016	71029	71028	71019	71018	
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
	Sample Date	11/20/1997	11/19/1997	11/21/1997	11/19/1997	11/19/1997	11/21/1997	11/21/1997	11/19/1997	11/19/1997	
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STE	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value	
Pentachlorophenol	UG/KG	6800 U	2100 U	2000 U	410 U	190 U	3600 U	44000 U	1000 U	220	
Phenanthrene	UG/KG	8300	1400	2600	530	50 J	5700	49000	880	390	
Phenol	UG/KG	2800 U	880 U	800 U	170 U	80 U	1500 U	18000 U	430 U	89	
Pyrene	UG/KG	11000	2300	3900	950	110	9400	98000	1900	590	
Pyridine	UG/KG										
Pesticides/PCBs											
4,4'-DDD	UG/KG	40 J	2.8 J	40 U	4.2 U	3.2 J	37 U	50	4.3 U	4.4	
4,4'-DDE	UG/KG	390	44	86	21	19	45	99	19	15	
4,4'-DDT	UG/KG	960	53	100	19	16	37 U	250	77	25	
Aldrin	UG/KG	22 U	2.3 U	21 U	2.2 U	2 U	19 U	19 U	2.2 U	2.3	
Alpha-BHC	UG/KG	22 U	1.9 J	21 U	2.2 U	2 U	14 J	19 U	2.2 U	2.3	
Alpha-Chlordane	UG/KG	22 U	2.3 U	21 U	2.2 U	2 U	19 U	19 U	2.2 U	2.3	
Beta-BHC	UG/KG	22 U	2.3 U	21 U	2.2 U	2 U	19 U	19 U	2.2 U	2.3	
Delta-BHC	UG/KG	22 U	2.3 U	21 U	2.2 U	2 U	19 U	19 U	2.2 U	2.3	
Dieldrin	UG/KG	42 U	3 J	40 U	4.2 U	4 U	37 U	37 U	4.3 U	4.4	
Endosulfan I	UG/KG	22 U	2.3 U	21 U	2.2 U	2 U	19 U	19 U	2.2 U	2.3	
Endosulfan II	UG/KG	42 U	4.4 U	40 U	4.2 U	4 U	37 U	50	4.3 U	4.4	
Endosulfan sulfate	UG/KG	31 J	4.4	40 U	4 J	4 U	37 U	36 J	4.6	4.4	
Endrin	UG/KG	42 U	2.4 J	40 U	4.2 U	4 U	37 U	54	4.3 U	4.4	
Endrin aldehyde	UG/KG	36 J	4.7	40 U	8.3	4	37 U	120	6.1	4.4	
Endrin ketone	UG/KG	26 J	6.6	40 U	6.4	4 U	23 J	120	11	4.4	
Gamma-BHC/Lindane	UG/KG	22 U	2.3 U	21 U	2.2 U	2 U	19 U	19 U	2.2 U	2.3	
Gamma-Chlordane	UG/KG	22 U	2.3 U	21 U	2.2 U	2 U	19 U	19 U	2.2 U	2.3	
Heptachlor	UG/KG	22 U	2.3 U	21 U	2.2 U	2 U	19 U	19 U	2.2 U	2.3	
Heptachlor epoxide	UG/KG	19 J	6.4	21 U	2.2 U	1.5 J	19 U	70	2.2 U	2.3	
Methoxychlor	UG/KG	220 U	23 U	210 U	22 U	20 U	520	170 J	62	23	
Toxaphene	UG/KG	2200 U	230 U	2100 U	220 U	200 U	1900 U	1900 U	220 U	230	
Aroclor-1016	UG/KG	420 U	44 U	400 U	42 U	40 U	370 U	370 U	43 U	44	
Aroclor-1221	UG/KG	850 U	89 U	820 U	86 U	81 U	750 U	740 U	87 U	90	
Aroclor-1232	UG/KG	420 U	44 U	400 U	42 U	40 U	370 U	370 U	43 U	44	
Aroclor-1242	UG/KG	420 U	44 U	400 U	42 U	40 U	370 U	370 U	43 U	44	
Aroclor-1248	UG/KG	420 U	44 U	400 U	42 U	40 U	370 U	370 U	43 U	44	
Aroclor-1254	UG/KG	420 U	44 U	400 U	42 U	40 U	370 U	370 U	43 U	44	
Aroclor-1260	UG/KG	420 U	44 U	400 U	42 U	40 U	370 U	370 U	43 U	44	
Metals											
Aluminum	MG/KG	12400	14000	10600	12500	13400	2060	2860	13600	15900	
Antimony	MG/KG	1.9 J	1 J	0.77 UJ	0.85 UJ	0.82 UJ	5.2 J	0.76 UJ	0.84 UJ	0.93	
Arsenic	MG/KG	11.5	6.1	6.1	4.6	4.7	9.5	4.8	5.9	14.6	
Barium	MG/KG	110 J	76.5 J	111 J	75.4 J	76.9 J	42.1 J	39.9 J	101 J	86.2	
Beryllium	MG/KG	0.36	0.46	0.52	0.41	0.44	0.02 U	0.11	0.38	0.43	
Cadmium	MG/KG	3.9 J	0.08 UJ	0.62 J	0.07 UJ	0.07 UJ	0.07 UJ	1.1 UJ	0.07 UJ	0.08	

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	SS71-19	SS71-2	SS71-20	SS71-3	SS71-4	SS71-5	SS71-6	SS71-8	SS71-9
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71020	71014	71031	71015	71016	71029	71028	71019	71018
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Sample Date	11/20/1997	11/19/1997	11/21/1997	11/19/1997	11/19/1997	11/21/1997	11/21/1997	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Calcium	MG/KG	8780	8370	13800	27100	43200	204000	261000	27300	9080
Chromium	MG/KG	60.3 J	21 J	31.9 J	18 J	19.5 J	39.9 J	14.6 J	22.2 J	23.8
Cobalt	MG/KG	12.4	11.1	9.7	9.4	11.2	7.8	6.4	11.5	12.5
Copper	MG/KG	95.6 J	55 J	98.7 J	40.5 J	24.9 J	48.3 J	18.4 J	23.6 J	45.3
Cyanide	MG/KG	0.64 U	0.68 U	0.7 U	0.73 U	0.61 U	0.58 U	0.58 U	0.71 U	0.67
Iron	MG/KG	34300	25900	25900	22800	24900	65100	11000	27200	38000
Lead	MG/KG	572 J	171 J	346 J	90.8 J	30.1 J	148 J	99.9 J	74.3 J	33
Magnesium	MG/KG	4750	5570	4490	8250	10200	23200	18500	6820	5570
Manganese	MG/KG	660 J	602 J	523 J	482 J	510 J	520 J	427 J	743 J	735
Mercury	MG/KG	0.06 UJ	0.09 J	0.07 J	0.06 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.06 UJ	0.07
Nickel	MG/KG	98.8	28.3	27.7	25.1	30.6	33.6	16.4	26.9	30.9
Potassium	MG/KG	1610	2070	1700	1960	1810	918	1240	1750	2180
Selenium	MG/KG	1.5 J	1.4 J	1.3 J	1.1 UJ	1.1 UJ	1.7 J	1 UJ	1.1 UJ	1.4
Silver	MG/KG	0.69 J	0.54 UJ	0.63 J	0.51 UJ	0.49 UJ	0.46 UJ	0.46 UJ	0.51 UJ	0.67
Sodium	MG/KG	514	176	344	226	251	1040	297	215	237
Thallium	MG/KG	1.5 U	1.6 U	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	1.5 U	2.3
Vanadium	MG/KG	22.3	23.9	19.2	20	19.6	9.2	11	19.8	23.4
Zinc	MG/KG	1790 J	144 J	525 J	105 J	352 UJ	3660 J	94.4 J	118 J	95.5

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	TP71-1	TP71-1	TP71-1	TP71-1	TP71-2	TP71-2	TP71-2	TP71-2	TP71-2	TP71-3-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	TP71-1-1	TP71-1-2	TP71-1-3	TP71-1-4	TP71-2-1	TP71-2-2	TP71-2-4	TP71-2-3		71002
Sample Depth to Top of Sample ⁽¹⁾	3	3	3	4	1	2	2	2		0
Sample Depth to Bottom of Sample ⁽¹⁾	3	3	3	4	1	2	2	3.3		8
Sample Date	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	10/14/1997
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID:P 1	ESI	ESI	ESI	ESI	ESI	ESI	ESI	ESI	ESI	RI PHASE 1 STEP 1

Parameter	Units	(Q)	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	U	4 J	7 J	10 J	23	11 U	11 U	12 U	3 J	11 U
1,1,2,2-Tetrachloroethane	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG										
1,1,2-Trichloroethane	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
1,1-Dichloroethane	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
1,1-Dichloroethene	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
1,2,3-Trichloropropane	UG/KG										
1,2,4-Trichlorobenzene	UG/KG										
1,2-Dibromo-3-chloropropane	UG/KG										
1,2-Dibromoethane	UG/KG										
1,2-Dichlorobenzene	UG/KG										
1,2-Dichloroethane	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
1,2-Dichloroethene (total)	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
1,2-Dichloropropane	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
1,3-Dichlorobenzene	UG/KG										
1,3-Dichloropropane	UG/KG										
1,4-Dichlorobenzene	UG/KG										
Acetone	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Benzene	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Bromodichloromethane	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Bromoform	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Carbon disulfide	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Carbon tetrachloride	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Chlorobenzene	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Chlorodibromomethane	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Chloroethane	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Chloroform	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Cis-1,2-Dichloroethene	UG/KG										
Cis-1,3-Dichloropropene	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Cyclohexane	UG/KG										
Dichlorodifluoromethane	UG/KG										
Ethyl benzene	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Isopropylbenzene	UG/KG										

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	TP71-1	TP71-1	TP71-1	TP71-1	TP71-1	TP71-2	TP71-2	TP71-2	TP71-2	TP71-3-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	TP71-1-1	TP71-1-2	TP71-1-3	TP71-1-4	TP71-2-1	TP71-2-2	TP71-2-4	TP71-2-3		71002
Sample Depth to Top of Sample ⁽¹⁾	3	3	3	4	1	2	2	2		0
Sample Depth to Bottom of Sample ⁽¹⁾	3	3	3	4	1	2	2	3.3		8
Sample Date	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	10/14/1997
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID: P 1	ESI	ESI	ESI	ESI	ESI	ESI	ESI	ESI	ESI	RI PHASE 1 STEP 1

Parameter	Units	(Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Meta/Para Xylene	UG/KG										
Methyl Acetate	UG/KG										
Methyl Tertbutyl Ether	UG/KG										
Methyl bromide	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Methyl butyl ketone	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Methyl chloride	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Methyl cyclohexane	UG/KG										
Methyl ethyl ketone	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Methyl isobutyl ketone	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Methylene chloride	UG/KG	U	2 J	2 J	2 J	2 J	2 J	2 J	11 J	3 J	11 U
Ortho Xylene	UG/KG										
Styrene	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Tetrachloroethene	UG/KG	U	1 J	1 J	3 J	12 U	11 U	11 U	12 U	12 U	11 U
Toluene	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Total BTEX	MG/KG										11.6
Total Xylenes	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	3 J
Trans-1,2-Dichloroethene	UG/KG										
Trans-1,3-Dichloropropene	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Trichloroethene	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Trichlorofluoromethane	UG/KG										
Vinyl chloride	UG/KG	U	12 U	12 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Semivolatiles Organics											
1,1'-Biphenyl	UG/KG										
1,2,4-Trichlorobenzene	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
1,2-Dichlorobenzene	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
1,3-Dichlorobenzene	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
1,4-Dichlorobenzene	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
2,2'-oxybis(1-Chloropropane)	UG/KG										
2,4,5-Trichlorophenol	UG/KG	U	45000 U	1200 U	900 U	940 U	3600 U	930 U	930 U	1000 U	160 U
2,4,6-Trichlorophenol	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
2,4-Dichlorophenol	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
2,4-Dimethylphenol	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
2,4-Dinitrophenol	UG/KG	U	45000 U	1200 U	900 U	940 U	3600 U	930 U	930 U	1000 U	160 U
2,4-Dinitrotoluene	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
2,6-Dinitrotoluene	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
2-Chloronaphthalene	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
2-Chlorophenol	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
2-Methylnaphthalene	UG/KG	J	19000 U	29 J	370 U	390 U	1500 U	380 U	380 U	420 U	520
2-Methylphenol	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
2-Nitroaniline	UG/KG	U	45000 U	1200 U	900 U	940 U	3600 U	930 U	930 U	1000 U	160 U
2-Nitrophenol	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
3,3'-Dichlorobenzidine	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
3-Nitroaniline	UG/KG	U	45000 U	1200 U	900 U	940 U	3600 U	930 U	930 U	1000 U	160 U
4,6-Dinitro-2-methylphenol	UG/KG	U	45000 U	1200 U	900 U	940 U	3600 U	930 U	930 U	1000 U	160 U
4-Bromophenyl phenyl ether	UG/KG	U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	TP71-1	TP71-1	TP71-1	TP71-1	TP71-2	TP71-2	TP71-2	TP71-2	TP71-2	TP71-3-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	TP71-1-1	TP71-1-2	TP71-1-3	TP71-1-4	TP71-2-1	TP71-2-2	TP71-2-4	TP71-2-3		71002
Sample Depth to Top of Sample ⁽¹⁾	3	3	3	4	1	2	2	2		0
Sample Depth to Bottom of Sample ⁽¹⁾	3	3	3	4	1	2	2	3.3		8
Sample Date	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	10/14/1997
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID: P 1	ESI	ESI	ESI	ESI	ESI	ESI	ESI	ESI	ESI	RI PHASE 1 STEP 1

Parameter	Units (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
4-Chloro-3-methylphenol	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
4-Chloroaniline	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
4-Chlorophenyl phenyl ether	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
4-Methylphenol	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
4-Nitroaniline	UG/KG U	45000 U	1200 U	900 U	940 U	3600 U	930 U	930 U	1000 U	160 U
4-Nitrophenol	UG/KG U	45000 U	1200 U	900 U	940 U	3600 U	930 U	930 U	1000 U	160 U
Acenaphthene	UG/KG J	5800 J	280 J	76 J	38 J	1500 U	380 U	380 U	420 U	830 J
Acenaphthylene	UG/KG J	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Acetophenone	UG/KG									
Aniline	UG/KG									
Anthracene	UG/KG J	11000 J	560	120 J	59 J	1500 U	380 U	380 U	420 U	48 J
Atrazine	UG/KG									
Benzaldehyde	UG/KG									
Benzo(a)anthracene	UG/KG	37000	1200	660	180 J	370 J	250 J	120 J	420 U	32 J
Benzo(a)pyrene	UG/KG	22000	750	630	160 J	490 J	290 J	94 J	420 U	66 U
Benzo(b)fluoranthene	UG/KG	26000	930	710	130 J	750 J	400	110 J	420 U	66 U
Benzo(ghi)perylene	UG/KG	10000 J	500	500	82 J	370 J	150 J	36 J	420 U	66 U
Benzo(k)fluoranthene	UG/KG U	15000 J	570	490	140 J	490 J	240 J	77 J	420 U	66 U
Benzoic Acid	UG/KG									
Bis(2-Chloroethoxy)methane	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Bis(2-Chloroethyl)ether	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Bis(2-Chloroisopropyl)ether	UG/KG U									66 U
Bis(2-Ethylhexyl)phthalate	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Butylbenzylphthalate	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Caprolactam	UG/KG									
Carbazole	UG/KG	9500 J	360 J	100 J	30 J	1500 U	380 U	380 U	420 U	40 J
Chrysene	UG/KG	36000	1000	750	220 J	610 J	360 J	130 J	420 U	49 J
Di-n-butylphthalate	UG/KG J	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Di-n-octylphthalate	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Dibenz(a,h)anthracene	UG/KG	9800 J	190 J	320 J	38 J	170 J	130 J	380 U	420 U	66 U
Dibenzofuran	UG/KG J	19000 U	120 J	370 U	390 U	1500 U	380 U	380 U	420 U	670 J
Diethyl phthalate	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Dimethylphthalate	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Fluoranthene	UG/KG	88000	2600	1400	330 J	690 J	580	240 J	63 J	220
Fluorene	UG/KG J	2800 J	230 J	56 J	390 U	1500 U	380 U	380 U	420 U	270
Hexachlorobenzene	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Hexachlorobutadiene	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Hexachlorocyclopentadiene	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Hexachloroethane	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Indeno(1,2,3-cd)pyrene	UG/KG	12000 J	390 J	520	88 J	430 J	220 J	52 J	420 U	66 U
Isophorone	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
N-Nitrosodiphenylamine	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
N-Nitrosodipropylamine	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U
Naphthalene	UG/KG J	19000 U	77 J	370 U	29 J	1500 U	380 U	380 U	420 U	590 J
Nitrobenzene	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	66 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	TP71-1	TP71-1	TP71-1	TP71-1	TP71-2	TP71-2	TP71-2	TP71-2	TP71-3-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	TP71-1-1	TP71-1-2	TP71-1-3	TP71-1-4	TP71-2-1	TP71-2-2	TP71-2-4	TP71-2-3	71002
	Sample Depth to Top of Sample ⁽¹⁾	3	3	3	4	1	2	2	2	0
	Sample Depth to Bottom of Sample ⁽¹⁾	3	3	3	4	1	2	2	3.3	8
	Sample Date	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	10/14/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID/P 1	ESI	ESI	ESI	ESI	ESI	ESI	ESI	ESI	RI PHASE 1 STEP 1
Parameter	Units (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG U	45000 U	1200 U	900 U	940 U	3600 U	930 U	930 U	1000 U	160 U
Phenanthrene	UG/KG	66000	1900	770	260 J	270 J	180 J	80 J	30 J	350
Phenol	UG/KG U	19000 U	500 U	370 U	390 U	1500 U	380 U	380 U	420 U	4.5 J
Pyrene	UG/KG	63000	1600	2000	390	1000 J	660	260 J	73 J	370
Pyridine	UG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG U	37 U	3.7 U	3.7 U	3.9 U	3.4 J	3.8 U	3.8 U	4.2 U	3.9 U
4,4'-DDE	UG/KG	37 U	3.7 U	3.1 J	4.2 J	3.7 U	3.8 U	3.8 U	4.2 U	3.9 U
4,4'-DDT	UG/KG	37 U	3.7 U	8.4	13	2.7 J	3.8 U	3.8 U	4.2 U	3.9 U
Aldrin	UG/KG U	19 U	1.9 U	1.9 U	2 U	1.9 U	2 U	2 U	2.2 U	2 U
Alpha-BHC	UG/KG U	19 U	1.9 U	1.9 U	2 U	1.9 U	2 U	2 U	2.2 U	2 U
Alpha-Chlordane	UG/KG U	74 J	1.9 U	1.9 U	2 U	2 J	2 U	2 U	2.2 U	2 U
Beta-BHC	UG/KG U	19 U	1.9 U	1.9 U	2 U	1.9 U	2 U	2 U	2.2 U	2 U
Delta-BHC	UG/KG U	19 U	1.9 U	1.9 U	2 U	1.9 U	2 U	2 U	2.2 U	2 U
Dieldrin	UG/KG U	37 U	3.5 J	3.7 U	3.9 U	3.7 U	3.8 U	3.8 U	4.2 U	3.9 U
Endosulfan I	UG/KG U	200 J	3.5	6.6 J	2.8 J	5.1 J	6.9 J	3.4 J	2.2 U	2 U
Endosulfan II	UG/KG U	26 J	2.5 J	3.7 U	3.9 U	2 J	3.8 U	3.8 U	4.2 U	3.9 U
Endosulfan sulfate	UG/KG U	37 U	3.7 U	3.7 U	3.9 U	2.2 J	3.8 U	3.8 U	4.2 U	3.9 U
Endrin	UG/KG U	29 J	3.7 U	3.7 U	3.9 U	3.7 U	3.8 U	3.8 U	4.2 U	3.9 U
Endrin aldehyde	UG/KG U	37 U	3.7 U	3.7 U	3.9 U	3.7 U	3.8 U	3.8 U	4.2 U	3.9 U
Endrin ketone	UG/KG U	37 U	3.7 U	3.7 U	3.9 U	3.7 U	3.8 U	3.8 U	4.2 U	3.9 U
Gamma-BHC/Lindane	UG/KG U	19 U	1.9 U	1.9 U	2 U	1.9 U	2 U	2 U	2.2 U	2 U
Gamma-Chlordane	UG/KG U	19 U	1.9 U	1.9 U	2 U	1.9 U	2 U	2 U	2.2 U	2 U
Heptachlor	UG/KG U	19 U	1.2 J	1.9 U	2 U	1.9 U	2 U	2 U	2.2 U	2 U
Heptachlor epoxide	UG/KG U	19 U	1.9 U	1.9 U	2 U	1.9 U	2 U	2 U	2.2 U	2 U
Methoxychlor	UG/KG U	190 U	19 U	19 U	20 U	19 U	20 U	20 U	22 U	20 U
Toxaphene	UG/KG U	1900 U	190 U	190 U	200 U	190 U	200 U	200 U	220 U	200 U
Aroclor-1016	UG/KG U	370 U	37 U	37 U	39 U	37 U	38 U	38 U	42 U	39 U
Aroclor-1221	UG/KG U	750 U	76 U	75 U	79 U	76 U	78 U	78 U	86 U	80 U
Aroclor-1232	UG/KG U	370 U	37 U	37 U	39 U	37 U	38 U	38 U	42 U	39 U
Aroclor-1242	UG/KG U	370 U	37 U	37 U	39 U	37 U	38 U	38 U	42 U	39 U
Aroclor-1248	UG/KG U	370 U	37 U	37 U	39 U	37 U	38 U	38 U	42 U	39 U
Aroclor-1254	UG/KG U	370 U	37 U	37 U	39 U	37 U	38 U	38 U	42 U	39 U
Aroclor-1260	UG/KG U	370 U	37 U	37 U	39 U	37 U	38 U	38 U	42 U	39 U
Metals										
Aluminum	MG/KG	12900	13100	10900	9960	9630	12500	15200	18000	8090 J
Antimony	MG/KG UJ	0.19 J	0.27 UJ	0.23 UJ	0.47 J	0.21 J	0.18 UJ	0.25 UJ	0.23 UJ	0.56 UJ
Arsenic	MG/KG	5.4	5.1	5.2	4.8	4.2	4.8	7.8	7.6	4.3
Barium	MG/KG J	86.2	69.2	69.8	63.5	37.5	57.6	76.1	108	51.3
Beryllium	MG/KG	0.58 J	0.56 J	0.53 J	0.47 J	0.44 J	0.48 J	0.7 J	0.88 J	0.21
Cadmium	MG/KG UJ	0.53 J	0.39 J	0.45 J	0.45 J	0.44 J	0.43 J	0.48 J	0.45 J	0.08 U

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Facility	TP71-1	TP71-1	TP71-1	TP71-1	TP71-2	TP71-2	TP71-2	TP71-2	TP71-2	TP71-3-1
Location ID	TP71-1	TP71-1	TP71-1	TP71-1	TP71-2	TP71-2	TP71-2	TP71-2	TP71-2	TP71-3-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	TP71-1-1	TP71-1-2	TP71-1-3	TP71-1-4	TP71-2-1	TP71-2-2	TP71-2-4	TP71-2-3		71002
Sample Depth to Top of Sample ⁽¹⁾	3	3	3	4	1	2	2	2		0
Sample Depth to Bottom of Sample ⁽¹⁾	3	3	3	4	1	2	2	3.3		8
Sample Date	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	6/7/1994	10/14/1997
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID:P 1	ESI	ESI	ESI	ESI	ESI	ESI	ESI	ESI	ESI	RI PHASE 1 STEP 1

Parameter	Units (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Calcium	MG/KG	38000 J	52800 J	32200 J	36500 J	10500 J	37200 J	27300 J	4260 J	134000
Chromium	MG/KG J	18.4	17.9	16.3	15.5	18.1	16.7	22	25.8	12.9
Cobalt	MG/KG	9.4	9.3 J	9.7	8.7 J	11.4	9	13.4	14.6	11
Copper	MG/KG J	25.4	19	23	26.7	37.5	17.5	23.5	36.2	15.2
Cyanide	MG/KG U	0.54 U	0.46 U	0.5 U	0.35 U	0.54 U	0.44 U	0.56 U	0.54 U	0.65 U
Iron	MG/KG	23600	22700	21600	20000	22400	22100	32100	32700	18000
Lead	MG/KG J	96.9	10.3	43.8	67.8	25.3	11.2	15.1	15.3	8.9 J
Magnesium	MG/KG	8690	7910	8840	9180	4830	13100	6320	6680	6760 J
Manganese	MG/KG J	497	390	474	458	255	434	503	749	784 J
Mercury	MG/KG UJ	0.03 J	0.03 J	0.03 J	0.03 J	0.04 J	0.15	0.02 J	0.04 J	0.05 U
Nickel	MG/KG	26.8	25.2	24.9	24.6	42.5	23.2	36.1	38.8	26.2
Potassium	MG/KG	1340 J	1540 J	1230 J	1520 J	992 J	1010 J	1300 J	1830 J	1120
Selenium	MG/KG J	0.43 J	0.57 U	0.47 U	0.56 U	0.91	0.37 U	0.74 J	0.61 J	0.77 U
Silver	MG/KG UJ	0.07 UJ	0.11 UJ	0.09 UJ	0.1 UJ	0.06 UJ	0.07 UJ	0.1 UJ	0.09 UJ	0.21 U
Sodium	MG/KG	54.9 J	108 J	140 J	90.7 J	50 J	45.6 J	37.2 J	17.6 U	83.3 U
Thallium	MG/KG	0.25 U	0.4 U	0.33 U	0.4 U	0.24 U	0.26 U	0.36 U	0.34 U	1.2 U
Vanadium	MG/KG	19.7	20.1	17.9	18.2	15.4	19.2	23.1	29.2	15.1
Zinc	MG/KG J	96.2	63.9	86.1	79.7	128	58.9	79.3	71.8	57 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
 J = the reported value is an estimated concentration
 UJ = the compound was not detected; the associated reporting limit is approximate
 R = the data was rejected in the data validating process
 NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Sample Depth to Top of Sample ⁽¹⁾	10.5	10	7	12.5	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	11	10.5	7.5	13	0	0	0	0	0
	Sample Date	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
						1	1	1	1	1
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	110 U	12 U	12 U	4 J	6 U	5 U	5 U	5.8 U	5.5 U
1,1,2,2-Tetrachloroethane	UG/KG	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 R	5.8 U	5.5 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG					6 U	5 U	5 U	5.8 U	5.5 U
1,1,2-Trichloroethane	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U		
1,1-Dichloroethane	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8 U	5.5 U
1,1-Dichloroethene	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8 U	5.5 U
1,2,3-Trichloropropane	UG/KG								5.8 U	5.5 U
1,2,4-Trichlorobenzene	UG/KG					6 UJ	5 UJ	5 R	5.8 U	5.5 U
1,2-Dibromo-3-chloropropane	UG/KG					6 UJ	5 UJ	5 R		
1,2-Dibromoethane	UG/KG					6 UJ	5 UJ	5 UJ		
1,2-Dichlorobenzene	UG/KG					6 UJ	5 UJ	5 R	5.8 U	5.5 U
1,2-Dichloroethane	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8 U	5.5 U
1,2-Dichloroethene (total)	UG/KG	110 U	12 U	12 U	12 U					
1,2-Dichloropropane	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U		
1,3-Dichlorobenzene	UG/KG					6 UJ	5 UJ	5 R	5.8 U	5.5 U
1,3-Dichloropropane	UG/KG								5.8 U	5.5 U
1,4-Dichlorobenzene	UG/KG					6 UJ	5 UJ	5 R	5.8 U	5.5 U
Acetone	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U	23 U	22 U
Benzene	UG/KG	110 U	12 U	12 U	12 U	1 J	5 U	5 U	5.8 U	5.5 U
Bromodichloromethane	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U		
Bromoform	UG/KG	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ		
Carbon disulfide	UG/KG	110 U	12 U	12 U	12 U	2 J	5 U	2 J	5.8 U	5.5 U
Carbon tetrachloride	UG/KG	110 U	12 U	12 U	12 U	6 U	5 UJ	5 U	5.8 U	5.5 U
Chlorobenzene	UG/KG	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ	5.8 U	5.5 U
Chlorodibromomethane	UG/KG	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ	5.8 U	5.5 U
Chloroethane	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U	12 U	11 U
Chloroform	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8 U	5.5 U
Cis-1,2-Dichloroethene	UG/KG					6 U	5 U	5 U		
Cis-1,3-Dichloropropene	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U		
Cyclohexane	UG/KG					4 J	5 U	3 J		
Dichlorodifluoromethane	UG/KG					6 U	5 U	5 U		
Ethyl benzene	UG/KG	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ	5.8 U	5.5 U
Isopropylbenzene	UG/KG					6 UJ	5 UJ	5 UJ		

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Sample Depth to Top of Sample ⁽¹⁾	10.5	10	7	12.5	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	11	10.5	7.5	13	0	0	0	0	0
	Sample Date	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
						1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Meta/Para Xylene	UG/KG								5.8 U	5.5 U
Methyl Acetate	UG/KG					6 U	5 U	5 U		
Methyl Tertbutyl Ether	UG/KG					6 U	5 U	5 U		
Methyl bromide	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U		
Methyl butyl ketone	UG/KG	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ		
Methyl chloride	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U		
Methyl cyclohexane	UG/KG					6	5 U	4 J		
Methyl ethyl ketone	UG/KG	110 U	12 U	12 U	12 U	6 U	5 UJ	5 U	12 U	11 U
Methyl isobutyl ketone	UG/KG	110 U	12 U	12 U	12 U	6 U	5 UJ	5 U	12 U	11 U
Methylene chloride	UG/KG	110 U	12 U	12 U	12 U	6 U	2 J	5 U	1.6 J	5.5 U
Ortho Xylene	UG/KG								5.8 U	5.5 U
Styrene	UG/KG	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ		
Tetrachloroethene	UG/KG	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ	5.8 U	5.5 U
Toluene	UG/KG	110 U	12 U	12 U	12 U	2 J	5 U	2 J	5.8 U	5.5 U
Total BTEX	MG/KG		3.5	3.05	3.3					
Total Xylenes	UG/KG	96 J	12 U	12 U	12 U	2 J	5 UJ	3 J		
Trans-1,2-Dichloroethene	UG/KG					6 U	5 U	5 U	5.8 U	5.5 U
Trans-1,3-Dichloropropene	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U		
Trichloroethene	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8 U	5.5 U
Trichlorofluoromethane	UG/KG					6 U	1 J	5 U		
Vinyl chloride	UG/KG	110 U	12 U	12 U	12 U	6 U	5 U	5 U	12 U	11 U
Semivolatle Organics										
1,1'-Biphenyl	UG/KG					370 U	360 U	370 U		
1,2,4-Trichlorobenzene	UG/KG	760 U	78 U	78 U	78 U					
1,2-Dichlorobenzene	UG/KG	760 U	78 U	78 U	78 U					
1,3-Dichlorobenzene	UG/KG	760 U	78 U	78 U	78 U					
1,4-Dichlorobenzene	UG/KG	760 U	78 U	78 U	78 U					
2,2'-oxybis(1-Chloropropane)	UG/KG					370 U	360 U	370 U		
2,4,5-Trichlorophenol	UG/KG	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	1100 U	1100 U
2,4,6-Trichlorophenol	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
2,4-Dichlorophenol	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
2,4-Dimethylphenol	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U		
2,4-Dinitrophenol	UG/KG	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	5900 UJ	5600 U
2,4-Dinitrotoluene	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	880 J	1100 U
2,6-Dinitrotoluene	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
2-Chloronaphthalene	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U		
2-Chlorophenol	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
2-Methylnaphthalene	UG/KG	31000 J	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
2-Methylphenol	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
2-Nitroaniline	UG/KG	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	5900 U	5600 U
2-Nitrophenol	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
3,3'-Dichlorobenzidine	UG/KG	760 U	78 U	78 UJ	78 UJ	370 U	360 U	370 U	1100 U	1100 U
3-Nitroaniline	UG/KG	1800 U	190 UJ	190 UJ	190 U	940 U	910 U	920 U	5900 U	5600 U
4,6-Dinitro-2-methylphenol	UG/KG	1800 U	190 U	190 U	190 U	940 U	910 U	920 U		
4-Bromophenyl phenyl ether	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U		

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Sample Depth to Top of Sample ⁽¹⁾	10.5	10	7	12.5	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	11	10.5	7.5	13	0	0	0	0	0
	Sample Date	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
						1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
4-Chloro-3-methylphenol	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
4-Chloroaniline	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
4-Chlorophenyl phenyl ether	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U		
4-Methylphenol	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
4-Nitroaniline	UG/KG	1800 U	190 UJ	190 UJ	190 UJ	940 U	75 J	920 U		
4-Nitrophenol	UG/KG	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	5900 U	5600 U
Acenaphthene	UG/KG	13000 J	78 U	78 U	78 U	370 U	360 U	62 J	1100 U	1100 U
Acenaphthylene	UG/KG	340 J	78 U	78 U	78 U	370 U	97 J	130 J	1100 U	230 J
Acetophenone	UG/KG					370 U	360 U	370 U		
Aniline	UG/KG								1100 U	1100 U
Anthracene	UG/KG	590 J	78 U	78 U	78 U	45 J	170 J	520	360 J	370 J
Atrazine	UG/KG					370 U	360 U	370 U		
Benzaldehyde	UG/KG					370 U	360 U	370 U		
Benzo(a)anthracene	UG/KG	240 J	78 U	18 J	3.9 J	180 J	730	1500	830 J	1300
Benzo(a)pyrene	UG/KG	160 J	78 U	19 J	3.9 J	170 J	810	1400	610 J	1500
Benzo(b)fluoranthene	UG/KG	130 J	78 U	21 J	4.4 J	230 J	1100	1900	650 J	1400
Benzo(ghi)perylene	UG/KG	76 J	78 U	12 J	78 U	99 J	490	770	430 J	910 J
Benzo(k)fluoranthene	UG/KG	98 J	78 U	24 J	4.6 J	94 J	440	670	650 J	1300
Benzoic Acid	UG/KG								5900 U	5600 U
Bis(2-Chloroethoxy)methane	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U		
Bis(2-Chloroethyl)ether	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U		
Bis(2-Chloroisopropyl)ether	UG/KG	760 U	78 U	78 U	78 U					
Bis(2-Ethylhexyl)phthalate	UG/KG	760 U	7.8 J	15 J	7.6 J	43 J	47 J	56 J	140 J	1100 U
Butylbenzylphthalate	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Caprolactam	UG/KG					370 U	360 U	370 U		
Carbazole	UG/KG	380 J	78 U	4.2 J	78 U	370 U	59 J	240 J		
Chrysene	UG/KG	290 J	78 U	28 J	4.6 J	190 J	820	1500	1000 J	1600
Di-n-butylphthalate	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Di-n-octylphthalate	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Dibenz(a,h)anthracene	UG/KG	760 U	78 U	4.4 J	78 U	370 U	42 J	230 J	170 J	310 J
Dibenzofuran	UG/KG	11000 J	78 U	78 U	78 U	370 U	360 U	38 J	1100 U	1100 U
Diethyl phthalate	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Dimethylphthalate	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Fluoranthene	UG/KG	1900	78 U	52 J	6.9 J	350 J	1300	2700	1800	2800
Fluorene	UG/KG	4100	78 U	78 U	78 U	370 U	360 U	99 J	1100 U	1100 U
Hexachlorobenzene	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Hexachlorobutadiene	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Hexachlorocyclopentadiene	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U		
Hexachloroethane	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Indeno(1,2,3-cd)pyrene	UG/KG	56 J	78 U	12 J	78 U	110 J	530	860	420 J	880 J
Isophorone	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
N-Nitrosodiphenylamine	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U		
N-Nitrosodipropylamine	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U		
Naphthalene	UG/KG	17000 J	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Nitrobenzene	UG/KG	760 U	78 U	78 U	78 U	370 U	360 UJ	370 UJ	1100 U	1100 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Sample Depth to Top of Sample ⁽¹⁾	10.5	10	7	12.5	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	11	10.5	7.5	13	0	0	0	0	0
	Sample Date	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
						1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	5900 U	5600 U
Phenanthrene	UG/KG	3800	78 U	24 J	78 U	150 J	400	1600	500 J	980 J
Phenol	UG/KG	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100 U	1100 U
Pyrene	UG/KG	1700	78 U	44 J	6 J	300 J	1300	2700	1300	2200
Pyridine	UG/KG								5900 U	5600 U
Pesticides/PCBs										
4,4'-DDD	UG/KG	3.8 U	3.9 U	3.9 U	3.9 U	3.7 U	8 J	18 U	38 U	18 U
4,4'-DDE	UG/KG	3.8 U	3.9 U	3.9 U	3.9 U	3.7 U	14	36 J	100 J	54 J
4,4'-DDT	UG/KG	5.1 J	3.9 U	3.9 U	3.9 U	7.1	40	55	38 U	42
Aldrin	UG/KG	2 U	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Alpha-BHC	UG/KG	2 U	2.9	4.9	18	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Alpha-Chlordane	UG/KG	2 U	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Beta-BHC	UG/KG	2 U	2 U	2 J	2.7	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Delta-BHC	UG/KG	2 U	2 U	2 U	1.8 J	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Dieldrin	UG/KG	3.8 U	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38 U	18 U
Endosulfan I	UG/KG	2 U	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Endosulfan II	UG/KG	3.8 U	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38 U	18 U
Endosulfan sulfate	UG/KG	3.8 U	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38 U	18 U
Endrin	UG/KG	3.7 J	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38 U	18 U
Endrin aldehyde	UG/KG	7.2 J	3.9 U	3 J	3.9 U	3.7 U	3.7 U	18 U	38 U	18 U
Endrin ketone	UG/KG	2.2 J	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38 U	18 U
Gamma-BHC/Lindane	UG/KG	2 U	2 U	2 U	4	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Gamma-Chlordane	UG/KG	1.1 J	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Heptachlor	UG/KG	2 U	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Heptachlor epoxide	UG/KG	1.5 J	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20 U	9.3 U
Methoxychlor	UG/KG	19 J	20 U	20 U	20 U	19 U	19 U	94 U	200 U	93 U
Toxaphene	UG/KG	200 U	200 U	200 U	200 U	190 U	190 U	940 U	380 U	180 U
Aroclor-1016	UG/KG	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38 U	36 U
Aroclor-1221	UG/KG	77 U	79 U	80 U	79 U	37 U	37 U	37 U	38 U	36 U
Aroclor-1232	UG/KG	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38 U	36 U
Aroclor-1242	UG/KG	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38 U	36 U
Aroclor-1248	UG/KG	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38 U	36 U
Aroclor-1254	UG/KG	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38 U	36 U
Aroclor-1260	UG/KG	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38 U	36 U
Metals										
Aluminum	MG/KG	8090 J	14500 J	12400	9400	12600	11000	9750	9490	10100
Antimony	MG/KG	0.56 UJ	0.68 UJ	0.65 UJ	0.64 UJ	2 J	9.2 J	5.9 J	11	3.2 UJ
Arsenic	MG/KG	4.3	3.1	5.3	4.1	7.4	6.9	5.5	5.4	5.6
Barium	MG/KG	51.3	94.1	78.1	48.8	92.4	95.1	83.6	89.2	75.3
Beryllium	MG/KG	0.21	0.56	0.31	0.31	0.7	0.57	0.49	0.17	0.28 J
Cadmium	MG/KG	0.08 U	0.09 U	0.09 U	0.09 U	0.49	0.46	0.44	0.28 U	0.42 J

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009-13	WS-71-D-009-2
	Sample Depth to Top of Sample ⁽¹⁾	10.5	10	7	12.5	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	11	10.5	7.5	13	0	0	0	0	0
	Sample Date	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Calcium	MG/KG	134000	36000	42800	46600	41100	44600	51800	45300	48600 J
Chromium	MG/KG	12.9	21.2	17.6	14.5	19.4 J	22.8	17.5	17.5	18.1
Cobalt	MG/KG	11	9	9.4	8.6	12.5 J	9.7 J	8.9 J	8.5	9.1
Copper	MG/KG	15.2	19.1	19.4	18.8	30.3	59.9	98.2	77.7	33.1
Cyanide	MG/KG	0.65 U	0.64 U	0.6 UJ	0.59 UJ					
Iron	MG/KG	18000	21600	21500	19200	28000 J	23000 J	19200 J	18800	24800 J
Lead	MG/KG	8.9 J	9.8 J	16	7.3	29.9 J	565 J	797 J	1010	97.5 J
Magnesium	MG/KG	6760 J	8120 J	10100	10100	7180 J	7330 J	15100 J	10100	9530 J
Manganese	MG/KG	784 J	345 J	623	345	446 J	582 J	454 J	435	516
Mercury	MG/KG	0.05 U	0.05 U	0.05 U	0.05 U	0.05	0.68	0.31	0.08	0.06
Nickel	MG/KG	26.2	28	24.1	23.3	37.1 J	26.9 J	26.9 J	25.4	24.1
Potassium	MG/KG	1120	2940	1950	1340	1410	1110	1230	1170	1300
Selenium	MG/KG	0.77 U	0.93 U	1.2	0.88 U	0.42 U	0.44 U	0.44 U	0.58 U	0.54 U
Silver	MG/KG	0.21 U	0.26 U	0.25 U	0.24 U	0.88	0.79	0.44 J	0.56 U	0.54 U
Sodium	MG/KG	83.3 U	109	108 U	138	135	103	120	76.1	78.1
Thallium	MG/KG	1.2 U	1.4 U	0.92 UJ	0.91 UJ	0.21 U	0.22 U	0.22 U	0.7 J	0.6 J
Vanadium	MG/KG	15.1	24.9	20.2	14.8	20	18.9	17.8	19.9	18.2
Zinc	MG/KG	57 J	61.5 J	82.1	73.4	75.5 J	122 J	104 J	114 J	93.8 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71
	Location ID	WS-71-E1-009-3	WS-71-E3-009-10
	Maxtrix	SOIL	SOIL
	Sample ID	WS-71-E1-009-3	WS-71-E3-009-10
Sample Depth to Top of Sample ⁽¹⁾		0	0
Sample Depth to Bottom of Sample ⁽¹⁾		0	0
	Sample Date	5/6/2004	5/6/2004
	QC Code	SA	SA
	Study ID	ENSR IRM	ENSR IRM
		1	1
Parameter	Units	Value (Q)	Value (Q)
Volatile Organics			
1,1,1-Trichloroethane	UG/KG	5.5 U	5.8 U
1,1,2,2-Tetrachloroethane	UG/KG	5.5 U	5.8 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5.5 U	5.8 U
1,1,2-Trichloroethane	UG/KG		
1,1-Dichloroethane	UG/KG	5.5 U	5.8 U
1,1-Dichloroethene	UG/KG	5.5 U	5.8 U
1,2,3-Trichloropropane	UG/KG	5.5 U	5.8 U
1,2,4-Trichlorobenzene	UG/KG	5.5 U	5.8 U
1,2-Dibromo-3-chloropropane	UG/KG		
1,2-Dibromoethane	UG/KG		
1,2-Dichlorobenzene	UG/KG	5.5 U	5.8 U
1,2-Dichloroethane	UG/KG	5.5 U	5.8 U
1,2-Dichloroethene (total)	UG/KG		
1,2-Dichloropropane	UG/KG		
1,3-Dichlorobenzene	UG/KG	5.5 U	5.8 U
1,3-Dichloropropane	UG/KG	5.5 U	5.8 U
1,4-Dichlorobenzene	UG/KG	5.5 U	5.8 U
Acetone	UG/KG	22 U	23 UJ
Benzene	UG/KG	5.5 U	5.8 U
Bromodichloromethane	UG/KG		
Bromoform	UG/KG		
Carbon disulfide	UG/KG	5.5 U	5.8 U
Carbon tetrachloride	UG/KG	5.5 U	5.8 U
Chlorobenzene	UG/KG	5.5 U	5.8 U
Chlorodibromomethane	UG/KG	5.5 U	5.8 U
Chloroethane	UG/KG	11 U	12 U
Chloroform	UG/KG	5.5 U	5.8 U
Cis-1,2-Dichloroethene	UG/KG		
Cis-1,3-Dichloropropene	UG/KG		
Cyclohexane	UG/KG		
Dichlorodifluoromethane	UG/KG		
Ethyl benzene	UG/KG	5.5 U	5.8 U
Isopropylbenzene	UG/KG		

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71
	Location ID	WS-71-E1-009-3	WS-71-E3-009-10
	Maxtrix	SOIL	SOIL
	Sample ID	WS-71-E1-009-3	WS-71-E3-009-10
Sample Depth to Top of Sample ⁽¹⁾		0	0
Sample Depth to Bottom of Sample ⁽¹⁾		0	0
	Sample Date	5/6/2004	5/6/2004
	QC Code	SA	SA
	Study ID	ENSR IRM	ENSR IRM
		1	1
Parameter	Units	Value (Q)	Value (Q)
Meta/Para Xylene	UG/KG	5.5 U	5.8 U
Methyl Acetate	UG/KG		
Methyl Tertbutyl Ether	UG/KG		
Methyl bromide	UG/KG		
Methyl butyl ketone	UG/KG		
Methyl chloride	UG/KG		
Methyl cyclohexane	UG/KG		
Methyl ethyl ketone	UG/KG	11 U	12 U
Methyl isobutyl ketone	UG/KG	11 U	12 U
Methylene chloride	UG/KG	5.5 U	5.8 U
Ortho Xylene	UG/KG	5.5 U	5.8 U
Styrene	UG/KG		
Tetrachloroethene	UG/KG	5.5 U	5.8 U
Toluene	UG/KG	5.5 U	5.8 U
Total BTEX	MG/KG		
Total Xylenes	UG/KG		
Trans-1,2-Dichloroethene	UG/KG	5.5 U	5.8 U
Trans-1,3-Dichloropropene	UG/KG		
Trichloroethene	UG/KG	5.5 U	5.8 U
Trichlorofluoromethane	UG/KG		
Vinyl chloride	UG/KG	11 U	12 U
Semivolatile Organics			
1,1'-Biphenyl	UG/KG		
1,2,4-Trichlorobenzene	UG/KG		
1,2-Dichlorobenzene	UG/KG		
1,3-Dichlorobenzene	UG/KG		
1,4-Dichlorobenzene	UG/KG		
2,2'-oxybis(1-Chloropropane)	UG/KG		
2,4,5-Trichlorophenol	UG/KG	360 U	1900 U
2,4,6-Trichlorophenol	UG/KG	360 U	1900 U
2,4-Dichlorophenol	UG/KG	360 U	1900 U
2,4-Dimethylphenol	UG/KG		
2,4-Dinitrophenol	UG/KG	1900 U	9800 UJ
2,4-Dinitrotoluene	UG/KG	360 U	1900 U
2,6-Dinitrotoluene	UG/KG	360 U	1900 U
2-Chloronaphthalene	UG/KG		
2-Chlorophenol	UG/KG	360 U	1900 U
2-Methylnaphthalene	UG/KG	360 U	1900 U
2-Methylphenol	UG/KG	360 U	1900 U
2-Nitroaniline	UG/KG	1900 U	9800 U
2-Nitrophenol	UG/KG	360 U	1900 U
3,3'-Dichlorobenzidine	UG/KG	360 U	1900 U
3-Nitroaniline	UG/KG	1900 U	9800 U
4,6-Dinitro-2-methylphenol	UG/KG		
4-Bromophenyl phenyl ether	UG/KG		

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71
	Location ID	WS-71-E1-009-3	WS-71-E3-009-10
	Maxtrix	SOIL	SOIL
	Sample ID	WS-71-E1-009-3	WS-71-E3-009-10
Sample Depth to Top of Sample ⁽¹⁾		0	0
Sample Depth to Bottom of Sample ⁽¹⁾		0	0
	Sample Date	5/6/2004	5/6/2004
	QC Code	SA	SA
	Study ID	ENSR IRM	ENSR IRM
		1	1
Parameter	Units	Value (Q)	Value (Q)
4-Chloro-3-methylphenol	UG/KG	360 U	1900 U
4-Chloroaniline	UG/KG	360 U	1900 U
4-Chlorophenyl phenyl ether	UG/KG		
4-Methylphenol	UG/KG	360 U	1900 U
4-Nitroaniline	UG/KG		
4-Nitrophenol	UG/KG	1900 U	9800 U
Acenaphthene	UG/KG	43 J	1900 U
Acenaphthylene	UG/KG	48 J	1900 U
Acetophenone	UG/KG		
Aniline	UG/KG	360 U	1900 U
Anthracene	UG/KG	110 J	1900 U
Atrazine	UG/KG		
Benzaldehyde	UG/KG		
Benzo(a)anthracene	UG/KG	390	1900 U
Benzo(a)pyrene	UG/KG	330 J	1900 U
Benzo(b)fluoranthene	UG/KG	390	1900 U
Benzo(ghi)perylene	UG/KG	270 J	1900 U
Benzo(k)fluoranthene	UG/KG	370 J	1900 U
Benzoic Acid	UG/KG	1900 U	9800 UJ
Bis(2-Chloroethoxy)methane	UG/KG		
Bis(2-Chloroethyl)ether	UG/KG		
Bis(2-Chloroisopropyl)ether	UG/KG		
Bis(2-Ethylhexyl)phthalate	UG/KG	360 U	1900 U
Butylbenzylphthalate	UG/KG	360 U	1900 U
Caprolactam	UG/KG		
Carbazole	UG/KG		
Chrysene	UG/KG	510	1900 U
Di-n-butylphthalate	UG/KG	360 U	1900 U
Di-n-octylphthalate	UG/KG	360 U	1900 U
Dibenz(a,h)anthracene	UG/KG	86 J	1900 U
Dibenzofuran	UG/KG	360 U	1900 U
Diethyl phthalate	UG/KG	360 U	1900 U
Dimethylphthalate	UG/KG	360 U	1900 U
Fluoranthene	UG/KG	800	270 J
Fluorene	UG/KG	360 U	1900 U
Hexachlorobenzene	UG/KG	360 U	1900 U
Hexachlorobutadiene	UG/KG	360 U	1900 U
Hexachlorocyclopentadiene	UG/KG		
Hexachloroethane	UG/KG	360 U	1900 U
Indeno(1,2,3-cd)pyrene	UG/KG	250 J	1900 U
Isophorone	UG/KG	360 U	1900 U
N-Nitrosodiphenylamine	UG/KG		
N-Nitrosodipropylamine	UG/KG		
Naphthalene	UG/KG	360 U	1900 U
Nitrobenzene	UG/KG	360 U	1900 U

Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71
	Location ID	WS-71-E1-009-3	WS-71-E3-009-10
	Maxtrix	SOIL	SOIL
	Sample ID	WS-71-E1-009-3	WS-71-E3-009-10
Sample Depth to Top of Sample ⁽¹⁾		0	0
Sample Depth to Bottom of Sample ⁽¹⁾		0	0
	Sample Date	5/6/2004	5/6/2004
	QC Code	SA	SA
	Study ID	ENSR IRM	ENSR IRM
		1	1
Parameter	Units	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG	1900 U	9800 U
Phenanthrene	UG/KG	300 J	1900 U
Phenol	UG/KG	360 U	1900 U
Pyrene	UG/KG	660	1900 U
Pyridine	UG/KG	1900 U	9800 U
Pesticides/PCBs			
4,4'-DDD	UG/KG	18 U	19 U
4,4'-DDE	UG/KG	18 U	19 U
4,4'-DDT	UG/KG	25	19 U
Aldrin	UG/KG	9.4 U	9.8 U
Alpha-BHC	UG/KG	9.4 U	9.8 U
Alpha-Chlordane	UG/KG	9.4 U	9.8 U
Beta-BHC	UG/KG	9.4 U	9.8 U
Delta-BHC	UG/KG	9.4 U	9.8 U
Dieldrin	UG/KG	18 U	19 U
Endosulfan I	UG/KG	9.4 U	9.8 U
Endosulfan II	UG/KG	18 U	19 U
Endosulfan sulfate	UG/KG	18 U	19 U
Endrin	UG/KG	18 U	19 U
Endrin aldehyde	UG/KG	18 U	19 U
Endrin ketone	UG/KG	18 U	19 U
Gamma-BHC/Lindane	UG/KG	9.4 U	9.8 U
Gamma-Chlordane	UG/KG	9.4 U	9.8 U
Heptachlor	UG/KG	9.4 U	9.8 U
Heptachlor epoxide	UG/KG	9.4 U	9.8 U
Methoxychlor	UG/KG	94 U	98 U
Toxaphene	UG/KG	180 U	190 U
Aroclor-1016	UG/KG	36 U	38 U
Aroclor-1221	UG/KG	36 U	38 U
Aroclor-1232	UG/KG	36 U	38 U
Aroclor-1242	UG/KG	36 U	38 U
Aroclor-1248	UG/KG	36 U	38 U
Aroclor-1254	UG/KG	36 U	38 U
Aroclor-1260	UG/KG	36 U	38 U
Metals			
Aluminum	MG/KG	13400	12600
Antimony	MG/KG	3.1 UJ	3.4 U
Arsenic	MG/KG	5.8	5 J
Barium	MG/KG	87	79.8
Beryllium	MG/KG	0.51 J	0.27
Cadmium	MG/KG	0.3 J	0.56 J

**Table D-4
SEAD-71 SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71
	Location ID	WS-71-E1-009-3	WS-71-E3-009-10
	Maxtrix	SOIL	SOIL
	Sample ID	WS-71-E1-009-3	WS-71-E3-009-10
	Sample Depth to Top of Sample ⁽¹⁾	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0
	Sample Date	5/6/2004	5/6/2004
	QC Code	SA	SA
	Study ID	ENSR IRM	ENSR IRM
		1	1
Parameter	Units	Value (Q)	Value (Q)
Calcium	MG/KG	20200 J	23600 J
Chromium	MG/KG	20.6	18.1
Cobalt	MG/KG	10.7	9.3
Copper	MG/KG	102	21.1
Cyanide	MG/KG		
Iron	MG/KG	25800 J	23300
Lead	MG/KG	19.2 J	15.1
Magnesium	MG/KG	5510 J	7680
Manganese	MG/KG	618	617
Mercury	MG/KG	0.04	0.04
Nickel	MG/KG	29.2	24.7
Potassium	MG/KG	1160	1030
Selenium	MG/KG	0.52 U	0.57 U
Silver	MG/KG	0.52 U	0.57 U
Sodium	MG/KG	52.1	57.4
Thallium	MG/KG	0.77 J	0.57 U
Vanadium	MG/KG	20	19.3
Zinc	MG/KG	89.3 J	67.9 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	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	5 U	5 U	5 U	5 U	5 U	5 U	6 U	2 NJ	6 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 UJ	6 UJ	5 UJ
1,1,2-Trichloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,1-Dichloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,1-Dichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,2,3-Trichloropropane	UG/KG										
1,2,4-Trichlorobenzene	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,2-Dibromo-3-chloropropane	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,2-Dibromoethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,2-Dichlorobenzene	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,2-Dichloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,2-Dichloroethene (total)	UG/KG										
1,2-Dichloropropane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
1,3-Dichlorobenzene	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
1,3-Dichloropropane	UG/KG										
1,4-Dichlorobenzene	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
Acetone	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	5 U	54 J	4 NJ	5 U
Benzene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Bromodichloromethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Bromoform	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Carbon disulfide	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 J	6 U	5 U
Carbon tetrachloride	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Chlorobenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Chlorodibromomethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Chloroethane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Chloroform	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Cis-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Cis-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Cyclohexane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Dichlorodifluoromethane	UG/KG	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	6 U	5 UJ	6 U	5 UJ
Ethyl benzene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Isopropylbenzene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Meta/Para Xylene	UG/KG										

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl Acetate	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl Tertbutyl Ether	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl bromide	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 UJ	5 UJ	6 UJ	5 U
Methyl butyl ketone	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl chloride	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl cyclohexane	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	3 J	6 U	5 U
Methyl ethyl ketone	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methyl isobutyl ketone	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Methylene chloride	UG/KG	5 U	5 U	6 U	5 U	5 U	5 U	6 U	7 U	6 U	9 U
Ortho Xylene	UG/KG										
Styrene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Tetrachloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Toluene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	1 J	6 U	5 U
Total BTEX	MG/KG										
Total Xylenes	UG/KG	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 R	6 UJ	5 UJ
Trans-1,2-Dichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Trans-1,3-Dichloropropene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Trichloroethene	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Trichlorofluoromethane	UG/KG	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 UJ	6 UJ	5 UJ	6 UJ	5 UJ
Vinyl chloride	UG/KG	5 U	5 U	5 U	5 U	5 U	5 U	6 U	5 UJ	6 U	5 U
Semivolatiles Organics											
1,1'-Biphenyl	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
1,2,4-Trichlorobenzene	UG/KG										
1,2-Dichlorobenzene	UG/KG										
1,3-Dichlorobenzene	UG/KG										
1,4-Dichlorobenzene	UG/KG										
2,2'-oxybis(1-Chloropropane)	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,4,5-Trichlorophenol	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
2,4,6-Trichlorophenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,4-Dichlorophenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,4-Dimethylphenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,4-Dinitrophenol	UG/KG	1000 UJ	880 U	900 U	920 UJ	890 UJ	870 UJ	1000 UJ	2700 UJ	1000 UJ	920 UJ
2,4-Dinitrotoluene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2,6-Dinitrotoluene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Chloronaphthalene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Chlorophenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Methylnaphthalene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Methylphenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
2-Nitroaniline	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
2-Nitrophenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
3,3'-Dichlorobenzidine	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 U	360 U
3-Nitroaniline	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
4,6-Dinitro-2-methylphenol	UG/KG	1000 UJ	880 U	900 U	920 UJ	890 UJ	870 UJ	1000 UJ	2700 UJ	1000 UJ	920 UJ
4-Bromophenyl phenyl ether	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
4-Chloro-3-methylphenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
4-Chloroaniline	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 UJ	360 UJ
4-Chlorophenyl phenyl ether	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
4-Methylphenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
4-Nitroaniline	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
4-Nitrophenol	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
Acenaphthene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	57 J	1100 U	400 U	360 U
Acenaphthylene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	120 J	190 J	400 U	360 U
Acetophenone	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Aniline	UG/KG										
Anthracene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	260 J	320 J	140 J	360 U
Atrazine	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Benzaldehyde	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Benzo(a)anthracene	UG/KG	55 J	350 U	360 U	61 J	41 J	50 J	1300 J	3100	470	360 U
Benzo(a)pyrene	UG/KG	58 J	350 U	360 U	52 J	37 J	45 J	1400 J	2900	400	38 J
Benzo(b)fluoranthene	UG/KG	85 J	350 U	360 U	69 NJ	55 NJ	64 NJ	1600 J	3600	690	54 NJ
Benzo(ghi)perylene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	810 J	1200	180 J	360 U
Benzo(k)fluoranthene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	1200 J	2100	270 J	360 U
Benzoic Acid	UG/KG										
Bis(2-Chloroethoxy)methane	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Bis(2-Chloroethyl)ether	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Bis(2-Chloroisopropyl)ether	UG/KG										
Bis(2-Ethylhexyl)phthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 U	360 U
Butylbenzylphthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 U	360 U
Caprolactam	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Carbazole	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	120 J	1100 U	400 U	360 U
Chrysene	UG/KG	67 J	350 U	360 U	67 J	52 J	58 J	1800 J	3000	620	47 J
Di-n-butylphthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Di-n-octylphthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 UJ	1100 U	400 U	360 U
Dibenz(a,h)anthracene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	200 J	330 J	61 J	360 U
Dibenzofuran	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Diethyl phthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Dimethylphthalate	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Fluoranthene	UG/KG	120 J	350 U	360 U	110 J	99 J	110 J	2200	4200	740	70 J
Fluorene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	81 J	1100 U	400 U	360 U
Hexachlorobenzene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Hexachlorobutadiene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Hexachlorocyclopentadiene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Hexachloroethane	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Indeno(1,2,3-cd)pyrene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	730 J	1200	190 J	360 U
Isophorone	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
N-Nitrosodiphenylamine	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
N-Nitrosodipropylamine	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Naphthalene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Nitrobenzene	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG	1000 U	880 U	900 U	920 U	890 U	870 U	1000 U	2700 U	1000 U	920 U
Phenanthrene	UG/KG	56 J	350 U	360 U	67 J	48 J	56 J	1200	810 J	320 J	360 U
Phenol	UG/KG	400 U	350 U	360 U	370 U	350 U	350 U	400 U	1100 U	400 U	360 U
Pyrene	UG/KG	110 J	350 U	360 U	110 J	84 J	98 J	3000	5800	1000	78 J
Pyridine	UG/KG										
Pesticides/PCBs											
4,4'-DDD	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	17	3.6 U	40 U	3.6 U
4,4'-DDE	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	16 NJ	6.8 J	190	3.6 U
4,4'-DDT	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	14 J	3.6 U	82	3.6 U
Aldrin	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Alpha-BHC	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 UJ
Alpha-Chlordane	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Beta-BHC	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Delta-BHC	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Dieldrin	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endosulfan I	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Endosulfan II	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endosulfan sulfate	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endrin	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endrin aldehyde	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Endrin ketone	UG/KG	4 U	3.5 U	3.6 U	3.7 U	3.5 U	3.5 U	4 U	3.6 U	40 U	3.6 U
Gamma-BHC/Lindane	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Gamma-Chlordane	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Heptachlor	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Heptachlor epoxide	UG/KG	2 U	1.8 U	1.8 U	1.9 U	1.8 U	1.8 U	2.1 U	1.8 U	21 U	1.9 U
Methoxychlor	UG/KG	20 U	18 U	18 U	19 U	18 U	18 U	21 U	18 U	210 U	19 U
Toxaphene	UG/KG	200 U	180 U	180 U	190 U	180 U	180 U	210 U	180 U	2100 U	190 U
Aroclor-1016	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1221	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1232	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1242	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1248	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1254	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	41 U	36 U	41 U	37 U
Aroclor-1260	UG/KG	40 U	35 U	36 U	38 U	36 U	35 U	200 J	36 U	41 U	37 U
Metals											
Aluminum	MG/KG	14600 J	6120 J	7660 J	13400 J	10800 J	7920 J	8110 J	13300 J	9640 J	8650 J
Antimony	MG/KG	1.8 J	0.96 J	1.3 J	1.6 J	1.5 J	1 J	11.5 J	1.6 J	3.8 J	0.88 J
Arsenic	MG/KG	4.6	4.3	4.9	5.2	6.2	5.2	6.2 J	5.9	6.7 J	4.9 J
Barium	MG/KG	114 J	54.9 J	47 J	119 J	61.9 J	54.1 J	78.1 J	80.1 J	82.2 J	56.2 J

**Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-A-F01	CL-71-A-WE1	CL-71-A-WN1	CL-71-A-WS1	CL-71-A-WW1	CL-71-B-F01	CL-71-B-WE2	CL-71-B-WN1	CL-71-B-WS1	CL-71-B-WW1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Beryllium	MG/KG	0.82	0.31	0.42	0.76	0.56	0.39	0.46	0.67	0.51	0.42
Cadmium	MG/KG	0.3 J	0.17 J	0.2 J	0.3 J	0.29 J	0.19 J	0.39	0.27 J	0.39	0.27 J
Calcium	MG/KG	6940 J	79800 J	83200 J	10300 J	32200 J	55000 J	36700 J	9130 J	47800 J	54700 J
Chromium	MG/KG	22.7 J	10 J	12.4 J	22.1 J	16.3 J	11.9 J	14 J	19 J	15.5 J	13.7 J
Cobalt	MG/KG	11.4 J	6.1 J	6.4 J	8.8 J	8.4 J	8.5 J	8.2 J	11.2 J	9.2 J	8.1 J
Copper	MG/KG	25.8 J	18.7 J	20.1 J	26.1 J	19.7 J	18.9 J	35.5 J	21.8 J	48.8 J	21.4 J
Cyanide	MG/KG										
Iron	MG/KG	25600	13200	15300	24900	20700	18300	15900 J	22800	20000 J	19700 J
Lead	MG/KG	17.4 J	7.4 J	12.7 J	19.1 J	13.5 J	11.9 J	635 J	17.9 J	452 J	17.9 J
Magnesium	MG/KG	4890 J	15300 J	9380 J	5580 J	8350 J	9620 J	8170 J	4880 J	7260 J	11100 J
Manganese	MG/KG	488 J	373 J	541 J	297 J	476 J	481 J	456 J	473 J	498 J	407 J
Mercury	MG/KG	0.07	0.02 J	0.02 J	0.05	0.04	0.03 J	0.43 J	0.06	1 J	0.02 J
Nickel	MG/KG	35.4 J	18 J	20.5 J	32.6 J	24.1 J	21.2 J	25.3 J	27 J	26.6 J	25 J
Potassium	MG/KG	1620	878	910	1260	965	863	960 J	969	1110 J	869 J
Selenium	MG/KG	0.45 U	0.41 U	0.43 U	0.42 U	0.43 U	0.39 U	0.46 U	0.4 U	0.47 U	0.41 U
Silver	MG/KG	1.6	0.1 U	0.4 J	1.4	0.92	0.41 J	0.74 J	1.2	0.55 J	0.32 J
Sodium	MG/KG	79.7	143	145	60.4	94.6	112	71.6 J	48.4	68.7	94.1 J
Thallium	MG/KG	0.22 U	0.2 U	0.22 U	0.21 U	0.21 U	0.2 U	0.23 U	0.2 U	0.24 U	0.21 U
Vanadium	MG/KG	20.4 J	11.3 J	12.9 J	19.6 J	17.2 J	12.9 J	15 J	19.9 J	24 J	13.4 J
Zinc	MG/KG	88.7	45.3	57.6	81.9	69.8	56.8	128 J	70	83.3 J	56 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	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	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,1,2,2-Tetrachloroethane	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,1,2-Trichloroethane	UG/KG	6 U								5 U	5 U
1,1-Dichloroethane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,1-Dichloroethene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,2,3-Trichloropropane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U		
1,2,4-Trichlorobenzene	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
1,2-Dibromo-3-chloropropane	UG/KG	6 UJ								5 UJ	5 UJ
1,2-Dibromoethane	UG/KG	6 U								5 U	5 U
1,2-Dichlorobenzene	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
1,2-Dichloroethane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
1,2-Dichloroethene (total)	UG/KG										
1,2-Dichloropropane	UG/KG	6 U								5 U	5 U
1,3-Dichlorobenzene	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
1,3-Dichloropropane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U		
1,4-Dichlorobenzene	UG/KG	6 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 UJ	5 UJ
Acetone	UG/KG	6 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U	5 U	5 U
Benzene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Bromodichloromethane	UG/KG	6 U								5 U	5 U
Bromoform	UG/KG	6 U								5 U	5 U
Carbon disulfide	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Carbon tetrachloride	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Chlorobenzene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Chlorodibromomethane	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Chloroethane	UG/KG	6 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	5 U	5 U
Chloroform	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Cis-1,2-Dichloroethene	UG/KG	6 U								5 U	5 U
Cis-1,3-Dichloropropene	UG/KG	6 U								5 U	5 U
Cyclohexane	UG/KG	6 U								5 U	5 U
Dichlorodifluoromethane	UG/KG	6 UJ								5 U	5 U
Ethyl benzene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Isopropylbenzene	UG/KG	6 U								5 U	5 U
Meta/Para Xylene	UG/KG		5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U		

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl Acetate	UG/KG	6 U								5 U	5 U
Methyl Tertbutyl Ether	UG/KG	6 U								5 U	5 U
Methyl bromide	UG/KG	6 U								5 U	5 U
Methyl butyl ketone	UG/KG	6 U								5 U	5 U
Methyl chloride	UG/KG	6 U								5 U	5 U
Methyl cyclohexane	UG/KG	6 U								5 U	5 U
Methyl ethyl ketone	UG/KG	6 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	5 U	5 U
Methyl isobutyl ketone	UG/KG	6 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	5 U	5 U
Methylene chloride	UG/KG	11 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Ortho Xylene	UG/KG		5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U		
Styrene	UG/KG	6 U								5 U	5 U
Tetrachloroethene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Toluene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Total BTEX	MG/KG										
Total Xylenes	UG/KG	6 UJ								5 UJ	5 UJ
Trans-1,2-Dichloroethene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Trans-1,3-Dichloropropene	UG/KG	6 U								5 U	5 U
Trichloroethene	UG/KG	6 U	5.5 U	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.6 U	5 U	5 U
Trichlorofluoromethane	UG/KG	6 U								5 U	5 U
Vinyl chloride	UG/KG	6 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	5 U	5 U
Semivolatle Organics											
1,1'-Biphenyl	UG/KG	390 U								360 U	370 U
1,2,4-Trichlorobenzene	UG/KG										
1,2-Dichlorobenzene	UG/KG										
1,3-Dichlorobenzene	UG/KG										
1,4-Dichlorobenzene	UG/KG										
2,2'-oxybis(1-Chloropropane)	UG/KG	390 U								360 U	370 U
2,4,5-Trichlorophenol	UG/KG	990 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	900 U	940 U
2,4,6-Trichlorophenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2,4-Dichlorophenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2,4-Dimethylphenol	UG/KG	390 U								360 U	370 U
2,4-Dinitrophenol	UG/KG	990 UJ	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
2,4-Dinitrotoluene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2,6-Dinitrotoluene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2-Chloronaphthalene	UG/KG	390 U								360 U	370 U
2-Chlorophenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2-Methylnaphthalene	UG/KG	390 U	61 J	360 U	360 U	360 U	1800 U	770 J	370 U	360 U	370 U
2-Methylphenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
2-Nitroaniline	UG/KG	990 U	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
2-Nitrophenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
3,3'-Dichlorobenzidine	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
3-Nitroaniline	UG/KG	990 U	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
4,6-Dinitro-2-methylphenol	UG/KG	990 U								900 U	940 U
4-Bromophenyl phenyl ether	UG/KG	390 U								360 U	370 U
4-Chloro-3-methylphenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U

**Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity**

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	
4-Chloroaniline	UG/KG	390 UJ	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
4-Chlorophenyl phenyl ether	UG/KG	390 U								360 U	370 U
4-Methylphenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
4-Nitroaniline	UG/KG	990 U								900 U	940 U
4-Nitrophenol	UG/KG	990 U	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
Acenaphthene	UG/KG	390 U	300 J	360 U	360 U	360 U	1800 U	1500 J	370 U	40 J	80 J
Acenaphthylene	UG/KG	390 U	360 U	120 J	360 U	360 U	1800	1500 J	44 J	33 J	85 J
Acetophenone	UG/KG	390 U								360 U	370 U
Aniline	UG/KG		360 U	360 U	360 U	360 U	1800 U	1800 U	370 U		
Anthracene	UG/KG	390 U	570	77 J	360 U	360 U	1100 J	5000	370 U	110 J	220 J
Atrazine	UG/KG	390 U								360 U	370 U
Benzaldehyde	UG/KG	390 U								360 U	370 U
Benzo(a)anthracene	UG/KG	390 U	1000	310 J	360 U	360 U	4700	10000	130 J	410	500
Benzo(a)pyrene	UG/KG	390 U	800	500	360 U	360 U	6500	9000	170 J	410	450
Benzo(b)fluoranthene	UG/KG	390 U	570	520	40 J	360 U	5900	6700	140 J	540	640
Benzo(ghi)perylene	UG/KG	390 U	380	590	360 U	360 U	5800	5200	120 J	230 J	300 J
Benzo(k)fluoranthene	UG/KG	390 U	670	460	360 U	360 U	5500	7700	140 J	200 J	230 J
Benzoic Acid	UG/KG		1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U		
Bis(2-Chloroethoxy)methane	UG/KG	390 U								360 U	370 U
Bis(2-Chloroethyl)ether	UG/KG	390 U								360 U	370 U
Bis(2-Chloroisopropyl)ether	UG/KG										
Bis(2-Ethylhexyl)phthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	83 J
Butylbenzylphthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Caprolactam	UG/KG	390 U								360 U	370 U
Carbazole	UG/KG	390 U								53 J	110 J
Chrysene	UG/KG	390 U	880	510	45 J	360 U	6300	10000	150 J	410 NJ	490
Di-n-butylphthalate	UG/KG	390 U	360 U	360 U	41 J	70 J	1800 U	1800 U	370 U	360 U	370 U
Di-n-octylphthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Dibenz(a,h)anthracene	UG/KG	390 U	170 J	140 J	360 U	360 U	1700 J	1900 J	44 J	67 J	75 J
Dibenzofuran	UG/KG	390 U	140 J	360 U	360 U	360 U	1800 U	1400 J	370 U	23 J	41 J
Diethyl phthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Dimethylphthalate	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Fluoranthene	UG/KG	390 U	2000	370 J	50 J	360 U	7700	27000	200 J	770	930
Fluorene	UG/KG	390 U	250 J	360 U	360 U	360 U	1800 U	2500	370 U	36 J	72 J
Hexachlorobenzene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Hexachlorobutadiene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Hexachlorocyclopentadiene	UG/KG	390 U								360 U	370 U
Hexachloroethane	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Indeno(1,2,3-cd)pyrene	UG/KG	390 U	420 J	450 J	360 U	360 U	4900 J	5200 J	110 J	260 J	300 J
Isophorone	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
N-Nitrosodiphenylamine	UG/KG	390 U								360 U	370 U
N-Nitrosodipropylamine	UG/KG	390 U								360 U	370 U
Naphthalene	UG/KG	390 U	86 J	360 U	360 U	360 U	1800 U	1100 J	370 U	360 U	370 U
Nitrobenzene	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG	990 U	1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U	900 U	940 U
Phenanthrene	UG/KG	390 U	1700	71 J	360 U	360 U	1300 J	25000	81 J	290 J	550
Phenol	UG/KG	390 U	360 U	360 U	360 U	360 U	1800 U	1800 U	370 U	360 U	370 U
Pyrene	UG/KG	390 U	1500	400	43 J	360 U	8100	20000	200 J	730	860
Pyridine	UG/KG		1900 U	1900 U	1900 U	1900 U	9200 U	9200 U	1900 U		
Pesticides/PCBs											
4,4'-DDD	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	4.2
4,4'-DDE	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	9.2 J	29 J
4,4'-DDT	UG/KG	3.9 U	22 U	22 U	22 U	22 U	59	22 J	22 U	6.8 NJ	17
Aldrin	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Alpha-BHC	UG/KG	2 UJ	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 UJ	1.9 U
Alpha-Chlordane	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Beta-BHC	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Delta-BHC	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Dieldrin	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endosulfan I	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Endosulfan II	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endosulfan sulfate	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endrin	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endrin aldehyde	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Endrin ketone	UG/KG	3.9 U	22 U	22 U	22 U	22 U	21 U	21 U	22 U	3.5 U	3.8 U
Gamma-BHC/Lindane	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Gamma-Chlordane	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Heptachlor	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Heptachlor epoxide	UG/KG	2 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	1.8 U	1.9 U
Methoxychlor	UG/KG	20 U	110 U	110 U	110 U	110 U	110 U	110 U	110 U	18 U	19 U
Toxaphene	UG/KG	200 U	220 U	220 U	220 U	220 U	210 U	210 U	220 U	180 U	190 U
Aroclor-1016	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1221	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1232	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1242	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1248	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1254	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	36 U	37 U	36 U	38 U
Aroclor-1260	UG/KG	40 U	36 U	36 U	36 U	36 U	36 U	120	37 U	36 U	38 U
Metals											
Aluminum	MG/KG	10600 J	10300	12200	12600	13500	10000	6370	12100	10200 J	12900 J
Antimony	MG/KG	1.4 J	3.1 UJ	3.2 UJ	3.1 UJ	3.3 UJ	3.2 UJ	3.2 UJ	3.3 UJ	1.4 J	2.2 J
Arsenic	MG/KG	6.2 J	5.1	6.4	4.5	5.1	8	11.8	5.3	5.7	6.9
Barium	MG/KG	70.3 J	86.7	68.3	80	115	114	59.2	75.4	64.4 J	88.9 J

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-B-WW2	CL-71-C-F01	CL-71-C-F02	CL-71-C-WE1	CL-71-C-WE2	CL-71-C-WN1	CL-71-C-WS1	CL-71-C-WW2	CL-71-D-F01	CL-71-D-WE1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	1	1	1	1	1	1	1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Beryllium	MG/KG	0.55	0.33	0.35	0.46	0.44	0.31	0.11	0.4	0.53	0.63
Cadmium	MG/KG	0.34 J	0.26 U	0.27 U	0.26 U	0.32 J	0.7	0.49 J	0.28 U	0.24 J	0.28 J
Calcium	MG/KG	33800 J	22400	6860	11600	14100	47400	66300	11800	29500	30800
Chromium	MG/KG	15.3 J	16.9	21	18.8	19.5	37.1	18.5	19.3	15.7 J	19.2 J
Cobalt	MG/KG	9.6 J	9.6	11.1	8.6	11.5	10.3	8.2	10.6	8.9	10.3
Copper	MG/KG	20.1 J	22.2	21.7	17.2	16.4	67.7	32.3	21.2	22 J	29.4 J
Cyanide	MG/KG										
Iron	MG/KG	20900 J	21300	26300	21800	25500	28300	15600	23300	20100 J	24400 J
Lead	MG/KG	14.3 J	17.1	18.6	21.5	12.4	169	188	16.1	14.7 J	48.3 J
Magnesium	MG/KG	9110 J	6630	4440	3800	4400	4940	14300	5490	8470 J	7320 J
Manganese	MG/KG	575 J	516	538	467	1040	641	460	488	539 J	634 J
Mercury	MG/KG	0.03 J	0.05	0.03	0.05	0.03	0.11	0.04	0.04	0.07	0.07
Nickel	MG/KG	25.7 J	27.1	31.3	24.2	26.8	28.6	29.6	30.3	25.1 J	29.2 J
Potassium	MG/KG	918 J	1050	1170	918	1090	1150	1020	1020	886	1210
Selenium	MG/KG	0.46 U	0.52 U	0.53 U	0.52 U	0.55 U	0.53 U	1.3	0.56 U	0.37 U	0.41 U
Silver	MG/KG	0.75 J	0.52 U	0.53 U	0.52 U	0.55 U	0.53 U	0.53 U	0.56 U	0.73	1.1
Sodium	MG/KG	73.8 J	65.8	42.5 J	45.3 J	43.1 J	141	139	40.3 J	76.2	62.5
Thallium	MG/KG	0.23 U	0.71 J	0.67 J	0.71 J	1 J	1 J	0.68 J	0.75 J	0.19 U	0.21 U
Vanadium	MG/KG	16.5 J	16.8	20.1	19.9	21.5	19.4	16.4	20	15.7 J	19.2 J
Zinc	MG/KG	64.5 J	62.6	89.9	69.3	75.7	161	357	66.5	62.8 J	95.4 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	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	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
1,1,2,2-Tetrachloroethane	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	5 U	5 U		5.5 U	5.5 U	5 UJ	5 UJ	5 UJ	6 U	6.1 U
1,1,2-Trichloroethane	UG/KG	5 U	5 U		5 U	5 U	5 U	5 U	5 U	6 U	
1,1-Dichloroethane	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
1,1-Dichloroethene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
1,2,3-Trichloropropane	UG/KG				5.5 U	5.5 U				6 U	6.1 U
1,2,4-Trichlorobenzene	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
1,2-Dibromo-3-chloropropane	UG/KG	5 UJ	5 UJ				5 UJ	5 R	5 R	6 U	
1,2-Dibromoethane	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 UJ	
1,2-Dichlorobenzene	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
1,2-Dichloroethane	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
1,2-Dichloroethene (total)	UG/KG										
1,2-Dichloropropane	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
1,3-Dichlorobenzene	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
1,3-Dichloropropane	UG/KG				5.5 U	5.5 U					6.1 U
1,4-Dichlorobenzene	UG/KG	5 UJ	5 UJ		5.5 U	5.5 U	5 UJ	5 R	5 R	6 U	6.1 U
Acetone	UG/KG	5 U	5 U		22 U	22 U	30 J	35 J	37 J	4 NJ	24 UJ
Benzene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Bromodichloromethane	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Bromoform	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 UJ	
Carbon disulfide	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Carbon tetrachloride	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Chlorobenzene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 UJ	5 UJ	6 U	6.1 U
Chlorodibromomethane	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 UJ	5 UJ	6 U	6.1 U
Chloroethane	UG/KG	5 U	5 U		11 U	11 U	5 U	5 U	5 U	6 U	12 U
Chloroform	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Cis-1,2-Dichloroethene	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Cis-1,3-Dichloropropene	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Cyclohexane	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Dichlorodifluoromethane	UG/KG	5 U	5 U				5 UJ	5 UJ	5 UJ	6 U	
Ethyl benzene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 UJ	5 UJ	6 U	6.1 U
Isopropylbenzene	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 U	
Meta/Para Xylene	UG/KG				5.5 U	5.5 U					6.1 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl Acetate	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl Tertbutyl Ether	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl bromide	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl butyl ketone	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 UJ	
Methyl chloride	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl cyclohexane	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Methyl ethyl ketone	UG/KG	5 U	5 U		11 U	11 U	5 U	5 U	5 U	6 UJ	12 U
Methyl isobutyl ketone	UG/KG	5 U	5 U		11 U	11 U	5 U	5 U	5 U	6 UJ	12 U
Methylene chloride	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	6 U	1 J	6.1 U
Ortho Xylene	UG/KG				5.5 U	5.5 U					6.1 U
Styrene	UG/KG	5 U	5 U				5 U	5 UJ	5 UJ	6 U	
Tetrachloroethene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 UJ	5 UJ	6 U	6.1 U
Toluene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Total BTEX	MG/KG										
Total Xylenes	UG/KG	5 UJ	5 UJ				5 UJ	5 R	5 R	6 U	
Trans-1,2-Dichloroethene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Trans-1,3-Dichloropropene	UG/KG	5 U	5 U				5 U	5 U	5 U	6 U	
Trichloroethene	UG/KG	5 U	5 U		5.5 U	5.5 U	5 U	5 U	5 U	6 U	6.1 U
Trichlorofluoromethane	UG/KG	5 U	5 U				5 UJ	5 UJ	5 UJ	6 UJ	
Vinyl chloride	UG/KG	5 U	5 U		11 U	11 U	5 U	5 U	5 U	6 U	12 U
Semivolatle Organics											
1,1'-Biphenyl	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
1,2,4-Trichlorobenzene	UG/KG										
1,2-Dichlorobenzene	UG/KG										
1,3-Dichlorobenzene	UG/KG										
1,4-Dichlorobenzene	UG/KG										
2,2'-oxybis(1-Chloropropane)	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
2,4,5-Trichlorophenol	UG/KG	880 U	900 U	5500 U	360 U	360 U	920 U	900 U	870 U	970 U	2000 U
2,4,6-Trichlorophenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2,4-Dichlorophenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2,4-Dimethylphenol	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
2,4-Dinitrophenol	UG/KG	880 UJ	900 U	29000 UJ	1900 U	1900 U	920 UJ	900 UJ	870 UJ	970 UJ	10000 U
2,4-Dinitrotoluene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2,6-Dinitrotoluene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2-Chloronaphthalene	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
2-Chlorophenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2-Methylnaphthalene	UG/KG	81 J	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2-Methylphenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
2-Nitroaniline	UG/KG	880 U	900 U	29000 U	1900 U	1900 U	920 U	900 U	870 U	970 U	10000 U
2-Nitrophenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
3,3'-Dichlorobenzidine	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
3-Nitroaniline	UG/KG	880 U	900 U	29000 U	1900 U	1900 U	920 U	900 U	870 U	970 U	10000 U
4,6-Dinitro-2-methylphenol	UG/KG	880 U	900 U				920 UJ	900 UJ	870 UJ	970 U	
4-Bromophenyl phenyl ether	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
4-Chloro-3-methylphenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
4-Chloroaniline	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
4-Chlorophenyl phenyl ether	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
4-Methylphenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
4-Nitroaniline	UG/KG	880 U	900 U				920 U	900 U	870 U	970 U	
4-Nitrophenol	UG/KG	880 U	900 U	29000 U	1900 U	1900 U	920 U	900 U	870 U	970 U	10000 U
Acenaphthene	UG/KG	340 J	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	420 J
Acenaphthylene	UG/KG	39 J	360 U	5500 U	360 U	360 U	73 J	360 U	37 J	390 U	1200 J
Acetophenone	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Aniline	UG/KG			5500 U	360 U	360 U					2000 U
Anthracene	UG/KG	640	360 U	5500 U	360 U	360 U					1800 J
Atrazine	UG/KG	350 U	360 U				45 J	360 U	36 J	94 J	
Benzaldehyde	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Benzo(a)anthracene	UG/KG	1300	40 J	1600 J	360 U	360 U	300 J	130 J	140 J	330 J	9000
Benzo(a)pyrene	UG/KG	1100	51 J	1500 J	360 U	360 U	390	150 J	180 J	250 J	8800
Benzo(b)fluoranthene	UG/KG	1500	83 J	1300 J	360 U	360 U	720	310 J	400	380 J	7400
Benzo(ghi)perylene	UG/KG	530	40 J	1000 J	360 U	360 U	260 J	110 J	130 J	110 J	5300
Benzo(k)fluoranthene	UG/KG	560	360 U	1300 J	360 U	360 U	370	170 J	190 J	170 J	8000
Benzoic Acid	UG/KG			29000 U	1900 U	1900 U					10000 U
Bis(2-Chloroethoxy)methane	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Bis(2-Chloroethyl)ether	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Bis(2-Chloroisopropyl)ether	UG/KG										
Bis(2-Ethylhexyl)phthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Butylbenzylphthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Caprolactam	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Carbazole	UG/KG	540	360 U				370 U	360 U	340 U	77 J	
Chrysene	UG/KG	1300	49 J	2000 J	360 U	360 U	490	240 J	280 J	360 J	10000
Di-n-butylphthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Di-n-octylphthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Dibenz(a,h)anthracene	UG/KG	160 J	360 U	5500 U	360 U	360 U	65 J	360 U	340 U	390 U	2000 J
Dibenzofuran	UG/KG	240 J	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	210 J
Diethyl phthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Dimethylphthalate	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Fluoranthene	UG/KG	3600	82 J	3900 J	360 U	360 U	440	280 J	270 J	690	22000
Fluorene	UG/KG	350 J	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	540 J
Hexachlorobenzene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Hexachlorobutadiene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Hexachlorocyclopentadiene	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Hexachloroethane	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Indeno(1,2,3-cd)pyrene	UG/KG	630	39 J	970 J	360 U	360 U	250 J	100 J	130 J	110 J	5400 J
Isophorone	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
N-Nitrosodiphenylamine	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
N-Nitrosodipropylamine	UG/KG	350 U	360 U				370 U	360 U	340 U	390 U	
Naphthalene	UG/KG	250 J	360 U	1000 J	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Nitrobenzene	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG	880 U	900 U	29000 U	1900 U	1900 U	920 U	900 U	870 U	970 U	10000 U
Phenanthrene	UG/KG	2700	34 J	2100 J	360 U	360 U	60 J	78 J	60 J	400	12000
Phenol	UG/KG	350 U	360 U	5500 U	360 U	360 U	370 U	360 U	340 U	390 U	2000 U
Pyrene	UG/KG	2800	77 J	2700 J	360 U	360 U	440	250 J	250 J	730	17000
Pyridine	UG/KG			29000 U	1900 U	1900 U					10000 U
Pesticides/PCBs											
4,4'-DDD	UG/KG	3.5 U	35 U	37 U	22 U	22 U	4.7 NJ	3.6 U	3.8 J	3.9 J	20 U
4,4'-DDE	UG/KG	12 NJ	170	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	8.3 NJ	20 U
4,4'-DDT	UG/KG	7.7 J	54	110	22 U	22 U	7.2	3.6 U	3.4 U	9 J	20 U
Aldrin	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Alpha-BHC	UG/KG	1.8 UJ	18 UJ	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Alpha-Chlordane	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Beta-BHC	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Delta-BHC	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Dieldrin	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endosulfan I	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Endosulfan II	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endosulfan sulfate	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endrin	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endrin aldehyde	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Endrin ketone	UG/KG	3.5 U	35 U	37 U	22 U	22 U	3.7 U	3.6 U	3.4 U	3.8 U	20 U
Gamma-BHC/Lindane	UG/KG	1.8 U	18 UJ	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Gamma-Chlordane	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Heptachlor	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	1.8 U	2 U	10 U
Heptachlor epoxide	UG/KG	1.8 U	18 U	19 U	11 U	11 U	1.9 U	1.8 U	3.2 NJ	2 U	10 U
Methoxychlor	UG/KG	18 U	180 U	190 U	110 U	110 U	19 U	18 U	18 U	20 U	100 U
Toxaphene	UG/KG	180 U	1800 U	370 U	220 U	220 U	190 U	180 U	180 U	200 U	200 U
Aroclor-1016	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1221	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1232	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1242	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1248	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1254	UG/KG	36 U	36 U	37 U	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Aroclor-1260	UG/KG	36 U	36 U	80	36 U	36 U	37 U	36 U	35 U	39 U	40 U
Metals											
Aluminum	MG/KG	12300 J	11900 J	6680	13800	13000	14300 J	13200 J	13600 J	12600 J	12900
Antimony	MG/KG	2.1 J	1.4 J	6.9	3.3 UJ	3.2 UJ	1.5 J	1.8 J	2.3 J	1.2 J	3.6 UJ
Arsenic	MG/KG	6.9	6.4	4.5	5.7	5.4	6.7	6.6	6.6	7.1 J	5.2 J
Barium	MG/KG	85.7 J	82.6 J	59.9	89.4	85.4	136 J	87.7 J	92.6 J	79.7 J	72.4

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	CL-71-E2-WE1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	CL-71-D-WN1	CL-71-D-WS1	CL-71-D-WW3	CL-71-E1-F01	CL-71-E1-WE1	CL-71-E1-WN1	CL-71-E1-WS1	CL-71-E1-WW1	CL-71-E2-F01	CL-71-E2-WE1	CL-71-E2-WE1
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	0
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
	1	1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Beryllium	MG/KG	0.65	0.6	0.13	0.51	0.46	0.85	0.69	0.71	0.64	0.36
Cadmium	MG/KG	0.37	0.26 J	0.42 J	0.27 U	0.27 U	0.36	0.29 J	0.3 J	0.31 J	0.3 U
Calcium	MG/KG	31000	26800	59600	9420	9090	7460 J	7370 J	11500 J	21300 J	22100
Chromium	MG/KG	18.8 J	16.9 J	14.9	20.6	19.1	20.5 J	19.1 J	19.6 J	19.1 J	19.3
Cobalt	MG/KG	10.4	9.7	6.3	12.4	11.2	11.1 J	10.4 J	9.3 J	10.3 J	11.1
Copper	MG/KG	26.9 J	25.6 J	61.4	18.3	16.2	22.4 J	20.1 J	24.5 J	25.1 J	17.6
Cyanide	MG/KG										
Iron	MG/KG	23300 J	22500 J	15000	26100	24000	25300	24300	24000	26000 J	23700 J
Lead	MG/KG	42.8 J	17.5 J	568	12.2	12.1	18.7 J	16.8 J	25.1 J	28.7 J	11.4
Magnesium	MG/KG	6620 J	8450 J	11800	4370	3800	4220 J	3980 J	3890 J	6420 J	4320
Manganese	MG/KG	563 J	582 J	296	753	741	737 J	742 J	679 J	621 J	647
Mercury	MG/KG	0.08	0.04	0.3	0.03	0.04	0.1	0.06	0.04	0.04 J	0.04 J
Nickel	MG/KG	28.1 J	25.6 J	19.4	29.1	25.4	26.7 J	24.5 J	24.3 J	30.8 J	26.4
Potassium	MG/KG	1120	1020	834	961	901	1150	815	901	1020 J	859
Selenium	MG/KG	0.38 U	0.38 U	0.54 U	0.55 U	0.54 U	0.44 U	0.4 U	0.4 U	0.47 U	0.6 U
Silver	MG/KG	0.86	0.96	0.55 U	0.55 U	0.54 U	1.8	1.7	1.6	1 J	0.6 U
Sodium	MG/KG	67.8	65.8	77.9	33.2 J	35.6 J	53.9	46.4	51.6	51.1	43.8 J
Thallium	MG/KG	0.19 U	0.19 U	0.55 U	0.95 J	1.1 J	0.22 U	0.2 U	0.2 U	0.23 U	0.64 J
Vanadium	MG/KG	20.8 J	18.7 J	15.7	20	19.8	20.6 J	19.1 J	20 J	18.9 J	19.3
Zinc	MG/KG	81.6 J	63 J	157 J	75.4	66	76.3	69.2	83.1	73.4 J	68.6 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	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	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
1,1,2,2-Tetrachloroethane	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	6 UJ	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,1,2-Trichloroethane	UG/KG	6 U								13 U	12 U
1,1-Dichloroethane	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
1,1-Dichloroethene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
1,2,3-Trichloropropane	UG/KG		5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,2,4-Trichlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,2-Dibromo-3-chloropropane	UG/KG	6 U									
1,2-Dibromoethane	UG/KG	6 U									
1,2-Dichlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,2-Dichloroethane	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
1,2-Dichloroethene (total)	UG/KG									13 U	12 U
1,2-Dichloropropane	UG/KG	6 U								13 U	12 U
1,3-Dichlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,3-Dichloropropane	UG/KG		5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
1,4-Dichlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
Acetone	UG/KG	6 U	23 UJ	24 UJ	24 UJ	23 UJ	23 UJ	24 UJ	24 UJ	13 U	12 U
Benzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	2 J	12 U
Bromodichloromethane	UG/KG	6 U								13 U	12 U
Bromoform	UG/KG	6 U								13 U	12 U
Carbon disulfide	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
Carbon tetrachloride	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
Chlorobenzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
Chlorodibromomethane	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
Chloroethane	UG/KG	6 U	12 U	12 U	12 U	11 U	12 U	12 U	12 U	13 U	12 U
Chloroform	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
Cis-1,2-Dichloroethene	UG/KG	6 U									
Cis-1,3-Dichloropropene	UG/KG	6 U								13 U	12 U
Cyclohexane	UG/KG	6 U									
Dichlorodifluoromethane	UG/KG	6 U									
Ethyl benzene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	12 U
Isopropylbenzene	UG/KG	6 U									
Meta/Para Xylene	UG/KG		5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	
Methyl Acetate	UG/KG	6 U									
Methyl Tertbutyl Ether	UG/KG	6 U									
Methyl bromide	UG/KG	6 UJ							13 U	12 U	
Methyl butyl ketone	UG/KG	6 U							13 U	12 U	
Methyl chloride	UG/KG	6 U							13 U	12 U	
Methyl cyclohexane	UG/KG	6 U									
Methyl ethyl ketone	UG/KG	6 U	12 U	12 U	12 U	11 U	12 U	12 U	12 U	13 U	
Methyl isobutyl ketone	UG/KG	6 U	12 U	12 U	12 U	11 U	12 U	12 U	12 U	13 U	
Methylene chloride	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	2 J	
Ortho Xylene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
Styrene	UG/KG	6 U								13 U	
Tetrachloroethene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	
Toluene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	4 J	
Total BTEX	MG/KG										
Total Xylenes	UG/KG	6 U								13 U	
Trans-1,2-Dichloroethene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U		
Trans-1,3-Dichloropropene	UG/KG	6 U								13 U	
Trichloroethene	UG/KG	6 U	5.8 U	6 U	6 U	5.7 U	5.8 U	6 U	5.9 U	13 U	
Trichlorofluoromethane	UG/KG	6 UJ								12 U	
Vinyl chloride	UG/KG	6 U	12 U	12 U	12 U	11 U	12 U	12 U	12 U	13 U	
Semivolatile Organics											
1,1'-Biphenyl	UG/KG	400 U									
1,2,4-Trichlorobenzene	UG/KG								300 U	93 U	
1,2-Dichlorobenzene	UG/KG								300 U	93 U	
1,3-Dichlorobenzene	UG/KG								300 U	93 U	
1,4-Dichlorobenzene	UG/KG								300 U	93 U	
2,2'-oxybis(1-Chloropropane)	UG/KG	400 U									
2,4,5-Trichlorophenol	UG/KG	1000 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	720 U	
2,4,6-Trichlorophenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	
2,4-Dichlorophenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	
2,4-Dimethylphenol	UG/KG	400 U								300 U	
2,4-Dinitrophenol	UG/KG	1000 UJ	9900 U	2000 U	2000 UJ	1900 UJ	2000 UJ	2000 UJ	6000 U	720 U	
2,4-Dinitrotoluene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	
2,6-Dinitrotoluene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	
2-Chloronaphthalene	UG/KG	400 U								300 U	
2-Chlorophenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	
2-Methylnaphthalene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	72 J	
2-Methylphenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	
2-Nitroaniline	UG/KG	1000 U	9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U	720 U	
2-Nitrophenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	
3,3'-Dichlorobenzidine	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	
3-Nitroaniline	UG/KG	1000 U	9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U	720 U	
4,6-Dinitro-2-methylphenol	UG/KG	1000 U								720 U	
4-Bromophenyl phenyl ether	UG/KG	400 U								300 U	
4-Chloro-3-methylphenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
4-Chloroaniline	UG/KG	400 UJ	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
4-Chlorophenyl phenyl ether	UG/KG	400 U								300 U	93 U
4-Methylphenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
4-Nitroaniline	UG/KG	1000 U								720 U	220 U
4-Nitrophenol	UG/KG	1000 U	9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U	720 U	220 U
Acenaphthene	UG/KG	400 U	1400 J	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	22 J
Acenaphthylene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Acetophenone	UG/KG	400 U									
Aniline	UG/KG		1900 U	390 U	390 U	370 U	380 U	400 U	1200 U		
Anthracene	UG/KG	400 U	3900	390 U	390 U	370 U	380 U	400 U	1200 U	68 J	47 J
Atrazine	UG/KG	400 U									
Benzaldehyde	UG/KG	400 U									
Benzo(a)anthracene	UG/KG	400 U	9100	390 U	390 U	370 U	380 U	400 U	240 J	500	220
Benzo(a)pyrene	UG/KG	400 U	6100	390 U	390 U	370 U	380 U	400 U	250 J	550	220
Benzo(b)fluoranthene	UG/KG	400 U	5000	390 U	390 U	370 U	380 U	400 U	300 J	750	280
Benzo(ghi)perylene	UG/KG	400 U	3300	390 U	390 U	370 U	380 U	400 U	230 J	370	140
Benzo(k)fluoranthene	UG/KG	400 U	5500	390 U	390 U	370 U	380 U	400 U	290 J	750	250
Benzoic Acid	UG/KG		9900 U	2000 U	2000 UJ	1900 UJ	2000 UJ	2000 UJ	6000 UJ		
Bis(2-Chloroethoxy)methane	UG/KG	400 U								300 U	93 U
Bis(2-Chloroethyl)ether	UG/KG	400 U								300 U	93 U
Bis(2-Chloroisopropyl)ether	UG/KG									300 U	93 U
Bis(2-Ethylhexyl)phthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	39 J	400 U	1200 U	300 U	93 U
Butylbenzylphthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Caprolactam	UG/KG	400 U									
Carbazole	UG/KG	400 U								110 J	75 J
Chrysene	UG/KG	400 U	8800 J	390 U	390 U	370 U	380 U	43 J	370 J	930	290
Di-n-butylphthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Di-n-octylphthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Dibenz(a,h)anthracene	UG/KG	400 U	1400 J	390 U	390 U	370 U	380 U	400 U	1200 U	130 J	51 J
Dibenzofuran	UG/KG	400 U	260 J	390 U	390 U	370 U	380 U	400 U	1200 U	100 J	13 J
Diethyl phthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Dimethylphthalate	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Fluoranthene	UG/KG	400 U	22000	390 U	390 U	370 U	380 U	58 J	640 J	1100	480
Fluorene	UG/KG	400 U	770 J	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	18 J
Hexachlorobenzene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Hexachlorobutadiene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Hexachlorocyclopentadiene	UG/KG	400 U								300 U	93 U
Hexachloroethane	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Indeno(1,2,3-cd)pyrene	UG/KG	400 U	3300 J	390 U	390 U	370 U	380 U	400 U	190 J	360	140
Isophorone	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
N-Nitrosodiphenylamine	UG/KG	400 U								300 U	93 U
N-Nitrosodipropylamine	UG/KG	400 U								300 U	93 U
Naphthalene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	78 J	93 U
Nitrobenzene	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10	
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2	
Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	
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	9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U	720 U	220 U
Phenanthrene	UG/KG	400 U	15000	390 U	390 U	370 U	380 U	400 U	210 J	440	210
Phenol	UG/KG	400 U	1900 U	390 U	390 U	370 U	380 U	400 U	1200 U	300 U	93 U
Pyrene	UG/KG	400 U	17000	390 U	390 U	370 U	380 U	400 U	400 J	900	380
Pyridine	UG/KG		9900 U	2000 U	2000 U	1900 U	2000 U	2000 U	6000 U		
Pesticides/PCBs											
4,4'-DDD	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	5.9	4.6 U
4,4'-DDE	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	88	22
4,4'-DDT	UG/KG	4 U	19 U	120	20 U	19 U	19 U	20 U	19 U	54	25
Aldrin	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4 U
Alpha-BHC	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.2 J	2.4 U
Alpha-Chlordane	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4 U
Beta-BHC	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4 U
Delta-BHC	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4 U
Dieldrin	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	4.4 U	4.6 U
Endosulfan I	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4 U
Endosulfan II	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	4.4 U	4.6 U
Endosulfan sulfate	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	2.7 J	4.6 U
Endrin	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	6.3	4.6 U
Endrin aldehyde	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	4.8	9.1
Endrin ketone	UG/KG	4 U	19 U	20 U	20 U	19 U	19 U	20 U	19 U	7.7	17
Gamma-BHC/Lindane	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4 U
Gamma-Chlordane	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	1.2 J	2.4 U
Heptachlor	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	2.3 U	2.4 U
Heptachlor epoxide	UG/KG	2 U	10 U	10 U	10 U	9.6 U	9.8 U	10 U	10 U	4.3	2.4 U
Methoxychlor	UG/KG	20 U	99 U	100 U	100 U	96 U	98 U	100 U	100 U	23 U	24 U
Toxaphene	UG/KG	200 U	190 U	200 U	200 U	190 U	190 U	200 U	190 U	230 U	240 U
Aroclor-1016	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46 U
Aroclor-1221	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	90 U	94 U
Aroclor-1232	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46 U
Aroclor-1242	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46 U
Aroclor-1248	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46 U
Aroclor-1254	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46 U
Aroclor-1260	UG/KG	40 U	39 U	39 U	39 U	37 U	38 U	40 U	39 U	44 U	46 U
Metals											
Aluminum	MG/KG	13900 J	11500	10900	14200	11400	15000	14900	11000	7250	9080
Antimony	MG/KG	1.8 J	3.3 UJ	3.4 UJ	3.5 UJ	3.4 UJ	3.5 UJ	3.5 UJ	3.5 UJ	1.9 J	0.95 UJ
Arsenic	MG/KG	7.5 J	4.7 J	5.2 J	4.9 J	4.5 J	5 J	5.9 J	4.8 J	4.9	7.4
Barium	MG/KG	71.7 J	66	94.8	90.6	82.9	85.2	116	55.5	51.2 J	53.4 J

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	SS71-1	SS71-10
	Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	CL-71-E2-WN1	CL-71-E2-WS1	CL-71-E2-WW1	CL-71-E3-F01	CL-71-E3-WE1	CL-71-E3-WN1	CL-71-E3-WS1	CL-71-E3-WW1	71013	71017
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	0	0	0	0	0	0.2	0.2
	Sample Date	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	5/6/2004	11/19/1997	11/19/1997
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1
		1	1	1	1	1	1	1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Beryllium	MG/KG	0.64	0.36	0.34	0.35	0.21	0.41	0.43	0.27	0.26 J	0.25
Cadmium	MG/KG	0.27 J	0.28 U	0.33	0.53 J	0.55 J	0.55 J	0.71	0.53 J	0.08 UJ	0.08 UJ
Calcium	MG/KG	11000 J	32800	32400	6040 J	34500 J	6060 J	18800 J	70700 J	35100	11100
Chromium	MG/KG	19.3 J	20.4	18.7	19.8	16.3	22.2	21.3	15	13.4 J	14.2 J
Cobalt	MG/KG	11.9 J	10.9	8.8	10.4	8.6	9.7	13.9	9.9	7.4	8.7
Copper	MG/KG	19.4 J	38.9	23.3	19.1	20.7	20.3	22.6	16.5	47.7 J	28.8 J
Cyanide	MG/KG									0.67 U	0.74 U
Iron	MG/KG	27200 J	23100 J	20300 J	26100	22000	29700	27900	19400	31800	24100
Lead	MG/KG	10.9 J	363	99.2	12.1	12.9	13	17.8	19.8	185 J	28.5 J
Magnesium	MG/KG	4550 J	8350	8730	4730	11100	4520	7040	6780	5050	4170
Manganese	MG/KG	771 J	453	503	849	555	470	1330	615	383 J	554 J
Mercury	MG/KG	0.04 J	0.07	0.06	0.04	0.03 J	0.04 J	0.04	0.03 J	0.14 J	0.07 UJ
Nickel	MG/KG	29 J	33.2	24.4	26.8	22.5	29.5	30	20.1	19.9	110
Potassium	MG/KG	810 J	1110	1150	970	992	1100	1100	908	1330	1030
Selenium	MG/KG	0.47 U	0.55 U	0.56 U	0.58 U	0.56 U	0.58 U	0.58 U	0.58 U	1.4 J	1.8 J
Silver	MG/KG	1.4 J	0.55 U	0.56 U	0.58 U	0.56 U	0.58 U	0.58 U	0.58 U	0.54 UJ	0.57 UJ
Sodium	MG/KG	39.9	68.6	50.1 J	37.2 J	70	46.4 J	49.2 J	78.4	215	636
Thallium	MG/KG	0.24 U	0.57 J	0.67 J	0.6 J	0.56 U	0.58 U	0.83 J	0.58 U	1.6 U	1.7 U
Vanadium	MG/KG	17.9 J	19.1	20.7	20.3	18.3	21.1	21.6	19.3	16	13.7
Zinc	MG/KG	66.4 J	97.1 J	97.5 J	66.7 J	59.5 J	79.1 J	71.3 J	51.8 J	95.3 J	1740 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	SS71-14	SS71-2	SS71-3	SS71-4	SS71-8	SS71-9	TP71-1	TP71-1	TP71-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71025	71014	71015	71016	71019	71018	TP71-1-1	TP71-1-2	TP71-1-3
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	3	3	3
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	3	3	3
	Sample Date	11/20/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	6/7/1994	6/7/1994	6/7/1994
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI
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	15 U	12 U	12 U	12 U	12 U	4 J	7 J	10 J
1,1,2,2-Tetrachloroethane	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG									
1,1,2-Trichloroethane	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
1,1-Dichloroethane	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
1,1-Dichloroethene	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
1,2,3-Trichloropropane	UG/KG									
1,2,4-Trichlorobenzene	UG/KG									
1,2-Dibromo-3-chloropropane	UG/KG									
1,2-Dibromoethane	UG/KG									
1,2-Dichlorobenzene	UG/KG									
1,2-Dichloroethane	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
1,2-Dichloroethene (total)	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
1,2-Dichloropropane	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
1,3-Dichlorobenzene	UG/KG									
1,3-Dichloropropane	UG/KG									
1,4-Dichlorobenzene	UG/KG									
Acetone	UG/KG	74	8 J	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Benzene	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Bromodichloromethane	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Bromoform	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Carbon disulfide	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Carbon tetrachloride	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Chlorobenzene	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Chlorodibromomethane	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Chloroethane	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Chloroform	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Cis-1,2-Dichloroethene	UG/KG									
Cis-1,3-Dichloropropene	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Cyclohexane	UG/KG									
Dichlorodifluoromethane	UG/KG									
Ethyl benzene	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Isopropylbenzene	UG/KG									
Meta/Para Xylene	UG/KG									

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	SS71-14	SS71-2	SS71-3	SS71-4	SS71-8	SS71-9	TP71-1	TP71-1	TP71-1	TP71-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	71025	71014	71015	71016	71019	71018	TP71-1-1	TP71-1-2	TP71-1-3	TP71-1-3
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	3	3	3	3
Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	3	3	3	3
Sample Date	11/20/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	6/7/1994	6/7/1994	6/7/1994	6/7/1994
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI	ESI
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl Acetate	UG/KG									
Methyl Tertbutyl Ether	UG/KG									
Methyl bromide	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Methyl butyl ketone	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Methyl chloride	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Methyl cyclohexane	UG/KG									
Methyl ethyl ketone	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Methyl isobutyl ketone	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Methylene chloride	UG/KG	12 U	15 U	12 U	12 U	12 U	2 J	2 J	2 J	2 J
Ortho Xylene	UG/KG									
Styrene	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Tetrachloroethene	UG/KG	12 U	15 U	12 U	12 U	12 U	1 J	1 J	1 J	3 J
Toluene	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Total BTEX	MG/KG									
Total Xylenes	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Trans-1,2-Dichloroethene	UG/KG									
Trans-1,3-Dichloropropene	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Trichloroethene	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Trichlorofluoromethane	UG/KG									
Vinyl chloride	UG/KG	12 U	15 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U
Semivolatile Organics										
1,1'-Biphenyl	UG/KG									
1,2,4-Trichlorobenzene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
1,2-Dichlorobenzene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
1,3-Dichlorobenzene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
1,4-Dichlorobenzene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
2,2'-oxybis(1-Chloropropane)	UG/KG									
2,4,5-Trichlorophenol	UG/KG	220 U	2100 U	410 U	190 U	1000 U	220 U	45000 U	1200 U	900 U
2,4,6-Trichlorophenol	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
2,4-Dichlorophenol	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
2,4-Dimethylphenol	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
2,4-Dinitrophenol	UG/KG	220 U	2100 U	410 U	190 U	1000 U	220 U	45000 U	1200 U	900 U
2,4-Dinitrotoluene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
2,6-Dinitrotoluene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
2-Chloronaphthalene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
2-Chlorophenol	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
2-Methylnaphthalene	UG/KG	23 J	880 U	15 J	9.4 J	430 U	9.6 J	19000 U	29 J	370 U
2-Methylphenol	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
2-Nitroaniline	UG/KG	220 U	2100 U	410 U	190 U	1000 U	220 U	45000 U	1200 U	900 U
2-Nitrophenol	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
3,3'-Dichlorobenzidine	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
3-Nitroaniline	UG/KG	220 U	2100 U	410 U	190 U	1000 U	220 U	45000 U	1200 U	900 U
4,6-Dinitro-2-methylphenol	UG/KG	220 U	2100 U	410 U	190 U	1000 U	220 U	45000 U	1200 U	900 U
4-Bromophenyl phenyl ether	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
4-Chloro-3-methylphenol	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	SS71-14	SS71-2	SS71-3	SS71-4	SS71-8	SS71-9	TP71-1	TP71-1	TP71-1	TP71-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	71025	71014	71015	71016	71019	71018	TP71-1-1	TP71-1-2	TP71-1-3	TP71-1-3
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	3	3	3	3
Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	3	3	3	3
Sample Date	11/20/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	6/7/1994	6/7/1994	6/7/1994	6/7/1994
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI	ESI
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
4-Chloroaniline	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
4-Chlorophenyl phenyl ether	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
4-Methylphenol	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
4-Nitroaniline	UG/KG	220 U	2100 U	410 U	190 U	1000 U	220 U	45000 U	1200 U	900 U
4-Nitrophenol	UG/KG	220 U	2100 U	410 U	190 U	1000 U	220 U	45000 U	1200 U	900 U
Acenaphthene	UG/KG	10 J	69 J	52 J	5.5 J	96 J	38 J	5800 J	280 J	76 J
Acenaphthylene	UG/KG	20 J	880 U	170 U	80 U	73 J	22 J	19000 U	500 U	370 U
Acetophenone	UG/KG									
Aniline	UG/KG									
Anthracene	UG/KG	380	170 J	120 J	12 J	240 J	70 J	11000 J	560	120 J
Atrazine	UG/KG									
Benzaldehyde	UG/KG									
Benzo(a)anthracene	UG/KG	360	1100	570	70 J	880	310	37000	1200	660
Benzo(a)pyrene	UG/KG	350	1300	540	83	1100	360	22000	750	630
Benzo(b)fluoranthene	UG/KG	830	1200	950	130	1400	810	26000	930	710
Benzo(ghi)perylene	UG/KG	220	820 J	310	69 J	940	220	10000 J	500	500
Benzo(k)fluoranthene	UG/KG	89 U	1600	170 U	80 U	1400	89 U	15000 J	570	490
Benzoic Acid	UG/KG									
Bis(2-Chloroethoxy)methane	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Bis(2-Chloroethyl)ether	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Bis(2-Chloroisopropyl)ether	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Bis(2-Ethylhexyl)phthalate	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Butylbenzylphthalate	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Caprolactam	UG/KG									
Carbazole	UG/KG	150	350 J	160 J	15 J	510	160	9500 J	360 J	100 J
Chrysene	UG/KG	560	1600	660	80	1600	500	36000	1000	750
Di-n-butylphthalate	UG/KG	89 U	880 U	170 U	80 U	430 U	6.4 J	19000 U	500 U	370 U
Di-n-octylphthalate	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Dibenz(a,h)anthracene	UG/KG	83 J	300 J	120 J	29 J	340 J	93	9800 J	190 J	320 J
Dibenzofuran	UG/KG	31 J	64 J	22 J	80 U	75 J	21 J	19000 U	120 J	370 U
Diethyl phthalate	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Dimethylphthalate	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Fluoranthene	UG/KG	480	3000	1200	140	2400	710	88000	2600	1400
Fluorene	UG/KG	47 J	67 J	36 J	4.7 J	100 J	31 J	2800 J	230 J	56 J
Hexachlorobenzene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Hexachlorobutadiene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Hexachlorocyclopentadiene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Hexachloroethane	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Indeno(1,2,3-cd)pyrene	UG/KG	190	780 J	310	57 J	780	200	12000 J	390 J	520
Isophorone	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
N-Nitrosodiphenylamine	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
N-Nitrosodipropylamine	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Naphthalene	UG/KG	31 J	880 U	11 J	10 J	430 U	15 J	19000 U	77 J	370 U
Nitrobenzene	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	SS71-14	SS71-2	SS71-3	SS71-4	SS71-8	SS71-9	TP71-1	TP71-1	TP71-1	TP71-1
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample ID	71025	71014	71015	71016	71019	71018	TP71-1-1	TP71-1-2	TP71-1-3	TP71-1-3
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	3	3	3	3
Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	3	3	3	3
Sample Date	11/20/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	6/7/1994	6/7/1994	6/7/1994	6/7/1994
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI	ESI
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG	220 U	2100 U	410 U	190 U	1000 U	220 U	45000 U	1200 U	900 U
Phenanthrene	UG/KG	210	1400	530	50 J	880	390	66000	1900	770
Phenol	UG/KG	89 U	880 U	170 U	80 U	430 U	89 U	19000 U	500 U	370 U
Pyrene	UG/KG	520	2300	950	110	1900	590	63000	1600	2000
Pyridine	UG/KG									
Pesticides/PCBs										
4,4'-DDD	UG/KG	4.4 U	2.8 J	4.2 U	3.2 J	4.3 U	4.4 U	37 U	3.7 U	3.7 U
4,4'-DDE	UG/KG	18	44	21	19	19	15	37 U	3.7 U	3.1 J
4,4'-DDT	UG/KG	21	53	19	16	77	25	37 U	3.7 U	8.4
Aldrin	UG/KG	2.3 U	2.3 U	2.2 U	2 U	2.2 U	2.3 U	19 U	1.9 U	1.9 U
Alpha-BHC	UG/KG	2.3 U	1.9 J	2.2 U	2 U	2.2 U	2.3 U	19 U	1.9 U	1.9 U
Alpha-Chlordane	UG/KG	2.3 U	2.3 U	2.2 U	2 U	2.2 U	2.3 U	74 J	1.9 U	1.9 U
Beta-BHC	UG/KG	2.3 U	2.3 U	2.2 U	2 U	2.2 U	2.3 U	19 U	1.9 U	1.9 U
Delta-BHC	UG/KG	2.3 U	2.3 U	2.2 U	2 U	2.2 U	2.3 U	19 U	1.9 U	1.9 U
Dieldrin	UG/KG	3.4 J	3 J	4.2 U	4 U	4.3 U	4.4 U	37 U	3.5 J	3.7 U
Endosulfan I	UG/KG	2.3 U	2.3 U	2.2 U	2 U	2.2 U	2.3 U	200 J	3.5	6.6 J
Endosulfan II	UG/KG	4.4 U	4.4 U	4.2 U	4 U	4.3 U	4.4 U	26 J	2.5 J	3.7 U
Endosulfan sulfate	UG/KG	4.4 U	4.4	4 J	4 U	4.6	4.4 U	37 U	3.7 U	3.7 U
Endrin	UG/KG	8.1	2.4 J	4.2 U	4 U	4.3 U	4.4 U	29 J	3.7 U	3.7 U
Endrin aldehyde	UG/KG	5.2	4.7	8.3	4	6.1	4.4 U	37 U	3.7 U	3.7 U
Endrin ketone	UG/KG	14	6.6	6.4	4 U	11	4.4 U	37 U	3.7 U	3.7 U
Gamma-BHC/Lindane	UG/KG	2.3 U	2.3 U	2.2 U	2 U	2.2 U	2.3 U	19 U	1.9 U	1.9 U
Gamma-Chlordane	UG/KG	2.3 U	2.3 U	2.2 U	2 U	2.2 U	2.3 U	19 U	1.9 U	1.9 U
Heptachlor	UG/KG	2.3 U	2.3 U	2.2 U	2 U	2.2 U	2.3 U	19 U	1.2 J	1.9 U
Heptachlor epoxide	UG/KG	2.3 U	6.4	2.2 U	1.5 J	2.2 U	2.3 U	19 U	1.9 U	1.9 U
Methoxychlor	UG/KG	39	23 U	22 U	20 U	62	23 U	190 U	19 U	19 U
Toxaphene	UG/KG	230 U	230 U	220 U	200 U	220 U	230 U	1900 U	190 U	190 U
Aroclor-1016	UG/KG	44 U	44 U	42 U	40 U	43 U	44 U	370 U	37 U	37 U
Aroclor-1221	UG/KG	90 U	89 U	86 U	81 U	87 U	90 U	750 U	76 U	75 U
Aroclor-1232	UG/KG	44 U	44 U	42 U	40 U	43 U	44 U	370 U	37 U	37 U
Aroclor-1242	UG/KG	44 U	44 U	42 U	40 U	43 U	44 U	370 U	37 U	37 U
Aroclor-1248	UG/KG	44 U	44 U	42 U	40 U	43 U	44 U	370 U	37 U	37 U
Aroclor-1254	UG/KG	44 U	44 U	42 U	40 U	43 U	44 U	370 U	37 U	37 U
Aroclor-1260	UG/KG	44 U	44 U	42 U	40 U	43 U	44 U	370 U	37 U	37 U
Metals										
Aluminum	MG/KG	10500	14000	12500	13400	13600	15900	12900	13100	10900
Antimony	MG/KG	0.85 UJ	1 J	0.85 UJ	0.82 UJ	0.84 UJ	0.93 UJ	0.19 J	0.27 UJ	0.23 UJ
Arsenic	MG/KG	4.1	6.1	4.6	4.7	5.9	14.6	5.4	5.1	5.2
Barium	MG/KG	58.8 J	76.5 J	75.4 J	76.9 J	101 J	86.2 J	86.2	69.2	69.8

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	SS71-14	SS71-2	SS71-3	SS71-4	SS71-8	SS71-9	TP71-1	TP71-1	TP71-1
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	71025	71014	71015	71016	71019	71018	TP71-1-1	TP71-1-2	TP71-1-3
	Sample Depth to Top of Sample ⁽¹⁾	0	0	0	0	0	0	3	3	3
	Sample Depth to Bottom of Sample ⁽¹⁾	0.2	0.2	0.2	0.2	0.2	0.2	3	3	3
	Sample Date	11/20/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	11/19/1997	6/7/1994	6/7/1994	6/7/1994
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ESI	ESI	ESI
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Beryllium	MG/KG	0.31	0.46	0.41	0.44	0.38	0.43	0.58 J	0.56 J	0.53 J
Cadmium	MG/KG	0.07 UJ	0.08 UJ	0.07 UJ	0.07 UJ	0.07 UJ	0.08 UJ	0.53 J	0.39 J	0.45 J
Calcium	MG/KG	295000	8370	27100	43200	27300	9080	38000 J	52800 J	32200 J
Chromium	MG/KG	16.5 J	21 J	18 J	19.5 J	22.2 J	23.8 J	18.4	17.9	16.3
Cobalt	MG/KG	10	11.1	9.4	11.2	11.5	12.5	9.4	9.3 J	9.7
Copper	MG/KG	19.5 J	55 J	40.5 J	24.9 J	23.6 J	45.3 J	25.4	19	23
Cyanide	MG/KG	0.71 U	0.68 U	0.73 U	0.61 U	0.71 U	0.67 U	0.54 U	0.46 U	0.5 U
Iron	MG/KG	19600	25900	22800	24900	27200	38000	23600	22700	21600
Lead	MG/KG	33.3 J	171 J	90.8 J	30.1 J	74.3 J	33 J	96.9	10.3	43.8
Magnesium	MG/KG	59300	5570	8250	10200	6820	5570	8690	7910	8840
Manganese	MG/KG	640 J	602 J	482 J	510 J	743 J	735 J	497	390	474
Mercury	MG/KG	0.07 J	0.09 J	0.06 UJ	0.05 UJ	0.06 UJ	0.07 UJ	0.03 J	0.03 J	0.03 J
Nickel	MG/KG	20.8	28.3	25.1	30.6	26.9	30.9	26.8	25.2	24.9
Potassium	MG/KG	1540	2070	1960	1810	1750	2180	1340 J	1540 J	1230 J
Selenium	MG/KG	1.3 J	1.4 J	1.1 UJ	1.1 UJ	1.1 UJ	1.4 J	0.43 J	0.57 U	0.47 U
Silver	MG/KG	0.51 UJ	0.54 UJ	0.51 UJ	0.49 UJ	0.51 UJ	0.67 UJ	0.07 UJ	0.11 UJ	0.09 UJ
Sodium	MG/KG	233	176	226	251	215	237	54.9 J	108 J	140 J
Thallium	MG/KG	1.5 U	1.6 U	1.5 U	1.5 U	1.5 U	2.3	0.25 U	0.4 U	0.33 U
Vanadium	MG/KG	17.8	23.9	20	19.6	19.8	23.4	19.7	20.1	17.9
Zinc	MG/KG	389 J	144 J	105 J	352 UJ	118 J	95.5 J	96.2	63.9	86.1

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	TP71-1	TP71-3-1	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	TP71-1-4	71002	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009	
Sample Depth to Top of Sample ⁽¹⁾	4	0	10.5	10	7	12.5	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	4	8	11	10.5	7.5	13	0	0	0	0	
Sample Date	6/7/1994	10/14/1997	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
Volatile Organics											
1,1,1-Trichloroethane	UG/KG	23	11 U	110 U	12 U	12 U	4 J	6 U	5 U	5 U	5.8
1,1,2,2-Tetrachloroethane	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 R	5.8
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG							6 U	5 U	5 U	5.8
1,1,2-Trichloroethane	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8
1,1-Dichloroethane	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8
1,1-Dichloroethene	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8
1,2,3-Trichloropropane	UG/KG										5.8
1,2,4-Trichlorobenzene	UG/KG							6 UJ	5 UJ	5 R	5.8
1,2-Dibromo-3-chloropropane	UG/KG							6 UJ	5 UJ	5 R	
1,2-Dibromoethane	UG/KG							6 UJ	5 UJ	5 UJ	
1,2-Dichlorobenzene	UG/KG							6 UJ	5 UJ	5 R	5.8
1,2-Dichloroethane	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8
1,2-Dichloroethene (total)	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U				
1,2-Dichloropropane	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	
1,3-Dichlorobenzene	UG/KG							6 UJ	5 UJ	5 R	5.8
1,3-Dichloropropane	UG/KG										5.8
1,4-Dichlorobenzene	UG/KG							6 UJ	5 UJ	5 R	5.8
Acetone	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	23
Benzene	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	1 J	5 U	5 U	5.8
Bromodichloromethane	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	
Bromoform	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ	
Carbon disulfide	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	2 J	5 U	2 J	5.8
Carbon tetrachloride	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 UJ	5 U	5.8
Chlorobenzene	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ	5.8
Chlorodibromomethane	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ	5.8
Chloroethane	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	12
Chloroform	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	5.8
Cis-1,2-Dichloroethene	UG/KG							6 U	5 U	5 U	
Cis-1,3-Dichloropropene	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 U	5 U	5 U	
Cyclohexane	UG/KG							4 J	5 U	3 J	
Dichlorodifluoromethane	UG/KG							6 U	5 U	5 U	
Ethyl benzene	UG/KG	12 U	11 U	110 U	12 U	12 U	12 U	6 UJ	5 UJ	5 UJ	5.8
Isopropylbenzene	UG/KG							6 UJ	5 UJ	5 UJ	
Meta/Para Xylene	UG/KG										5.8

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	TP71-1	TP71-3-1	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	TP71-1-4	71002	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009	
Sample Depth to Top of Sample ⁽¹⁾	4	0	10.5	10	7	12.5	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	4	8	11	10.5	7.5	13	0	0	0	0	
Sample Date	6/7/1994	10/14/1997	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	
Methyl Acetate	UG/KG						6 U	5 U	5 U		
Methyl Tertbutyl Ether	UG/KG						6 U	5 U	5 U		
Methyl bromide	UG/KG	12 U	11 U	110 U	12 U	12 U	6 U	5 U	5 U		
Methyl butyl ketone	UG/KG	12 U	11 U	110 U	12 U	12 U	6 UJ	5 UJ	5 UJ		
Methyl chloride	UG/KG	12 U	11 U	110 U	12 U	12 U	6 U	5 U	5 U		
Methyl cyclohexane	UG/KG						6	5 U	4 J		
Methyl ethyl ketone	UG/KG	12 U	11 U	110 U	12 U	12 U	6 U	5 UJ	5 U	12	
Methyl isobutyl ketone	UG/KG	12 U	11 U	110 U	12 U	12 U	6 U	5 UJ	5 U	12	
Methylene chloride	UG/KG	2 J	11 U	110 U	12 U	12 U	6 U	2 J	5 U	1.6	
Ortho Xylene	UG/KG									5.8	
Styrene	UG/KG	12 U	11 U	110 U	12 U	12 U	6 UJ	5 UJ	5 UJ		
Tetrachloroethene	UG/KG	12 U	11 U	110 U	12 U	12 U	6 UJ	5 UJ	5 UJ	5.8	
Toluene	UG/KG	12 U	11 U	110 U	12 U	12 U	2 J	5 U	2 J	5.8	
Total BTEX	MG/KG		11.6		3.5	3.05	3.3				
Total Xylenes	UG/KG	12 U	3 J	96 J	12 U	12 U	2 J	5 UJ	3 J		
Trans-1,2-Dichloroethene	UG/KG						6 U	5 U	5 U	5.8	
Trans-1,3-Dichloropropene	UG/KG	12 U	11 U	110 U	12 U	12 U	6 U	5 U	5 U		
Trichloroethene	UG/KG	12 U	11 U	110 U	12 U	12 U	6 U	5 U	5 U	5.8	
Trichlorofluoromethane	UG/KG						6 U	1 J	5 U		
Vinyl chloride	UG/KG	12 U	11 U	110 U	12 U	12 U	6 U	5 U	5 U	12	
Semivolatiles Organics											
1,1'-Biphenyl	UG/KG						370 U	360 U	370 U		
1,2,4-Trichlorobenzene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U				
1,2-Dichlorobenzene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U				
1,3-Dichlorobenzene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U				
1,4-Dichlorobenzene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U				
2,2'-oxybis(1-Chloropropane)	UG/KG	390 U					370 U	360 U	370 U		
2,4,5-Trichlorophenol	UG/KG	940 U	160 U	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	
2,4,6-Trichlorophenol	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
2,4-Dichlorophenol	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
2,4-Dimethylphenol	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
2,4-Dinitrophenol	UG/KG	940 U	160 U	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	
2,4-Dinitrotoluene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
2,6-Dinitrotoluene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
2-Chloronaphthalene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
2-Chlorophenol	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
2-Methylnaphthalene	UG/KG	390 U	520	31000 J	78 U	78 U	78 U	370 U	360 U	370 U	
2-Methylphenol	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
2-Nitroaniline	UG/KG	940 U	160 U	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	
2-Nitrophenol	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
3,3'-Dichlorobenzidine	UG/KG	390 U	66 U	760 U	78 U	78 UJ	78 UJ	370 U	360 U	370 U	
3-Nitroaniline	UG/KG	940 U	160 U	1800 U	190 UJ	190 UJ	190 U	940 U	910 U	920 U	
4,6-Dinitro-2-methylphenol	UG/KG	940 U	160 U	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	
4-Bromophenyl phenyl ether	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
4-Chloro-3-methylphenol	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	TP71-1	TP71-3-1	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	TP71-1-4	71002	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009	
Sample Depth to Top of Sample ⁽¹⁾	4	0	10.5	10	7	12.5	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	4	8	11	10.5	7.5	13	0	0	0	0	
Sample Date	6/7/1994	10/14/1997	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
4-Chloroaniline	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
4-Chlorophenyl phenyl ether	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
4-Methylphenol	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
4-Nitroaniline	UG/KG	940 U	160 U	1800 U	190 UJ	190 UJ	190 UJ	940 U	75 J	920 U	
4-Nitrophenol	UG/KG	940 U	160 U	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	5900
Acenaphthene	UG/KG	38 J	830 J	13000 J	78 U	78 U	78 U	370 U	360 U	62 J	1100
Acenaphthylene	UG/KG	390 U	66 U	340 J	78 U	78 U	78 U	370 U	97 J	130 J	1100
Acetophenone	UG/KG							370 U	360 U	370 U	
Aniline	UG/KG										1100
Anthracene	UG/KG	59 J	48 J	590 J	78 U	78 U	78 U	45 J	170 J	520	360
Atrazine	UG/KG							370 U	360 U	370 U	
Benzaldehyde	UG/KG							370 U	360 U	370 U	
Benzo(a)anthracene	UG/KG	180 J	32 J	240 J	78 U	18 J	3.9 J	180 J	730	1500	830
Benzo(a)pyrene	UG/KG	160 J	66 U	160 J	78 U	19 J	3.9 J	170 J	810	1400	610
Benzo(b)fluoranthene	UG/KG	130 J	66 U	130 J	78 U	21 J	4.4 J	230 J	1100	1900	650
Benzo(ghi)perylene	UG/KG	82 J	66 U	76 J	78 U	12 J	78 U	99 J	490	770	430
Benzo(k)fluoranthene	UG/KG	140 J	66 U	98 J	78 U	24 J	4.6 J	94 J	440	670	650
Benzoic Acid	UG/KG										5900
Bis(2-Chloroethoxy)methane	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
Bis(2-Chloroethyl)ether	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
Bis(2-Chloroisopropyl)ether	UG/KG		66 U	760 U	78 U	78 U	78 U				
Bis(2-Ethylhexyl)phthalate	UG/KG	390 U	66 U	760 U	7.8 J	15 J	7.6 J	43 J	47 J	56 J	140
Butylbenzylphthalate	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
Caprolactam	UG/KG							370 U	360 U	370 U	
Carbazole	UG/KG	30 J	40 J	380 J	78 U	4.2 J	78 U	370 U	59 J	240 J	
Chrysene	UG/KG	220 J	49 J	290 J	78 U	28 J	4.6 J	190 J	820	1500	1000
Di-n-butylphthalate	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
Di-n-octylphthalate	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
Dibenz(a,h)anthracene	UG/KG	38 J	66 U	760 U	78 U	4.4 J	78 U	370 U	42 J	230 J	170
Dibenzofuran	UG/KG	390 U	670 J	11000 J	78 U	78 U	78 U	370 U	78 U	360 U	1100
Diethyl phthalate	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
Dimethylphthalate	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
Fluoranthene	UG/KG	330 J	220	1900	78 U	52 J	6.9 J	350 J	1300	2700	1800
Fluorene	UG/KG	390 U	270	4100	78 U	78 U	78 U	370 U	360 U	99 J	1100
Hexachlorobenzene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
Hexachlorobutadiene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
Hexachlorocyclopentadiene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
Hexachloroethane	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
Indeno(1,2,3-cd)pyrene	UG/KG	88 J	56 J	56 J	78 U	12 J	78 U	110 J	530	860	420
Isophorone	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
N-Nitrosodiphenylamine	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
N-Nitrosodipropylamine	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 U	370 U	
Naphthalene	UG/KG	29 J	590 J	17000 J	78 U	78 U	78 U	370 U	360 U	370 U	1100
Nitrobenzene	UG/KG	390 U	66 U	760 U	78 U	78 U	78 U	370 U	360 UJ	370 UJ	1100

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
Location ID	TP71-1	TP71-3-1	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009	
Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Sample ID	TP71-1-4	71002	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009	
Sample Depth to Top of Sample ⁽¹⁾	4	0	10.5	10	7	12.5	0	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	4	8	11	10.5	7.5	13	0	0	0	0	
Sample Date	6/7/1994	10/14/1997	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA	
Study ID	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM	
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
Pentachlorophenol	UG/KG	940 U	160 U	1800 U	190 U	190 U	190 U	940 U	910 U	920 U	5900
Phenanthrene	UG/KG	260 J	350	3800	78 U	24 J	78 U	150 J	400	1600	500
Phenol	UG/KG	390 U	4.5 J	760 U	78 U	78 U	78 U	370 U	360 U	370 U	1100
Pyrene	UG/KG	390	370	1700	78 U	44 J	6 J	300 J	1300	2700	1300
Pyridine	UG/KG										5900
Pesticides/PCBs											
4,4'-DDD	UG/KG	3.9 U	3.9 U	3.8 U	3.9 U	3.9 U	3.9 U	3.7 U	8 J	18 U	38
4,4'-DDE	UG/KG	4.2 J	3.9 U	3.8 U	3.9 U	3.9 U	3.9 U	14	36 J	100 J	38
4,4'-DDT	UG/KG	13	3.9 U	5.1 J	3.9 U	3.9 U	3.9 U	7.1	40	55	38
Aldrin	UG/KG	2 U	2 U	2 U	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20
Alpha-BHC	UG/KG	2 U	2 U	2 U	2.9	4.9	18	1.9 U	1.9 U	9.4 U	20
Alpha-Chlordane	UG/KG	2 U	2 U	2 U	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20
Beta-BHC	UG/KG	2 U	2 U	2 U	2 U	2 J	2.7	1.9 U	1.9 U	9.4 U	20
Delta-BHC	UG/KG	2 U	2 U	2 U	2 U	2 U	1.8 J	1.9 U	1.9 U	9.4 U	20
Dieldrin	UG/KG	3.9 U	3.9 U	3.8 U	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38
Endosulfan I	UG/KG	2.8 J	2 U	2 U	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20
Endosulfan II	UG/KG	3.9 U	3.9 U	3.8 U	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38
Endosulfan sulfate	UG/KG	3.9 U	3.9 U	3.8 U	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38
Endrin	UG/KG	3.9 U	3.9 U	3.7 J	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38
Endrin aldehyde	UG/KG	3.9 U	3.9 U	7.2 J	3.9 U	3 J	3.9 U	3.7 U	3.7 U	18 U	38
Endrin ketone	UG/KG	3.9 U	3.9 U	2.2 J	3.9 U	3.9 U	3.9 U	3.7 U	3.7 U	18 U	38
Gamma-BHC/Lindane	UG/KG	2 U	2 U	2 U	2 U	2 U	4	1.9 U	1.9 U	9.4 U	20
Gamma-Chlordane	UG/KG	2 U	2 U	1.1 J	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20
Heptachlor	UG/KG	2 U	2 U	2 U	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20
Heptachlor epoxide	UG/KG	2 U	2 U	1.5 J	2 U	2 U	2 U	1.9 U	1.9 U	9.4 U	20
Methoxychlor	UG/KG	20 U	20 U	19 J	20 U	20 U	20 U	19 U	19 U	94 U	200
Toxaphene	UG/KG	200 U	200 U	200 U	200 U	200 U	200 U	190 U	190 U	940 U	380
Aroclor-1016	UG/KG	39 U	39 U	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38
Aroclor-1221	UG/KG	79 U	80 U	77 U	79 U	80 U	79 U	37 U	37 U	37 U	38
Aroclor-1232	UG/KG	39 U	39 U	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38
Aroclor-1242	UG/KG	39 U	39 U	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38
Aroclor-1248	UG/KG	39 U	39 U	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38
Aroclor-1254	UG/KG	39 U	39 U	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38
Aroclor-1260	UG/KG	39 U	39 U	38 U	39 U	39 U	39 U	37 U	37 U	37 U	38
Metals											
Aluminum	MG/KG	9960	8090 J	8090 J	14500 J	12400	9400	12600	11000	9750	9490
Antimony	MG/KG	0.47 J	0.56 UJ	0.56 UJ	0.68 UJ	0.65 UJ	0.64 UJ	2 J	9.2 J	5.9 J	11
Arsenic	MG/KG	4.8	4.3	4.3	3.1	5.3	4.1	7.4	6.9	5.5	5.4
Barium	MG/KG	63.5	51.3	51.3	94.1	78.1	48.8	92.4	95.1	83.6	89.2

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	TP71-1	TP71-3-1	TP71-3-2	TP71-4-2	TP71-5-1	TP71-6-1	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009
	Maxtrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sample ID	TP71-1-4	71002	71003	71006	71007	71010	WS-71-A-009-9	WS-71-B-009-6	WS-71-B-009-8	WS-71-D-009
	Sample Depth to Top of Sample ⁽¹⁾	4	0	10.5	10	7	12.5	0	0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾	4	8	11	10.5	7.5	13	0	0	0	0
	Sample Date	6/7/1994	10/14/1997	10/14/1997	10/14/1997	10/14/1997	10/15/1997	5/6/2004	5/6/2004	5/6/2004	5/6/2004
	QC Code	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
	Study ID	ESI	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	RI PHASE 1 STEP 1	ENSR IRM	ENSR IRM	ENSR IRM	ENSR IRM
								1	1	1	1
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value
Beryllium	MG/KG	0.47 J	0.21	0.21	0.56	0.31	0.31	0.7	0.57	0.49	0.17
Cadmium	MG/KG	0.45 J	0.08 U	0.08 U	0.09 U	0.09 U	0.09 U	0.49	0.46	0.44	0.28
Calcium	MG/KG	36500 J	134000	134000	36000	42800	46600	41100	44600	51800	45300
Chromium	MG/KG	15.5	12.9	12.9	21.2	17.6	14.5	19.4 J	22.8	17.5	17.5
Cobalt	MG/KG	8.7 J	11	11	9	9.4	8.6	12.5 J	9.7 J	8.9 J	8.5
Copper	MG/KG	26.7	15.2	15.2	19.1	19.4	18.8	30.3	59.9	98.2	77.7
Cyanide	MG/KG	0.35 U	0.65 U	0.65 U	0.64 U	0.6 UJ	0.59 UJ				
Iron	MG/KG	20000	18000	18000	21600	21500	19200	28000 J	23000 J	19200 J	18800
Lead	MG/KG	67.8	8.9 J	8.9 J	9.8 J	16	7.3	29.9 J	565 J	797 J	1010
Magnesium	MG/KG	9180	6760 J	6760 J	8120 J	10100	10100	7180 J	7330 J	15100 J	10100
Manganese	MG/KG	458	784 J	784 J	345 J	623	345	446 J	582 J	454 J	435
Mercury	MG/KG	0.03 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05	0.68	0.31	0.08
Nickel	MG/KG	24.6	26.2	26.2	28	24.1	23.3	37.1 J	26.9 J	26.9 J	25.4
Potassium	MG/KG	1520 J	1120	1120	2940	1950	1340	1410	1110	1230	1170
Selenium	MG/KG	0.56 U	0.77 U	0.77 U	0.93 U	1.2	0.88 U	0.42 U	0.44 U	0.44 U	0.58
Silver	MG/KG	0.1 UJ	0.21 U	0.21 U	0.26 U	0.25 U	0.24 U	0.88	0.79	0.44 J	0.56
Sodium	MG/KG	90.7 J	83.3 U	83.3 U	109	108 U	138	135	103	120	76.1
Thallium	MG/KG	0.4 U	1.2 U	1.2 U	1.4 U	0.92 UJ	0.91 UJ	0.21 U	0.22 U	0.22 U	0.7
Vanadium	MG/KG	18.2	15.1	15.1	24.9	20.2	14.8	20	18.9	17.8	19.9
Zinc	MG/KG	79.7	57 J	57 J	61.5 J	82.1	73.4	75.5 J	122 J	104 J	114

Note(s):
(1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
(2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected
J = the reported value is an estimated concentration
UJ = the compound was not detected; the associated reporting limit is approximate
R = the data was rejected in the data validating process
NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility		SEAD-71	SEAD-71	SEAD-71
	Location ID-13		WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10
	Maxtrix		SOIL	SOIL	SOIL
	Sample ID-13		WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10
	Sample Depth to Top of Sample ⁽¹⁾		0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾		0	0	0
	Sample Date		5/6/2004	5/6/2004	5/6/2004
	QC Code		SA	SA	SA
	Study ID		ENSR IRM	ENSR IRM	ENSR IRM
			1	1	1
Parameter	Units	(Q)	Value (Q)	Value (Q)	Value (Q)
Volatile Organics					
1,1,1-Trichloroethane	UG/KG	U	5.5 U	5.5 U	5.8 U
1,1,2,2-Tetrachloroethane	UG/KG	U	5.5 U	5.5 U	5.8 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	UG/KG	U	5.5 U	5.5 U	5.8 U
1,1,2-Trichloroethane	UG/KG				
1,1-Dichloroethane	UG/KG	U	5.5 U	5.5 U	5.8 U
1,1-Dichloroethene	UG/KG	U	5.5 U	5.5 U	5.8 U
1,2,3-Trichloropropane	UG/KG	U	5.5 U	5.5 U	5.8 U
1,2,4-Trichlorobenzene	UG/KG	U	5.5 U	5.5 U	5.8 U
1,2-Dibromo-3-chloropropane	UG/KG				
1,2-Dibromoethane	UG/KG				
1,2-Dichlorobenzene	UG/KG	U	5.5 U	5.5 U	5.8 U
1,2-Dichloroethane	UG/KG	U	5.5 U	5.5 U	5.8 U
1,2-Dichloroethene (total)	UG/KG				
1,2-Dichloropropane	UG/KG				
1,3-Dichlorobenzene	UG/KG	U	5.5 U	5.5 U	5.8 U
1,3-Dichloropropane	UG/KG	U	5.5 U	5.5 U	5.8 U
1,4-Dichlorobenzene	UG/KG	U	5.5 U	5.5 U	5.8 U
Acetone	UG/KG	U	22 U	22 U	23 UJ
Benzene	UG/KG	U	5.5 U	5.5 U	5.8 U
Bromodichloromethane	UG/KG				
Bromoform	UG/KG				
Carbon disulfide	UG/KG	U	5.5 U	5.5 U	5.8 U
Carbon tetrachloride	UG/KG	U	5.5 U	5.5 U	5.8 U
Chlorobenzene	UG/KG	U	5.5 U	5.5 U	5.8 U
Chlorodibromomethane	UG/KG	U	5.5 U	5.5 U	5.8 U
Chloroethane	UG/KG	U	11 U	11 U	12 U
Chloroform	UG/KG	U	5.5 U	5.5 U	5.8 U
Cis-1,2-Dichloroethene	UG/KG				
Cis-1,3-Dichloropropene	UG/KG				
Cyclohexane	UG/KG				
Dichlorodifluoromethane	UG/KG				
Ethyl benzene	UG/KG	U	5.5 U	5.5 U	5.8 U
Isopropylbenzene	UG/KG				
Meta/Para Xylene	UG/KG	U	5.5 U	5.5 U	5.8 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71
	Location ID-13	WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10
	Maxtrix	SOIL	SOIL	SOIL
	Sample ID-13	WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10
Sample Depth to Top of Sample ⁽¹⁾		0	0	0
Sample Depth to Bottom of Sample ⁽¹⁾		0	0	0
Sample Date		5/6/2004	5/6/2004	5/6/2004
QC Code		SA	SA	SA
Study ID		ENSR IRM	ENSR IRM	ENSR IRM
		1	1	1
Parameter	Units (Q)	Value (Q)	Value (Q)	Value (Q)
Methyl Acetate	UG/KG			
Methyl Tertbutyl Ether	UG/KG			
Methyl bromide	UG/KG			
Methyl butyl ketone	UG/KG			
Methyl chloride	UG/KG			
Methyl cyclohexane	UG/KG			
Methyl ethyl ketone	UG/KG U	11 U	11 U	12 U
Methyl isobutyl ketone	UG/KG U	11 U	11 U	12 U
Methylene chloride	UG/KG J	5.5 U	5.5 U	5.8 U
Ortho Xylene	UG/KG U	5.5 U	5.5 U	5.8 U
Styrene	UG/KG			
Tetrachloroethene	UG/KG U	5.5 U	5.5 U	5.8 U
Toluene	UG/KG U	5.5 U	5.5 U	5.8 U
Total BTEX	MG/KG			
Total Xylenes	UG/KG			
Trans-1,2-Dichloroethene	UG/KG U	5.5 U	5.5 U	5.8 U
Trans-1,3-Dichloropropene	UG/KG			
Trichloroethene	UG/KG U	5.5 U	5.5 U	5.8 U
Trichlorofluoromethane	UG/KG			
Vinyl chloride	UG/KG U	11 U	11 U	12 U
Semivolatle Organics				
1,1'-Biphenyl	UG/KG			
1,2,4-Trichlorobenzene	UG/KG			
1,2-Dichlorobenzene	UG/KG			
1,3-Dichlorobenzene	UG/KG			
1,4-Dichlorobenzene	UG/KG			
2,2'-oxybis(1-Chloropropane)	UG/KG			
2,4,5-Trichlorophenol	UG/KG U	1100 U	360 U	1900 U
2,4,6-Trichlorophenol	UG/KG U	1100 U	360 U	1900 U
2,4-Dichlorophenol	UG/KG U	1100 U	360 U	1900 U
2,4-Dimethylphenol	UG/KG			
2,4-Dinitrophenol	UG/KG UJ	5600 U	1900 U	9800 UJ
2,4-Dinitrotoluene	UG/KG J	1100 U	360 U	1900 U
2,6-Dinitrotoluene	UG/KG U	1100 U	360 U	1900 U
2-Chloronaphthalene	UG/KG			
2-Chlorophenol	UG/KG U	1100 U	360 U	1900 U
2-Methylnaphthalene	UG/KG U	1100 U	360 U	1900 U
2-Methylphenol	UG/KG U	1100 U	360 U	1900 U
2-Nitroaniline	UG/KG U	5600 U	1900 U	9800 U
2-Nitrophenol	UG/KG U	1100 U	360 U	1900 U
3,3'-Dichlorobenzidine	UG/KG U	1100 U	360 U	1900 U
3-Nitroaniline	UG/KG U	5600 U	1900 U	9800 U
4,6-Dinitro-2-methylphenol	UG/KG			
4-Bromophenyl phenyl ether	UG/KG			
4-Chloro-3-methylphenol	UG/KG U	1100 U	360 U	1900 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility		SEAD-71	SEAD-71	SEAD-71
	Location ID-13		WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10
	Maxtrix		SOIL	SOIL	SOIL
	Sample ID-13		WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10
	Sample Depth to Top of Sample ⁽¹⁾		0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾		0	0	0
	Sample Date		5/6/2004	5/6/2004	5/6/2004
	QC Code		SA	SA	SA
	Study ID		ENSR IRM	ENSR IRM	ENSR IRM
			1	1	1
Parameter	Units	(Q)	Value (Q)	Value (Q)	Value (Q)
4-Chloroaniline	UG/KG	U	1100 U	360 U	1900 U
4-Chlorophenyl phenyl ether	UG/KG				
4-Methylphenol	UG/KG	U	1100 U	360 U	1900 U
4-Nitroaniline	UG/KG				
4-Nitrophenol	UG/KG	U	5600 U	1900 U	9800 U
Acenaphthene	UG/KG	U	1100 U	43 J	1900 U
Acenaphthylene	UG/KG	U	230 J	48 J	1900 U
Acetophenone	UG/KG				
Aniline	UG/KG	U	1100 U	360 U	1900 U
Anthracene	UG/KG	J	370 J	110 J	1900 U
Atrazine	UG/KG				
Benzaldehyde	UG/KG				
Benzo(a)anthracene	UG/KG	J	1300	390	1900 U
Benzo(a)pyrene	UG/KG	J	1500	330 J	1900 U
Benzo(b)fluoranthene	UG/KG	J	1400	390	1900 U
Benzo(ghi)perylene	UG/KG	J	910 J	270 J	1900 U
Benzo(k)fluoranthene	UG/KG	J	1300	370 J	1900 U
Benzoic Acid	UG/KG	U	5600 U	1900 U	9800 UJ
Bis(2-Chloroethoxy)methane	UG/KG				
Bis(2-Chloroethyl)ether	UG/KG				
Bis(2-Chloroisopropyl)ether	UG/KG				
Bis(2-Ethylhexyl)phthalate	UG/KG	J	1100 U	360 U	1900 U
Butylbenzylphthalate	UG/KG	U	1100 U	360 U	1900 U
Caprolactam	UG/KG				
Carbazole	UG/KG				
Chrysene	UG/KG	J	1600	510	1900 U
Di-n-butylphthalate	UG/KG	U	1100 U	360 U	1900 U
Di-n-octylphthalate	UG/KG	U	1100 U	360 U	1900 U
Dibenz(a,h)anthracene	UG/KG	J	310 J	86 J	1900 U
Dibenzofuran	UG/KG	U	1100 U	360 U	1900 U
Diethyl phthalate	UG/KG	U	1100 U	360 U	1900 U
Dimethylphthalate	UG/KG	U	1100 U	360 U	1900 U
Fluoranthene	UG/KG		2800	800	270 J
Fluorene	UG/KG	U	1100 U	360 U	1900 U
Hexachlorobenzene	UG/KG	U	1100 U	360 U	1900 U
Hexachlorobutadiene	UG/KG	U	1100 U	360 U	1900 U
Hexachlorocyclopentadiene	UG/KG				
Hexachloroethane	UG/KG	U	1100 U	360 U	1900 U
Indeno(1,2,3-cd)pyrene	UG/KG	J	880 J	250 J	1900 U
Isophorone	UG/KG	U	1100 U	360 U	1900 U
N-Nitrosodiphenylamine	UG/KG				
N-Nitrosodipropylamine	UG/KG				
Naphthalene	UG/KG	U	1100 U	360 U	1900 U
Nitrobenzene	UG/KG	U	1100 U	360 U	1900 U

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility		SEAD-71	SEAD-71	SEAD-71
	Location ID-13		WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10
	Maxtrix		SOIL	SOIL	SOIL
	Sample ID-13		WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10
	Sample Depth to Top of Sample ⁽¹⁾		0	0	0
	Sample Depth to Bottom of Sample ⁽¹⁾		0	0	0
	Sample Date		5/6/2004	5/6/2004	5/6/2004
	QC Code		SA	SA	SA
	Study ID		ENSR IRM	ENSR IRM	ENSR IRM
			1	1	1
Parameter	Units	(Q)	Value (Q)	Value (Q)	Value (Q)
Pentachlorophenol	UG/KG	U	5600 U	1900 U	9800 U
Phenanthrene	UG/KG	J	980 J	300 J	1900 U
Phenol	UG/KG	U	1100 U	360 U	1900 U
Pyrene	UG/KG		2200	660	1900 U
Pyridine	UG/KG	U	5600 U	1900 U	9800 U
Pesticides/PCBs					
4,4'-DDD	UG/KG	U	18 U	18 U	19 U
4,4'-DDE	UG/KG	U	54 J	18 U	19 U
4,4'-DDT	UG/KG	U	42	25	19 U
Aldrin	UG/KG	U	9.3 U	9.4 U	9.8 U
Alpha-BHC	UG/KG	U	9.3 U	9.4 U	9.8 U
Alpha-Chlordane	UG/KG	U	9.3 U	9.4 U	9.8 U
Beta-BHC	UG/KG	U	9.3 U	9.4 U	9.8 U
Delta-BHC	UG/KG	U	9.3 U	9.4 U	9.8 U
Dieldrin	UG/KG	U	18 U	18 U	19 U
Endosulfan I	UG/KG	U	9.3 U	9.4 U	9.8 U
Endosulfan II	UG/KG	U	18 U	18 U	19 U
Endosulfan sulfate	UG/KG	U	18 U	18 U	19 U
Endrin	UG/KG	U	18 U	18 U	19 U
Endrin aldehyde	UG/KG	U	18 U	18 U	19 U
Endrin ketone	UG/KG	U	18 U	18 U	19 U
Gamma-BHC/Lindane	UG/KG	U	9.3 U	9.4 U	9.8 U
Gamma-Chlordane	UG/KG	U	9.3 U	9.4 U	9.8 U
Heptachlor	UG/KG	U	9.3 U	9.4 U	9.8 U
Heptachlor epoxide	UG/KG	U	9.3 U	9.4 U	9.8 U
Methoxychlor	UG/KG	U	93 U	94 U	98 U
Toxaphene	UG/KG	U	180 U	180 U	190 U
Aroclor-1016	UG/KG	U	36 U	36 U	38 U
Aroclor-1221	UG/KG	U	36 U	36 U	38 U
Aroclor-1232	UG/KG	U	36 U	36 U	38 U
Aroclor-1242	UG/KG	U	36 U	36 U	38 U
Aroclor-1248	UG/KG	U	36 U	36 U	38 U
Aroclor-1254	UG/KG	U	36 U	36 U	38 U
Aroclor-1260	UG/KG	U	36 U	36 U	38 U
Metals					
Aluminum	MG/KG		10100	13400	12600
Antimony	MG/KG		3.2 UJ	3.1 UJ	3.4 U
Arsenic	MG/KG		5.6	5.8	5 J
Barium	MG/KG		75.3	87	79.8

Table D-5
SEAD-71 FENCED AREA EXCLUDED SOIL DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71
Location ID-13	WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10	
Maxtrix	SOIL	SOIL	SOIL	
Sample ID-13	WS-71-D-009-2	WS-71-E1-009-3	WS-71-E3-009-10	
Sample Depth to Top of Sample ⁽¹⁾	0	0	0	
Sample Depth to Bottom of Sample ⁽¹⁾	0	0	0	
Sample Date	5/6/2004	5/6/2004	5/6/2004	
QC Code	SA	SA	SA	
Study ID	ENSR IRM	ENSR IRM	ENSR IRM	
	1	1	1	
Parameter	Units (Q)	Value (Q)	Value (Q)	Value (Q)
Beryllium	MG/KG	0.28 J	0.51 J	0.27
Cadmium	MG/KG U	0.42 J	0.3 J	0.56 J
Calcium	MG/KG	48600 J	20200 J	23600 J
Chromium	MG/KG	18.1	20.6	18.1
Cobalt	MG/KG	9.1	10.7	9.3
Copper	MG/KG	33.1	102	21.1
Cyanide	MG/KG			
Iron	MG/KG	24800 J	25800 J	23300
Lead	MG/KG	97.5 J	19.2 J	15.1
Magnesium	MG/KG	9530 J	5510 J	7680
Manganese	MG/KG	516	618	617
Mercury	MG/KG	0.06	0.04	0.04
Nickel	MG/KG	24.1	29.2	24.7
Potassium	MG/KG	1300	1160	1030
Selenium	MG/KG U	0.54 U	0.52 U	0.57 U
Silver	MG/KG U	0.54 U	0.52 U	0.57 U
Sodium	MG/KG	78.1	52.1	57.4
Thallium	MG/KG J	0.6 J	0.77 J	0.57 U
Vanadium	MG/KG	18.2	20	19.3
Zinc	MG/KG J	93.8 J	89.3 J	67.9 J

Note(s):

- (1) - Historical sample depths are presented (i.e. prior to 2002 TCRA)
- (2) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

Table D-6
SEAD-71 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	MW71-1	MW71-1	MW71-1	MW71-2	MW71-3	MW71-4	MW71-4	MW71-4	MW71-4
	Maxtrix	GW	GW	GW	GW	GW	GW	GW	GW	GW
	Sample ID	712000	712007DUP	712007	712004	712001	712002D	712003	712002	712006
	Sample Depth to Top of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Depth to Bottom of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Date	4/6/2004	9/1/2004	9/1/2004	8/31/2004	4/6/2004	4/5/2004	4/5/2004	4/5/2004	8/31/2004
	QC Code	SA	DU	SA	SA	SA	DU	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	2	2	2	1	1	1	1	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Volatile Organics										
1,1,1,2-Tetrachloroethane	UG/L	0.5 U		0.5 U	0.5 U	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	3.1	3.1		2.5
1,1,2,2-Tetrachloroethane	UG/L	0.5 U		0.5 U	0.5 U	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	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	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	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	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	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	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	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	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	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	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	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	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		0.5 U		0.5 U
1,3,5-Trimethylbenzene	UG/L	0.5 U		0.5 U	0.5 U	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	0.5 U	0.5 U		0.5 U
1,3-Dichloropropane	UG/L	0.5 U		0.5 U	0.5 U	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	0.5 U	0.5 U		0.5 U
2,2-Dichloropropane	UG/L	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
2-Chlorotoluene	UG/L	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Acetone	UG/L									
Benzene	UG/L	0.5 U		0.5 U	0.5 U	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	0.5 U	0.5 U		0.5 U
Bromochloromethane	UG/L	0.5 U		0.5 U	0.5 U	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	0.5 U	0.5 U		0.5 U
Bromoform	UG/L	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Carbon disulfide	UG/L									
Carbon tetrachloride	UG/L	0.5 U		0.5 U	0.5 U	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	0.5 U	0.5 U		0.5 U
Chlorodibromomethane	UG/L	0.5 U		0.5 U	0.5 U	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	0.5 U	0.5 U		0.5 U
Chloroform	UG/L	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Cis-1,2-Dichloroethene	UG/L	0.5 U		0.5 U	0.5 U	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	0.5 U	0.5 U		0.5 U
Dichlorodifluoromethane	UG/L	0.5 U		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		0.5 U
Ethyl benzene	UG/L	0.5 U		0.5 U	0.5 U	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	0.5 U	0.5 U		0.5 U

Table D-6
SEAD-71 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	MW71-1	MW71-1	MW71-1	MW71-2	MW71-3	MW71-4	MW71-4	MW71-4	MW71-4
	Maxtrix	GW	GW	GW	GW	GW	GW	GW	GW	GW
	Sample ID	712000	712007DUP	712007	712004	712001	712002D	712003	712002	712006
	Sample Depth to Top of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Depth to Bottom of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Date	4/6/2004	9/1/2004	9/1/2004	8/31/2004	4/6/2004	4/5/2004	4/5/2004	4/5/2004	8/31/2004
	QC Code	SA	DU	SA	SA	SA	DU	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	2	2	2	1	1	1	1	2
Parameter	Units	Value (Q)	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		0.5 U	0.5 U	0.5 U
Meta/Para Xylene	UG/L	0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
Methyl bromide	UG/L	0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
Methyl butyl ketone	UG/L									
Methyl chloride	UG/L	0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
Methyl ethyl ketone	UG/L									
Methyl isobutyl ketone	UG/L									
Methylene bromide	UG/L	0.5 U		0.5 U	0.5 U	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		0.5 U	0.5 U	0.5 U
Naphthalene	UG/L	0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
Ortho Xylene	UG/L	0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
Propylbenzene	UG/L	0.5 U		0.5 U	0.5 U	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		0.5 U	0.5 U	0.5 U
Tetrachloroethene	UG/L	0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
Toluene	UG/L	0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
Total Xylenes	UG/L	0.5 U		0.5 U	0.5 U	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		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		0.5 U	0.5 U	0.5 U
Trichloroethene	UG/L	0.5 U		0.5 U	0.5 U	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		0.5 U	0.5 U	0.5 U
Vinyl acetate	UG/L	1 U		1 U	1 U	1 U		1 U	1 U	1 U
Vinyl chloride	UG/L	0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
Semivolatle Organics										
n-Butylbenzene	UG/L	0.5 U		0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	0.5 U
p-Chlorotoluene	UG/L	0.5 U		0.5 U	0.5 U	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		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		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		0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
1,2-Dichlorobenzene	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
1,2-Diphenylhydrazine	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
1,3-Dichlorobenzene	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
1,4-Dichlorobenzene	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
2,2'-oxybis(1-Chloropropane)	UG/L									
2,4,5-Trichlorophenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
2,4,6-Trichlorophenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
2,4-Dichlorophenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
2,4-Dimethylphenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
2,4-Dinitrophenol	UG/L	19.4 U		21.7 U	22.2 U	20.2 U		19.6 U	19.6 U	19.2 UJ
2,4-Dinitrotoluene	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
2,6-Dichlorophenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ

Table D-6
SEAD-71 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	MW71-1	MW71-1	MW71-1	MW71-2	MW71-3	MW71-4	MW71-4	MW71-4	MW71-4
	Maxtrix	GW	GW	GW	GW	GW	GW	GW	GW	GW
	Sample ID	712000	712007DUP	712007	712004	712001	712002D	712003	712002	712006
	Sample Depth to Top of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Depth to Bottom of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Date	4/6/2004	9/1/2004	9/1/2004	8/31/2004	4/6/2004	4/5/2004	4/5/2004	4/5/2004	8/31/2004
	QC Code	SA	DU	SA	SA	SA	DU	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	2	2	2	1	1	1	1	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
2,6-Dinitrotoluene	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
2-Chloronaphthalene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
2-Chlorophenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
2-Methylnaphthalene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
2-Methylphenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
2-Nitroaniline	UG/L	9.7 U		10.9 UJ	11.1 UJ	10.1 U		9.8 U	9.8 U	9.6 UJ
2-Nitrophenol	UG/L	9.7 U		10.9 U	11.1 UJ	10.1 U		9.8 U	9.8 U	9.6 UJ
3,3'-Dichlorobenzidine	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 UJ	9.8 UJ	9.6 U
3-Nitroaniline	UG/L	9.7 U		10.9 UJ	11.1 UJ	10.1 U		9.8 U	9.8 U	9.6 U
4,6-Dinitro-2-methylphenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
4-Bromophenyl phenyl ether	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
4-Chloro-3-methylphenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
4-Chloroaniline	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
4-Chlorophenyl phenyl ether	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
4-Methylphenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
4-Nitroaniline	UG/L	9.7 U		10.9 UJ	8.7 J	10.1 U		9.8 U	9.8 U	9.6 U
4-Nitrophenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
Acenaphthene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Acenaphthylene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Acetophenone	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Anthracene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Benzidine	UG/L	48.5 U		54.3 U	55.6 U	50.5 U		49 U	49 U	48.1 U
Benzo(a)anthracene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Benzo(a)pyrene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Benzo(b)fluoranthene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Benzo(ghi)perylene	UG/L	0.97 UJ		1.1 UJ	1.1 UJ	1 UJ		0.98 U	0.98 U	0.96 U
Benzo(k)fluoranthene	UG/L	0.97 UJ		1.1 U	1.1 U	1 UJ		0.98 U	0.98 U	0.96 U
Benzoic Acid	UG/L	19.4 UJ		21.7 U	22.2 U	20.2 UJ		19.6 U	19.6 U	19.2 U
Benzyl alcohol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Bis(2-Chloroethoxy)methane	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Bis(2-Chloroethyl)ether	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Bis(2-Chloroisopropyl)ether	UG/L	9.7 UJ		10.9 U	11.1 U	10.1 UJ		9.8 U	9.8 U	9.6 U
Bis(2-Ethylhexyl)phthalate	UG/L	9.7 U		10.9 U	11.1 U	1.6 J		9.8 U	9.8 U	9.6 U
Butylbenzylphthalate	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Carbazole	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Chrysene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Di-n-butylphthalate	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Di-n-octylphthalate	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Dibenz(a,h)anthracene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Dibenzofuran	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Diethyl phthalate	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U

Table D-6
SEAD-71 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	MW71-1	MW71-1	MW71-1	MW71-2	MW71-3	MW71-4	MW71-4	MW71-4	MW71-4
	Maxtrix	GW	GW	GW	GW	GW	GW	GW	GW	GW
	Sample ID	712000	712007DUP	712007	712004	712001	712002D	712003	712002	712006
	Sample Depth to Top of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Depth to Bottom of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Date	4/6/2004	9/1/2004	9/1/2004	8/31/2004	4/6/2004	4/5/2004	4/5/2004	4/5/2004	8/31/2004
	QC Code	SA	DU	SA	SA	SA	DU	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	2	2	2	1	1	1	1	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Dimethylphthalate	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Diphenylamine	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Fluoranthene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Fluorene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Hexachlorobenzene	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Hexachlorobutadiene	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Hexachlorocyclopentadiene	UG/L									
Hexachloroethane	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Indeno(1,2,3-cd)pyrene	UG/L	0.97 UJ		1.1 U	1.1 U	1 UJ		0.98 U	0.98 U	0.96 U
Isophorone	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
N-Nitrosodimethylamine	UG/L	9.7 UJ		10.9 U	11.1 U	10.1 UJ		9.8 U	9.8 U	9.6 U
N-Nitrosodiphenylamine	UG/L									
N-Nitrosodipropylamine	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
N-Nitrosopyrrolidine	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Naphthalene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Nitrobenzene	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 U
Pentachlorophenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
Phenanthrene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Phenol	UG/L	9.7 U		10.9 U	11.1 U	10.1 U		9.8 U	9.8 U	9.6 UJ
Pyrene	UG/L	0.97 U		1.1 U	1.1 U	1 U		0.98 U	0.98 U	0.96 U
Pesticides/PCBs										
4,4'-DDD	UG/L	0.04 U		0.0396 U	0.0388 U	0.0385 U		0.0385 U	0.0364 UJ	0.0408 U
4,4'-DDE	UG/L	0.04 U		0.0396 U	0.0388 U	0.006 J		0.0385 U	0.006 J	0.0408 U
4,4'-DDT	UG/L	0.04 U		0.0396 U	0.0388 U	0.043		0.0385 UJ	0.04 J	0.0437
Aldrin	UG/L	0.02 U		0.0198 U	0.0194 U	0.0192 U		0.0192 U	0.0182 UJ	0.0204 U
Alpha-BHC	UG/L	0.02 U		0.0198 U	0.0194 U	0.0192 U		0.0192 U	0.0182 UJ	0.0204 U
Alpha-Chlordane	UG/L									
Beta-BHC	UG/L	0.02 U		0.0198 U	0.0194 U	0.0192 U		0.0192 U	0.0182 UJ	0.0204 U
Chlordane	UG/L	0.25 U		0.248 U	0.243 U	0.24 U		0.24 U	0.227 UJ	0.255 UJ
Delta-BHC	UG/L	0.02 U		0.0198 U	0.0194 U	0.0192 U		0.0192 U	0.0182 UJ	0.0204 U
Dieldrin	UG/L	0.04 U		0.0396 U	0.0388 U	0.0385 U		0.0385 U	0.0364 UJ	0.0408 U
Endosulfan I	UG/L	0.02 U		0.0198 U	0.0194 U	0.0192 U		0.0192 U	0.0182 UJ	0.0204 U
Endosulfan II	UG/L	0.04 U		0.0396 U	0.0388 U	0.0385 U		0.0385 U	0.0364 UJ	0.0408 U
Endosulfan sulfate	UG/L	0.04 U		0.0396 U	0.0388 U	0.0385 U		0.0385 U	0.0364 UJ	0.0408 U
Endrin	UG/L	0.04 U		0.0396 U	0.0388 U	0.0385 U		0.0385 U	0.0364 UJ	0.0408 U
Endrin aldehyde	UG/L	0.04 U		0.0396 U	0.0388 U	0.0385 U		0.0385 U	0.0364 UJ	0.0408 U
Endrin ketone	UG/L	0.04 U		0.0396 U	0.0388 U	0.008 J		0.0385 U	0.0364 UJ	0.0408 U
Gamma-BHC/Lindane	UG/L	0.02 U		0.0198 U	0.0194 U	0.0192 U		0.0192 U	0.0182 UJ	0.0204 U
Gamma-Chlordane	UG/L									
Heptachlor	UG/L	0.02 UJ		0.0198 U	0.0194 U	0.0192 U		0.0192 U	0.0182 UJ	0.0204 U
Heptachlor epoxide	UG/L	0.02 U		0.0198 U	0.0194 U	0.0192 U		0.0192 U	0.0182 UJ	0.0204 U

Table D-6
SEAD-71 RI GROUNDWATER DATASET
SEAD-59 and SEAD-71 Record of Decision
Seneca Army Depot Activity

	Facility	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71	SEAD-71
	Location ID	MW71-1	MW71-1	MW71-1	MW71-2	MW71-3	MW71-4	MW71-4	MW71-4	MW71-4
	Maxtrix	GW	GW	GW	GW	GW	GW	GW	GW	GW
	Sample ID	712000	712007DUP	712007	712004	712001	712002D	712003	712002	712006
	Sample Depth to Top of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Depth to Bottom of Sample	8.4	0	0	0	7.51	20.67	20.67	20.67	0
	Sample Date	4/6/2004	9/1/2004	9/1/2004	8/31/2004	4/6/2004	4/5/2004	4/5/2004	4/5/2004	8/31/2004
	QC Code	SA	DU	SA	SA	SA	DU	SA	SA	SA
	Study ID	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004	RI 2004
		1	2	2	2	1	1	1	1	2
Parameter	Units	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)	Value (Q)
Methoxychlor	UG/L	0.2 U		0.198 U	0.194 U	0.192 U		0.192 U	0.182 UJ	0.204 U
Toxaphene	UG/L	1 U		0.99 U	0.971 U	0.962 U		0.962 U	0.909 UJ	1.02 UJ
Aroclor-1016	UG/L	0.5 U		0.495 U	0.485 U	0.481 U		0.481 U	0.454 UJ	0.51 U
Aroclor-1221	UG/L	0.5 U		0.495 U	0.485 U	0.481 U		0.481 U	0.454 UJ	0.51 U
Aroclor-1232	UG/L	0.5 U		0.495 U	0.485 U	0.481 U		0.481 U	0.454 UJ	0.51 U
Aroclor-1242	UG/L	0.5 U		0.495 U	0.485 U	0.481 U		0.481 U	0.454 UJ	0.51 U
Aroclor-1248	UG/L	0.5 U		0.495 U	0.485 U	0.481 U		0.481 U	0.454 UJ	0.51 U
Aroclor-1254	UG/L	0.5 U		0.495 U	0.485 U	0.481 U		0.481 U	0.454 UJ	0.51 U
Aroclor-1260	UG/L	0.5 U		0.495 U	0.485 U	0.481 U		0.481 U	0.454 UJ	0.51 U
Metals										
Aluminum	UG/L	14.7 U		51.2 J	100 U	12200	14.7 U	14.7 U	14.7 U	146
Antimony	UG/L	6.52 J		10 U	10 U	5.08 U	6.9 J	7.4 J	5.16 J	10 U
Arsenic	UG/L	2.24 U		5 U	5 U	2.24 U	22.4 U	22.4 U	22.4 U	5 U
Barium	UG/L	37.1		46.9 J	121	47.9	61.8	63.3	62.4	74.3
Beryllium	UG/L	0.158 U		5 U	5 U	0.819	0.158 U	0.158 U	0.158 U	5 U
Cadmium	UG/L	0.313 U		5 U	5 U	0.313 U	0.313 U	0.313 U	0.313 U	5 U
Calcium	UG/L	218000		210000 J	164000	97800	174000	178000	178000	148000
Chromium	UG/L	0.503 U		5 U	5 U	4.58	0.503 U	0.503 U	0.503 U	0.82 J
Cobalt	UG/L	0.541 U		5 U	1.2 J	0.631 J	0.541 U	0.541 U	0.541 U	5 U
Copper	UG/L	1.39 U		5 U	5 U	5.3	1.39 U	1.44 J	1.41 J	5 U
Cyanide	UG/L									
Iron	UG/L	30.2 J		39.1 J	83.7	4470	14.4 J	24.7 J	21.1 J	148
Lead	UG/L	1.72 U		5 U	2.1 J	7.3	1.72 U	1.72 U	1.72 U	5 U
Magnesium	UG/L	28800		28400	20500	12500	21500	21700	21600	20100
Manganese	UG/L	46.5		16.1 J	2680	76.7	0.296 U	0.296 U	0.296 U	8.1
Mercury	UG/L	0.047 U	0.2 U	0.2 U	0.2 U	0.069 J	0.049 J	0.047 U	0.047 U	0.2 U
Nickel	UG/L	0.69 U		1.7 J	6.6	4.79	0.69 U	0.69 U	0.69 U	0.74 J
Potassium	UG/L	765 J		842 J	1150	950 J	1070 J	1090 J	1090 J	1050
Selenium	UG/L	2.81 U		5 R	5 U	2.81 U	2.81 U	2.81 U	2.81 U	5 R
Silver	UG/L	0.835 U		5 U	5 U	0.835 U	0.835 U	0.835 U	0.835 U	5 U
Sodium	UG/L	6720		7920 J	16000	62200	42100	42500	41600	48200
Thallium	UG/L	10 U		20 U	20 U	10 U	10 U	10 U	10 U	20 U
Vanadium	UG/L	0.606 U		5 U	5 U	3 J	0.606 U	0.606 U	0.606 U	5 U
Zinc	UG/L	2.26 J		1.6 J	83.4	41.7	8.1	8.48	8.5	9.2

Note(s):

(1) - Sample/Duplicate pair are presented as individual samples in this table. Statistical information used Sample Duplicate pairs as a single entity and averaged result values were used in risk assessment analysis.

U = compound was not detected

J = the reported value is an estimated concentration

UJ = the compound was not detected; the associated reporting limit is approximate

R = the data was rejected in the data validating process

NJ = compound was "tentatively identified" and the associated numerical value is approximate

APPENDIX E

RISK ASSESSMENT DATA AND RESULTS

Appendix E

Human Health Risk Assessment Uncertainty Analysis Risk Calculation Tables

- 1A Occurrence, Distribution, and Selection of Chemicals of Potential Concern in SEAD-59 Soil
- 1B Occurrence, Distribution, and Selection of Chemicals of Potential Concern in SEAD-59 Groundwater
- 1C Occurrence, Distribution, and Selection of Chemicals of Potential Concern in SEAD-59 Stockpile Soil
- 1D Occurrence, Distribution, and Selection of Chemicals of Potential Concern in SEAD-71 Soil (Fenced Area Excluded)
- 1E Occurrence, Distribution, and Selection of Chemicals of Potential Concern in SEAD-71 Groundwater (Fenced Area Excluded)
- 2A SEAD-59 Surface Soil – Soil Exposure Point Concentration Summary
- 2B SEAD-59 Surface and Subsurface Soil – Soil Exposure Point Concentration Summary
- 2C SEAD-59 Surface Soil – Ambient Air Exposure Point Concentrations
- 2D SEAD-59 Surface and Subsurface Soil – Ambient Air Exposure Point Concentrations
- 2E SEAD-59 Groundwater Exposure Point Concentration Summary
- 2F SEAD-59 Stockpile Soil – Soil Exposure Point Concentration Summary
- 2G SEAD-59 Stockpile Soil – Ambient Air Exposure Point Concentrations
- 2H SEAD-71 Surface Soil (Fenced Area Excluded) – Soil Exposure Point Concentration Summary
- 2I SEAD-71 Surface and Subsurface Soil (Fenced Area Excluded) – Soil Exposure Point Concentration Summary
- 2J SEAD-71 Surface Soil (Fenced Area Excluded) – Ambient Air Exposure Point Concentrations
- 2K SEAD-71 Surface and Subsurface Soil (Fenced Area Excluded) – Ambient Air Exposure Point Concentrations
- 2L SEAD-71 Groundwater Exposure Point Concentration Summary
- 3 Exposure Factor Assumptions for Adolescent Trespasser

Appendix E (Continued)

- 4A Non-Cancer Toxicity Data – Oral/Dermal
- 4B Non-Cancer Toxicity Data – Inhalation
- 4C Cancer Toxicity Data – Oral/Dermal
- 4D Cancer Toxicity Data – Inhalation
- 5A Calculation of Intake and Risk from the Ingestion of SEAD-59 Soil – RME
- 5B Calculation of Intake and Risk from the Ingestion of SEAD-59 Stockpile Soil – RME
- 5C Calculation of Intake and Risk from the Ingestion of SEAD-71 Soil (Fenced Area Excluded) – RME
- 6A Calculation of Absorbed Dose and Risk from Dermal Contact to SEAD-59 Soil – RME
- 6B Calculation of Absorbed Dose and Risk from Dermal Contact to SEAD-59 Stockpile Soil – RME
- 6C Calculation of Absorbed Dose and Risk from Dermal Contact to SEAD-71 Soil (Fenced Area Excluded) – RME
- 7A Calculation of intake and Risk from Inhalation of SEAD-59 Dust in Ambient Air – RME
- 7B Calculation of intake and Risk from Inhalation of SEAD-59 Stockpile Dust in Ambient Air – RME
- 7C Calculation of intake and Risk from Inhalation of SEAD-71 Dust in Ambient Air (Fenced Area Excluded) – RME
- 8A Calculation of Absorbed Dose and Risk from Dermal Contact to SEAD-59 Groundwater – RME
- 8B Calculation of Absorbed Dose and Risk from Dermal Contact to SEAD-71 Groundwater – RME
- 9A Calculation of Intake and Risk from the Intake of SEAD-59 Groundwater – RME
- 9B Calculation of Intake and Risk from the Intake of SEAD-71 Groundwater – RME
- 10 Calculation of Blood Level Concentration – Industrial Worker Exposed to SEAD-59 Stockpile Soil
- 11 Calculation of Blood Level Concentration – Construction Worker Exposed to SEAD-59 Stockpile Soil
- 12 Calculation of Blood Lead Level Concentration – Child Exposed to SEAD-59 Stockpile Soil

Appendix E (Continued)

- 13 Calculation of Blood Level Concentration – Industrial Construction Worker Exposed to SEAD-71 Surface Soil
- 14 Calculation of Blood Level Concentration – Construction Worker Exposed to SEAD-71 Surface and Subsurface Soil
- 15 Calculation of Blood Lead Level Concentration – Child Exposed to SEAD-71 Soil and Groundwater

**APPENDIX E TABLE 1A
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 SITE SOIL
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity**

Scenario Time frame:	Cuurent/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	Potential ARAR/TBC Source	ARAR / TBC Value ⁵ (mg/kg)	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
VOC															
75-35-4	1,1-Dichloroethene	0.001	J	0.008	J	CL-59-01-WS5	3 / 198	0.004 - 0.12	0.008		12	NYSDEC TAGM 4046	0.4	NO	BSL
67-64-1	Acetone	0.004	J	0.55	NJ	CL-59-01-WE4	47 / 198	0.004 - 0.12	0.55		1,400	NYSDEC TAGM 4046	0.2	NO	BSL
71-43-2	Benzene	0.001	J	0.0058	J	SB59-17	8 / 198	0.004 - 0.12	0.0058		0.64	NYSDEC TAGM 4046	0.06	NO	BSL
75-15-0	Carbon disulfide	0.001	J	0.004	J	SB59-4	6 / 198	0.004 - 0.12	0.004		36	NYSDEC TAGM 4046	2.7	NO	BSL
110-82-7	Cyclohexane	0.001	J	0.003	J	WS-59-04-010-5	8 / 98	0.004 - 0.023	0.003		14			NO	BSL
100-41-4	Ethyl benzene	0.0023	J	0.11	J	TP59-13A-1	4 / 198	0.004 - 0.055	0.11		400	NYSDEC TAGM 4046	5.5	NO	BSL
	Meta/Para Xylene	0.0051	J	0.0084	J	WS-59-03-001-2	3 / 70	0.0054 - 0.006	0.0084		27			NO	BSL
79-20-9	Methyl Acetate	0.001	J	0.002	J	CL-59-OTHERB-WE1	3 / 98	0.004 - 0.023	0.002		2,200			NO	BSL
74-87-3	Methyl chloride	0.003	J	0.003	J	TP59-5	1 / 128	0.004 - 0.12	0.003		4.7			NO	BSL
108-87-2	Methyl cyclohexane	0.001	J	0.005	J	WS-59-04-010-5	10 / 98	0.004 - 0.023	0.005		260			NO	BSL
78-93-3	Methyl ethyl ketone	0.002	J	0.19	J	CL-59-01-WE4	25 / 198	0.004 - 0.12	0.19		2,200	NYSDEC TAGM 4046	0.3	NO	BSL
108-10-1	Methyl isobutyl ketone	0.0019	J	0.0019	J	CL-59-OTHERC-WS1	1 / 198	0.004 - 0.12	0.0019		530	NYSDEC TAGM 4046	1	NO	BSL
75-09-2	Methylene chloride	0.001	J	0.0049	J	WS-59-01-018-1	37 / 199	0.004 - 0.12	0.0049		9.1	NYSDEC TAGM 4046	0.1	NO	BSL
95-47-6	Ortho Xylene	0.0011	NJ	0.0036	J	FD-59-WS-01/WS-59-03-001-3	3 / 70	0.0054 - 0.006	0.0036		27			NO	BSL
127-18-4	Tetrachloroethene	0.002	J	0.0064		WS-59-01-017-1	5 / 198	0.004 - 0.12	0.0064		0.48	NYSDEC TAGM 4046	1.4	NO	BSL
108-88-3	Toluene	0.0009	J	0.011	J	SB59-17	17 / 198	0.004 - 0.12	0.011		520	NYSDEC TAGM 4046	1.5	NO	BSL
	Total BTEX	0.0025		0.0095		TP59-13C-1	16 / 18	1.25 - 1.25	0.0095					NO	ICE
133-02-07	Total Xylenes	0.001	J	0.073	J	SB59-17	8 / 123	0.004 - 0.12	0.073		27	NYSDEC TAGM 4046	1.2	NO	BSL
79-01-6	Trichloroethene	0.001	J	0.0045	J	WS-59-01-006-4	8 / 198	0.004 - 0.12	0.0045		0.053	NYSDEC TAGM 4046	0.7	NO	BSL
75-69-4	Trichlorofluoromethane	0.006	J	0.006	J	WS-59-04-010-6	1 / 98	0.004 - 0.023	0.006		39			NO	BSL
SVOC															
92-52-4	1,1'-Biphenyl	0.059	NJ	0.15	J	FD-59-W5-6/WS-59-01-012-1	2 / 99	0.35 - 1.9	0.15		300			NO	BSL
91-57-6	2-Methylnaphthalene	0.01	J	10		TP59-13A-1	46 / 199	0.066 - 4	10		31	NYSDEC TAGM 4046	36.4	NO	BSL
106-47-8	4-Chloroaniline	0.13	J	1.2		CL-59-01-WN2	2 / 199	0.066 - 8	1.2		24	NYSDEC TAGM 4046	0.22	NO	BSL
106-44-5	4-Methylphenol	0.024	NJ	0.15	J	CL-59-01-WN5	7 / 199	0.066 - 8	0.15		31	NYSDEC TAGM 4046	0.9	NO	BSL
83-32-9	Acenaphthene	0.0061	J	2.68	J	FD-59-WS-07/WS-59-01-015-13	54 / 199	0.066 - 4	2.68		370	NYSDEC TAGM 4046	50	NO	BSL
208-96-8	Acenaphthylene	0.0079	J	1.7	J	WS-59-01-006-11	76 / 199	0.066 - 8	1.7			NYSDEC TAGM 4046	41	NO	NSV
120-12-7	Anthracene	0.0084	J	4.395	J	FD-59-WS-07/WS-59-01-015-13	87 / 199	0.066 - 8	4.395		2,200	NYSDEC TAGM 4046	50	NO	BSL
1912-24-9	Atrazine	0.12	J	0.12	J	CL-59-01-WN2	1 / 99	0.35 - 1.9	0.12		0.22			NO	BSL
100-52-7	Benzaldehyde	0.05	J	0.05	J	CL-59-01-WE4	1 / 99	0.35 - 1.9	0.05		610			NO	BSL

**APPENDIX E TABLE 1A
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 SITE SOIL
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Scenario Time frame:	Cuurent/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	Potential ARAR/TBC Source	ARAR / TBC Value ⁵ (mg/kg)	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
56-55-3	Benzo(a)anthracene	0.0038	J	8.9	J	FD-59-WS-07/WS-59-01-015-13	104 / 199	0.069 - 8	8.9		0.62	NYSDEC TAGM 4046	0.224	YES	ASL
50-32-8	Benzo(a)pyrene	0.0036	J	8.05	J	FD-59-WS-07/WS-59-01-015-13	105 / 199	0.069 - 8	8.05		0.062	NYSDEC TAGM 4046	0.061	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.0038	J	6.8	J	FD-59-WS-07/WS-59-01-015-13	108 / 199	0.078 - 8	6.8		0.62	NYSDEC TAGM 4046	1.1	YES	ASL
191-24-2	Benzo(ghi)perylene	0.0063	J	5.2	J	FD-59-WS-07/WS-59-01-015-13	95 / 199	0.069 - 8	5.2			NYSDEC TAGM 4046	50	NO	NSV
207-08-9	Benzo(k)fluoranthene	0.0037	J	7.35	J	FD-59-WS-07/WS-59-01-015-13	101 / 199	0.069 - 8	7.35		6.2	NYSDEC TAGM 4046	1.1	YES	ASL
117-81-7	Bis(2-Ethylhexyl)phthalate	0.007	J	0.52	J	SB59-1	49 / 199	0.35 - 8	0.52		35	NYSDEC TAGM 4046	50	NO	BSL
85-68-7	Butylbenzylphthalate	0.0042	J	1	J	TP59-15-5	2 / 199	0.066 - 8	1		1,200	NYSDEC TAGM 4046	50	NO	BSL
86-74-8	Carbazole	0.0066	J	1.5	J	TP59-2	31 / 129	0.069 - 8	1.5		24			NO	BSL
218-01-9	Chrysene	0.0048	J	8.9	J	FD-59-WS-07/WS-59-01-015-13	106 / 199	0.069 - 8	8.9		62	NYSDEC TAGM 4046	0.4	YES	CSG
53-70-3	Dibenz(a,h)anthracene	0.0047	J	1.665	J	FD-59-WS-07/WS-59-01-015-13	76 / 199	0.066 - 8	1.665		0.062	NYSDEC TAGM 4046	0.014	YES	ASL
132-64-9	Dibenzofuran	0.0056	J	1.875	J	FD-59-WS-07/WS-59-01-015-13	38 / 199	0.066 - 4	1.875		15	NYSDEC TAGM 4046	6.2	NO	BSL
84-66-2	Diethylphthalate	0.0053	J	0.012	J	SB59-9	9 / 199	0.078 - 8	0.012		4,900	NYSDEC TAGM 4046	7.1	NO	BSL
84-74-2	Di-n-butylphthalate	0.0048	J	0.49	J	SB59-1	13 / 199	0.076 - 8	0.49		610	NYSDEC TAGM 4046	8.1	NO	BSL
117-84-0	Di-n-octylphthalate	0.0056	J	0.011	J	SB59-8	2 / 199	0.066 - 8	0.011		240	NYSDEC TAGM 4046	50	NO	BSL
206-44-0	Fluoranthene	0.0048	J	23.5	J	FD-59-WS-07/WS-59-01-015-13	112 / 199	0.069 - 8	23.5		230	NYSDEC TAGM 4046	50	NO	BSL
86-73-7	Fluorene	0.0086	J	3	J	TP59-13A-1	60 / 199	0.066 - 4	3		270	NYSDEC TAGM 4046	50	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.006	J	4.95	J	FD-59-WS-07/WS-59-01-015-13	97 / 199	0.069 - 8	4.95		0.62	NYSDEC TAGM 4046	3.2	YES	ASL
91-20-3	Naphthalene	0.01	J	1.325	J	FD-59-WS-07/WS-59-01-015-13	44 / 199	0.066 - 8	1.325		5.6	NYSDEC TAGM 4046	13	NO	BSL
86-30-6	N-Nitrosodiphenylamine	0.1	J	0.1	J	CL-59-01-WN2	1 / 129	0.066 - 8	0.1		99			NO	BSL
85-01-8	Phenanthrene	0.0046	J	21.3	J	FD-59-WS-07/WS-59-01-015-13	107 / 199	0.069 - 0.46	21.3			NYSDEC TAGM 4046	50	NO	NSV
108-95-2	Phenol	0.017	J	0.017	J	TP59-6-2	1 / 199	0.066 - 8	0.017		1,800	NYSDEC TAGM 4046	0.03	NO	BSL

**APPENDIX E TABLE 1A
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 SITE SOIL
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity**

Scenario Time frame:	Cuurent/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	Potential ARAR/TBC Source	ARAR / TBC Value ⁵ (mg/kg)	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
129-00-0	Pyrene	0.0051	J	19.2	J	FD-59-WS-07/WS-59-01-015-13	114 / 198	0.069 - 8	19.2		230	NYSDEC TAGM 4046	50	NO	BSL
PCB															
11096-82-5	Aroclor-1260	0.077		0.079	NJ	CL-59-OTHERC-WE2	2 / 199	0.035 - 0.42	0.079		0.22	NYSDEC TAGM 4046	10	NO	BSL
Pesticides															
72-54-8	4,4'-DDD	0.0025	J	0.74	J	CL-59-01-WN2	55 / 199	0.0034 - 0.099	0.74		2.4	NYSDEC TAGM 4046	2.9	NO	BSL
72-55-9	4,4'-DDE	0.0018	J	2.6	J	CL-59-01-WN2	75 / 199	0.0034 - 0.099	2.6		1.7	NYSDEC TAGM 4046	2.1	YES	ASL
50-29-3	4,4'-DDT	0.0024	J	3.7	J	CL-59-01-WN2	66 / 199	0.0034 - 0.099	3.7		1.7	NYSDEC TAGM 4046	2.1	YES	ASL
309-00-2	Aldrin	0.0012	J	0.0012	J	SB59-2	1 / 199	0.0018 - 0.22	0.0012		0.029	NYSDEC TAGM 4046	0.041	NO	BSL
319-84-6	Alpha-BHC	0.009	J	0.0099	J	MW59-4	2 / 199	0.0018 - 0.22	0.0099		0.09	NYSDEC TAGM 4046	0.11	NO	BSL
5103-71-9	Alpha-Chlordane	0.0011	J	0.034	J	WS-59-04-010-10	9 / 199	0.0018 - 0.22	0.034		1.6			NO	BSL
319-85-7	Beta-BHC	0.0024	J	0.0036	J	SB59-8	6 / 199	0.0018 - 0.22	0.0036		0.32	NYSDEC TAGM 4046	0.2	NO	BSL
319-86-8	Delta-BHC	0.00095	J	0.0014	J	SB59-8	4 / 199	0.0018 - 0.22	0.0014		0.09	NYSDEC TAGM 4046	0.3	NO	BSL
60-57-1	Dieldrin	0.0018	J	0.0018	J	TP59-8-2	1 / 199	0.0034 - 0.43	0.0018		0.030	NYSDEC TAGM 4046	0.044	NO	BSL
959-98-8	Endosulfan I	0.0041	J	0.016	J	SB59-2	2 / 199	0.0018 - 0.22	0.016		37	NYSDEC TAGM 4046	0.9	NO	BSL
33213-65-9	Endosulfan II	0.0071	J	0.0071	J	TP59-2	1 / 199	0.0034 - 0.43	0.0071		37	NYSDEC TAGM 4046	0.9	NO	BSL
1031-07-8	Endosulfan sulfate	0.0043	J	0.0062	J	CL-59-OTHERC-WE2	2 / 199	0.0034 - 0.43	0.0062		37	NYSDEC TAGM 4046	1	NO	BSL
72-20-8	Endrin	0.0038	NJ	0.016	NJ	CL-59-04-FO1	4 / 199	0.0034 - 0.43	0.016		1.8	NYSDEC TAGM 4046	0.1	NO	BSL
7421-93-4	Endrin aldehyde	0.0035	J	0.0063	J	TP59-2	5 / 199	0.0034 - 0.43	0.0063		1.8			NO	BSL
53494-70-5	Endrin ketone	0.0033	J	0.038	J	WS-59-01-011-3	5 / 199	0.0034 - 0.43	0.038		1.8			NO	BSL
5103-74-2	Gamma-Chlordane	0.001	J	0.024	J	WS-59-04-010-10	16 / 199	0.0018 - 0.22	0.024		1.6	NYSDEC TAGM 4046	0.54	NO	BSL
1024-57-3	Heptachlor epoxide	0.001	J	0.0057	J	TP59-6-2	5 / 199	0.0018 - 0.22	0.0057		0.053	NYSDEC TAGM 4046	0.02	NO	BSL
Metals															
7429-90-5	Aluminum	4,200		18,300	J	CL-59-01-F12	199 / 199		18,300	20,500	7,600	NYSDEC TAGM 4046	19,300	YES	ASL
7440-36-0	Antimony	0.24	J	424	J	SB59-4	107 / 199	0.14 - 3.62	424	6.55	3.1	NYSDEC TAGM 4046	5.9	YES	ASL
7440-38-2	Arsenic	2.3	J	32.2	J	CL-59-01-WN2	199 / 199		32.2	21.5	0.39	NYSDEC TAGM 4046	8.2	YES	ASL
7440-39-3	Barium	21.1	J	304	J	SB59-4	199 / 199		304	159	540	NYSDEC TAGM 4046	300	NO	BSL
7440-41-7	Beryllium	0.11	J	2.6	J	CL-59-01-WN2	197 / 199	0.05 - 0.045	2.6	1.4	15	NYSDEC TAGM 4046	1.1	NO	BSL
7440-43-9	Cadmium	0.1	J	3.2	J	SB59-4	158 / 199	0.07 - 0.15	3.2	2.9	3.7	NYSDEC TAGM 4046	2.3	NO	BSL
7440-70-2	Calcium	1,350	J	214,000	J	SB59-4	199 / 199		214,000	293,000	2,500,000	NYSDEC TAGM 4046	121,000	NO	NUT
7440-47-3	Chromium	7.4	J	39.3	J	CL-59-01-WN2	199 / 199		39.3	32.7	210	NYSDEC TAGM 4046	29.6	NO	BSL
7440-48-4	Cobalt	3.8	J	47.8	J	CL-59-01-WN2	199 / 199		47.8	29.1	900	NYSDEC TAGM 4046	30	NO	BSL
7440-50-8	Copper	9.8	J	305	J	WS-59-01-013-5	199 / 199		305	62.8	310	NYSDEC TAGM 4046	33	NO	BSL
7439-89-6	Iron	6,540	J	64,000	J	CL-59-01-WN2	199 / 199		64,000	38,600	2,300	NYSDEC TAGM 4046	36,500	YES	ASL
7439-92-1	Lead	4.1	J	164	J	WS-59-01-006-8	199 / 199		164	266	400	NYSDEC TAGM 4046	24.8	NO	BSL
7439-95-4	Magnesium	2,530		34,400	J	SB59-5	199 / 199		34,400	29,100	400,000	NYSDEC TAGM 4046	21,500	NO	NUT

**APPENDIX E TABLE 1A
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 SITE SOIL
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity**

Scenario Time frame:	Cuurent/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	Potential ARAR/TBC Source	ARAR / TBC Value ⁵ (mg/kg)	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
7439-96-5	Manganese	156	J	1,290	J	CL-59-01-WS6	199 / 199		1,290	2,380	180	NYSDEC TAGM 4046	1,060	YES	ASL
7439-97-6	Mercury	0.02	J	0.95	J	WS-59-04-010-6	179 / 198	0.02 - 0.03	0.95	0.13	2.3	NYSDEC TAGM 4046	0.1	NO	BSL
7440-02-0	Nickel	9	J	88.3	J	CL-59-01-WN2	199 / 199		88.3	62.3	160	NYSDEC TAGM 4046	49	NO	BSL
7440-09-7	Potassium	539	J	2,520	J	SB59-1	199 / 199		2,520	3,160	5,000,000	NYSDEC TAGM 4046	2,380	NO	NUT
7782-49-2	Selenium	0.28	J	1.5		SB59-21	21 / 199	0.12 - 0.58	1.5	1.7	39	NYSDEC TAGM 4046	2	NO	BSL
7440-22-4	Silver	0.11	J	2.9		CL-59-OTHERA-WN1	88 / 199	0.08 - 0.31	2.9	0.87	39	NYSDEC TAGM 4046	0.75	NO	BSL
7440-23-5	Sodium	33.3	J	4,060	J	CL-59-01-WE5	194 / 199	83.1 - 57.5	4,060	269	1,125,000	NYSDEC TAGM 4046	172	NO	NUT
7440-28-0	Thallium	0.11		1.8	J	CL-59-03-WS3	51 / 199	0.18 - 0.75	1.8	1.2	0.52	NYSDEC TAGM 4046	0.7	YES	ASL
7440-62-2	Vanadium	8.4	J	28.5	J	CL-59-01-F12	199 / 199		28.5	32.7	7.8	NYSDEC TAGM 4046	150	YES	ASL
7440-66-6	Zinc	19.6	J	341		SB59-4	199 / 199		341	126	2,300	NYSDEC TAGM 4046	110	NO	BSL

Notes:

- Field duplicates were treated as discrete samples. Laboratory duplicates were not included in the assessment. Range of reporting limits were presented for nondetects only.
- The maximum detected concentration was used for screening.
- Background value is the maximum Seneca background concentration.
- EPA Region 9 Preliminary Remediation Goals (PRGs) for residential soil. On-line resources available at <http://www.epa.gov/region09/waste/sfund/prg/files/prgtable2004.xls>. Last updated October 2004.
 Region 9 PRGs were derived based on Direct contact exposure (ingestion and dermal contact) and a target Cancer Risk of 1E-6 or a Target Hazard Quotient of 1.
 EPA Region III Risk Based Concentration (RBC) for residential soil was used as screening value for 2-methylnaphthalene as no Region 9 PRG is available. EPA Region III RBC, available on-line at <http://www.epa.gov/reg3hwm/risk/human/rbc/rbc1004.XLS>, was calculated based on soil ingestion exposure and a target cancer risk of 1E-6 and a target hazard quotient of 1.
 The PRGs or RBCs corresponding to a hazard quotient of 1 were adjusted by multiplying 0.1 before they were used as screening values.
 PRG for xylenes was used as screening value for meta/para xylenes and ortho xylene.
 PRG for Aroclor 1254 was used as screening value for Aroclor 1260.
 PRG for gamma-chlordane was used as screening value for alpha-chlordane.
 PRG for alpha-BHC was used as screening value for delta-BHC.
 PRG for endosulfan was used as screening value for endosulfan I, endosulfan II, and endosulfan sulfate.
 PRG for endrin was used as screening value for endrin aldehyde and endrin ketone.
 Screening values for calcium, magnesium, potassium, and sodium were calculated based on an assumption of 200 mg/day soil ingestion and recommended dietary allowances and adequate intakes for 1-3 yr children (500 mg/day and 80 mg/day for calcium and magnesium) and minimum requirements for 1 yr children (225 mg/day and 1000 mg/day for sodium and potassium) from Marilyn Wright (2001) Dietary Reference Intakes.
 PRG for total chromium (1:6 ratio Cr VI: Cr III) was used as screening value for chromium.
 PRG for nickel (soluble salts) was used as screening value for nickel.
- Potential ARAR/TBC values are from NYSDEC Technical and Administrative Guidance Memorandum #4046 (on-line resources available at <http://www.dec.state.ny.us/website/der/tagms/prtg4046.html>)
- Rationale codes
 Selection Reason: Above Screening Levels (ASL)
 Chemicals in the Same Group were retained as COPC (CSG)
 Deletion Reason: Essential Nutrient (NUT)
 Below Screening Level (BSL)
 No Screening Value or Toxicity Value (NSV)

APPENDIX E TABLE 1A
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 SITE SOIL
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Scenario Time frame:	Cuurent/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	Potential ARAR/TBC Source	ARAR / TBC Value ⁵ (mg/kg)	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
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Individual Chemicals Evaluated (ICE)

Definitions:

COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

Q = Qualifier

J = Estimated Value

NJ = Presence of the analyte has been "tentatively identified" and the associated numerical value represents its approximate concentration.

**APPENDIX E TABLE 1B
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 SITE GROUNDWATER
SEAD-59 AND SEAD-71 PHASE II RI
SENECA ARMY DEPOT ACTIVITY**

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Point:	Aquifer -- Tap Water

CAS Number	Chemical	Minimum Detected Concentration ¹ (ug/L)	Q	Maximum Detected Concentration ¹ (ug/L)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (ug/L)	Concentration Used for Screening ² (ug/L)	Background Value ³ (ug/L)	Screening Value ⁴ (ug/L)	Potential ARAR /TBC Value (ug/L)	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁵
VOC															
71-55-6	1,1,1-Trichloroethane	0.45	J	0.45	J	MW59-3	1 / 13	0.5 - 10	0.45		320	5	GA	NO	BSL
108-88-3	Toluene	0.27	J	0.27	J	MW59-3	1 / 13	0.5 - 10	0.27		72	5	GA	NO	BSL
SVOC															
84-74-2	Di-n-butylphthalate	2.3	J	2.3	J	MW59-7	1 / 13	9.7 - 11	2.3		360	50	GA	NO	BSL
108-95-2	Phenol	1	J	2	J	MW59-2	2 / 13	9.7 - 10.8	2		1,100	1	GA	NO	BSL
Pesticides															
72-55-9	4,4'-DDE	0.008	J	0.008	J	MW59-1	2 / 10	0.04 - 0.04	0.008		0.20	0.2	GA	NO	BSL
50-29-3	4,4'-DDT	0.042	J	0.042	J	MW59-3	1 / 10	0.04 - 0.04	0.042		0.20	0.2	GA	NO	BSL
Metals															
7429-90-5	Aluminum	26.8	J	3,250		MW59-6	12 / 13	14.7 - 14.7	3,250	2,730	3,600	50	SEC	NO	BSL
7440-36-0	Antimony	5.49	J	8.6	J	MW59-3	4 / 13	0.99 - 10	8.6	8.2	1.5	3	GA	YES	ASL
7440-38-2	Arsenic	2	J	2	J	MW59-1	1 / 13	2 - 22.4	2	1.7	0.045	10	MCL	YES	ASL
7440-39-3	Barium	54.7		132		MW59-2	13 / 13		132	78.2	260	1,000	GA	NO	BSL
7440-43-9	Cadmium	0.335	J	0.9	J	MW59-3	4 / 13	0.1 - 5	0.9	0.5	1.8	5	GA	NO	BSL
7440-70-2	Calcium	102,000		169,000		MW59-3	13 / 13		169,000	116,000	250,000			NO	NUT
7440-47-3	Chromium	0.53	J	3.6	J	MW59-3	8 / 13	0.5 - 5	3.6	4.7	11	50	GA	NO	BSL
7440-48-4	Cobalt	0.68	J	3.5	J	MW59-1	7 / 13	0.54 - 5	3.5	3.7	73			NO	BSL
7440-50-8	Copper	1.42	J	4.65	J	MW59-6	6 / 13	0.5 - 5	4.65	3.3	150	200	GA	NO	BSL
7439-89-6	Iron	60.9	J	3,940	J	MW59-3	13 / 13		3,940	4,480	1,100	300	GA	YES	ASL
7439-92-1	Lead	1.5	J	4.4	J	MW59-7	6 / 13	0.9 - 5	4.4	2.5	15	15	MCL	NO	BSL
7439-95-4	Magnesium	12,800		29,200		MW59-2	13 / 13		29,200	28,600	40,000			NO	NUT
7439-96-5	Manganese	9.11		780		MW59-1	13 / 13		780	224	88	50	SEC	YES	ASL
7439-97-6	Mercury	0.05	J	0.06	J	MW59-3	2 / 13	0.03 - 0.2	0.06	0.04	1.1	0.7	GA	NO	BSL
7440-02-0	Nickel	0.812	J	7.6	J	MW59-1	10 / 13	0.69 - 5	7.6	7.3	73	100	GA	NO	BSL
7440-09-7	Potassium	817	J	4150	J	MW59-3	13 / 13		4,150	3,830	700,000			NO	NUT
7782-49-2	Selenium	4.2	J	4.2	J	MW59-8	1 / 10	1.7 - 5	4.2	1.5	18	10	GA	NO	BSL
7440-23-5	Sodium	22,000		304,000		MW59-3	13 / 13		304,000	14,600	1,200,000	20,000	GA	NO	NUT
7440-28-0	Thallium	2.8	J	4	J	MW59-2	2 / 13	1.6 - 20	4	1.5	0.24	2	MCL	YES	ASL
7440-62-2	Vanadium	1.1	J	5.26		MW59-6	5 / 13	0.61 - 5	5.26	5.2	3.6			YES	ASL
7440-66-6	Zinc	1.5	J	26.2		MW59-3	13 / 13		26.2	23.1	1,100	5,000	SEC	NO	BSL

**APPENDIX E TABLE 1B
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 SITE GROUNDWATER
 SEAD-59 AND SEAD-71 PHASE II RI
 SENECA ARMY DEPOT ACTIVITY**

Notes:

1. Field duplicates were averaged and regarded as one sample entry. Laboratory duplicates were not included in the assessment. Range of reporting limits were presented for nondetects only.
2. The maximum detected concentration was used for screening.
3. Background values are average concentrations of background sample results.
4. EPA Region 9 Preliminary Remediation Goals (PRGs) for tap water. On-line resources available at <http://www.epa.gov/region09/waste/sfund/prg/files/prgtable2004.xls>. Last updated October 2004.
 Region 9 PRGs were derived based on ingestion and inhalation exposure and a target Cancer Risk of 1E-6 or a Target Hazard Quotient of 1. The PRGs corresponding to a hazard quotient of 1 was adjusted by multiplying 0.1 before they were used as screening values.
 MCL for lead was used as screening value for lead as no Region 9 PRG is available.
 PRG for endrin was used as screening value for endrin ketone.
 Screening values for calcium, magnesium, potassium, and sodium were calculated based on an assumption of 2L/day water intake and recommended dietary allowances and adequate intakes for 1-3 yr children (500 mg/day and 80 mg/day for calcium and magnesium) and minimum requirements for 2-5 yr children (1400 mg/day for potassium) from Marilyn Wright (2001) Dietary Reference Intakes.
 For sodium, an upper limit intake of 2,400 mg/day (<http://www.mealformation.com/dailyval.html>) was used
 PRG for chromium (VI) was used as screening value for chromium.
5. Rationale codes

Selection Reason:	Above Screening Levels (ASL)
Deletion Reason:	Essential Nutrient (NUT)
	Below Screening Level (BSL)

Definitions:

COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 MCL = Federal Maximum Contaminant Level
 GA = New York State Class GA Groundwater Standard (TOGS 1.1.1, June 1998 with updates)
 SEC = USEPA Secondary Drinking Water Regulation, non-enforceable (EPA 822-B-00-001, Summer 2000)
 Q = Qualifier
 J = Estimated Value

**APPENDIX E TABLE 1C
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 STOCKPILE SOIL
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Scenario Time frame:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59 Stockpile

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	ARAR /TBC Value ⁵ (mg/kg)	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
VOC															
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	0.0015	J	0.0015	J	WS-59-01-016-13	1 / 53	0.005 - 0.006	0.0015		5,600		NYSDEC TAGM 4046	NO	BSL
75-35-4	1,1-Dichloroethene	0.001	J	0.001	J	WS-59-01-011-1	1 / 53	0.005 - 0.006	0.001		12	0.4	NYSDEC TAGM 4046	NO	BSL
67-64-1	Acetone	0.0048	J	0.069	NJ	WS-59-01-012-2	13 / 53	0.005 - 0.025	0.069		400	0.2	NYSDEC TAGM 4046	NO	BSL
	Meta/Para Xylene	0.0022	J	0.0023	J	WS-59-01-007-13	2 / 48	0.0055 - 0.006	0.0023		27		NYSDEC TAGM 4046	NO	BSL
78-93-3	Methyl ethyl ketone	0.0026	J	0.007	J	WS-59-01-012-2	5 / 53	0.005 - 0.012	0.007		2,200			NO	BSL
75-09-2	Methylene chloride	0.0021	J	0.0021	J	FD-59-WS-03/WS-59-01-006-12	1 / 53	0.005 - 0.006	0.0021		9.1	0.1	NYSDEC TAGM 4046	NO	BSL
95-47-6	Ortho Xylene	0.001	J	0.0019	J	WS-59-01-016-10	5 / 48	0.0055 - 0.006	0.0019		27			NO	BSL
127-18-4	Tetrachloroethene	0.0053	J	0.0067	J	WS-59-01-016-20	3 / 53	0.005 - 0.006	0.0067		0.48	1.4	NYSDEC TAGM 4046	NO	BSL
1330-20-7	Total Xylenes	0.003	J	0.003	J	WS-59-01-011-1	1 / 5	0.005 - 0.006	0.003		27			NO	BSL
79-01-6	Trichloroethene	0.0011	J	0.0028	J	FD-59-WS-03/WS-59-01-006-12	4 / 53	0.005 - 0.006	0.0028		0.053	0.7	NYSDEC TAGM 4046	NO	BSL
SVOC															
92-52-4	1,1'-Biphenyl	0.059	J	0.059	J	WS-59-01-012-2	1 / 5	0.37 - 1.9	0.059		300		NYSDEC TAGM 4046	NO	BSL
91-57-6	2-Methylnaphthalene	0.039	J	1.2	J	WS-59-01-007-1	27 / 53	0.37 - 3.8	1.2		31			NO	BSL
83-32-9	Acenaphthene	0.046	J	2.4	J	WS-59-01-016-9	46 / 53	0.37 - 1.9	2.4		370	50	NYSDEC TAGM 4046	NO	BSL
208-96-8	Acenaphthylene	0.097	J	3.5	J	WS-59-01-007-14	52 / 53	0.37 - 0.37	3.5			41	NYSDEC TAGM 4046	NO	NSV
120-12-7	Anthracene	0.11	J	6.6	J	WS-59-01-007-14	53 / 53		6.6		2,200	50	NYSDEC TAGM 4046	NO	BSL
56-55-3	Benzo(a)anthracene	0.086	NJ	14	J	WS-59-01-011-7	53 / 53		14		0.62	0.224	NYSDEC TAGM 4046	YES	ASL
50-32-8	Benzo(a)pyrene	0.085	J	16	J	WS-59-01-011-7	53 / 53		16		0.062	0.061	NYSDEC TAGM 4046	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.11	J	11	J	WS-59-01-011-7	53 / 53		11		0.62	1.1	NYSDEC TAGM 4046	YES	ASL
191-24-2	Benzo(ghi)perylene	0.052	J	8	J	WS-59-01-011-7	53 / 53		8			50	NYSDEC TAGM 4046	NO	NSV
207-08-9	Benzo(k)fluoranthene	0.048	J	13	J	WS-59-01-011-7	53 / 53		13		6.2	1.1	NYSDEC TAGM 4046	YES	ASL
117-81-7	Bis(2-Ethylhexyl)phthal	0.097	J	0.13	NJ	WS-59-01-012-2	3 / 53	0.38 - 3.8	0.13		35	50	NYSDEC TAGM 4046	NO	BSL
86-74-8	Carbazole	0.042	J	1.1	J	WS-59-01-011-1	4 / 5	0.37 - 0.37	1.1		24			NO	BSL
218-01-9	Chrysene	0.087	J	13	J	WS-59-01-007-14	53 / 53		13		62	0.4	NYSDEC TAGM 4046	YES	CSG
53-70-3	Dibenz(a,h)anthracene	0.073	J	2.9	J	WS-59-01-012-3	52 / 53	0.37 - 0.37	2.9		0.062	0.014	NYSDEC TAGM 4046	YES	ASL
132-64-9	Dibenzofuran	0.19	J	1.3	J	WS-59-01-016-9	33 / 53	0.37 - 3.8	1.3		15	6.2	NYSDEC TAGM 4046	NO	BSL
206-44-0	Fluoranthene	0.17	J	29	J	WS-59-01-007-14	53 / 53		29		230	50	NYSDEC TAGM 4046	NO	BSL
86-73-7	Fluorene	0.051	NJ	3.1	J	WS-59-01-016-9	47 / 53	0.37 - 1.9	3.1		270	50	NYSDEC TAGM 4046	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.055	J	8	J	WS-59-01-011-7	53 / 53		8		0.62	3.2	NYSDEC TAGM 4046	YES	ASL
91-20-3	Naphthalene	0.046	J	1.2	J	WS-59-01-007-13	33 / 53	0.37 - 3.8	1.2		5.6	13	NYSDEC TAGM 4046	NO	BSL

**APPENDIX E TABLE 1C
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 STOCKPILE SOIL
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity**

Scenario Time frame:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59 Stockpile

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	ARAR /TBC Value ⁵ (mg/kg)	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
87-86-5	Pentachlorophenol	0.66	J	0.66	J	WS-59-01-014-5	1 / 53	0.93 - 20	0.66		3.0	1	NYSDEC TAGM 4046	NO	BSL
85-01-8	Phenanthrene	0.12	J	17		WS-59-01-007-14	53 / 53		17			50	NYSDEC TAGM 4046	NO	NSV
129-00-0	Pyrene	0.16	J	22		WS-59-01-012-3	53 / 53		22		230	50	NYSDEC TAGM 4046	NO	BSL
Pesticide															
72-54-8	4,4'-DDD	0.006		0.45		WS-59-01-015-14	33 / 53	0.019 - 0.098	0.45		2.4	2.9	NYSDEC TAGM 4046	NO	BSL
72-55-9	4,4'-DDE	0.0024	J	0.23		WS-59-01-006-9	33 / 53	0.018 - 0.098	0.23		1.7	2.1	NYSDEC TAGM 4046	NO	BSL
50-29-3	4,4'-DDT	0.0061	J	0.52		WS-59-01-015-14	37 / 53	0.019 - 0.098	0.52		1.7	2.1	NYSDEC TAGM 4046	NO	BSL
319-84-6	Alpha-BHC	0.0044		0.0044		WS-59-01-011-2	1 / 53	0.0019 - 0.051	0.0044		0.09	0.11	NYSDEC TAGM 4046	NO	BSL
5103-71-9	Alpha-Chlordane	0.0034		0.027	J	WS-59-01-011-8	6 / 53	0.002 - 0.051	0.027		1.6			NO	BSL
319-85-7	Beta-BHC	0.013	NJ	0.013	NJ	WS-59-01-014-5	1 / 53	0.0019 - 0.051	0.013		0.32	0.2	NYSDEC TAGM 4046	NO	BSL
53494-70-5	Endrin ketone	0.015	J	0.015	J	WS-59-01-011-2	1 / 53	0.0037 - 0.098	0.015		1.8			NO	BSL
58-89-9	Gamma-Chlordane	0.0079		0.021	J	WS-59-01-005-5	5 / 53	0.0019 - 0.051	0.021		1.6	0.54	NYSDEC TAGM 4046	NO	BSL
Metals															
7429-90-5	Aluminum	6,830	J	13,400		WS-59-01-005-5	53 / 53		13,400	20,500	7,600	19,300	NYSDEC TAGM 4046	YES	ASL
7440-36-0	Antimony	0.96	J	43.9	J	WS-59-01-015-14	11 / 53	1.6 - 1.8	43.9	6.55	3.1	5.9	NYSDEC TAGM 4046	YES	ASL
7440-38-2	Arsenic	3.6	J	7.3	J	WS-59-01-014-5	53 / 53		7.3	21.5	0.39	8.2	NYSDEC TAGM 4046	YES	ASL
7440-39-3	Barium	53.6		135		WS-59-01-015-14	53 / 53		135	159	540	300	NYSDEC TAGM 4046	NO	BSL
7440-41-7	Beryllium	0.14	J	0.69		WS-59-01-005-4	53 / 53		0.69	1.4	15	1.1	NYSDEC TAGM 4046	NO	BSL
7440-43-9	Cadmium	0.29	J	1.2		WS-59-01-016-5	52 / 53	0.14 - 0.14	1.2	2.9	3.7	2.3	NYSDEC TAGM 4046	NO	BSL
7440-70-2	Calcium	17,500		100,000		WS-59-01-016-20	53 / 53		100,000	293,000	2,500,000	121,000	NYSDEC TAGM 4046	NO	NUT
7440-47-3	Chromium	11.4	J	35		WS-59-01-016-18	53 / 53		35	32.7	210	29.6	NYSDEC TAGM 4046	NO	BSL
7440-48-4	Cobalt	6.1	J	13.9		WS-59-01-006-9	53 / 53		13.9	29.1	900	30	NYSDEC TAGM 4046	NO	BSL
7440-50-8	Copper	18.4	J	51.8	J	WS-59-01-016-18	53 / 53		51.8	62.8	310	33	NYSDEC TAGM 4046	NO	BSL
7439-89-6	Iron	14,900		26,500		WS-59-01-008-2	53 / 53		26,500	38,600	2,300	36,500	NYSDEC TAGM 4046	YES	ASL
7439-92-1	Lead	15.4	J	1,440	J	WS-59-01-016-10	53 / 53		1,440	266	400	24.8	NYSDEC TAGM 4046	YES	ASL
7439-95-4	Magnesium	4,890		26,600	J	WS-59-01-008-3	53 / 53		26,600	29,100	400,000	21,500	NYSDEC TAGM 4046	NO	NUT
7439-96-5	Manganese	321	J	1,220		WS-59-01-016-5	53 / 53		1,220	2,380	180	1,060	NYSDEC TAGM 4046	YES	ASL
7439-97-6	Mercury	0.04		0.52	J	WS-59-04-010-8	53 / 53		0.52	0.13	2.3	0.1	NYSDEC TAGM 4046	NO	BSL
7440-02-0	Nickel	19.1	J	56.6		WS-59-01-007-12	53 / 53		56.6	62.3	160	49	NYSDEC TAGM 4046	NO	BSL
7440-09-7	Potassium	781		1,580	J	WS-59-01-011-1	53 / 53		1,580	3,160	5,000,000	2,380	NYSDEC TAGM 4046	NO	NUT
7782-49-2	Selenium	0.69	J	0.72	J	WS-59-01-013-2	2 / 53	0.135 - 0.6	0.72	1.7	39	2	NYSDEC TAGM 4046	NO	BSL
7440-22-4	Silver	0.56		4.7		WS-59-01-016-18	9 / 53	0.055 - 0.305	4.7	0.87	39	0.75	NYSDEC TAGM 4046	NO	BSL
7440-23-5	Sodium	68.5		525		WS-59-01-016-4	53 / 53		525	269	1,125,000	172	NYSDEC TAGM 4046	NO	NUT
7440-28-0	Thallium	0.56	J	0.99	J	WS-59-01-015-16	27 / 53	0.095 - 0.295	0.99	1.2	0.52	0.7	NYSDEC TAGM 4046	YES	ASL

**APPENDIX E TABLE 1C
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-59 STOCKPILE SOIL
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Scenario Time frame:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59 Stockpile

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	ARAR /TBC Value ⁵ (mg/kg)	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
7440-62-2	Vanadium	13.4		35.4		WS-59-01-007-10	53 / 53		35.4	32.7	7.8	150	NYSDEC TAGM 4046	YES	ASL
7440-66-6	Zinc	57	J	185	J	WS-59-01-006-9	53 / 53		185	126	2,300	110	NYSDEC TAGM 4046	NO	BSL

Notes:

- Field duplicates were averaged and regarded as one sample entry. Laboratory duplicates were not included in the assessment. Range of reporting limits were presented for nondetects only.
- The maximum detected concentration was used for screening.
- Background value is the maximum Seneca background concentration.
- EPA Region 9 Preliminary Remediation Goals (PRGs) for residential soil. On-line resources available at <http://www.epa.gov/region09/waste/sfund/prg/files/prgtable2004.xls>. Last updated October 2004. Region 9 PRGs were derived based on Direct contact exposure (ingestion and dermal contact) and a target Cancer Risk of 1E-6 or a Target Hazard Quotient of 1. EPA Region III Risk Based Concentration (RBC) for residential soil was used as screening value for 2-methylnaphthalene as no Region 9 PRG is available. EPA Region III RBC, available on-line at <http://www.epa.gov/reg3hwmd/risk/human/rbc/rbc1004.XLS>, was calculated based on soil ingestion exposure and a target cancer risk of 1E-6 and a target hazard quotient of 1. The PRGs or RBCs corresponding to a hazard quotient of 1 were adjusted by multiplying 0.1 before they were used as screening values. PRG for gamma-chlordane was used as screening value for alpha-chlordane. PRG for endrin was used as screening value for endrin ketone. Screening values for calcium, magnesium, potassium, and sodium were calculated based on 200 mg/day soil ingestion and recommended dietary allowances and adequate intakes for 1-3 yr children (500 mg/day and 80 mg/day for calcium and magnesium) and minimum requirements for 1 yr children (225 mg/day and 1000 mg/day for sodium and potassium) from Marilyn Wright (2001) Dietary Reference Intakes. PRG for total chromium (1:6 ratio Cr VI: Cr III) was used as screening value for chromium. PRG for nickel (soluble salts) was used as screening value for nickel.
- Potential ARAR/TBC values are from NYSDEC Technical and Administrative Guidance Memorandum #4046 (on-line resources available at <http://www.dec.state.ny.us/website/der/tagms/prtg4046.html>)
- Rationale codes

Selection Reason:	Above Screening Levels (ASL)
	Chemicals in the Same Group were retained as COPC (CSG)
Deletion Reason:	Essential Nutrient (NUT)
	Below Screening Level (BSL)
	No Screening Value or Toxicity Value (NSV)

Definitions:

- COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 Q = Qualifier
 J = Estimated Value
 NJ = Presence of the analyte has been "tentatively identified" and the associated numerical value represents its approximate concentration.

APPENDIX E TABLE 1D
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-71 SOIL (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-71

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	ARAR/TBC Value ⁵ (mg/kg)	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
VOC															
71-55-6	1,1,1-Trichloroethane	0.002	NJ	0.023		TP71-1	6 / 61	0.005 - 0.11	0.023		1,200	0.8	NYSDEC TAGM 4046	NO	BSL
67-64-1	Acetone	0.004	NJ	0.074		SS71-14	9 / 61	0.005 - 0.11	0.074		1,400	0.2	NYSDEC TAGM 4046	NO	BSL
71-43-2	Benzene	0.001	J	0.002	J	SS71-1	2 / 61	0.005 - 0.11	0.002		0.64	0.06	NYSDEC TAGM 4046	NO	BSL
75-15-0	Carbon disulfide	0.002	J	0.005	J	CL-71-B-WN1	3 / 61	0.005 - 0.11	0.005		36	2.7	NYSDEC TAGM 4046	NO	BSL
110-82-7	Cyclohexane	0.003	J	0.004	J	WS-71-A-009-9	2 / 23	0.005 - 0.006	0.004		14			NO	BSL
108-87-2	Methyl cyclohexane	0.003	J	0.006		WS-71-A-009-9	3 / 23	0.005 - 0.006	0.006		260			NO	BSL
75-09-2	Methylene chloride	0.001	J	0.002	J	SS71-1	8 / 61	0.005 - 0.11	0.002		9.1	0.1	NYSDEC TAGM 4046	NO	BSL
127-18-4	Tetrachloroethene	0.001	J	0.003	J	TP71-1	3 / 61	0.005 - 0.11	0.003		0.48	1.4	NYSDEC TAGM 4046	NO	BSL
108-88-3	Toluene	0.001	J	0.004	J	SS71-1	4 / 61	0.005 - 0.11	0.004		520	1.5	NYSDEC TAGM 4046	NO	BSL
	Total BTEX	3.05		11.6		TP71-3-1	4 / 4		11.6					NO	ICE
1330-20-7	Total Xylenes	0.002	J	0.096	J	TP71-3-2	4 / 37	0.005 - 0.015	0.096		27	1.2	NYSDEC TAGM 4046	NO	BSL
75-69-4	Trichlorofluoromethane	0.001	J	0.001	J	WS-71-B-009-6	1 / 23	0.005 - 0.006	0.001		39			NO	BSL
SVOC															
121-14-2	2,4-Dinitrotoluene	0.88	J	0.88	J	WS-71-D-009-13	1 / 62	0.066 - 19	0.88		12			NO	BSL
91-57-6	2-Methylnaphthalene	0.0086	J	31	J	TP71-3-2	12 / 62	0.078 - 19	31		31	36.4	NYSDEC TAGM 4046	YES	ASL
100-01-6	4-Nitroaniline	0.075	J	0.075	J	WS-71-B-009-6	1 / 40	0.16 - 45	0.075		23			NO	BSL
83-32-9	Acenaphthene	0.0055	J	13	J	TP71-3-2	23 / 62	0.078 - 5.5	13		370	50	NYSDEC TAGM 4046	NO	BSL
208-96-8	Acenaphthylene	0.02	J	1.8		CL-71-C-WN1	20 / 62	0.066 - 19	1.8			41	NYSDEC TAGM 4046	NO	NSV
120-12-7	Anthracene	0.012	J	11	J	TP71-1	35 / 62	0.078 - 5.5	11		2,200	50	NYSDEC TAGM 4046	NO	BSL
56-55-3	Benzo(a)anthracene	0.0039	J	37		TP71-1	46 / 62	0.078 - 1.9	37		0.62	0.224	NYSDEC TAGM 4046	YES	ASL
50-32-8	Benzo(a)pyrene	0.0039	J	22		TP71-1	46 / 62	0.066 - 1.9	22		0.062	0.061	NYSDEC TAGM 4046	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.0044	J	26		TP71-1	47 / 62	0.066 - 1.9	26		0.62	1.1	NYSDEC TAGM 4046	YES	ASL
191-24-2	Benzo(ghi)perylene	0.012	J	10	J	TP71-1	40 / 62	0.066 - 1.9	10			50	NYSDEC TAGM 4046	NO	NSV
207-08-9	Benzo(k)fluoranthene	0.0046	J	15	J	TP71-1	36 / 62	0.066 - 1.9	15		6.2	1.1	NYSDEC TAGM 4046	YES	ASL
117-81-7	Bis(2-Ethylhexyl)phthalate	0.0076	J	0.14	J	WS-71-D-009-13	9 / 62	0.066 - 19	0.14		35	50	NYSDEC TAGM 4046	NO	BSL
86-74-8	Carbazole	0.0042	J	9.5	J	TP71-1	22 / 40	0.078 - 1.1	9.5		24			NO	BSL
218-01-9	Chrysene	0.0046	J	36		TP71-1	49 / 62	0.078 - 1.9	36		62	0.4	NYSDEC TAGM 4046	YES	CSG
84-74-2	Di-n-butylphthalate	0.0064	J	0.07	J	CL-71-C-WE2	3 / 62	0.066 - 19	0.07		610	8.1	NYSDEC TAGM 4046	NO	BSL
53-70-3	Dibenz(a,h)anthracene	0.0044	J	9.8	J	TP71-1	32 / 62	0.066 - 5.5	9.8		0.062	0.014	NYSDEC TAGM 4046	YES	ASL
132-64-9	Dibenzofuran	0.013	J	11	J	TP71-3-2	18 / 62	0.078 - 19	11		15	6.2	NYSDEC TAGM 4046	NO	BSL
206-44-0	Fluoranthene	0.0069	J	88		TP71-1	50 / 62	0.078 - 0.4	88		230	50	NYSDEC TAGM 4046	NO	BSL
86-73-7	Fluorene	0.0047	J	4.1		TP71-3-2	21 / 62	0.078 - 5.5	4.1		270	50	NYSDEC TAGM 4046	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.012	J	12	J	TP71-1	40 / 62	0.066 - 1.9	12		0.62	3.2	NYSDEC TAGM 4046	YES	ASL

APPENDIX E TABLE 1D
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-71 SOIL (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-71

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	ARAR/TBC Value ⁵ (mg/kg)	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
91-20-3	Naphthalene	0.01	J	17	J	TP71-3-2	13 / 62	0.078 - 19	17		5.6	13	NYSDEC TAGM 4046	YES	ASL
85-01-8	Phenanthrene	0.024	J	66		TP71-1	45 / 62	0.078 - 1.9	66			50	NYSDEC TAGM 4046	NO	NSV
108-95-2	Phenol	0.0045	J	0.0045	J	TP71-3-1	1 / 62	0.078 - 19	0.0045		1,800	0.03	NYSDEC TAGM 4046	NO	BSL
129-00-0	Pyrene	0.006	J	63		TP71-1	48 / 62	0.078 - 1.9	63		230	50	NYSDEC TAGM 4046	NO	BSL
Pesticide															
72-54-8	4,4'-DDD	0.0028	J	0.017		CL-71-B-WE2	9 / 62	0.0035 - 0.04	0.017		2.4	2.9	NYSDEC TAGM 4046	NO	BSL
72-55-9	4,4'-DDE	0.0031	J	0.19		CL-71-B-WS1	22 / 62	0.0034 - 0.038	0.19		1.7	2.1	NYSDEC TAGM 4046	NO	BSL
50-29-3	4,4'-DDT	0.0051	J	0.12		CL-71-E2-WW1	28 / 62	0.0034 - 0.038	0.12		1.7	2.1	NYSDEC TAGM 4046	NO	BSL
319-84-6	Alpha-BHC	0.0019	J	0.018		TP71-6-1	5 / 62	0.0018 - 0.021	0.018		0.09	0.11	NYSDEC TAGM 4046	NO	BSL
5103-71-9	Alpha-Chlordane	0.074	J	0.074	J	TP71-1	1 / 62	0.0018 - 0.021	0.074		1.6			NO	BSL
319-85-7	Beta-BHC	0.002	J	0.0027		TP71-6-1	2 / 62	0.0018 - 0.021	0.0027		0.32	0.2	NYSDEC TAGM 4046	NO	BSL
319-86-8	Delta-BHC	0.0018	J	0.0018	J	TP71-6-1	1 / 62	0.0018 - 0.021	0.0018		0.09	0.3	NYSDEC TAGM 4046	NO	BSL
60-57-1	Dieldrin	0.003	J	0.0035	J	TP71-1	3 / 62	0.0034 - 0.04	0.0035		0.03	0.044	NYSDEC TAGM 4046	NO	BSL
959-98-8	Endosulfan I	0.0028	J	0.2	J	TP71-1	4 / 62	0.0018 - 0.021	0.2		37	0.9	NYSDEC TAGM 4046	NO	BSL
33213-65-9	Endosulfan II	0.0025	J	0.026	J	TP71-1	2 / 62	0.0034 - 0.04	0.026		37	0.9	NYSDEC TAGM 4046	NO	BSL
1031-07-8	Endosulfan sulfate	0.0027	J	0.0046		SS71-8	4 / 62	0.0034 - 0.04	0.0046		37	1	NYSDEC TAGM 4046	NO	BSL
72-20-8	Endrin	0.0024	J	0.029	J	TP71-1	5 / 62	0.0034 - 0.04	0.029		1.8	0.1	NYSDEC TAGM 4046	NO	BSL
7421-93-4	Endrin aldehyde	0.003	J	0.0091		SS71-10	9 / 62	0.0034 - 0.04	0.0091		1.8			NO	BSL
53494-70-5	Endrin ketone	0.0022	J	0.017		SS71-10	7 / 62	0.0034 - 0.04	0.017		1.8			NO	BSL
58-89-9	Gamma-BHC/Lindane	0.004		0.004		TP71-6-1	1 / 62	0.0018 - 0.021	0.004		0.44	0.06	NYSDEC TAGM 4046	NO	BSL
5103-74-2	Gamma-Chlordane	0.0011	J	0.0012	J	SS71-1	2 / 62	0.0018 - 0.021	0.0012		1.6	0.54	NYSDEC TAGM 4046	NO	BSL
76-44-8	Heptachlor	0.0012	J	0.0012	J	TP71-1	1 / 62	0.0018 - 0.021	0.0012		0.11	0.1	NYSDEC TAGM 4046	NO	BSL
1024-57-3	Heptachlor epoxide	0.0015	J	0.0064		SS71-2	5 / 62	0.0018 - 0.021	0.0064		0.053	0.02	NYSDEC TAGM 4046	NO	BSL
72-43-5	Methoxychlor	0.019	J	0.062		SS71-8	3 / 62	0.018 - 0.21	0.062		31			NO	BSL
PCB															
11096-82-5	Aroclor-1260	0.08		0.2	J	CL-71-B-WE2	3 / 62	0.035 - 0.37	0.2		0.22	10	NYSDEC TAGM 4046	NO	BSL
Metals															
7429-90-5	Aluminum	6,120	J	15,900		SS71-9	62 / 62		15,900	20,500	7,600	19,300	NYSDEC TAGM 4046	YES	ASL
7440-36-0	Antimony	0.19	J	11.5	J	CL-71-B-WE2	29 / 62	0.23 - 3.6	11.5	6.55	3.1	5.9	NYSDEC TAGM 4046	YES	ASL
7440-38-2	Arsenic	3.1		14.6		SS71-9	62 / 62		14.6	21.5	0.39	8.2	NYSDEC TAGM 4046	YES	ASL
7440-39-3	Barium	47	J	136	J	CL-71-E1-WN1	62 / 62		136	159	540	300	NYSDEC TAGM 4046	NO	BSL
7440-41-7	Beryllium	0.11		0.85		CL-71-E1-WN1	62 / 62		0.85	1.4	15	1.1	NYSDEC TAGM 4046	NO	BSL
7440-43-9	Cadmium	0.17	J	0.71		CL-71-E3-WS1	40 / 62	0.07 - 0.3	0.71	2.9	3.7	2.3	NYSDEC TAGM 4046	NO	BSL
7440-70-2	Calcium	6,040	J	295,000		SS71-14	62 / 62		295,000	293,000	2,500,000	121,000	NYSDEC TAGM 4046	NO	NUT

APPENDIX E TABLE 1D
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-71 SOIL (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-71

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	ARAR/TBC Value ⁵ (mg/kg)	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
7440-47-3	Chromium	10	J	37.1		CL-71-C-WN1	62 / 62		37.1	32.7	210	29.6	NYSDEC TAGM 4046	NO	BSL
7440-48-4	Cobalt	6.1	J	13.9		CL-71-E3-WS1	62 / 62		13.9	29.1	900	30	NYSDEC TAGM 4046	NO	BSL
7440-50-8	Copper	15.2		102		WS-71-E1-009-3	62 / 62		102	62.8	310	33	NYSDEC TAGM 4046	NO	BSL
7439-89-6	Iron	13,200		38,000		SS71-9	62 / 62		38,000	38,600	2,300	36,500	NYSDEC TAGM 4046	YES	ASL
7439-92-1	Lead	7.3		1,010		WS-71-D-009-13	62 / 62		1,010	266	400	24.8	NYSDEC TAGM 4046	YES	ASL
7439-95-4	Magnesium	3,800		59,300		SS71-14	62 / 62		59,300	29,100	400,000	21,500	NYSDEC TAGM 4046	NO	NUT
7439-96-5	Manganese	296		1,330		CL-71-E3-WS1	62 / 62		1,330	2,380	180	1,060	NYSDEC TAGM 4046	YES	ASL
7439-97-6	Mercury	0.02	J	1	J	CL-71-B-WS1	52 / 62	0.05 - 0.07	1	0.13	2.3	0.1	NYSDEC TAGM 4046	NO	BSL
7440-02-0	Nickel	18	J	110		SS71-10	62 / 62		110	62.3	160	49	NYSDEC TAGM 4046	NO	BSL
7440-09-7	Potassium	810	J	2,940		TP71-4-2	62 / 62		2,940	3,160	5,000,000	2,380	NYSDEC TAGM 4046	NO	NUT
7782-49-2	Selenium	0.43	J	1.8	J	SS71-10	8 / 62	0.37 - 1.1	1.8	1.7	39	2	NYSDEC TAGM 4046	NO	BSL
7440-22-4	Silver	0.32	J	1.8		CL-71-E1-WN1	22 / 62	0.07 - 0.67	1.8	0.87	39	0.75	NYSDEC TAGM 4046	NO	BSL
7440-23-5	Sodium	33.2	J	636		SS71-10	59 / 62	83.3 - 108	636	269	1,125,000	172	NYSDEC TAGM 4046	NO	NUT
7440-28-0	Thallium	0.57	J	2.3		SS71-9	18 / 62	0.19 - 1.7	2.3	1.2	0.52	0.7	NYSDEC TAGM 4046	YES	ASL
7440-62-2	Vanadium	11.3	J	24.9		TP71-4-2	62 / 62		24.9	32.7	7.8	150	NYSDEC TAGM 4046	YES	ASL
7440-66-6	Zinc	45.3		1,740	J	SS71-10	61 / 62	352 - 352	1,740	126	2,300	110	NYSDEC TAGM 4046	NO	BSL

Notes:

- Field duplicates were averaged and regarded as one sample entry. Laboratory duplicates were not included in the assessment. Range of reporting limits were presented for nondetects only.
- The maximum detected concentration was used for screening.
- Background value is the maximum Seneca background concentration.
- EPA Region 9 Preliminary Remediation Goals (PRGs) for residential soil. On-line resources available at <http://www.epa.gov/region09/waste/sfund/prg/files/prgtable2004.xls>. Last updated October 2004. Region 9 PRGs were derived based on Direct contact exposure (ingestion and dermal contact) and a target Cancer Risk of 1E-6 or a Target Hazard Quotient of 1. EPA Region III Risk Based Concentration (RBC) for residential soil was used as screening value for 2-methylnaphthalene as no Region 9 PRG is available. EPA Region III RBC, available on-line at <http://www.epa.gov/reg3hwmd/risk/human/rbc/rbc1004.XLS>, was calculated based on soil ingestion exposure and a target cancer risk of 1E-6 and a target hazard quotient of 1. The PRGs or RBCs corresponding to a hazard quotient of 1 were adjusted by multiplying 0.1 before they were used as screening values. PRG for Aroclor 1254 was used as screening value for Aroclor 1260. PRG for gamma-chlordane was used as screening value for alpha-chlordane. PRG for alpha-BHC was used as screening value for delta-BHC. PRG for endosulfan was used as screening value for endosulfan I, endosulfan II, and endosulfan sulfate. PRG for endrin was used as screening value for endrin aldehyde and endrin ketone. Screening values for calcium, magnesium, potassium, and sodium were calculated based on 200 mg/day soil ingestion and recommended dietary allowances and adequate intakes for 1-3 yr children (500 mg/day and 80 mg/day for calcium and magnesium) and minimum requirements for 1 yr children (225 mg/day and 1000 mg/day for sodium and potassium) from Marilyn Wright (2001) Dietary Reference Intakes. PRG for total chromium (1:6 ratio Cr VI: Cr III) was used as screening value for chromium. PRG for nickel (soluble salts) was used as screening value for nickel.

**APPENDIX E TABLE 1D
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-71 SOIL (FENCED AREA EXCLUDED)
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity**

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-71

CAS Number	Chemical	Minimum Detected Concentration ¹ (mg/kg)	Q	Maximum Detected Concentration ¹ (mg/kg)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (mg/kg)	Concentration Used for Screening ² (mg/kg)	Background Value ³ (mg/kg)	Screening Value ⁴ (mg/kg)	ARAR/TBC Value ⁵ (mg/kg)	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁶
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5. Potential ARAR/TBC values are from NYSDEC Technical and Administrative Guidance Memorandum #4046 (on-line resources available at <http://www.dec.state.ny.us/website/der/tagms/prtg4046.html>)

6. Rationale codes
 Selection Reason: Above Screening Levels (ASL)
 Deletion Reason: Essential Nutrient (NUT)
 Below Screening Level (BSL)
 Individual Chemicals Evaluated (ICE)
 No Screening Value or Toxicity Value (NSV)

Definitions:
 COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 Q = Qualifier
 J = Estimated Value
 NJ = Presence of the analyte has been "tentatively identified" and the associated numerical value represents its approximate concentration.

APPENDIX E TABLE 1E
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-71 GROUNDWATER (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
SENECA ARMY DEPOT ACTIVITY

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Point:	Aquifer -- Tap Water

CAS #	Chemical	Minimum Detected Concentration ¹ (ug/L)	Q	Maximum Detected Concentration ¹ (ug/L)	Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (ug/L)	Concentration Used for Screening ² (ug/L)	Background Value ³ (ug/L)	Screening Value ⁴ (ug/L)	Potential ARAR /TBC Value (ug/L)	ARAR/ TBC Source	COPC Flag	Rationale for COPC Deletion or Selection ⁵
VOC															
71-55-6	1,1,1-Trichloroethane	2.5		3.1		MW71-4	2 / 8	0.5 - 10	3.1		320	5	GA	NO	BSL
SVOC															
100-01-6	4-Nitroaniline	8.7	J	8.7	J	MW71-2	1 / 8	9.6 - 32	8.7		3.2	5	GA	YES	ASL
117-81-7	Bis(2-Ethylhexyl)phthalate	1.6	J	1.6	J	MW71-3	1 / 8	9.6 - 16	1.6		4.8	5	GA	NO	BSL
Pesticides															
72-55-9	4,4'-DDE	0.006	J	0.013	J	MW71-4	2 / 6	0.0388 - 0.0408	0.013		0.20	0.2	GA	NO	BSL
50-29-3	4,4'-DDT	0.030	J	0.0437		MW71-4	3 / 6	0.0388 - 0.04	0.0437		0.20	0.2	GA	NO	BSL
53494-70-5	Endrin ketone	0.008	J	0.008	J	MW71-3	1 / 6	0.0375 - 0.0408	0.008		1.1	5	GA	NO	BSL
Metals															
7429-90-5	Aluminum	51.2	J	19,700		MW71-1	5 / 8	14.7 - 100	19,700	2,730	3,600	50	SEC	YES	ASL
7440-36-0	Antimony	6.28	J	6.52	J	MW71-1	2 / 8	1 - 10	6.52	8.2	1.5	3	GA	YES	ASL
7440-38-2	Arsenic	2.7	J	2.7	J	MW71-1	1 / 8	2 - 22.4	2.7	1.7	0.045	10	MCL	YES	ASL
7440-39-3	Barium	37.1		164	J	MW71-1	8 / 8		164	78.2	260	1,000	GA	NO	BSL
7440-41-7	Beryllium	0.819		0.88	J	MW71-1	2 / 8	0.1 - 5	0.88	0.21	7.3	4	MCL	NO	BSL
7440-43-9	Cadmium	0.33	J	0.33	J	MW71-1	1 / 8	0.2 - 5	0.33	0.5	1.8	5	GA	NO	BSL
7440-70-2	Calcium	97,800		218,000		MW71-1	8 / 8		218,000	116,000	250,000			NO	NUT
7440-47-3	Chromium	0.59	J	33.1		MW71-1	4 / 8	0.503 - 5	33.1	4.7	11	50	GA	YES	ASL
7440-48-4	Cobalt	0.631	J	22.1	J	MW71-1	4 / 8	0.541 - 5	22.1	3.7	73			NO	BSL
7440-50-8	Copper	0.75	J	16.1	J	MW71-1	4 / 8	1.39 - 5	16.1	3.3	150	200	GA	NO	BSL
7439-89-6	Iron	22.9	J	35,100		MW71-1	8 / 8		35,100	4,480	1,100	300	GA	YES	ASL
7439-92-1	Lead	2.1	J	17.2		MW71-1	3 / 8	0.89 - 5	17.2	2.5	15	15	MCL	YES	ASL
7439-95-4	Magnesium	12,500		32,400		MW71-1	8 / 8		32,400	28,600	40,000			NO	NUT
7439-96-5	Manganese	8.1		2,680		MW71-2	7 / 8	0.296 - 0.296	2,680	224	88	50	SEC	YES	ASL
7439-97-6	Mercury	0.05	J	0.069	J	MW71-3	3 / 8	0.047 - 0.2	0.069	0.04	1.1	0.7	GA	NO	BSL
7440-02-0	Nickel	0.74	J	49.4		MW71-1	6 / 8	0.69 - 0.69	49.4	7.3	73	100	GA	NO	BSL
9/7/7440	Potassium	765	J	4,910	J	MW71-3	8 / 8		4,910	3,830	700,000			NO	NUT
7440-23-5	Sodium	4,130	J	62,200		MW71-3	8 / 8		62,200	14,600	1,200,000	20,000	GA	NO	NUT
7440-28-0	Thallium	2.5	J	2.5	J	MW71-3	1 / 8	1.6 - 20	2.5	1.5	0.24	2	MCL	YES	ASL
7440-62-2	Vanadium	0.9	J	25.7	J	MW71-1	3 / 8	0.606 - 5	25.7	5.2	3.6			YES	ASL
7440-66-6	Zinc	1.6	J	97.3		MW71-1	8 / 8		97.3	23.1	1,100	5,000	SEC	NO	BSL

APPENDIX E TABLE 1E
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN IN SEAD-71 GROUNDWATER (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
SENECA ARMY DEPOT ACTIVITY

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Point:	Aquifer -- Tap Water

CAS #	Chemical	Minimum Detected Concentration ¹ Q	Maximum Detected Concentration ¹ Q	Location of Maximum Concentration	Detection Frequency ¹	Range of Reporting Limits ¹ (ug/L)	Concentration Used for Screening ² (ug/L)	Background Value ³ (ug/L)	Screening Value ⁴ (ug/L)	Potential ARAR /TBC Value (ug/L)	ARAR/TBC Source	COPC Flag	Rationale for COPC Deletion or Selection ⁵
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Notes:

- Field duplicates were averaged and regarded as one sample entry. Laboratory duplicates were not included in the assessment. Range of reporting limits were presented for nondetects only.
- The maximum detected concentration was used for screening.
- Background values are average concentrations of background sample results.
- EPA Region 9 Preliminary Remediation Goals (PRGs) for tap water. On-line resources available at <http://www.epa.gov/region09/waste/sfund/prg/files/prgtable2004.xls>. Last updated October 2004.
 Region 9 PRGs were derived based on ingestion and inhalation exposure and a target Cancer Risk of 1E-6 or a Target Hazard Quotient of 1. The PRGs corresponding to a hazard quotient of 1 was adjusted by multiplying 0.1 before they were used as screening values.
 MCL for lead was used as screening value for lead as no Region 9 PRG is available.
 PRG for endrin was used as screening value for endrin ketone.
 Screening values for calcium, magnesium, potassium, and sodium were calculated based on an assumption of 2L/day water intake and recommended dietary allowances and adequate intakes for 1-3 yr children (500 mg/day and 80 mg/day for calcium and magnesium) and minimum requirements for 2-5 yr children (1400 mg/day for potassium) from Marilyn Wright (2001) Dietary Reference Intakes.
 For sodium, an upper limit intake of 2,400 mg/day (<http://www.mealformation.com/dailyval.html>) was used.
 PRG for chromium (VI) was used as screening value for chromium.
- Rationale codes
 Selection Reason: Above Screening Levels (ASL)
 Deletion Reason: Essential Nutrient (NUT)
 Below Screening Level (BSL)

Definitions:

COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 MCL = Federal Maximum Contaminant Level
 GA = New York State Class GA Groundwater Standard (TOGS 1.1.1, June 1998 with updates)
 SEC = USEPA Secondary Drinking Water Regulation, non-enforceable (EPA 822-B-00-001, Summer 2000)
 Q = Qualifier
 J = Estimated Value

APPENDIX E TABLE 2A
 SOIL EXPOSURE POINT CONCENTRATION SUMMARY - SURFACE SOIL FOR SEAD-59
 SEAD-59 AND SEAD-71 PHASE II RI
 SENECA ARMY DEPOT ACTIVITY

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59

Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL of Normal Data (1)	Maximum Detected Concentration (1)	Q	EPC Units	Reasonable Maximum Exposure (2)			Central Tendency (2)		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Surface Soil												
Benzo(a)anthracene	mg/kg	0.8	1.0	8.9	J	mg/kg	1.4	97.5 Chebyshev	Non-parametric, MH	1.4	97.5 Chebyshev	Non-parametric, MH
Benzo(a)pyrene	mg/kg	0.9	1.0	8.1	J	mg/kg	1.4	97.5 Chebyshev	Non-parametric, MH	1.4	97.5 Chebyshev	Non-parametric, MH
Benzo(b)fluoranthene	mg/kg	0.8	0.9	6.8	J	mg/kg	1.3	97.5 Chebyshev	Non-parametric, MH	1.3	97.5 Chebyshev	Non-parametric, MH
Benzo(k)fluoranthene	mg/kg	0.7	0.8	7.4	J	mg/kg	1.1	97.5 Chebyshev	Non-parametric, MH	1.1	97.5 Chebyshev	Non-parametric, MH
Chrysene	mg/kg	0.8	1.0	8.9	J	mg/kg	1.4	97.5 Chebyshev	Non-parametric, MH	1.4	97.5 Chebyshev	Non-parametric, MH
Dibenz(a,h)anthracene	mg/kg	0.3	0.3	1.7	J	mg/kg	0.35	95% Chebyshev	Non-parametric, MO	0.35	95% Chebyshev	Non-parametric, MO
Indeno(1,2,3-cd)pyrene	mg/kg	0.5	0.6	4.95	J	mg/kg	0.88	97.5% Chebyshev	Non-parametric, MH	0.88	97.5% Chebyshev	Non-parametric, MH
4,4'-DDE	mg/kg	0.04	0.06	2.6		mg/kg	0.13	97.5% Chebyshev	Non-parametric, MH	0.13	97.5% Chebyshev	Non-parametric, MH
4,4'-DDT	mg/kg	0.051	0.086	3.7		mg/kg	0.18	97.5% Chebyshev	Non-parametric, MH	0.18	97.5% Chebyshev	Non-parametric, MH
Aluminum	mg/kg	11,011	11,309	18,300		mg/kg	11,100	95% modified t	Non-parametric, M	11,100	95% modified t	Non-parametric, M
Antimony	mg/kg	4.0	7.7	424	J	mg/kg	13.9	95% Chebyshev	Non-parametric, MO	13.9	95% Chebyshev	Non-parametric, MO
Arsenic	mg/kg	5.4	5.7	32.2		mg/kg	5.8	95% modified t	Non-parametric, M	5.8	95% modified t	Non-parametric, M
Iron	mg/kg	21,212	21,830	64,000	J	mg/kg	21,844	95% modified t	Non-parametric, M	21,844	95% modified t	Non-parametric, M
Manganese	mg/kg	507	533	1,290		mg/kg	462	95% H-UCL	Lognormal	462	95% H-UCL	Lognormal
Thallium	mg/kg	0.32	0.41	1.8		mg/kg	0.17	95% Chebyshev	Non-parametric, MO	0.17	95% Chebyshev	Non-parametric, MO
Vanadium	mg/kg	19.3	19.7	28.5		mg/kg	19.5	95% modified t	Non-parametric, M	19.5	95% modified t	Non-parametric, M

Notes:

- Field duplicates were averaged and regarded as one sample entry. Lab duplicates were not included in the assessment. Nondetects were assumed to be half reporting limits.
- The EPCs were calculated using the ProUCL (Version 3.00.02) and the EPCs were selected in accordance with the ProUCL Version 3.0 User Guide (USEPA, 2004) and the Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites (USEPA, 2002).
 - HE - highly skewed to extremely highly skewed (standard deviation of log-transformed data in the interval (2.0, 3.0] data set.
 - MH - moderately to highly skewed (standard deviation of log-transformed data in the interval (1.0, 2.0] data set.
 - MO - moderately skewed (standard deviation of log-transformed data in the interval (0.5,1] data set.
 - M - mildly skewed (standard deviation of log-transformed data less than or equal to 0.5) data set.
 - Q - qualifier
 - J = Estimated Value

APPENDIX E TABLE 2B
 SOIL EXPOSURE POINT CONCENTRATION SUMMARY - SURFACE AND SUBSURFACE SOIL FOR SEAD-5'
 SEAD-59 AND SEAD-71 PHASE II RI
 SENECA ARMY DEPOT ACTIVITY

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59

Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL of Normal Data (1)	Maximum Detected Concentration (1)	Q	EPC Units	Reasonable Maximum Exposure (2)			Central Tendency (2)		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Surface and Subsurface Soil												
Benzo(a)anthracene	mg/kg	0.8	0.9	8.9	J	mg/kg	1.4	97.5 Chebyshev	Non-parametric, MH	1.4	97.5 Chebyshev	Non-parametric, MH
Benzo(a)pyrene	mg/kg	0.9	1.0	8.1	J	mg/kg	1.4	97.5 Chebyshev	Non-parametric, MH	1.4	97.5 Chebyshev	Non-parametric, MH
Benzo(b)fluoranthene	mg/kg	0.8	0.9	6.8	J	mg/kg	1.2	97.5 Chebyshev	Non-parametric, MH	1.2	97.5 Chebyshev	Non-parametric, MH
Benzo(k)fluoranthene	mg/kg	0.7	0.8	7.4	J	mg/kg	1.2	97.5 Chebyshev	Non-parametric, MH	1.2	97.5 Chebyshev	Non-parametric, MH
Chrysene	mg/kg	0.8	1.0	8.9	J	mg/kg	1.4	97.5 Chebyshev	Non-parametric, MH	1.4	97.5 Chebyshev	Non-parametric, MH
Dibenz(a,h)anthracene	mg/kg	0.3	0.3	1.7	J	mg/kg	0.40	95% Chebyshev	Non-parametric, MO	0.40	95% Chebyshev	Non-parametric, MO
Indeno(1,2,3-cd)pyrene	mg/kg	0.5	0.6	4.95	J	mg/kg	0.87	97.5% Chebyshev	Non-parametric, MH	0.87	97.5% Chebyshev	Non-parametric, MH
4,4'-DDE	mg/kg	0.04	0.06	2.6		mg/kg	0.12	97.5% Chebyshev	Non-parametric, MH	0.12	97.5% Chebyshev	Non-parametric, MH
4,4'-DDT	mg/kg	0.048	0.081	3.7		mg/kg	0.17	97.5% Chebyshev	Non-parametric, MH	0.17	97.5% Chebyshev	Non-parametric, MH
Aluminum	mg/kg	10,895	11,184	18,300	J	mg/kg	10,900	95% modified t	Non-parametric, M	10,900	95% modified t	Non-parametric, M
Antimony	mg/kg	3.7	7.2	424	J	mg/kg	13.0	95% Chebyshev	Non-parametric, MO	13.0	95% Chebyshev	Non-parametric, MO
Arsenic	mg/kg	5.4	5.6	32.2		mg/kg	5.7	95% modified t	Non-parametric, M	5.7	95% modified t	Non-parametric, M
Iron	mg/kg	21,152	21,741	64,000	J	mg/kg	21,753	95% modified t	Non-parametric, M	21,753	95% modified t	Non-parametric, M
Manganese	mg/kg	503	527	1,290	J	mg/kg	462	95% H-UCL	Lognormal	462	95% H-UCL	Lognormal
Thallium	mg/kg	0.33	0.42	1.8	J	mg/kg	0.26	95% Chebyshev	Non-parametric, MO	0.26	95% Chebyshev	Non-parametric, MO
Vanadium	mg/kg	19.0	19.5	28.5	J	mg/kg	19.4	95% modified t	Non-parametric, M	19.4	95% modified t	Non-parametric, M

Notes:

- Field duplicates were averaged and regarded as one sample entry. Lab duplicates were not included in the assessment. Nondetects were assumed to be half reporting limits.
- The EPCs were calculated using the ProUCL (Version 3.00.02) and the EPCs were selected in accordance with the ProUCL Version 3.0 User Guide (USEPA, 2004) and the Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites (USEPA, 2002).
 - HE - highly skewed to extremely highly skewed (standard deviation of log-transformed data in the interval (2.0, 3.0] data set.
 - MH - moderately to highly skewed (standard deviation of log-transformed data in the interval (1.0, 2.0] data set.
 - MO - moderately skewed (standard deviation of log-transformed data in the interval (0.5,1] data set.
 - M - mildly skewed (standard deviation of log-transformed data less than or equal to 0.5) data set.
 - Q - qualifier
 - J = Estimated Value

APPENIX E TABLE 2C
 AMBIENT AIR EXPOSURE POINT CONCENTRATIONS - SURFACE SOIL FOR SEAD-59
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	SEAD-59

Equation for Air EPC from Surface Soil (mg/m³) = CSsurf x PM10 x CF

Variables:
 CSsurf = Chemical Concentration in Surface Soil, from EPC data (mg/kg)
 PM10 = Average Measured PM10 Concentration = 17 ug/m³
 CF = Conversion Factor = 1E-9 kg/ug

Analyte	Reasonable Maximum Exposure		Central Tendency Exposure	
	EPC Data for Surface Soil	Calculated Air EPC Surface Soil	EPC Data for Surface Soil	Calculated Air EPC Surface Soil
	(mg/kg)	(mg/m ³)	(mg/kg)	(mg/m ³)
Benzo(a)anthracene	1.4	2.3E-08	1.4	2.3E-08
Benzo(a)pyrene	1.4	2.4E-08	1.4	2.4E-08
Benzo(b)fluoranthene	1.3	2.1E-08	1.3	2.1E-08
Benzo(k)fluoranthene	1.1	1.9E-08	1.1	1.9E-08
Chrysene	1.4	2.4E-08	1.4	2.4E-08
Dibenz(a,h)anthracene	0.4	6.0E-09	0.4	6.0E-09
Indeno(1,2,3-cd)pyrene	0.9	1.5E-08	0.9	1.5E-08
4,4'-DDE	0.1	2.2E-09	0.1	2.2E-09
4,4'-DDT	0.2	3.1E-09	0.2	3.1E-09
Aluminum	11100.0	1.9E-04	11100.0	1.9E-04
Antimony	13.9	2.4E-07	13.9	2.4E-07
Arsenic	5.8	9.8E-08	5.8	9.8E-08
Iron	21844.0	3.7E-04	21844.0	3.7E-04
Manganese	462.0	7.9E-06	462.0	7.9E-06
Thallium	0.2	2.9E-09	0.2	2.9E-09
Vanadium	19.5	3.3E-07	19.5	3.3E-07

APPENDIX E TABLE 2D
 AMBIENT AIR EXPOSURE POINT CONCENTRATIONS - SURFACE AND SUBSURFACE SOIL FOR SEAD-59
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	SEAD-59

Equation for Air EPC from Total Soils (mg/m³) = CStot x PM10 x CF

Variables:
 CStot = Chemical Concentration in Total Soils, from EPC data (mg/kg)
 PM10 = PM10 Concentration Calculated for Construction Worker= 954 ug/m³
 CF = Conversion Factor = 1E-9 kg/ug

Analyte	Reasonable Maximum Exposure		Central Tendency Exposure	
	EPC Data for Surface and Subsurface Soil (mg/kg)	Calculated Air EPC Surface and Subsurface Soil (mg/m ³)	EPC Data for Surface and Subsurface Soil (mg/kg)	Calculated Air EPC Surface and Subsurface Soil (mg/m ³)
Benzo(a)anthracene	1.4	1.3E-06	1.4	1.3E-06
Benzo(a)pyrene	1.4	1.3E-06	1.4	1.3E-06
Benzo(b)fluoranthene	1.2	1.1E-06	1.2	1.1E-06
Benzo(k)fluoranthene	1.2	1.1E-06	1.2	1.1E-06
Chrysene	1.4	1.3E-06	1.4	1.3E-06
Dibenz(a,h)anthracene	0.4	3.8E-07	0.4	3.8E-07
Indeno(1,2,3-cd)pyrene	0.87	8.3E-07	0.87	8.3E-07
4,4'-DDE	0.12	1.1E-07	0.12	1.1E-07
4,4'-DDT	0.17	1.6E-07	0.17	1.6E-07
Aluminum	10900	1.0E-02	10900	1.0E-02
Antimony	13	1.2E-05	13	1.2E-05
Arsenic	5.7	5.4E-06	5.7	5.4E-06
Iron	21753	2.1E-02	21753	2.1E-02
Manganese	462	4.4E-04	462	4.4E-04
Thallium	0.26	2.5E-07	0.26	2.5E-07
Vanadium	19.4	1.9E-05	19.4	1.9E-05

APPENDIX E TABLE 2E
GROUNDWATER EXPOSURE POINT CONCENTRATION SUMMARY - SEAD-59
SEAD-59 AND SEAD-71 PHASE II RI
SENECA ARMY DEPOT ACTIVITY

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Point:	Aquifer--Tap Water

Chemical of Potential Concern	Units	Arithmetic Mean	Maximum Detected Concentration mg/L	Maximum Qualifier	Reasonable Maximum Exposure			Central Tendency		
					Medium EPC Value (mg/L)	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value (mg/L)	Medium EPC Statistic	Medium EPC Rationale
Antimony	mg/L	0.0045	0.0086	J	0.0086	MDC	See note	0.0086	MDC	See note
Arsenic	mg/L	0.0033	0.002	J	0.002	MDC	See note	0.002	MDC	See note
Iron	mg/L	1.08	3.94	J	3.94	MDC	See note	3.94	MDC	See note
Manganese	mg/L	0.19	0.78	J	0.78	MDC	See note	0.78	MDC	See note
Thallium	mg/L	0.0064	0.004	J	0.004	MDC	See note	0.004	MDC	See note
Vanadium	mg/L	0.0021	0.00526	J	0.00526	MDC	See note	0.00526	MDC	See note

Notes:

- Field duplicates were averaged and regarded as one sample entry. Lab duplicates were not included in the assessment.
Concentrations for nondetects were assumed to be half the detection limits.
 - The maximum detected concentration was used as EPC for the RME scenario.
As residential use of groundwater has been based on the assumption that a single private well can be placed anywhere in the contaminated plume, the MDC across several rounds of monitoring was used as the EPC for groundwater as a conservative step for both the RME and CT scenarios.
 - The maximum detected concentration was used as EPC for the CT scenario.
- EPC = Exposure Point Concentration
MDC = Maximum Detected Concentration
RME = Reasonable Maximum Exposure
CT = Central Tendency

APPENDIX E TABLE 2F
SOIL EXPOSURE POINT CONCENTRATION SUMMARY - SEAD-59 STOCKPILE SOIL
SEAD-59 AND SEAD-71 PHASE II RI
SENECA ARMY DEPOT ACTIVITY

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59 Stockpile

Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL of Normal Data (1)	Maximum Detected Concentration (1)	Q	EPC Units	Reasonable Maximum Exposure (2)			Central Tendency (2)		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Stockpile Soil												
Benzo(a)anthracene	mg/kg	5.0	5.7	14		mg/kg	6.8	95% Chebyshev	Non-parametric, MO	6.8	95% Chebyshev	Non-parametric, MO
Benzo(a)pyrene	mg/kg	5.7	6.5	16		mg/kg	7.9	95% Chebyshev	Non-parametric, MO	7.9	95% Chebyshev	Non-parametric, MO
Benzo(b)fluoranthene	mg/kg	4.3	4.9	11		mg/kg	5.1	95% Approximate Gamma	Approximate Gamma	5.1	95% Approximate Gamma	Approximate Gamma
Benzo(k)fluoranthene	mg/kg	4.2	4.9	13		mg/kg	6.7	97.5 Chebyshev	Non-parametric, MH	6.7	97.5 Chebyshev	Non-parametric, MH
Chrysene	mg/kg	5.0	5.7	13		mg/kg	6.8	95% Chebyshev	Non-parametric, MO	6.8	95% Chebyshev	Non-parametric, MO
Dibenz(a,h)anthracene	mg/kg	1.1	1.2	2.9	J	mg/kg	1.2	95% Student's t	Normal	1.2	95% Student's t	Normal
Indeno(1,2,3-cd)pyrene	mg/kg	3.0	3.5	8	J	mg/kg	3.5	95% Student's t	Normal	3.5	95% Student's t	Normal
Aluminum	mg/kg	10,701	10,974	13,400		mg/kg	10,800	95% modified t	Non-parametric, M	10,800	95% modified t	Non-parametric, M
Antimony	mg/kg	3.1	4.5	43.9	J	mg/kg	6.8	95% Chebyshev	Non-parametric, MO	6.8	95% Chebyshev	Non-parametric, MO
Arsenic	mg/kg	4.8	4.9	7.3	J	mg/kg	4.9	95% Approximate Gamma, H	Approximate Gamma, Lognormal	4.9	95% Approximate Gamma, H	Approximate Gamma, Lognormal
Iron	mg/kg	20,590	21,147	26,500	J	mg/kg	21,147	95% Student's t	Normal	21,147	95% Student's t	Normal
Lead	mg/kg	79	N/A	1,440	J	mg/kg	79	Mean	See Note	79	Mean	See Note
Manganese	mg/kg	522	557	1,220		mg/kg	489	95% modified t	Non-parametric, M	489	95% modified t	Non-parametric, M
Thallium	mg/kg	0.50	0.66	0.99	J	mg/kg	0.56	95% Chebyshev	Non-parametric, MO	0.56	95% Chebyshev	Non-parametric, MO
Vanadium	mg/kg	19.9	20.6	35.4		mg/kg	19.4	95% Approximate Gamma	Approximate Gamma	19.4	95% Approximate Gamma	Approximate Gamma

Notes:

- Field duplicates were averaged and regarded as one sample entry. Lab duplicates were not included in the assessment. Nondetects were assumed to be half reporting limits.
- The EPCs were calculated using the ProUCL (Version 3.00.02) and the EPCs were selected in accordance with the ProUCL Version 3.0 User Guide (USEPA, 2004) and the Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites (USEPA, 2002). The average lead concentration was used as the lead EPC in accordance with the User's Guide for the Integrated Exposure Uptake Biokinetic Model for Lead in Children (IEUBK) Windows® Version – 32 bit Version (USEPA, 2002).
 - HE - highly skewed to extremely highly skewed (standard deviation of log-transformed data in the interval (2.0, 3.0]) data set.
 - MH - moderately to highly skewed (standard deviation of log-transformed data in the interval (1.0, 2.0]) data set.
 - MO - moderately skewed (standard deviation of log-transformed data in the interval (0.5, 1]) data set.
 - M - mildly skewed (standard deviation of log-transformed data less than or equal to 0.5) data set.
 - Q - qualifier
 - J = Estimated Value

APPENDIX E TABLE 2G
 AMBIENT AIR EXPOSURE POINT CONCENTRATIONS - SEAD-59 STOCKPILE SOIL
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	SEAD-59 Stockpile

Equation for Air EPC from Stockpile Soil (mg/m³) = CSsurf x PM10 x CF

Variables:
 CSsurf = Chemical Concentration in Stockpile Soil, from EPC data (mg/kg)
 PM10 = Average Measured PM10 Concentration = 17 ug/m³
 CF = Conversion Factor = 1E-9 kg/ug

Analyte	Reasonable Maximum Exposure		Central Tendency Exposure	
	EPC Data for Stockpile Soil	Calculated Air EPC Stockpile Soil	EPC Data for Stockpile Soil	Calculated Air EPC Stockpile Soil
	(mg/kg)	(mg/m ³)	(mg/kg)	(mg/m ³)
Benzo(a)anthracene	6.8	1.2E-07	6.8	1.2E-07
Benzo(a)pyrene	7.9	1.3E-07	7.9	1.3E-07
Benzo(b)fluoranthene	5.1	8.7E-08	5.1	8.7E-08
Benzo(k)fluoranthene	6.7	1.1E-07	6.7	1.1E-07
Chrysene	6.8	1.2E-07	6.8	1.2E-07
Dibenz(a,h)anthracene	1.2	2.0E-08	1.2	2.0E-08
Indeno(1,2,3-cd)pyrene	3.5	6.0E-08	3.5	6.0E-08
Aluminum	10800	1.8E-04	10800	1.8E-04
Antimony	6.8	1.2E-07	6.8	1.2E-07
Arsenic	4.9	8.3E-08	4.9	8.3E-08
Iron	21147	3.6E-04	21147	3.6E-04
Lead	79.18	1.3E-06	79.18	1.3E-06
Manganese	489	8.3E-06	489	8.3E-06
Thallium	0.56	9.5E-09	0.56	9.5E-09
Vanadium	19.4	3.3E-07	19.4	3.3E-07

APPENDIX E TABLE 2H
 SOIL EXPOSURE POINT CONCENTRATION SUMMARY - SURFACE SOIL FOR SEAD-71 (FENCED AREA EXCLUDED)
 SEAD-59 AND SEAD-71 PHASE II RI
 SENECA ARMY DEPOT ACTIVITY

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-71

Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL of Normal Data (1)	Maximum Detected Concentration (1)	Q	EPC Units	Reasonable Maximum Exposure (2)			Central Tendency (2)		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Surface Soil												
2-Methylnaphthalene	mg/kg	0.32	0.67	0.77	J	mg/kg	0.19	97.5% Chebyshev	Non-parametric, MH	0.19	97.5% Chebyshev	Non-parametric, MH
Benzo(a)anthracene	mg/kg	1.0	1.5	10		mg/kg	2.9	97.5% Chebyshev	Non-parametric, MH	2.9	97.5% Chebyshev	Non-parametric, MH
Benzo(a)pyrene	mg/kg	1.0	1.5	9		mg/kg	2.7	97.5% Chebyshev	Non-parametric, MH	2.7	97.5% Chebyshev	Non-parametric, MH
Benzo(b)fluoranthene	mg/kg	0.9	1.4	7.4		mg/kg	1.6	95% H-UCL	Lognormal, MH	1.6	95% H-UCL	Lognormal, MH
Benzo(k)fluoranthene	mg/kg	0.9	1.3	8		mg/kg	2.4	97.5% Chebyshev	Non-parametric, MH	2.4	97.5% Chebyshev	Non-parametric, MH
Chrysene	mg/kg	1.2	1.7	10		mg/kg	1.9	95% H-UCL	Lognormal, MH	1.9	95% H-UCL	Lognormal, MH
Dibenz(a,h)anthracene	mg/kg	0.35	0.47	2	J	mg/kg	0.7	95% Chebyshev	Non-parametric, MO	0.7	95% Chebyshev	Non-parametric, MO
Indeno(1,2,3-cd)pyrene	mg/kg	0.65	0.93	5.4	J	mg/kg	1.7	97.5% Chebyshev	Non-parametric, MH	1.7	97.5% Chebyshev	Non-parametric, MH
Naphthalene	mg/kg	0.30	0.46	1.1	J	mg/kg	0.19	95% Chebyshev	Non-parametric, MO	0.19	95% Chebyshev	Non-parametric, MO
Aluminum	mg/kg	11,506	12,058	15,900		mg/kg	12,150	95% Student t	Normal	12,150	95% Student t	Normal
Antimony	mg/kg	2.17	3.56	11.5	J	mg/kg	1.6	95% Chebyshev	Non-parametric, MO	1.6	95% Chebyshev	Non-parametric, MO
Arsenic	mg/kg	5.9	6.3	14.6		mg/kg	6.3	95% Approximate Gamma	Gamma	6.3	95% Approximate Gamma	Gamma
Iron	mg/kg	23,129	24,133	38,000		mg/kg	24,133	95% Student t	Normal	24,133	95% Student t	Normal
Lead	mg/kg	115	N/A	1,010		mg/kg	115	Mean	Mean	115	Mean	Mean
Manganese	mg/kg	581	620	1,330		mg/kg	548	95% Approximate Gamma	Gamma	548	95% Approximate Gamma	Gamma
Thallium	mg/kg	0.47	0.71	2.3		mg/kg	0.29	95% Chebyshev	Non-parametric, MO	0.29	95% Chebyshev	Non-parametric, MO
Vanadium	mg/kg	18.6	19.3	24		mg/kg	19.3	95% Student t	Normal	19.3	95% Student t	Normal

Notes:

- Field duplicates were averaged and regarded as one sample entry. Lab duplicates were not included in the assessment.
 Nondetects were assumed to be half reporting limits.
- The EPCs were calculated using the ProUCL (Version 3.00.02) and the EPCs were selected in accordance with the ProUCL Version 3.0 User Guide (USEPA, 2004) and the Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites (USEPA, 2002). The average lead concentration was used as the lead EPC in accordance with the User's Guide for the Integrated Exposure Uptake Biokinetic Model for Lead in Children (IEUBK) Windows® Version – 32 bit Version (USEPA, 2002).
 HE - highly skewed to extremely highly skewed (standard deviation of log-transformed data in the interval (2.0, 3.0] data set.
 MH - moderately to highly skewed (standard deviation of log-transformed data in the interval (1.0, 2.0] data set.
 MO - moderately skewed (standard deviation of log-transformed data in the interval (0.5, 1.0] data set
 M - mildly skewed (standard deviation of log-transformed data less than or equal to 0.5) data set.
 Q - qualifier
 J = Estimated Value

APPENDIX E TABLE 2I
 SOIL EXPOSURE POINT CONCENTRATION SUMMARY - SURFACE AND SUBSURFACE SOIL FOR SEAD-71 (FENCED AREA EXCLUDED)
 SEAD-59 AND SEAD-71 PHASE II RI
 SENECA ARMY DEPOT ACTIVITY

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-71

Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL of Normal Data (1)	Maximum Detected Concentration (1)	Q	EPC Units	Reasonable Maximum Exposure (2)			Central Tendency (2)		
							Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
Surface and Subsurface Soil												
2-Methylnaphthalene	mg/kg	0.94	4.2	31		mg/kg	0.19	97.5% Chebyshev	Non-parametric, MH	0.19	97.5% Chebyshev	Non-parametric, MH
Benzo(a)anthracene	mg/kg	1.6	2.6	37		mg/kg	5.5	97.5% Chebyshev	Non-parametric, MH	5.5	97.5% Chebyshev	Non-parametric, MH
Benzo(a)pyrene	mg/kg	1.3	1.9	22		mg/kg	3.8	97.5% Chebyshev	Non-parametric, MH	3.8	97.5% Chebyshev	Non-parametric, MH
Benzo(b)fluoranthene	mg/kg	1.3	2.1	26		mg/kg	2.2	95% H-UCL	Lognormal, MH	2.2	95% H-UCL	Lognormal, MH
Benzo(k)fluoranthene	mg/kg	1	1.5	15	J	mg/kg	3	97.5% Chebyshev	Non-parametric, MH	3	97.5% Chebyshev	Non-parametric, MH
Chrysene	mg/kg	1.6	2.7	36		mg/kg	2.6	95% H-UCL	Lognormal, MH	2.6	95% H-UCL	Lognormal, MH
Dibenz(a,h)anthracene	mg/kg	0.5	0.8	9.8	J	mg/kg	1.5	97.5% Chebyshev	Non-parametric, MH	1.5	97.5% Chebyshev	Non-parametric, MH
Indeno(1,2,3-cd)pyrene	mg/kg	0.8	1.2	12	J	mg/kg	2.2	97.5% Chebyshev	Non-parametric, MH	2.2	97.5% Chebyshev	Non-parametric, MH
Naphthalene	mg/kg	0.69	2.6	17	J	mg/kg	0.19	97.5% Chebyshev	Non-parametric, MH	0.19	97.5% Chebyshev	Non-parametric, MH
Aluminum	mg/kg	11,493	11,997	15,900		mg/kg	12,150	95% Student t UCL	Normal	12,150	95% Student t UCL	Normal
Antimony	mg/kg	1.9	3.2	11.5	J	mg/kg	1.6	95% Chebyshev	Non-parametric, MO	1.6	95% Chebyshev	Non-parametric, MO
Arsenic	mg/kg	5.8	6.1	14.6		mg/kg	6.1	95% H-UCL	Lognormal	6.1	95% H-UCL	Lognormal
Iron	mg/kg	22,859	23,752	38,000		mg/kg	23,752	95% Student t UCL	Normal	23,752	95% Student t UCL	Normal
Lead	mg/kg	104.5	N/A	1,010		mg/kg	104.5	Mean	Mean	104.5	Mean	Mean
Manganese	mg/kg			1,330		mg/kg		95% Approximate Gamma	Gamma		95% Approximate Gamma	Gamma
		570	605				539			539		
Thallium	mg/kg	0.45	0.67	2.3		mg/kg	0.29	95% Chebyshev	Non-parametric, MO	0.29	95% Chebyshev	Non-parametric, MO
Vanadium	mg/kg	18.7	19.3	24.9		mg/kg	19.3	95% Student t UCL	Normal	19.3	95% Student t UCL	Normal

Notes:

- Field duplicates were averaged and regarded as one sample entry. Lab duplicates were not included in the assessment. Nondetects were assumed to be half reporting limits.
- The EPCs were calculated using the ProUCL (Version 3.00.02) and the EPCs were selected in accordance with the ProUCL Version 3.0 User Guide (USEPA, 2004) and the Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites (USEPA, 2002). The average lead concentration was used as the lead EPC in accordance with the User's Guide for the Integrated Exposure Uptake Biokinetic Model for Lead in Children (IEUBK) Windows® Version – 32 bit Version (USEPA, 2002).
 - HE - highly skewed to extremely highly skewed (standard deviation of log-transformed data in the interval (2.0, 3.0] data set.
 - MH - moderately to highly skewed (standard deviation of log-transformed data in the interval (1.0, 2.0] data set.
 - MO - moderately skewed (standard deviation of log-transformed data in the interval (0.5, 1.0] data set
 - M - mildly skewed (standard deviation of log-transformed data less than or equal to 0.5) data set.
 - Q - qualifier
 - J = Estimated Value

APPENDIX E TABLE 2J
 AMBIENT AIR EXPOSURE POINT CONCENTRATIONS - SURFACE SOIL FOR SEAD-71 (FENCED AREA EXCLUDED)
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	SEAD-71

Equation for Air EPC from Surface Soil (mg/m³) = CS_{surf} x PM₁₀ x CF

Variables:
 CS_{surf} = Chemical Concentration in Surface Soil, from EPC data (mg/kg)
 PM₁₀ = Average Measured PM₁₀ Concentration = 17 ug/m³
 CF = Conversion Factor = 1E-9 kg/ug

Analyte	Reasonable Maximum Exposure		Central Tendency Exposure	
	EPC Data for Surface Soil	Calculated Air EPC Surface Soil	EPC Data for Surface Soil	Calculated Air EPC Surface Soil
	(mg/kg)	(mg/m ³)	(mg/kg)	(mg/m ³)
2-Methylnaphthalene	0.185	3.1E-09	0.185	3.1E-09
Benzo(a)anthracene	2.9	4.9E-08	2.9	4.9E-08
Benzo(a)pyrene	2.7	4.6E-08	2.7	4.6E-08
Benzo(b)fluoranthene	1.6	2.7E-08	1.6	2.7E-08
Benzo(k)fluoranthene	2.4	4.1E-08	2.4	4.1E-08
Chrysene	1.9	3.2E-08	1.9	3.2E-08
Dibenz(a,h)anthracene	0.7	1.2E-08	0.7	1.2E-08
Indeno(1,2,3-cd)pyrene	1.7	2.9E-08	1.7	2.9E-08
Naphthalene	0.185	3.1E-09	0.185	3.1E-09
Aluminum	12150	2.1E-04	12150	2.1E-04
Antimony	1.6	2.7E-08	1.6	2.7E-08
Arsenic	6.3	1.1E-07	6.3	1.1E-07
Iron	24133	4.1E-04	24133	4.1E-04
Lead	115	2.0E-06	115	2.0E-06
Manganese	547.5	9.3E-06	547.5	9.3E-06
Thallium	0.29	4.9E-09	0.29	4.9E-09
Vanadium	19.3	3.3E-07	19.3	3.3E-07

APPENDIX E TABLE 2K
 AMBIENT AIR EXPOSURE POINT CONCENTRATIONS - SURFACE AND SUBSURFACE SOIL FOR SEAD-71 (FENCED AREA EXCLUDED)
 SEAD-59 AND SEAD-71 PHASE II RI
 Seneca Army Depot Activity

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	SEAD-71

Equation for Air EPC from Total Soils (mg/m³) = CStot x PM10 x CF

Variables:
 CStot = Chemical Concentration in Total Soils, from EPC data (mg/kg)
 PM10 = PM10 Concentration Calculated for Construction Worker= 954 ug/m³
 CF = Conversion Factor = 1E-9 kg/ug

Analyte	Reasonable Maximum Exposure		Central Tendency Exposure	
	EPC Data for Surface and Subsurface Soil (mg/kg)	Calculated Air EPC Surface and Subsurface Soil (mg/m ³)	EPC Data for Surface and Subsurface Soil (mg/kg)	Calculated Air EPC Surface and Subsurface Soil (mg/m ³)
2-Methylnaphthalene	0.185	1.8E-07	0.185	1.8E-07
Benzo(a)anthracene	5.5	5.2E-06	5.5	5.2E-06
Benzo(a)pyrene	3.8	3.6E-06	3.8	3.6E-06
Benzo(b)fluoranthene	2.2	2.1E-06	2.2	2.1E-06
Benzo(k)fluoranthene	3	2.9E-06	3	2.9E-06
Chrysene	2.6	2.5E-06	2.6	2.5E-06
Dibenz(a,h)anthracene	1.5	1.4E-06	1.5	1.4E-06
Indeno(1,2,3-cd)pyrene	2.2	2.1E-06	2.2	2.1E-06
Naphthalene	0.185	1.8E-07	0.185	1.8E-07
Aluminum	12150	1.2E-02	12150	1.2E-02
Antimony	1.6	1.5E-06	1.6	1.5E-06
Arsenic	6.1	5.8E-06	6.1	5.8E-06
Iron	23752	2.3E-02	23752	2.3E-02
Lead	104.5	1.0E-04	104.5	1.0E-04
Manganese	538.5	5.1E-04	538.5	5.1E-04
Thallium	0.29	2.8E-07	0.29	2.8E-07
Vanadium	19.3	1.8E-05	19.3	1.8E-05

APPENDIX E TABLE 2L
GROUNDWATER EXPOSURE POINT CONCENTRATION SUMMARY - SEAD-71 (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
SENECA ARMY DEPOT ACTIVITY

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Point:	SEAD-71

Chemical of Potential Concern	Units	Arithmetic Mean (1)	Maximum Detected Concentration	Maximum Qualifier	EPC Units	RME (2)			CT (3)		
						Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale	Medium EPC Value	Medium EPC Statistic	Medium EPC Rationale
4-Nitroaniline	ug/L	7.8	8.7	J	ug/L	8.7	MDC	See note	8.7	MDC	See note
Aluminum	ug/L	4,062	19,700		ug/L	19700	MDC	See note	19700	MDC	See note
Antimony	ug/L	3.94	6.52	J	ug/L	6.52	MDC	See note	6.52	MDC	See note
Arsenic	ug/L	3.1	2.7	J	ug/L	2.7	MDC	See note	2.7	MDC	See note
Chromium	ug/L	5.57	33.1		ug/L	33.1	MDC	See note	33.1	MDC	See note
Iron	ug/L	5,063	35,100		ug/L	35,100	MDC	See note	35,100	MDC	See note
Lead	ug/L	4.2	17.2		ug/L	17.2	MDC	See note	17.2	MDC	See note
Manganese	ug/L	633	2,680		ug/L	2,680	MDC	See note	2,680	MDC	See note
Thallium	ug/L	6.0	2.5	J	ug/L	2.5	MDC	See note	2.5	MDC	See note
Vanadium	ug/L	4.71	25.7	J	ug/L	25.7	MDC	See note	25.7	MDC	See note

Notes:

- Field duplicates were averaged and regarded as one sample entry. Lab duplicates were not included in the assessment. Concentrations for nondetects were assumed to be half the detection limits.
 - The maximum detected concentration was used as EPC for the RME scenario.
As residential use of groundwater has been based on the assumption that a single private well can be placed anywhere in the contaminated plume, the MDC across several rounds of monitoring was used as the EPC for groundwater as a conservative step for both the RME and CT scenarios.
 - The maximum detected concentration was used as EPC for the CT scenario.
- EPC = Exposure Point Concentration
MDC = Maximum Detected Concentration
RME = Reasonable Maximum Exposure
CT = Central Tendency

**APPENDIX E TABLE 3
EXPOSURE FACTOR ASSUMPTIONS FOR SEAD-59 AND SEAD-71
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Soil
Exposure Point:	SEAD-59 and SEAD-71
Receptor Population:	Adolescent Trespasser / Adolescent Visitor
Receptor Age:	Adolescent (11-16 yr)

EXPOSURE ROUTE	PARAMETER CODE	PARAMETER DEFINITION	UNITS	RME VALUE	RME RATIONALE	RME REFERENCE
Ingestion of Soil	EPC	Soil EPC	mg/kg		Surface soils.	See Table 6-4A/B/C & 6-5A/B
	BW	Body Weight	kg	50	Average weight for adolescent ages 11-16 (Table 7-3).	USEPA, 2002.
	IR	Ingestion Rate	mg/day	100	Default soil ingestion rate for adult.	USEPA, 2002.
	FI	Fraction Ingested	unitless	1	Assuming 100% ingestion from site	BPJ.
	EF	Exposure Frequency	days/yr	14	Assumption.	BPJ.
	ED	Exposure Duration	year	5	Assumption.	BPJ.
	CF	Conversion Factor	kg/mg	1.E-06		
	AT(Nc)	Averaging Time - Nc	days	1,825	5 years.	
AT(Car)	Averaging Time - Car	days	25,550	70 years, default value for human life span	USEPA, 2002.	
Dermal Contact of Soil	EPC	Soil EPC	mg/kg		Surface soils.	See Table 6-4A/B/C & 6-5A/B
	BW	Body Weight	kg	50	Average weight for adolescent ages 11-16 (Table 7-3).	USEPA, 2002.
	SA	Skin Contact Surface Area	cm ²	5,867	Average surface area for adolescent child (11-16) including head, hands, forearms, lower legs, and feet.	USEPA, 1997.
	AF	Soil/Skin Adherence Factor	mg/cm ² -event	0.07	Default value for adult.	USEPA, 2004.
	ABS	Dermal Absorption Fraction	unitless		Chemical-specific	USEPA, 2004.
	EV	Event Frequency	events/day	1	Default value for residential child.	USEPA, 2004.
	EF	Exposure Frequency	days/yr	14	Assumption.	BPJ.
	ED	Exposure Duration	year	5	Assumption.	BPJ.
	CF	Conversion Factor	kg/mg	1E-06		
	AT(Nc)	Averaging Time - Nc	days	1,825	5 years.	
	AT(Car)	Averaging Time - Car	days	25,550	70 years, default value for human life span.	USEPA, 2002.

Notes:

RME = Reasonable Maximum Exposure

Source References:

- BPJ: Best Professional Judgment.
- USEPA, 1997: Exposure Factors Handbook
- USEPA, 2002: Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites. December.
- USEPA, 2004: Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final.

Intake Equations:

Ingestion Daily Intake (DI) (mg/kg-day) = EPC x IR x EF x ED x CF x FI / (BW x AT)
Dermal DI (mg/kg-day) = EPC x SA x AF x ABS x EV x EF x ED x CF/(BW x AT)

**APPENDIX E TABLE 3
EXPOSURE FACTOR ASSUMPTIONS FOR SEAD-59 AND SEAD-71
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Air
Exposure Point:	SEAD-59 and SEAD-71
Receptor Population:	Adolescent Trespasser / Adolescent Visitor
Receptor Age:	Adolescent (11-16 yr)

EXPOSURE ROUTE	PARAMETER CODE	PARAMETER DEFINITION	UNITS	RME VALUE	RME RATIONALE	RME REFERENCE
Inhalation of Dust in Ambient Air	EPC	Air EPC	mg/m ³		Surface soils.	See Table 6-7A/B/C & 6-8A/B
	BW	Body Weight	kg	50	Average weight for adolescent ages 11-16 (Table 7-3).	USEPA, 2002.
	IR	Inhalation Rate	m ³ /day	1.6	Average inhalation rate for moderate activity is 1.6 m ³ /hr. Assuming 1 hr/day exposure.	USEPA, 1997 & BPJ.
	EF	Exposure Frequency	days/yr	14	Assumption.	BPJ.
	ED	Exposure Duration	year	5	Assumption.	BPJ.
	AT(Nc) AT(Car)	Averaging Time - Nc Averaging Time - Car	days days	1,825 25,550	6 years. 70 years, default value for human life span.	USEPA, 2002.

Notes:

RME = Reasonable Maximum Exposure

Source References:

- BPJ: Best Professional Judgment.
- USEPA, 1997: Exposure Factors Handbook
- USEPA, 2002: Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites. December.
- USEPA, 2004: Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final.

Intake Equation:

Inhalation Daily Intake (DI) (mg/kg-day) = EPC x IR x EF x ED / (BW x AT)

**APPENDIX E TABLE 3
EXPOSURE FACTOR ASSUMPTIONS FOR SEAD-59 AND SEAD-71
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater
Exposure Point:	SEAD-59 and SEAD-71
Receptor Population:	Adolescent Trespasser / Adolescent Visitor
Receptor Age:	Adolescent (11-16 yr)

EXPOSURE ROUTE	PARAMETER CODE	PARAMETER DEFINITION	UNITS	RME VALUE	RME RATIONALE	RME REFERENCE
Intake of Groundwater	EPC	Groundwater EPC	mg/L		See Table 6-6A/B	See Table 6-6A/B
	BW	Body Weight	kg	50	Average weight for adolescent ages 11-16 (Table 7-3).	USEPA, 2002.
	IR	Intake Rate	L/day	2	95th percentile for 11-19 yr old.	USEPA, 1997.
	EF	Exposure Frequency	days/yr	14	Assumption.	BPJ.
	ED	Exposure Duration	year	5	Assumption.	BPJ.
	AT(Nc)	Averaging Time - Nc	days	1,825	5 years.	
	AT(Car)	Averaging Time - Car	days	25,550	70 years, default value for human life span.	USEPA, 2002.

Notes:

RME = Reasonable Maximum Exposure

Source References:

- BPJ: Best Professional Judgment.
- USEPA, 1997: Exposure Factors Handbook
- USEPA, 2002: Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites. December.
- USEPA, 2004: Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final.

Intake Equation:

Ingestion Daily Intake (DI) (mg/kg-day) = EPC x IR x EF x ED x CF x FI / (BW x AT)

**APPENDIX E TABLE 4A
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
SEAD-59 AND SEAD-71**

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (3) (MM/DD/YY)
2-Methylnaphthalene	Chronic	4E-03	mg/kg-day	1	4.00E-03	mg/kg-day	Respiratory System	1000	IRIS	2/17/2006
4-nitroaniline	Chronic	3.00E-03	mg/kg-day	1	3.00E-03	mg/kg-day	N/A	N/A	PPRTV	10/8/2004
Acenaphthylene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)anthracene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(b)fluoranthene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(ghi)perylene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(k)fluoranthene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Carbazole	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Chrysene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Dibenz(a,h)anthracene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
Naphthalene	Chronic	2E-02	mg/kg-day	1	2E-02	mg/kg-day	Body Weight	3000	IRIS	2/13/2006
Phenanthrene	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDE	N/A	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDT	Chronic	5E-04	mg/kg-day	1	5E-04	mg/kg-day	Liver	100	IRIS	12/03/2004
Heptachlor epoxide	Chronic	1.3E-05	mg/kg-day	1	1.3E-05	mg/kg-day	Liver	1000	IRIS	12/03/2004
Aluminum	Chronic	1.0E+00	mg/kg-day	1	1.0E+00	mg/kg-day	N/A	N/A	NCEA	8/26/1996
Antimony	Chronic	4E-04	mg/kg-day	0.15	6E-05	mg/kg-day	Whole Body Blood	1000	IRIS	12/03/2004
Arsenic	Chronic	3E-04	mg/kg-day	1	3E-04	mg/kg-day	Skin	3	IRIS	12/03/2004
Chromium (VI)	Chronic	3E-03	mg/kg-day	0.025	8E-05	mg/kg-day	Weight, Blood, and Other Tissues	900	IRIS	2/13/06
Iron	Chronic	3E-01	mg/kg-day	1	3E-01	mg/kg-day	N/A	1	NCEA	07/23/96
Manganese (4)	Chronic	2.3E-02	mg/kg-day	0.04	9E-04	mg/kg-day	Central Nervous	3	IRIS	12/23/2004

**APPENDIX E TABLE 4A
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
SEAD-59 AND SEAD-71**

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD: Target Organ (3) (MM/DD/YY)
Thallium (5)	Chronic	6E-04	mg/kg-day	1	6E-04	mg/kg-day	Liver, Blood, Hair	3000	IRIS	12/23/2004
Vanadium	Chronic	1.0E-03	mg/kg-day	0.026	3E-05	mg/kg-day	N/A	N/A	NCEA, quoted in Region 3 and Region 9	2/13/06

N/A = Not Applicable

NCEA = National Center for Environmental Assessment

IRIS = Integrated Risk Information System

PPRTV = EPA's Provisional Peer Reviewed Toxicity Values

(1) Source: Supplemental Guidance for Dermal Risk Assessment. Part E of Risk Assessment Guidance for Superfund, Human Health Evaluation Manual (Volume I). Final. USEPA. 2004.

A default value of 1 was used if no value was available in the USEPA (2004) document.

(2) Dermal RfD = Oral RfD x Adjustment Factor

(3) For IRIS values, the date was the last time IRIS was checked.

For NCEA values, the date was the date of the article provided by NCEA.

For PPRTV values, the date was the date of the Region III RBC table, where the PPRTV was cited from.

(4) The chronic oral RfD for manganese was adjusted by using a modifying factor of 3 in accordance with the IRIS recommendation.

In addition, dietary exposure (assumed 5 mg/day) was subtracted. Thus, the RfD used in this risk assessment is 1/6 of the value listed in the IRIS.

(5) The chronic oral RfD for thallium was based on the chronic oral RfD of thallium sulfate adjusted for molecular weight differences.

**APPENDIX E TABLE 4B
NON-CANCER TOXICITY DATA -- INHALATION
SEAD-59 AND SEAD-71**

Chemical of Potential Concern	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD (1)	Units	Primary Target Organ	Combined Uncertainty/Modifyin Factors	Sources of RfC:RfD: Target Organ	Dates (2) (MM/DD/YY)
2-Methylnaphthalene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4-nitroaniline	Chronic	N/A	N/A	1.00E-03	mg/kg-day	N/A	N/A	PPRTV	10/8/2004
Acenaphthylene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)anthracene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(b)fluoranthene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(ghi)perylene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(k)fluoranthene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbazole	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chrysene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dibenz(a,h)anthracene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Naphthalene	Chronic	3E-03	mg/m ³	8.57E-04	mg/kg-day	Nasal and Respiratory System	3000	IRIS	2/13/2006
Phenanthrene	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor epoxide	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aluminum	Chronic	5E-03	mg/m ³	1.43E-03	mg/kg-day	N/A	N/A	NCEA	6/20/1997
Antimony	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (VI)	Chronic	1E-04	mg/m ³	3E-05	mg/kg-day	Respiratory System	300	IRIS	2/13/2006
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	Chronic	5E-05	mg/m ³	1E-05	mg/kg-day	Central Nervous System	1000	IRIS	12/23/04
Thallium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**APPENDIX E TABLE 4B
NON-CANCER TOXICITY DATA -- INHALATION
SEAD-59 AND SEAD-71**

Chemical of Potential Concern	Chronic/ Subchronic	Value Inhalation RfC	Units	Adjusted Inhalation RfD (1)	Units	Primary Target Organ	Combined Uncertainty/Modifyin Factors	Sources of RfC:RfD: Target Organ	Dates (2) (MM/DD/YY)
Vanadium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:

(1) Inhalation RfD was adjusted based on the assumption of 70 kg body weight and 20 m³/day inhalation rate.

(2) For IRIS values, the date was the last time IRIS was checked.

For PPRTV values, the date was the date of the Region III RBC table, where the PPRTV was cited from.

N/A = Not Applicable

IRIS = Integrated Risk Information System

PPRTV = EPA's Provisional Peer Reviewed Toxicity Values

**APPENDIX E TABLE 4C
CANCER TOXICITY DATA -- ORAL/DERMAL
SEAD-59 AND SEAD-71**

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral Cancer Slope Factor Source	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal Cancer Slope Factor (2)	Units	Weight of Evidence/ Cancer Guideline Description	Weight of Evidence Source	Date (3) (MM/DD/YY)
2-Methylnaphthalene	N/A	N/A	N/A	N/A	N/A	inadequate to assess human carcinogenic potential	IRIS	2/17/2006
4-nitroaniline	2.00E-02	PPRTV	1	2.00E-02	(mg/kg-day) ⁻¹	N/A	N/A	10/8/2004
Acenaphthylene	N/A	N/A	1	N/A	N/A	D	IRIS	12/03/2004
Benzo(a)anthracene	0.73	NCEA	1	0.73	(mg/kg-day) ⁻¹	B2	IRIS	10/8/2004
Benzo(a)pyrene	7.3	IRIS	1	7.3	(mg/kg-day) ⁻¹	B2	IRIS	12/03/2004
Benzo(b)fluoranthene	0.73	NCEA	1	0.73	(mg/kg-day) ⁻¹	B2	IRIS	10/8/2004
Benzo(ghi)perylene	N/A	N/A	1	N/A	N/A	D	IRIS	12/03/2004
Benzo(k)fluoranthene	0.073	NCEA	1	0.073	(mg/kg-day) ⁻¹	B2	IRIS	10/8/2004
Carbazole	0.02	HEAST, 1997	1	0.02	(mg/kg-day) ⁻¹	N/A	N/A	N/A
Chrysene	0.0073	NCEA	1	0.0073	(mg/kg-day) ⁻¹	B2	IRIS	10/8/2004
Dibenz(a,h)anthracene	7.3	NCEA	1	7.3	(mg/kg-day) ⁻¹	B2	IRIS	10/8/2004
Indeno(1,2,3-cd)pyrene	0.73	NCEA	1	0.73	(mg/kg-day) ⁻¹	B2	IRIS	10/8/2004
Naphthalene	N/A	N/A	N/A	N/A	N/A	C ⁴	IRIS	2/13/2006
Phenanthrene	N/A	N/A	1	N/A	N/A	D	IRIS	12/03/2004
4,4'-DDE	0.34	IRIS	1	0.34	(mg/kg-day) ⁻¹	B2	IRIS	12/03/2004
4,4'-DDT	0.34	IRIS	1	0.34	(mg/kg-day) ⁻¹	B2	IRIS	12/03/2004
Heptachlor epoxide	9.1	IRIS	1	9.1	(mg/kg-day) ⁻¹	B2	IRIS	12/03/2004
Aluminum	N/A	N/A	N/A	N/A	N/A	D	NCEA	6/20/1997
Antimony	N/A	N/A	0.15	N/A	N/A	N/A	N/A	N/A
Arsenic	1.5	IRIS	1	1.5	(mg/kg-day) ⁻¹	A	IRIS	12/03/2004
Chromium (VI)	N/A	N/A	N/A	N/A	N/A	A	IRIS	2/13/2006
Iron	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A
Manganese	N/A	N/A	0.04	N/A	N/A	D	N/A	N/A

**APPENDIX E TABLE 4C
CANCER TOXICITY DATA -- ORAL/DERMAL
SEAD-59 AND SEAD-71**

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral Cancer Slope Factor Source	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal Cancer Slope Factor (2)	Units	Weight of Evidence/ Cancer Guideline Description	Weight of Evidence Source	Date (3) (MM/DD/YY)
Thallium	N/A	N/A	1	N/A	N/A	D	N/A	N/A
Vanadium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

IRIS = Integrated Risk Information System

HEAST= Health Effects Assessment Summary Tables

NCEA = National Center for Environmental Assessment

PPRTV = EPA's Provisional Peer Reviewed Toxicity Values

EPA Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

Notes:

(1) Source: USEPA (2004) Supplemental Guidance for Dermal Risk Assessment. Part E of Risk Assessment Guidance for Superfund, Human Health Evaluation Manual (Volume I). Final. A default value of 1 was used if no value was available in the USEPA (2004) document.

(2) Dermal Cancer Slope Factor = Oral Cancer Slope Factor/Adjustment Factor

(3) For IRIS values, the date was the last time IRIS was checked.

For PPRTV and NCEA values, the date was the date of the Region III RBC table, where the PPRTV and NCEA values were cited from.

**APPENDIX E TABLE 4D
CANCER TOXICITY DATA -- INHALATION
SEAD-59 AND SEAD-71**

Chemical of Potential Concern	Unit Risk	Units	Unit Risk Source	Adjustment (1)	Inhalation Cancer Slope Factor	Units	Weight of Evidence/ Cancer Guideline Description	Weight of Evidence Source	Date (2) (MM/DD/YY)
2-Methylnaphthalene	N/A	N/A	N/A	N/A	N/A	N/A	inadequate to assess human carcinogenic potential	IRIS	2/17/2006
4-nitroaniline	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acenaphthylene	N/A	N/A	N/A	N/A	N/A	N/A	D	IRIS	12/03/2004
Benzo(a)anthracene	N/A	N/A	N/A	N/A	N/A	N/A	B2	IRIS	12/03/2004
Benzo(a)pyrene	8.9E-04	(ug/m ³) ⁻¹	NCEA	3500	3.1	(mg/kg-day) ⁻¹	B2	IRIS	10/8/2004
Benzo(b)fluoranthene	N/A	N/A	N/A	N/A	N/A	N/A	B2	IRIS	12/03/2004
Benzo(ghi)perylene	N/A	N/A	N/A	N/A	N/A	N/A	D	IRIS	12/03/2004
Benzo(k)fluoranthene	N/A	N/A	N/A	N/A	N/A	N/A	B2	IRIS	12/03/2004
Carbazole	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chrysene	N/A	N/A	N/A	N/A	N/A	N/A	B2	IRIS	12/03/2004
Dibenz(a,h)anthracene	N/A	N/A	N/A	N/A	N/A	N/A	B2	IRIS	12/03/2004
Indeno(1,2,3-cd)pyrene	N/A	N/A	N/A	N/A	N/A	N/A	B2	IRIS	12/03/2004
Naphthalene	N/A	N/A	N/A	N/A	N/A	N/A	C ⁴	IRIS	2/13/2006
Phenanthrene	N/A	N/A	N/A	N/A	N/A	N/A	D	IRIS	12/03/2004
4,4'-DDE	N/A	N/A	N/A	N/A	N/A	N/A	B2	IRIS	12/03/2004
4,4'-DDT	9.7E-05	(ug/m ³) ⁻¹	IRIS	3500	3.4E-01	(mg/kg-day) ⁻¹	B2	IRIS	12/03/2004
Heptachlor epoxide	2.6E-03	(ug/m ³) ⁻¹	IRIS	3500	9.1E+00	(mg/kg-day) ⁻¹	B2	IRIS	12/03/2004
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	D	NCEA	6/20/1997
Antimony	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	4.3E-03	(ug/m ³) ⁻¹	IRIS	3500	1.5E+01	(mg/kg-day) ⁻¹	A	IRIS	12/03/2004
Chromium (VI)	1.2E-02	(ug/m ³) ⁻¹	IRIS	3500	4.2E+01	(mg/kg-day) ⁻¹	A	IRIS	2/13/2006
Iron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	N/A	N/A	N/A	N/A	N/A	N/A	D	IRIS	12/23/2004
Thallium	N/A	N/A	N/A	N/A	N/A	N/A	D	IRIS	12/23/2004
Vanadium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

IRIS = Integrated Risk Information System

HEAST= Health Effects Assessment Summary Tables

NCEA = National Center for Environmental Assessment

Notes:

(1) The adjustment was based on a 70 kg body weight and 20 m³/day inhalation rate.

(2) For IRIS values, the date was the last time IRIS was checked. For NCEA values, the date was the date of the Region III RBC, where the NCEA was cited from.

EPA Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

**APPENDIX E TABLE 5A
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-59 SOIL
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Equation for Intake (mg/kg-day) =	$\frac{EPC \times IR \times CF \times FI \times EF \times ED \times B}{BW \times AT}$	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose
Variables (Assumptions for Each Receptor are Listed at the Bottom):		Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
EPC = Exposure Point Concentration in Soil, mg/kg	EF = Exposure Frequency	
IR = Ingestion Rate	ED = Exposure Duration	
CF = Conversion Factor	BW = Bodyweight	
FI = Fraction Ingested	AT = Averaging Time	
	B = Bioavailability	

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day) ⁻¹	Bioavailability (unitless)	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Industrial Worker			Construction Worker			Adolescent Trespasser					
						Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
						(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Benzo(a)anthracene	N/A	7.3E-01	1	1.4E+00	1.4E+00		4.79E-07		3E-07		6.46E-08		5E-08		7.51E-09		5E-09
Benzo(a)pyrene	N/A	7.3E+00	1	1.4E+00	1.4E+00		4.89E-07		4E-06		6.46E-08		5E-07		7.67E-09		6E-08
Benzo(b)fluoranthene	N/A	7.3E-01	1	1.3E+00	1.2E+00		4.37E-07		3E-07		5.54E-08		4E-08		6.85E-09		5E-09
Benzo(k)fluoranthene	N/A	7.3E-02	1	1.1E+00	1.2E+00		3.84E-07		3E-08		5.54E-08		4E-09		6.03E-09		4E-10
Chrysene	N/A	7.3E-03	1	1.4E+00	1.4E+00		4.89E-07		4E-09		6.46E-08		5E-10		7.67E-09		6E-11
Dibenz(a,h)anthracene	N/A	7.3E+00	1	3.5E-01	4.0E-01		1.22E-07		9E-07		1.85E-08		1E-07		1.92E-09		1E-08
Indeno(1,2,3-cd)pyrene	N/A	7.3E-01	1	8.8E-01	8.7E-01		3.06E-07		2E-07		4.01E-08		3E-08		4.80E-09		4E-09
4,4'-DDE	N/A	3.4E-01	1	1.3E-01	1.2E-01		4.54E-08		2E-08		5.54E-09		2E-09		7.12E-10		2E-10
4,4'-DDT	5.00E-04	3.4E-01	1	1.8E-01	1.7E-01	1.76E-07	6.29E-08	4E-04	2E-08	5.49E-07	7.84E-09	1E-03	3E-09	1.38E-08	9.86E-10	3E-05	3E-10
Aluminum	1.00E+00	N/A	1	1.1E+04	1.1E+04	1.09E-02		1E-02		3.52E-02		4E-02		8.52E-04		9E-04	
Antimony	4.00E-04	N/A	1	1.4E+01	1.3E+01	1.36E-05		3E-02		4.20E-05		1E-01		1.07E-06		3E-03	
Arsenic	3.00E-04	1.5E+00	1	5.8E+00	5.7E+00	5.63E-06	2.01E-06	2E-02	3E-06	1.84E-05	2.63E-07	6E-02	4E-07	4.41E-07	3.15E-08	1E-03	5E-08
Iron	3.00E-01	N/A	1	2.2E+04	2.2E+04	2.14E-02		7E-02		7.02E-02		2E-01		1.68E-03		6E-03	
Manganese	2.33E-02	N/A	1	4.6E+02	4.6E+02	4.52E-04		2E-02		1.49E-03		6E-02		3.54E-05		2E-03	
Thallium	6.47E-04	N/A	1	1.7E-01	2.6E-01	1.66E-07		3E-04		8.40E-07		1E-03		1.30E-08		2E-05	
Vanadium	1.00E-03	N/A	1	2.0E+01	1.9E+01	1.91E-05		2E-02		6.26E-05		6E-02		1.50E-06		1E-03	
Total Hazard Quotient and Cancer Risk:								2E-01	8E-06			6E-01	1E-06			1E-02	1E-07

Assumptions for Industrial Worker		Assumptions for Construction Worker		Assumptions for Adolescent Trespasser	
CF =	1E-06 kg/mg	CF =	1E-06 kg/mg	CF =	1E-06 kg/mg
EPC =	EPC Surface Only	EPC =	EPC Surface and Subsurface	EPC =	EPC Surface Only
BW =	70 kg	BW =	70 kg	BW =	50 kg
IR =	100 mg/day	IR =	330 mg/day	IR =	100 mg/day
FI =	1 unitless	FI =	1 unitless	FI =	1 unitless
EF =	250 days/year	EF =	250 days/year	EF =	14 days/year
ED =	25 years	ED =	1 years	ED =	5 years
AT (Nc) =	9,125 days	AT (Nc) =	365 days	AT (Nc) =	1,825 days
AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.

NA= Information not available.

**APPENDIX E TABLE 5B
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-59 STOCKPILE SOIL
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Equation for Intake (mg/kg-day) =	$EPC \times IR \times CF \times FI \times EF \times ED \times B$ $BW \times AT$	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose
Variables (Assumptions for Each Receptor are Listed at the Bottom):		Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
EPC = Exposure Point Concentration in Soil, mg/kg	EF = Exposure Frequency	
IR = Ingestion Rate	ED = Exposure Duration	
CF = Conversion Factor	BW = Bodyweight	
FI = Fraction Ingested	B = Bioavailability	
	AT = Averaging Time	

Analyte	Oral RFD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	Bioavailability (unitless)	EPC Stockpile Soil (mg/kg)	Industrial Worker			Construction Worker			Adolescent Trespasser					
					Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
					(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Benzo(a)anthracene	N/A	7.3E-01	1	6.8E+00		2.38E-06		2E-06		3.14E-07		2E-07		3.73E-08		3E-08
Benzo(a)pyrene	N/A	7.3E+00	1	7.9E+00		2.76E-06		2E-05		3.64E-07		3E-06		4.33E-08		3E-07
Benzo(b)fluoranthene	N/A	7.3E-01	1	5.1E+00		1.78E-06		1E-06		2.35E-07		2E-07		2.79E-08		2E-08
Benzo(k)fluoranthene	N/A	7.3E-02	1	6.7E+00		2.34E-06		2E-07		3.09E-07		2E-08		3.73E-08		3E-09
Chrysene	N/A	7.3E-03	1	6.8E+00		2.38E-06		2E-08		3.14E-07		2E-09		3.73E-08		3E-10
Dibenz(a,h)anthracene	N/A	7.3E+00	1	1.2E+00		4.19E-07		3E-06		5.54E-08		4E-07		6.58E-09		5E-08
Indeno(1,2,3-cd)pyrene	N/A	7.3E-01	1	3.5E+00		1.22E-06		9E-07		1.61E-07		1E-07		1.92E-08		1E-08
Aluminum	1.00E+00	N/A	1	1.1E+04	1.06E-02		1E-02		3.49E-02		3E-02		8.28E-04		8E-04	
Antimony	4.00E-04	N/A	1	6.8E+00	6.65E-06		2E-02		2.20E-05		5E-02		5.22E-07		1E-03	
Arsenic	3.00E-04	1.5E+00	1	4.9E+00	4.79E-06	1.71E-06	2E-02	3E-06	1.58E-05	2.26E-07	5E-02	3E-07	3.76E-07	2.68E-08	1E-03	4E-08
Iron	3.00E-01	N/A	1	2.1E+04	2.07E-02		7E-02		6.83E-02		2E-01		1.62E-03		5E-03	
Manganese	2.33E-02	N/A	1	4.9E+02	4.78E-04		2E-02		1.58E-03		7E-02		3.75E-05		2E-03	
Thallium	6.47E-04	N/A	1	5.6E-01	5.48E-07		8E-04		1.81E-06		3E-03		4.30E-08		7E-05	
Vanadium	1.00E-03	N/A	1	1.9E+01	1.90E-05		2E-02		6.26E-05		6E-02		1.49E-06		1E-03	
Total Hazard Quotient and Cancer Risk:							2E-01	3E-05			5E-01	4E-06			1E-02	5E-07
					Assumptions for Industrial Worker			Assumptions for Construction Worker			Assumptions for Adolescent Trespasser					
					CF =	1E-06 kg/mg	CF =	1E-06 kg/mg	CF =	1E-06 kg/mg						
					EPC=	EPC Surface Only	EPC=	EPC Surface and Subsurface	EPC=	EPC Surface Only						
					BW =	70 kg	BW =	70 kg	BW =	50 kg						
					IR =	100 mg/day	IR =	330 mg/day	IR =	100 mg/day						
					FI =	1 unitless	FI =	1 unitless	FI =	1 unitless						
					EF =	250 days/year	EF =	250 days/year	EF =	14 days/year						
					ED =	25 years	ED =	1 years	ED =	5 years						
					AT (Nc) =	9,125 days	AT (Nc) =	365 days	AT (Nc) =	1,825 days						
					AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days						

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.

NA= Information not available.

**APPENDIX E TABLE 5C
CALCULATION OF INTAKE AND RISK FROM THE INGESTION OF SOIL
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-71 (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Equation for Intake (mg/kg-day) =	$\frac{EPC \times IR \times CF \times FI \times EF \times ED \times B}{BW \times AT}$	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose
Variables (Assumptions for Each Receptor are Listed at the Bottom):		Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
EPC = Exposure Point Concentration in Soil, mg/kg	EF = Exposure Frequency	
IR = Ingestion Rate	ED = Exposure Duration	
CF = Conversion Factor	BW = Bodyweight	
FI = Fraction Ingested	AT = Averaging Time	
	B = Bioavailability	

Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day) ⁻¹	Bioavailability (unitless)	EPC Surface Soil (mg/kg)	EPC from Total Soils (mg/kg)	Industrial Worker			Construction Worker			Adolescent Trespasser					
						Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
						(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
2-Methylnaphthalene	4.00E-03	N/A	1	1.9E-01	1.9E-01	1.81E-07		5E-05		5.97E-07	1E-04		1.42E-08		4E-06		
Benzo(a)anthracene	N/A	7.3E-01	1	2.9E+00	5.5E+00		1.01E-06		7E-07		2.54E-07		2E-06		1.59E-08		
Benzo(a)pyrene	N/A	7.3E+00	1	2.7E+00	3.8E+00		9.44E-07		7E-06		1.75E-07		1E-06		1.48E-08		
Benzo(b)fluoranthene	N/A	7.3E-01	1	1.6E+00	2.2E+00		5.59E-07		4E-07		1.01E-07		7E-08		8.77E-09		
Benzo(k)fluoranthene	N/A	7.3E-02	1	2.4E+00	3.0E+00		8.39E-07		6E-08		1.38E-07		1E-08		1.32E-08		
Chrysene	N/A	7.3E-03	1	1.9E+00	2.6E+00		6.64E-07		5E-09		1.20E-07		9E-10		1.04E-08		
Dibenz(a,h)anthracene	N/A	7.3E+00	1	7.0E-01	1.5E+00		2.45E-07		2E-06		6.92E-08		5E-07		3.84E-09		
Indeno(1,2,3-cd)pyrene	N/A	7.3E-01	1	1.7E+00	2.2E+00		5.94E-07		4E-07		1.01E-07		7E-08		9.32E-09		
Naphthalene	2.00E-02	N/A	1	1.9E-01	1.9E-01	1.81E-07		9E-06		5.97E-07		3E-05		1.42E-08		7E-07	
Aluminum	1.00E+00	N/A	1	1.2E+04	1.2E+04	1.19E-02		1E-02		3.92E-02		4E-02		9.32E-04		9E-04	
Antimony	4.00E-04	N/A	1	1.6E+00	1.6E+00	1.57E-06		4E-03		5.17E-06		1E-02		1.23E-07		3E-04	
Arsenic	3.00E-04	1.5E+00	1	6.3E+00	6.1E+00	6.16E-06	2.20E-06	2E-02	3E-06	1.97E-05	2.81E-07	7E-02	4E-07	4.83E-07	3.45E-08	2E-03	
Iron	3.00E-01	N/A	1	2.4E+04	2.4E+04	2.36E-02		8E-02		7.67E-02		3E-01		1.85E-03		6E-03	
Manganese	2.33E-02	N/A	1	5.5E+02	5.4E+02	5.36E-04		2E-02		1.74E-03		7E-02		4.20E-05		2E-03	
Thallium	6.47E-04	N/A	1	2.9E-01	2.9E-01	2.84E-07		4E-04		9.36E-07		1E-03		2.22E-08		3E-05	
Vanadium	1.00E-03	N/A	1	1.9E+01	1.9E+01	1.89E-05		2E-02		6.23E-05		6E-02		1.48E-06		1E-03	
Total Hazard Quotient and Cancer Risk:								2E-01	1E-05			5E-01	3E-06			1E-02	2E-07
						Assumptions for Industrial Worker			Assumptions for Construction Worker			Assumptions for Adolescent Trespasser					
						CF =	1E-06 kg/mg	CF =	1E-06 kg/mg	CF =	1E-06 kg/mg						
						EPC =	EPC Surface Only	EPC =	EPC Surface and Subsurface	EPC =	EPC Surface Only						
						BW =	70 kg	BW =	70 kg	BW =	50 kg						
						IR =	100 mg/day	IR =	330 mg/day	IR =	100 mg/day						
						FI =	1 unitless	FI =	1 unitless	FI =	1 unitless						
						EF =	250 days/year	EF =	250 days/year	EF =	14 days/year						
						ED =	25 years	ED =	1 years	ED =	5 years						
						AT (Nc) =	9,125 days	AT (Nc) =	365 days	AT (Nc) =	1,825 days						
						AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days						

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
NA= Information not available.

APPENDIX E TABLE 6A
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-59 SOIL
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) =	$\frac{EPC \times CF \times SA \times AF \times ABS \times EV \times EF \times ED}{BW \times AT}$	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose
Variables (Assumptions for Each Receptor are Listed at the Bottom):		Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
EPC = Exposure Point Concentration in Soil, mg/kg	EV = Event Frequency	
CF = Conversion Factor	EF = Exposure Frequency	
SA = Surface Area Contact	ED = Exposure Duration	
AF = Adherence Factor	BW = Bodyweight	
ABS = Absorption Factor	AT = Averaging Time	

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)	Industrial Worker			Construction Worker			Adolescent Trespasser					
						Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk
						(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Benzo(a)anthracene	N/A	7.3E-01	1.3E-01	1.4E+00	1.4E+00		4.11E-07	3E-07		2.52E-08	2E-08		4.01E-09	2.93E-09			
Benzo(a)pyrene	N/A	7.3E+00	1.3E-01	1.4E+00	1.4E+00		4.20E-07	3E-06		2.52E-08	2E-07		4.10E-09	2.99E-08			
Benzo(b)fluoranthene	N/A	7.3E-01	1.3E-01	1.3E+00	1.2E+00		3.75E-07	3E-07		2.16E-08	2E-08		3.66E-09	2.67E-09			
Benzo(k)fluoranthene	N/A	7.3E-02	1.3E-01	1.1E+00	1.2E+00		3.30E-07	2E-08		2.16E-08	2E-09		3.22E-09	2.35E-10			
Chrysene	N/A	7.3E-03	1.3E-01	1.4E+00	1.4E+00		4.20E-07	3E-09		2.52E-08	2E-10		4.10E-09	2.99E-11			
Dibenz(a,h)anthracene	N/A	7.3E+00	1.3E-01	3.5E-01	4.0E-01		1.05E-07	8E-07		7.20E-09	5E-08		1.02E-09	7.47E-09			
Indeno(1,2,3-cd)pyrene	N/A	7.3E-01	1.3E-01	8.8E-01	8.7E-01		2.63E-07	2E-07		1.57E-08	1E-08		2.56E-09	1.87E-09			
4,4'-DDE	N/A	3.4E-01	3.0E-02	1.3E-01	1.2E-01		8.99E-09	3E-09		4.98E-10	2E-10		8.78E-11	2.98E-11			
4,4'-DDT	5.00E-04	3.4E-01	3.0E-02	1.8E-01	1.7E-01	3.49E-08	1.25E-08	7E-05	4E-09	4.94E-08	7.06E-10	1E-04	2E-10	1.70E-09	1.22E-10	3.40E-06	4.13E-11
Aluminum	1.00E+00	N/A	1.0E-03	1.1E+04	1.1E+04	7.17E-05		7E-05		1.06E-04		1E-04		3.50E-06		3.50E-06	
Antimony	6.00E-05	N/A	1.0E-03	1.4E+01	1.3E+01	8.98E-08		1E-03		1.26E-07		2E-03		4.38E-09		7.30E-05	
Arsenic	3.00E-04	1.5E+00	3E-02	5.8E+00	5.7E+00	1.11E-06	3.98E-07	4E-03	6E-07	1.66E-06	2.37E-08	6E-03	4E-08	5.43E-08	3.88E-09	1.81E-04	5.82E-09
Iron	3.00E-01	N/A	1E-03	2.2E+04	2.2E+04	1.41E-04		5E-04		2.11E-04		7E-04		6.88E-06		2.29E-05	
Manganese	9.33E-04	N/A	1E-03	4.6E+02	4.6E+02	2.98E-06		3E-03		4.48E-06		5E-03		1.46E-07		1.56E-04	
Thallium	6.47E-04	N/A	1E-03	1.7E-01	2.6E-01	1.10E-09		2E-06		2.52E-09		4E-06		5.36E-11		8.28E-08	
Vanadium	2.60E-05	N/A	1E-03	2.0E+01	1.9E+01	1.26E-07		5E-03		1.88E-07		7E-03		6.14E-09		2.36E-04	
Total Hazard Quotient and Cancer Risk:								1E-02	5E-06			2E-02	3E-07			7E-04	5E-08
						Assumptions for Industrial Worker			Assumptions for Construction Worker			Assumptions for Adolescent Trespasser					
						CF =	1E-06 kg/mg	CF =	1E-06 kg/mg	CF =	1E-06 kg/mg	CF =	1E-06 kg/mg	CF =	1E-06 kg/mg	CF =	1E-06 kg/mg
						CS =	EPC Surface Only	EPC =	EPC Surface and Subsurface	EPC =	EPC Surface Only	EPC =	EPC Surface Only	EPC =	EPC Surface Only	EPC =	EPC Surface Only
						BW =	70 kg	BW =	70 kg	BW =	50 kg	BW =	50 kg	BW =	50 kg	BW =	50 kg
						SA =	3,300 cm ²	SA =	3,300 cm ²	SA =	5,867 cm ²	SA =	5,867 cm ²	SA =	5,867 cm ²	SA =	5,867 cm ²
						AF =	0.2 mg/cm ² -event	AF =	0.3 mg/cm ² -event	AF =	0.07 mg/cm ² -event	AF =	0.07 mg/cm ² -event	AF =	0.07 mg/cm ² -event	AF =	0.07 mg/cm ² -event
						EV =	1 event/day	EV =	1 event/day	EV =	1 event/day	EV =	1 event/day	EV =	1 event/day	EV =	1 event/day
						EF =	250 days/year	EF =	250 days/year	EF =	14 days/year	EF =	14 days/year	EF =	14 days/year	EF =	14 days/year
						ED =	25 years	ED =	1 years	ED =	5 years	ED =	5 years	ED =	5 years	ED =	5 years
						AT (Nc) =	9,125 days	AT (Nc) =	365 days	AT (Nc) =	1,825 days	AT (Nc) =	1,825 days	AT (Nc) =	1,825 days	AT (Nc) =	1,825 days
						AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.

N/A= Information not available.

* Absorption factors from Exhibit 3-4 of USEPA (2004) Supplemental Guidance for Dermal Risk Assessment, Part E of Risk Assessment Guidance for Superfund, Human Health Evaluation Manual (Volume I).

Absorption factors for antimony and iron were assumed to be 0.001 in accordance with the USEPA Region 4 (2000)

Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins (<http://www.epa.gov/region4/waste/ots/healthbul.htm>).

**APPENDIX E TABLE 6B
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-59 STOCKPILE SOIL
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Equation for Intake (mg/kg-day) = $\frac{EPC \times CF \times SA \times AF \times ABS \times EV \times EF \times ED}{BW \times AT}$	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose
Variables (Assumptions for Each Receptor are Listed at the Bottom): EPC = Exposure Point Concentration in Soil, mg/kg CF = Conversion Factor SA = Surface Area Contact AF = Adherence Factor ABS = Absorption Factor	Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
EV = Event Frequency EF = Exposure Frequency ED = Exposure Duration BW = Bodyweight AT = Averaging Time	

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Absorption Factor* (unitless)	EPC Stockpile Soil (mg/kg)	Industrial Worker			Construction Worker			Adolescent Trespasser					
					Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk
					(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Benzo(a)anthracene	N/A	7.3E-01	1.3E-01	6.8E+00		2.04E-06		1E-06	1.22E-07		9E-08		1.99E-08		1.45E-08	
Benzo(a)pyrene	N/A	7.3E+00	1.3E-01	7.9E+00		2.37E-06		2E-05	1.42E-07		1E-06		2.31E-08		1.69E-07	
Benzo(b)fluoranthene	N/A	7.3E-01	1.3E-01	5.1E+00		1.53E-06		1E-06	9.17E-08		7E-08		1.49E-08		1.09E-08	
Benzo(k)fluoranthene	N/A	7.3E-02	1.3E-01	6.7E+00		2.01E-06		1E-07	1.21E-07		9E-09		1.96E-08		1.43E-09	
Chrysene	N/A	7.3E-03	1.3E-01	6.8E+00		2.04E-06		1E-08	1.22E-07		9E-10		1.99E-08		1.45E-10	
Dibenz(a,h)anthracene	N/A	7.3E+00	1.3E-01	1.2E+00		3.60E-07		3E-06	2.16E-08		2E-07		3.51E-09		2.56E-08	
Indeno(1,2,3-cd)pyrene	N/A	7.3E-01	1.3E-01	3.5E+00		1.05E-06		8E-07	6.30E-08		5E-08		1.02E-08		7.47E-09	
Aluminum	1.00E+00	N/A	1.0E-03	1.1E+04	6.97E-05		7E-05		1.05E-04		1E-04		3.40E-06		3.40E-06	
Antimony	6.00E-05	N/A	1.0E-03	6.8E+00	4.39E-08		7E-04		6.59E-08		1E-03		2.14E-09		3.57E-05	
Arsenic	3.00E-04	1.5E+00	3.0E-02	4.9E+00	9.49E-07	3.39E-07	3E-03	5E-07	1.42E-06	2.03E-08	5E-03	3E-08	4.63E-08	3.31E-09	1.54E-04	
Iron	3.00E-01	N/A	1.0E-03	2.1E+04	1.37E-04		5E-04		2.05E-04		7E-04		6.66E-06		2.22E-05	
Manganese	9.33E-04	N/A	1E-03	4.9E+02	3.16E-06		3E-03		4.74E-06		5E-03		1.54E-07		1.65E-04	
Thallium	6.47E-04	N/A	1E-03	5.6E-01	3.62E-09		6E-06		5.42E-09		8E-06		1.76E-10		2.73E-07	
Vanadium	2.60E-05	N/A	1E-03	1.9E+01	1.25E-07		5E-03		1.88E-07		7E-03		6.11E-09		2.35E-04	
Total Hazard Quotient and Cancer Risk:							1E-02	2E-05			2E-02	1E-06			6E-04	2E-07

Assumptions for Industrial Worker					Assumptions for Construction Worker					Assumptions for Adolescent Trespasser				
CF =	1E-06	kg/mg			CF =	1E-06	kg/mg			CF =	1E-06	kg/mg		
CS =	EPC Surface Only				EPC =	EPC Surface and Subsurface				EPC =	EPC Surface Only			
BW =	70	kg			BW =	70	kg			BW =	50	kg		
SA =	3,300	cm ²			SA =	3,300	cm ²			SA =	5,867	cm ²		
AF =	0.2	mg/cm ² -event			AF =	0.3	mg/cm ² -event			AF =	0.07	mg/cm ² -event		
EV =	1	event/day			EV =	1	event/day			EV =	1	event/day		
EF =	250	days/year			EF =	250	days/year			EF =	14	days/year		
ED =	25	years			ED =	1	years			ED =	5	years		
AT (Nc) =	9,125	days			AT (Nc) =	365	days			AT (Nc) =	1,825	days		
AT (Car) =	25,550	days			AT (Car) =	25,550	days			AT (Car) =	25,550	days		

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.

N/A= Information not available.

* Absorption factors from Exhibit 3-4 of USEPA (2004) Supplemental Guidance for Dermal Risk Assessment, Part E of Risk Assessment Guidance for Superfund, Human Health Evaluation Manual (Volume I).

Absorption factors for antimony and iron were assumed to be 0.001 in accordance with the USEPA Region 4 (2000)

Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins (<http://www.epa.gov/region4/waste/ots/healthbul.htm>).

**APPENDIX E TABLE 6C
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO SOIL
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-71 (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Equation for Intake (mg/kg-day) =	$\frac{EPC \times CF \times SA \times AF \times ABS \times EV \times EF \times ED}{BW \times AT}$	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
Variables (Assumptions for Each Receptor are Listed at the Bottom):	EPC = Chemical Concentration in Soil, mg/kg CF = Conversion Factor SA = Surface Area Contact AF = Adherence Factor ABS = Absorption Factor EV = Event Frequency EF = Exposure Frequency ED = Exposure Duration BW = Bodyweight AT = Averaging Time	

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)	Industrial Worker				Construction Worker				Adolescent Trespasser			
						Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk	Absorbed Dose (mg/kg-day)		Hazard Quotient	Cancer Risk
						(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
2-Methylnaphthalene	4.00E-03	N/A	1.3E-01	1.9E-01	1.9E-01	1.55E-07		4E-05		2.33E-07		6E-05		7.58E-09		1.89E-06	
Benzo(a)anthracene	N/A	7.3E-01	1.3E-01	2.9E+00	5.5E+00		8.70E-07		6E-07		9.89E-08		7E-08		8.48E-09		6.19E-09
Benzo(a)pyrene	N/A	7.3E+00	1.3E-01	2.7E+00	3.8E+00		8.10E-07		6E-06		6.84E-08		5E-07		7.90E-09		5.77E-08
Benzo(b)fluoranthene	N/A	7.3E-01	1.3E-01	1.6E+00	2.2E+00		4.80E-07		4E-07		3.96E-08		3E-08		4.68E-09		3.42E-09
Benzo(k)fluoranthene	N/A	7.3E-02	1.3E-01	2.4E+00	3.0E+00		7.20E-07		5E-08		5.40E-08		4E-09		7.02E-09		5.13E-10
Chrysene	N/A	7.3E-03	1.3E-01	1.9E+00	2.6E+00		5.70E-07		4E-09		4.68E-08		3E-10		5.56E-09		4.06E-11
Dibenz(a,h)anthracene	N/A	7.3E+00	1.3E-01	7.0E-01	1.5E+00		2.10E-07		2E-06		2.70E-08		2E-07		2.05E-09		1.49E-08
Indeno(1,2,3-cd)pyrene	N/A	7.3E-01	1.3E-01	1.7E+00	2.2E+00		5.10E-07		4E-07		3.96E-08		3E-08		4.97E-09		3.63E-09
Naphthalene	2.00E-02	N/A	1.3E-01	1.9E-01	1.9E-01	1.55E-07		8E-06		2.33E-07		1E-05		7.58E-09		3.79E-07	
Aluminum	1.00E+00	N/A	1E-03	1.2E+04	1.2E+04	7.85E-05		8E-05		1.18E-04		1E-04		3.83E-06		3.83E-06	
Antimony	6.00E-05	N/A	1E-03	1.6E+00	1.6E+00	1.03E-08		2E-04		1.55E-08		3E-04		5.04E-10		8.40E-06	
Arsenic	3.00E-04	1.5E+00	3E-02	6.3E+00	6.1E+00	1.22E-06	4.36E-07	4E-03	7E-07	1.77E-06	2.53E-08	6E-03	4E-08	5.95E-08	4.25E-09	1.98E-04	6.38E-09
Iron	3.00E-01	N/A	1E-03	2.4E+04	2.4E+04	1.56E-04		5E-04		2.30E-04		8E-04		7.60E-06		2.53E-05	
Manganese	9.33E-04	N/A	1E-03	5.5E+02	5.4E+02	3.54E-06		4E-03		5.22E-06		6E-03		1.72E-07		1.85E-04	
Thallium	6.47E-04	N/A	1E-03	2.9E-01	2.9E-01	1.87E-09		3E-06		2.81E-09		4E-06		9.14E-11		1.41E-07	
Vanadium	2.60E-05	N/A	1E-03	1.9E+01	1.9E+01	1.25E-07		5E-03		1.87E-07		7E-03		6.08E-09		2.34E-04	
Total Hazard Quotient and Cancer Risk:								1E-02	1E-05			2E-02	9E-07			7E-04	9E-08
						Assumptions for Industrial Worker				Assumptions for Construction Worker				Assumptions for Adolescent Trespasser			
						CF =	1E-06 kg/mg	CF =	1E-06 kg/mg	CF =	1E-06 kg/mg	CF =	1E-06 kg/mg				
						CS =	EPC Surface Only	EPC =	EPC Surface and Subsurface	EPC =	EPC Surface Only	EPC =	EPC Surface Only				
						BW =	70 kg	BW =	70 kg	BW =	70 kg	BW =	50 kg				
						SA =	3,300 cm ²	SA =	3,300 cm ²	SA =	3,300 cm ²	SA =	5,867 cm ²				
						AF =	0.2 mg/cm ² -event	AF =	0.3 mg/cm ² -event	AF =	0.07 mg/cm ² -event	AF =	0.07 mg/cm ² -event				
						EV =	1 event/day	EV =	1 event/day	EV =	1 event/day	EV =	1 event/day				
						EF =	250 days/year	EF =	250 days/year	EF =	250 days/year	EF =	14 days/year				
						ED =	25 years	ED =	1 years	ED =	5 years	ED =	5 years				
						AT (Nc) =	9,125 days	AT (Nc) =	365 days	AT (Nc) =	1,825 days	AT (Nc) =	1,825 days				
						AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days				

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.

NA= Information not available.

* Absorption factors from Exhibit 3-4 of USEPA (2004) Supplemental Guidance for Dermal Risk Assessment, Part E of Risk Assessment Guidance for Superfund, Human Health Evaluation Manual (Volume I).

Absorption factor for iron was assumed to be 0.001 in accordance with the USEPA Region 4 (2000)

Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins (<http://www.epa.gov/region4/waste/ots/healthbul.htm>).

APPENDIX E TABLE 7A
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-59 SOIL
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{EPC \times IR \times EF \times ED}{BW \times AT}$ <u>Variables (Assumptions for Each Receptor are Listed at the Bottom):</u> EPC = EPC in Air, mg/m3 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
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Analyte	Inhalation RID (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m3)	Air EPC from Total Soils (mg/m3)	Industrial Worker			Construction Worker			Adolescent Trespasser					
					Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
					(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Benzo(a)anthracene	N/A	N/A	2.3E-08	1.3E-06												
Benzo(a)pyrene	N/A	3.10E+00	2.4E-08	1.3E-06		1.66E-09		5E-09		3.73E-09		1E-08		2.09E-12		6E-12
Benzo(b)fluoranthene	N/A	N/A	2.1E-08	1.1E-06												
Benzo(k)fluoranthene	N/A	N/A	1.9E-08	1.1E-06												
Chrysene	N/A	N/A	2.4E-08	1.3E-06												
Dibenz(a,h)anthracene	N/A	N/A	6.0E-09	3.8E-07												
Indeno(1,2,3-cd)pyrene	N/A	N/A	1.5E-08	8.3E-07												
4,4'-DDE	N/A	N/A	2.2E-09	1.1E-07												
4,4'-DDT	N/A	3.40E-01	3.1E-09	1.6E-07		2.14E-10		7E-11		4.53E-10		2E-10		2.68E-13		9E-14
Aluminum	1.43E-03	N/A	1.9E-04	1.0E-02	3.69E-05		3E-02		2.03E-03		1E+00		2.32E-07		2E-04	
Antimony	N/A	N/A	2.4E-07	1.2E-05												
Arsenic	N/A	1.51E+01	9.8E-08	5.4E-06		6.83E-09		1E-07		1.52E-08		2E-07		8.57E-12		1E-10
Iron	N/A	N/A	3.7E-04	2.1E-02												
Manganese	1.43E-05	N/A	7.9E-06	4.4E-04	1.54E-06		1E-01		8.62E-05		6E+00		9.64E-09		7E-04	
Thallium	N/A	N/A	2.9E-09	2.5E-07												
Vanadium	N/A	N/A	3.3E-07	1.9E-05												
Total Hazard Quotient and Cancer Risk:							1E-01	1E-07			7E+00	2E-07		8E-04	1E-10	
					Assumptions for Industrial Worker			Assumptions for Construction Worker			Assumptions for Adolescent Trespasser					
					CA =	EPC Surface Only			CA =	EPC Surface and Sub-Surface			CA =	EPC Surface Only		
					BW =	70 kg			BW =	70 kg			BW =	50 kg		
					IR =	20 m3/day			IR =	20 m3/day			IR =	1.6 m3/day		
					EF =	250 days/year			EF =	250 days/year			EF =	14 days/year		
					ED =	25 years			ED =	1 year			ED =	5 years		
					AT (Nc) =	9,125 days			AT (Nc) =	365 days			AT (Nc) =	1,825 days		
					AT (Car) =	25,550 days			AT (Car) =	25,550 days			AT (Car) =	25,550 days		

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
 NA= Information not available.

APPENDIX E TABLE 7B
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-59 STOCKPILE SOIL
SEAD-59 AND SEAD-71 PHASE II RI
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 ED = Exposure Duration IR = Inhalation Rate BW = Bodyweight EF = Exposure Frequency AT = Averaging Time	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
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Analyte	Inhalation RfD (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day) ⁻¹	Air EPC from Stockpile Soil (mg/m ³)	Industrial Worker			Construction Worker			Adolescent Trespasser					
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
				(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Benzo(a)anthracene	N/A	N/A	1.2E-07												
Benzo(a)pyrene	N/A	3.10E+00	1.3E-07		9.39E-09			3.75E-10		1E-09		1.18E-11		4E-11	
Benzo(b)fluoranthene	N/A	N/A	8.7E-08												
Benzo(k)fluoranthene	N/A	N/A	1.1E-07												
Chrysene	N/A	N/A	1.2E-07												
Dibenz(a,h)anthracene	N/A	N/A	2.0E-08												
Indeno(1,2,3-cd)pyrene	N/A	N/A	6.0E-08												
Aluminum	1.43E-03	N/A	1.8E-04	3.59E-05		3E-02		3.59E-05		3E-02		2.25E-07		2E-04	
Antimony	N/A	N/A	1.2E-07												
Arsenic	N/A	1.51E+01	8.3E-08		5.82E-09			2.33E-10		4E-09		7.30E-12		1E-10	
Iron	N/A	N/A	3.6E-04												
Manganese	1.43E-05	N/A	8.3E-06	1.63E-06		1E-01		1.63E-06		1E-01		1.02E-08		7E-04	
Thallium	N/A	N/A	9.5E-09												
Vanadium	N/A	N/A	3.3E-07												
Total Hazard Quotient and Cancer Risk:						1E-01	1E-07			1E-01	5E-09		9E-04	1E-10	
				Assumptions for Industrial Worker			Assumptions for Construction Worker			Assumptions for Adolescent Trespasser					
				CA =	EPC Stockpile	CA =	EPC Stockpile	CA =	EPC Stockpile	CA =	EPC Stockpile	CA =	EPC Stockpile	CA =	
				BW =	70 kg	BW =	70 kg	BW =	50 kg	BW =	50 kg	BW =	50 kg	BW =	
				IR =	20 m ³ /day	IR =	20 m ³ /day	IR =	1.6 m ³ /day	IR =	1.6 m ³ /day	IR =	1.6 m ³ /day	IR =	
				EF =	250 days/year	EF =	250 days/year	EF =	14 days/year	EF =	14 days/year	EF =	14 days/year	EF =	
				ED =	25 years	ED =	1 year	ED =	5 years	ED =	5 years	ED =	5 years	ED =	
				AT (Nc) =	9,125 days	AT (Nc) =	365 days	AT (Nc) =	1,825 days	AT (Nc) =	1,825 days	AT (Nc) =	1,825 days	AT (Nc) =	
				AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	25,550 days	AT (Car) =	

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
 NA= Information not available.

APPENDIX E TABLE 7C
CALCULATION OF INTAKE AND RISK FROM INHALATION OF DUST IN AMBIENT AIR
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-71 (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{EPC \times IR \times EF \times ED}{BW \times AT}$ <u>Variables (Assumptions for Each Receptor are Listed at the Bottom):</u> EPC = Exposure Point Concentration in Air, mg/m ³ ED = Exposure Duration IR = Inhalation Rate BW = Bodyweight EF = Exposure Frequency AT = Averaging Time	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
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Analyte	Inhalation RID (mg/kg-day)	Carc. Slope Inhalation (mg/kg-day)-1	Air EPC from Surface Soil (mg/m ³)	Air EPC from Total Soils (mg/m ³)	Industrial Worker			Construction Worker			Adolescent Trespasser					
					Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
					(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
2-Methylnaphthalene	N/A	N/A	#N/A	1.8E-07												
Benzo(a)anthracene	N/A	N/A	4.9E-08	5.2E-06												
Benzo(a)pyrene	N/A	3.10E+00	4.6E-08	3.6E-06		3.21E-09		1E-08		1.01E-08		3E-08		4.02E-12	1E-11	
Benzo(b)fluoranthene	N/A	N/A	2.7E-08	2.1E-06												
Benzo(k)fluoranthene	N/A	N/A	4.1E-08	2.9E-06												
Chrysene	N/A	N/A	3.2E-08	2.5E-06												
Dibenz(a,h)anthracene	N/A	N/A	1.2E-08	1.4E-06												
Indeno(1,2,3-cd)pyrene	N/A	N/A	2.9E-08	2.1E-06												
Naphthalene	8.57E-04	N/A	3.1E-09	1.8E-07	6.15E-10		7E-07		3.45E-08		4E-05		3.86E-12		5E-09	
Aluminum	1.43E-03	N/A	2.1E-04	1.2E-02	4.04E-05		3E-02		2.27E-03		2E+00		2.54E-07		2E-04	
Antimony	N/A	N/A	2.7E-08	1.5E-06												
Arsenic	N/A	1.51E+01	1.1E-07	5.8E-06		7.49E-09		1E-07		1.63E-08		2E-07		9.39E-12	1E-10	
Iron	N/A	N/A	4.1E-04	2.3E-02												
Manganese	1.43E-05	N/A	9.3E-06	5.1E-04	1.82E-06		1E-01		1.01E-04		7E+00		1.14E-08		8E-04	
Thallium	N/A	N/A	4.9E-09	2.8E-07												
Vanadium	N/A	N/A	3.3E-07	1.8E-05												
Total Hazard Quotient and Cancer Risk:							2E-01	1E-07			9E+00	3E-07		1E-03	2E-10	
					Assumptions for Industrial Worker			Assumptions for Construction Worker			Assumptions for Adolescent Trespasser					
					CA =	EPC Surface Only		CA =	EPC Surface and Sub-Surface		CA =	EPC Surface Only				
					BW =	70 kg		BW =	70 kg		BW =	50 kg				
					IR =	20 m ³ /day		IR =	20 m ³ /day		IR =	1.6 m ³ /day				
					EF =	250 days/year		EF =	250 days/year		EF =	14 days/year				
					ED =	25 years		ED =	1 year		ED =	5 years				
					AT (Nc) =	9,125 days		AT (Nc) =	365 days		AT (Nc) =	1,825 days				
					AT (Car) =	25,550 days		AT (Car) =	25,550 days		AT (Car) =	25,550 days				

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
 NA= Information not available.

**APPENDIX E TABLE 8A
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO GROUNDWATER
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-59
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Equation for Dermal (mg/kg-day) = $\frac{DA \times SA \times EF \times ED \times EV}{BW \times AT}$	Equation for Absorbed Dose per Event (DA): For inorganics: $DA = K_p \times EPC \times t_{event} \times CF$	
Variables (Assumptions for Each Receptor are Listed at the Bottom): DA = Absorbed Dose per Event, mg/cm ² -event SA = Surface Area Contact EF = Exposure Frequency EV = Event Frequency	K_p = Permeability Coefficient, cm/hr EPC = EPC in Groundwater, mg/L CF = Conversion Factor, 10 ⁻³ L/cm ³	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
ED = Exposure Duration BW = Bodyweight AT = Averaging Time		

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day) ⁻¹	Permeability Coefficient K_p (cm/hr)	t_{event} (hr/event)	EPC Ground Water (mg/L)	Absorbed Dose/Event (mg/cm ² -event)	Industrial Worker			Construction Worker			Adolescent Trespasser						
							Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	
							(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)			
Metals							Dermal Contact to Ground Water Not Applicable for Industrial Worker						Dermal Contact to Ground Water Not Applicable for Adolescent Trespasser						
Antimony	4.E-04	N/A	1.E-03	5.E-01	9.E-03	4.30E-09				4.19E-08						1E-04			
Arsenic	3.E-04	1.5E+00	1.E-03	5.E-01	2.E-03	1.00E-09				9.75E-09	1.39E-10					3E-05	2E-10		
Iron	3.E-01	N/A	1.E-03	5.E-01	4.E+00	1.97E-06				1.92E-05						6E-05			
Manganese	2.E-02	N/A	1.E-03	5.E-01	8.E-01	3.90E-07				3.80E-06						2E-04			
Thallium	6.E-04	N/A	1.E-03	5.E-01	4.E-03	2.00E-09				1.95E-08						3E-05			
Vanadium	1.E-03	N/A	1.E-03	5.E-01	5.E-03	2.63E-09				2.56E-08						3E-05			
Total Hazard Quotient and Cancer Risk:										4E-04	2E-10								
							Assumptions for Construction Worker												
							BW = 70 kg												
							SA = 2,490 cm ²												
							EV = 1 event/day												
							EF = 100 days/year												
							ED = 1 years												
							t_{event} = 0.5 hr/event												
							AT (Nc) = 365 days												
							AT (Car) = 25,550 days												

Note: Cells in this table were intentionally left blank due to a lack of toxicity data
NA= Information not available

**APPENDIX E TABLE 8B
CALCULATION OF ABSORBED DOSE AND RISK FROM DERMAL CONTACT TO GROUNDWATER
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-71 EXCLUDE FENCED AREA
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity**

Equation for Dermal (mg/kg-day) = $\frac{DA \times SA \times EF \times ED \times EV}{BW \times AT}$	Equation for Absorbed Dose per Event (DA): For inorganics: $DA = K_p \times EPC \times t_{event} \times C$ For organics: If $t_{event} \leq t^*$, then: $DA_{event} = 2 FA \times K_p \times C_w \left(\frac{6 \tau_{event} \times t_{event}}{\pi} \right)^{1/2}$ If $t_{event} > t^*$, then: $DA_{event} = FA \times K_p \times C_w \left[\left(\frac{t_{event}}{1+B} \right) + 2 \tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right]$ B = Dimensionless ratio of the permeability coefficient of a compound through the stratum corneum relative to its permeability coefficient across the viable epidermis (ve) (dimensionless) FA = Fraction absorbed water (dimensionless)	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
Variables (Assumptions for Each Receptor are Listed at the Bottom): DA = Absorbed Dose per Event SA = Surface Area Contact EF = Exposure Frequency EV = Event Frequency ED = Exposure Duration BW = Bodyweight AT = Averaging Time	Kp = Permeability Coefficient, cm/hr EPC = EPC in Groundwater, mg/L C = Conversion Factor, 10 ³ L/cm ³	

Analyte	Dermal RfD (mg/kg-day)	Carc. Slope Dermal (mg/kg-day)-1	Permeability Coefficient Kp (cm/hr)	τ _{event} (hr/event)	Fraction Absorbed Water	B	t* (hour)	EPC Ground Water (mg/L)	Absorbed Dose/Event (mg-cm ² /event)	Industrial Worker			Construction Worker			Adolescent Trespasser								
										Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk			
										(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)					
Semivolatile Organic 4-nitroaniline	3.E-03	2.0E-02	2.7E-03	0.6	1.0	1.3E-02	3.0E-02	2.0E+01	8.1E-05	Dermal Contact to Ground Water Not Applicable for Industrial Worker			7.87E-04	1.12E-05	3E-01	2E-07	Dermal Contact to Ground Water Not Applicable for Adolescent Trespasser							
Metals Aluminum	1.E+00	N/A	1.0E-03					2.7E-03	1.4E-09				1.32E-08			1E-08								
Antimony	6.E-05	N/A	1.0E-03					2.7E-03	1.4E-09				1.32E-08			2E-04								
Arsenic	3.E-04	1.5E+00	1.0E-03					6.5E-03	3.3E-09				3.18E-08	4.54E-10						1E-04	7E-10			
Chromium	8.E-05	N/A	1.0E-03					2.7E-03	1.4E-09				1.32E-08			2E-04								
Iron	3.E-01	N/A	1.0E-03					2.7E-03	1.4E-09				1.32E-08			4E-08								
Manganese	9.E-04	N/A	1.0E-03					3.5E+01	1.8E-05				1.71E-04			2E-01								
Thallium	6.E-04	N/A	1.0E-03					1.7E-02	8.6E-09				8.38E-08			1E-04								
Vanadium	3.E-05	N/A	1.0E-03					1.7E-02	8.6E-09				8.38E-08			3E-03								
Total Hazard Quotient and Cancer Risk:															4E-01	7E-10								
													Assumptions for Construction Worker											
										BW = 70 kg														
										SA = 2,490 cm ²														
										EV = 1 event/day														
										EF = 100 days/year														
										ED = 1 years														
										t _{event} = 0.5 hr/event														
										AT (Nc) = 365 days														
										AT (Car) = 25,550 days														

Note: Cells in this table were intentionally left blank due to a lack of toxicity data
NA= Information not available.

APPENDIX E TABLE 9A
CALCULATION OF INTAKE AND RISK FROM THE INTAKE OF GROUNDWATER
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-59
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

<p>Equation for Intake (mg/kg-day) = $\frac{EPC \times IR \times EF \times ED}{BW \times AT}$</p> <p>Variables (Assumptions for Each Receptor are Listed at the Bottom): EPC = Exposure Point Concentration in Groundwater (mg/L) ED=Exposure Duration IR = Intake Rate BW=Bodyweight EF = Exposure Frequency AT=Averaging Time</p>	<p>Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose</p> <p>Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor</p>
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Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day)-1	EPC Groundwater (mg/liter)	Industrial Worker				Construction Worker				Adolescent Trespasser			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
				(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
Antimony	4.E-04	N/A	0.0086	8.4E-05	3.0E-05	2E-01		8.4E-05	1.2E-06	2E-01		1.3E-05	9.4E-07	3E-02	
Arsenic	3.E-04	1.5E+00	0.002	2.0E-05	7.0E-06	7E-02	1E-05	2.0E-05	2.8E-07	7E-02	4E-07	3.1E-06	2.2E-07	1E-02	3E-07
Iron	3.E-01	N/A	3.94	3.9E-02	1.4E-02	1E-01		3.9E-02	5.5E-04	1E-01		6.0E-03	4.3E-04	2E-02	
Manganese	2.E-02	N/A	0.78	7.6E-03	2.7E-03	3E-01		7.6E-03	1.1E-04	3E-01		1.2E-03	8.5E-05	5E-02	
Thallium	6.E-04	N/A	0.004	3.9E-05	1.4E-05	6E-02		3.9E-05	5.6E-07	6E-02		6.1E-06	4.4E-07	9E-03	
Vanadium	1.E-03	N/A	0.00526	5.1E-05	1.8E-05	5E-02		5.1E-05	7.4E-07	5E-02		8.1E-06	5.8E-07	8E-03	
Total Hazard Quotient and Cancer Risk:						8E-01	1E-05			8E-01	4E-07			1E-01	3E-07
				Assumptions for Industrial Worker				Assumptions for Construction Worker				Assumptions for Adolescent Trespasser			
				BW = 70 kg				BW = 70 kg				BW = 50 kg			
				IR = 1 liters/day				IR = 1 liters/day				IR = 2.0 liters/day			
				EF = 250 days/year				EF = 250 days/year				EF = 14 days/year			
				ED = 25 years				ED = 1 years				ED = 5 years			
				AT (Nc) = 9,125 days				AT (Nc) = 365 days				AT (Nc) = 1,825 days			
				AT (Car) = 25,550 days				AT (Car) = 25,550 days				AT (Car) = 25,550 days			

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.

N/A= Information not available.

APPENDIX E TABLE 9B
CALCULATION OF INTAKE AND RISK FROM THE INTAKE OF GROUNDWATER
REASONABLE MAXIMUM EXPOSURE (RME) - SEAD-71 (FENCED AREA EXCLUDED)
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Equation for Intake (mg/kg-day) = $\frac{EPC \times IR \times EF \times ED}{BW \times AT}$	Equation for Hazard Quotient = Chronic Daily Intake (Nc)/Reference Dose Equation for Cancer Risk = Chronic Daily Intake (Car) x Slope Factor
Variables (Assumptions for Each Receptor are Listed at the Bottom): EPC = Exposure Point Concentration in Groundwater, mg/L IR = Ingestion Rate EF = Exposure Frequency	ED=Exposure Duration BW=Bodyweight AT=Averaging Time

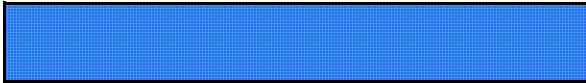
Analyte	Oral RfD (mg/kg-day)	Carc. Slope Oral (mg/kg-day) ⁻¹	EPC Groundwater (mg/liter)	Industrial Worker				Construction Worker				Adolescent Trespasser			
				Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk	Intake (mg/kg-day)		Hazard Quotient	Cancer Risk
				(Nc)	(Car)			(Nc)	(Car)			(Nc)	(Car)		
4-Nitroaniline	3.E-03	2.0E-02	0.0087	8.51E-05	3.04E-05	3E-02	6E-07	8.51E-05	1.22E-06	3E-02	2E-08	1.33E-05	9.53E-07	4.45E-03	1.91E-08
Aluminum	1.E+00	N/A	19.7	1.93E-01	6.88E-02	2E-01		1.93E-01	2.75E-03	2E-01		3.02E-02	2.16E-03	3.02E-02	
Antimony	4.E-04	N/A	0.00652	6.38E-05	2.28E-05	2E-01		6.38E-05	9.11E-07	2E-01		1.00E-05	7.15E-07	2.50E-02	
Arsenic	3.E-04	1.5E+00	0.0027	2.64E-05	9.44E-06	9E-02	1E-05	2.64E-05	3.77E-07	9E-02	6E-07	4.14E-06	2.96E-07	1.38E-02	4.44E-07
Chromium	3.E-03	N/A	0.0331	3.24E-04	1.16E-04	1E-01		3.24E-04	4.63E-06	1E-01		5.08E-05	3.63E-06	1.69E-02	
Iron	3.E-01	N/A	35.1	3.43E-01	1.23E-01	1E+00		3.43E-01	4.91E-03	1E+00		5.39E-02	3.85E-03	1.80E-01	
Manganese	2.E-02	N/A	2.68	2.62E-02	9.37E-03	1E+00		2.62E-02	3.75E-04	1E+00		4.11E-03	2.94E-04	1.76E-01	
Thallium	6.E-04	N/A	0.0025	2.45E-05	8.74E-06	4E-02		2.45E-05	3.49E-07	4E-02		3.84E-06	2.74E-07	5.93E-03	
Vanadium	1.E-03	N/A	0.0257	2.51E-04	8.98E-05	3E-01		2.51E-04	3.59E-06	3E-01		3.94E-05	2.82E-06	3.94E-02	
Total Hazard Quotient and Cancer Risk:						3E+00	1E-05			3E+00	6E-07			5E-01	5E-07
				Assumptions for Industrial Worker				Assumptions for Construction Worker				Assumptions for Adolescent Trespasser			
				BW = 70 kg				BW = 70 kg				BW = 50 kg			
				IR = 1 liters/day				IR = 1 liters/day				IR = 2 liters/day			
				EF = 250 days/year				EF = 250 days/year				EF = 14 days/year			
				ED = 25 years				ED = 1 years				ED = 5 years			
				AT (Nc) = 9,125 days				AT (Nc) = 365 days				AT (Nc) = 1,825 days			
				AT (Car) = 25,550 days				AT (Car) = 25,550 days				AT (Car) = 25,550 days			

Note: Cells in this table were intentionally left blank due to a lack of toxicity data.
 NA= Information not available.

APPENDIX E Table 10
Calculation of Blood Lead Concentration - Industrial Worker Exposed to SEAD-59 Stockpile Soil
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Calculations of Blood Lead Concentrations (PbBs)

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee



Version date 05/19/03

Exposure Variable	PbB Equation ¹		Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario			
	1*	2**			Using Equation 1		Using Equation 2	
					GSDi = Hom	GSDi = Het	GSDi = Hom	GSDi = Het
PbS	X	X	Soil lead concentration	ug/g or ppm	79	79	79	79
R _{fetal/maternal}	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD _i	X	X	Geometric standard deviation PbB	--	1.9	2.1	1.9	2.1
PbB ₀	X	X	Baseline PbB	ug/dL	1.7	2.2	1.7	2.2
IR _S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050	0.050	--	--
IR _{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.050	0.050
W _S		X	Weighting factor; fraction of IR _{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K _{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
AF _{S,D}	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
EF _{S,D}	X	X	Exposure frequency (same for soil and dust)	days/yr	219	219	219	219
AT _{S,D}	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}	PbB of adult worker, geometric mean			ug/dL	1.8	2.3	1.8	2.3
PbB_{fetal, 0.95}	95th percentile PbB among fetuses of adult workers			ug/dL	4.7	7.1	4.7	7.1
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)			ug/dL	10.0	10.0	10.0	10.0
P(PbB_{fetal} > PbB_t)	Probability that fetal PbB > PbB_t, assuming lognormal distribution			%	0.2%	1.7%	0.2%	1.7%

¹ Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
When IR_S = IR_{S+D} and W_S = 1.0, the equations yield the same PbB_{fetal,0.95}.

***Equation 1, based on Eq. 1, 2 in USEPA (1996).**

PbB_{adult} =	$(PbS * BKSF * IR_{S+D} * AF_{S,D} * EF_S / AT_{S,D}) + PbB_0$
PbB_{fetal, 0.95} =	$PbB_{adult} * (GSD_i^{1.645} * R)$

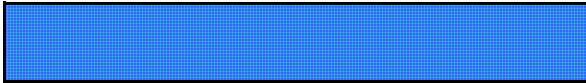
****Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).**

PbB_{adult} =	$PbS * BKSF * ((IR_{S+D} * AF_S * EF_S * W_S) + [K_{SD} * (IR_{S+D}) * (1 - W_S) * AF_D * EF_D]) / 365 + PbB_0$
PbB_{fetal, 0.95} =	$PbB_{adult} * (GSD_i^{1.645} * R)$

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

APPENDIX E Table 11
Calculation of Blood Lead Concentration - Construction Worker Exposed to SEAD-59 Stockpile Soil
SEAD-59 AND SEAD-71 PHASE II RI
Seneca Army Depot Activity

Calculations of Blood Lead Concentrations (PbBs)
 U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee



Version date 05/19/03

Exposure Variable	PbB Equation ¹		Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario			
	1*	2**			Using Equation 1		Using Equation 2	
					GSDi = Hom	GSDi = Het	GSDi = Hom	GSDi = Het
PbS	X	X	Soil lead concentration	ug/g or ppm	79	79	79	79
R _{fetal/maternal}	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD _i	X	X	Geometric standard deviation PbB	--	1.9	2.1	1.9	2.1
PbB ₀	X	X	Baseline PbB	ug/dL	1.7	2.2	1.7	2.2
IR _S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100	0.100	--	--
IR _{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.100	0.100
W _S		X	Weighting factor; fraction of IR _{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K _{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
AF _{S,D}	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
EF _{S,D}	X	X	Exposure frequency (same for soil and dust)	days/yr	219	219	219	219
AT _{S,D}	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}	PbB of adult worker, geometric mean			ug/dL	1.9	2.4	1.9	2.4
PbB_{fetal, 0.95}	95th percentile PbB among fetuses of adult workers			ug/dL	5.0	7.4	5.0	7.4
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)			ug/dL	10.0	10.0	10.0	10.0
P(PbB_{fetal} > PbB_t)	Probability that fetal PbB > PbB_t, assuming lognormal distribution			%	0.3%	2.0%	0.3%	2.0%

¹ Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
 When IR_S = IR_{S+D} and W_S = 1.0, the equations yield the same PbB_{fetal,0.95}.

***Equation 1, based on Eq. 1, 2 in USEPA (1996).**

PbB_{adult} =	$(PbS * BKSF * IR_{S+D} * AF_{S,D} * EF_S / AT_{S,D}) + PbB_0$
PbB_{fetal, 0.95} =	$PbB_{adult} * (GSD_i^{1.645} * R)$

****Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).**

PbB_{adult} =	$PbS * BKSF * ((IR_{S+D} * AF_S * EF_S * W_S) + [K_{SD} * (IR_{S+D}) * (1 - W_S) * AF_D * EF_D]) / 365 + PbB_0$
PbB_{fetal, 0.95} =	$PbB_{adult} * (GSD_i^{1.645} * R)$

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

Appendix E Table 12

Calculation of Blood Lead Concentration - Child Exposed to

SEAD-59 Stockpile Soil
SEAD-59 and SEAD-71 Phase II RI
Seneca Army Depot Activity

LEAD MODEL FOR WINDOWS Version 1.0

Model Version: 1.0 Build 261
User Name:
Date:
Site Name:
Operable Unit:
Run Mode: Research

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

***** Air *****

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m ³ /day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m ³)
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

***** Diet *****

Age	Diet Intake(ug/day)
.5-1	5.530
1-2	5.780
2-3	6.490
3-4	6.240
4-5	6.010
5-6	6.340
6-7	7.000

***** Drinking Water *****

Water Consumption:
Age Water (L/day)

.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Appendix E Table 12

Drinking Water Concentration: 0.000 ug Pb/L

***** Soil & Dust *****

Multiple Source Analysis Used

Average multiple source concentration: 65.300 ug/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700

Outdoor airborne lead to indoor household dust lead concentration: 100.000

Use alternate indoor dust Pb sources? No

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
.5-1	79.000	65.300
1-2	79.000	65.300
2-3	79.000	65.300
3-4	79.000	65.300
4-5	79.000	65.300
5-6	79.000	65.300
6-7	79.000	65.300

***** Alternate Intake *****

Age	Alternate (ug Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

***** Maternal Contribution: Infant Model *****

Maternal Blood Concentration: 2.500 ug Pb/dL

 CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.021	2.631	0.000	0.000
1-2	0.034	2.754	0.000	0.000
2-3	0.062	3.107	0.000	0.000
3-4	0.067	3.008	0.000	0.000
4-5	0.067	2.924	0.000	0.000
5-6	0.093	3.095	0.000	0.000
6-7	0.093	3.420	0.000	0.000

Year	Soil +Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	1.734	4.386	2.4
1-2	2.758	5.547	2.4
2-3	2.771	5.939	2.2
3-4	2.790	5.864	2.1
4-5	2.086	5.077	1.8
5-6	1.884	5.072	1.6
6-7	1.781	5.294	1.5

APPENDIX E Table 13
Calculations of Blood Lead Concentration - Industrial Worker Exposed to SEAD-71 Surface Soil
SEAD-59 and SEAD-71 Phase II RI
Seneca Army Depot Activity

Calculations of Blood Lead Concentrations (PbBs)

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Version date 05/19/03



Exposure Variable	PbB Equation ¹		Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario			
	1*	2**			Using Equation 1		Using Equation 2	
					GSDi = Hom	GSDi = Het	GSDi = Hom	GSDi = Het
PbS	X	X	Soil lead concentration	ug/g or ppm	166.3	166.3	166.3	166.3
R _{fetal/maternal}	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD _i	X	X	Geometric standard deviation PbB	--	1.9	2.1	1.9	2.1
PbB ₀	X	X	Baseline PbB	ug/dL	1.7	2.2	1.7	2.2
IR _S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050	0.050	--	--
IR _{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.050	0.050
W _S		X	Weighting factor; fraction of IR _{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K _{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
AF _{S,D}	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
EF _{S,D}	X	X	Exposure frequency (same for soil and dust)	days/yr	219	219	219	219
AT _{S,D}	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}	PbB of adult worker, geometric mean			ug/dL	1.9	2.4	1.9	2.4
PbB_{fetal, 0.95}	95th percentile PbB among fetuses of adult workers			ug/dL	5.0	7.4	5.0	7.4
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)			ug/dL	10.0	10.0	10.0	10.0
P(PbB_{fetal} > PbB_t)	Probability that fetal PbB > PbB_t, assuming lognormal distribution			%	0.3%	2.1%	0.3%	2.1%

¹ Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
 When IR_S = IR_{S+D} and W_S = 1.0, the equations yield the same PbB_{fetal,0.95}.

***Equation 1, based on Eq. 1, 2 in USEPA (1996).**

PbB_{adult} =	$(PbS * BKSF * IR_{S+D} * AF_{S,D} * EF_S / AT_{S,D}) + PbB_0$
PbB_{fetal, 0.95} =	$PbB_{adult} * (GSD_i^{1.645} * R)$

****Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).**

PbB_{adult} =	$PbS * BKSF * ((IR_{S+D}) * AF_S * EF_S * W_S) + [K_{SD} * (IR_{S+D}) * (1 - W_S) * AF_D * EF_D] / 365 + PbB_0$
PbB_{fetal, 0.95} =	$PbB_{adult} * (GSD_i^{1.645} * R)$

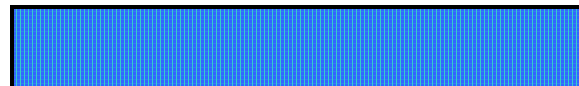
Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

APPENDIX E Table 14
Calculations of Blood Lead Concentration - Construction Worker Exposed to SEAD-71 Surface and Subsurface Soil
SEAD-59 and SEAD-71 Phase II RI
Seneca Army Depot Activity

Calculations of Blood Lead Concentrations (PbBs)

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Version date 05/19/03



Exposure Variable	PbB Equation ¹		Description of Exposure Variable	Units	Values for Non-Residential Exposure Scenario			
	1*	2**			Using Equation 1		Using Equation 2	
					GSDi = Hom	GSDi = Het	GSDi = Hom	GSDi = Het
PbS	X	X	Soil lead concentration	ug/g or ppm	152.4	152.4	152.4	152.4
R _{fetal/maternal}	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4	0.4	0.4
GSD _i	X	X	Geometric standard deviation PbB	--	1.9	2.1	1.9	2.1
PbB ₀	X	X	Baseline PbB	ug/dL	1.7	2.2	1.7	2.2
IR _S	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100	0.100	--	--
IR _{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	0.100	0.100
W _S		X	Weighting factor; fraction of IR _{S+D} ingested as outdoor soil	--	--	--	1.0	1.0
K _{SD}		X	Mass fraction of soil in dust	--	--	--	0.7	0.7
AF _{S,D}	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12
EF _{S,D}	X	X	Exposure frequency (same for soil and dust)	days/yr	219	219	219	219
AT _{S,D}	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365
PbB_{adult}	PbB of adult worker, geometric mean			ug/dL	2.1	2.6	2.1	2.6
PbB_{fetal, 0.95}	95th percentile PbB among fetuses of adult workers			ug/dL	5.5	8.0	5.5	8.0
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)			ug/dL	10.0	10.0	10.0	10.0
P(PbB_{fetal} > PbB_t)	Probability that fetal PbB > PbB_t, assuming lognormal distribution			%	0.5%	2.6%	0.5%	2.6%

¹Equation 1 does not apportion exposure between soil and dust ingestion (excludes W_S, K_{SD}).
When IR_S = IR_{S+D} and W_S = 1.0, the equations yield the same PbB_{fetal,0.95}.

***Equation 1, based on Eq. 1, 2 in USEPA (1996).**

PbB_{adult} =	$(PbS * BKSF * IR_{S+D} * AF_{S,D} * EF_{S,D} / AT_{S,D}) + PbB_0$
PbB_{fetal, 0.95} =	$PbB_{adult} * (GSD_i^{1.645} * R)$

****Equation 2, alternate approach based on Eq. 1, 2, and A-19 in USEPA (1996).**

PbB_{adult} =	$PbS * BKSF * [(IR_{S+D}) * AF_{S,D} * EF_{S,D} * W_S] + [K_{SD} * (IR_{S+D}) * (1 - W_S) * AF_D * EF_D] / 365 + PbB_0$
PbB_{fetal, 0.95} =	$PbB_{adult} * (GSD_i^{1.645} * R)$

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

Appendix E Table 15

Calculation of Blood Lead Concentration - Child Exposed to
 SEAD-71 Surface Soil and Groundwater
 SEAD-59 and SEAD-71 Phase II RI
 Seneca Army Depot Activity
 LEAD MODEL FOR WINDOWS Version 1.0

=====
 Model Version: 1.0 Build 261
 User Name:
 Date:
 Site Name:
 Operable Unit:
 Run Mode: Research

=====
 The time step used in this model run: 1 - Every 4 Hours (6 times a day).

***** Air *****

Indoor Air Pb Concentration: 30.000 percent of outdoor.
 Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m ³ /day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m ³)
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

***** Diet *****

Age	Diet Intake(ug/day)
.5-1	5.530
1-2	5.780
2-3	6.490
3-4	6.240
4-5	6.010
5-6	6.340
6-7	7.000

***** Drinking Water *****

Age	Water Consumption: Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 17.200 ug Pb/L

Appendix E Table 15

***** Soil & Dust *****

Multiple Source Analysis Used

Average multiple source concentration: 126.410 ug/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700

Outdoor airborne lead to indoor household dust lead concentration: 100.000

Use alternate indoor dust Pb sources? No

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
.5-1	166.300	126.410
1-2	166.300	126.410
2-3	166.300	126.410
3-4	166.300	126.410
4-5	166.300	126.410
5-6	166.300	126.410
6-7	166.300	126.410

***** Alternate Intake *****

Age	Alternate (ug Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

***** Maternal Contribution: Infant Model *****

Maternal Blood Concentration: 2.500 ug Pb/dL

CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.021	2.538	0.000	1.579
1-2	0.034	2.605	0.000	3.876
2-3	0.062	2.958	0.000	4.076
3-4	0.067	2.881	0.000	4.208
4-5	0.067	2.823	0.000	4.444
5-6	0.093	2.999	0.000	4.718
6-7	0.093	3.323	0.000	4.817

Year	Soil +Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	3.379	7.516	4.1
1-2	5.270	11.785	4.8
2-3	5.329	12.425	4.6
3-4	5.398	12.554	4.4
4-5	4.069	11.403	3.9
5-6	3.687	11.497	3.6
6-7	3.495	11.728	3.3

APPENDIX F

LIST OF ARARs

APPENDIX F

LIST OF ARARs

There are currently no promulgated Federal standards for hazardous substance levels in soils, and risk-based decisions are used to determine if cleanup is warranted or necessary. New York has recently published Remedial Program Requirements, which include numeric soil cleanup objectives for five categories of future land use (i.e., Unrestricted, Residential, Restricted-Residential, Commercial, and Industrial), as well as procedures for proposing alternative cleanup objectives, for waste sites located within its bounds and these were considered during the development of this Record of Decision to represent “to be considered” (TBC) values and procedures.

New York designates all groundwater as a possible source of drinking water. Further, New York has promulgated standards for groundwater that is designated as GA. The groundwater at SEDA is designated as GA, and thus New York’s groundwater standards are ARARs. Groundwater was sampled at SEAD-59 and SEAD-71 and the available analytical data indicates that there are some contaminants present in the samples that are found at concentrations above State GA standards.

The noted groundwater exceedances found at SEAD-59 and SEAD-71 are not associated with the historic activities conducted at the AOCs. The observed contaminants are associated with the native soils of the depot, and the poor regional groundwater quality that exists throughout the PID Area. The overburden is comprised principally of a clay-silt mixture that results in a very low yielding groundwater flow system. The groundwater is susceptible to entrainment of soil fines and particles.

The potential use of groundwater that is classified as GA in New York is as drinking water. As a potential supply of drinking water, the maximum contaminant levels (MCLs) established under the Safe Drinking Water Act are ARARs for GA groundwater. Exceedances of the MCLs were observed in groundwater samples collected from SEAD-59 and SEAD-71. The shallow aquifer that underlies the PID Area and the a majority of the overall Depot is subject to large seasonal elevation variations and is poor yielding due to the low permeability glacial till, clay and silt formation that defines the shallow overburden. The PID Area of SEDA is serviced by a municipal water supply that derives its raw water from a non-groundwater source, which makes the future use of the poor yielding, shallow groundwater aquifer that underlies portions of the PID Area unnecessary. Finally, the generally poor quality of the PID Area-wide groundwater has already been identified and acknowledged, and access to and use of the groundwater in the greater PID Area, exclusive of Army retained properties, has been restricted in a separate ROD that was finalized in 2004 [Final ROD for Sites Requiring Institutional Controls in the Planned Industrial/Office Development or Warehousing Areas (Parsons, 2004).

Surface water at SEAD-59 and SEAD-71 is found occasionally in man-made drainage ditches that abut the AOCs along their sides and along bisecting roadways, and in localized puddles that evaporate into the air or infiltrate into the soil. . Storm-event water falls on both of the AOCs and then runs off towards the abutting drainage ditches. The surface water captured in the drainage ditches has not been classified by NYSDEC since these ditches are not recognized as an established stream or creek. However, because the

drainage ditches form the headwaters for Kendaia Creek, the lower portion of which is designated as Class C surface water by NYSDEC, the Class C surface water ambient water quality criteria were used to provide a basis of comparison for the on-site chemical data. The Class C standards are not strictly applicable to the surface water in the drainage ditches found on the sites and thus are treated as TBCs.

The sediment found in the drainage ditches at SEDA results from overland flow and the erosion and subsequent accumulation native soil, debris and dead vegetation. The man-made drainage ditches located throughout the Depot were subject to a periodic inspection and maintenance (i.e., dredging) program during the active days of the military operation. Drainage ditches found around both of these AOCs are generally void of fish and aquatic animal life. As such, sediment at both of these AOCs has been evaluated as “ditch soil” and compared to the New York State soil cleanup objectives presented in Title 6 NYCRR Subpart 375-6.

Chemical-Specific ARARs, and other pertinent advisories or guidance to be considered (TBCs)

Soil

Title 6 New York Code of Rules and Regulations Part 375-6 Remedial Program Soil Cleanup Objectives, Soil Cleanup Objectives, June 14, 2006 was considered during the development of this Record of Decision.

U.S. EPA Region IX Preliminary Remedial Goals, October 2004 was considered during the development of this Record of Decision. Source (<http://www.epa.gov/region09/waste/sfund/prg/>)

U.S. EPA Region III Risk Based Concentrations, October 2007 was considered during the development of this Record of Decision. Source: <http://www.epa.gov/reg3hwmd/risk/human/rbc/RBCoct07.pdf>

Groundwater

Title 40 Code of Federal Regulations, Part 141 – National Primary Drinking Water Regulations.

Title 6 New York Code of Rules and Regulations Part 703 Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations.

Title 6 New York Code of Rules and Regulations Part 375-6 Remedial Program Soil Cleanup Objectives, Protection of Groundwater, June 14, 2006 was considered during the development of this Record of Decision.

Surface Water:

Title 6 New York Code of Rules and Regulations Part 703 Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations was considered during the development of this Record of Decision.

Federal Location-Specific ARARs

- Executive Orders 11593, Floodplain Management (May 24, 1977), and 11990, Protection of Wetlands (May 24, 1977).
- National Historic Preservation Act (16 USC 470) Section 106 and 110(f), and the associated regulations (i.e., 36 CFR part 800) (requires Federal agencies to identify all affected properties on or

eligible for the National Register of Historic Places and consult with the State Historic Preservation Office and Advisory Council on Historic Presentation).

- RCRA Location and 100-year Floodplains Requirements (40 CFR 264.18(b)).
- Clean Water Act, section 404, and Rivers and Harbor Act, section 10 (requirements for dredge and fill activities) and the associated regulations (*i.e.*, 40 CFR part 230).
- Wetlands Construction and Management Procedures (40 CFR part 6, Appendix A).
- Endangered Species Act of 1973 (16 USC 1531 - 1544).
- Fish and Wildlife Coordination Act of 1934 (16 USC 661).
- Wilderness Act of 1964 (16 USC 1131 - 1136).

New York Location-Specific ARARs

- New York State Freshwater Wetlands Law (New York Environmental Conservation Law (ECL) articles 24 and 71).
- New York State Freshwater Wetlands Permit and Classification Requirements (6 NYCRR 663 and 664).
- New York State Floodplain Management Act, ECL, article 36, and Floodplain Management regulations (6 NYCRR Part 500).
- Endangered and Threatened Species of Fish and Wildlife, Species of Special Concern Requirements (6 NYCRR part 182).
- New York State Inactive Hazardous Waste Disposal Sites—Remedy Selection (6 NYCRR 375.10(b) (“goal of the program for a specific site is to restore that site to pre-disposal conditions, to the extent feasible and authorized by law.”)).
- New York State Flood Hazard Area Construction Standards.

Federal Action-Specific ARARs

- RCRA subtitle C, Hazardous Waste Treatment Facility Design and Operating Standards for Treatment and Disposal systems, (*i.e.*, landfill, incinerators, tanks, containers, etc.) (*i.e.*, 40 CFR part 264); RCRA section 3004(o), 42 USC 6924(o) (RCRA statutory minimum technology requirements.)
- RCRA, Closure and Post-Closure Standards (40 CFR 264, subpart G).
- RCRA Groundwater Monitoring and Protection Standards (40 CFR 264.92 and 264.97 – 264.99).
- RCRA Generator Requirements for Manifesting Waste for Off-site Disposal (40 CFR part 262, subpart B).
- RCRA Transporter Requirements for Off-Site Disposal (40 CFR part 263).
- RCRA, Subtitle D, Non-Hazardous Waste Management Standards (40 CFR part 257).
- RCRA Land Disposal Restrictions (40 CFR part 268) (on and off-site disposal of excavated soil).
- CWA--NPDES Permitting Requirements for Discharge of Treatment System Effluent (40 CFR parts 122-125).
- CWA--Effluent Guidelines for Organic Chemicals, Plastics and Synthetic Fibers (discharge limits) (40 CFR part 414).
- CWA--Discharge to POTW—general Pretreatment regulations (40 CFR part 403).

- DOT Rules for Hazardous Materials Transport (49 CFR part 107, and 171.1-171.500).
- OSHA Standards for Hazardous Waste Operations and Emergency Response, 29 CFR 1910.120, and procedures for General Construction Activities (29 CFR parts 1910 and 1926).
- RCRA Air Emission Standards for Process Vents, Equipment Leaks, and Tanks, Surface Impoundments, and Containers (40 CFR part 264, subparts AA, BB, and CC).

New York Action-Specific ARARs

- New York State Pollution Discharge Elimination System (SPDES) Permit Requirements (Standards for Stormwater Runoff, Surface Water, and Groundwater Discharges (6 NYCRR 750-757)).
- New York State Hazardous Waste Regulations—identification, generators, transportation, treatment/storage/disposal, land disposal restrictions, and minimum technology requirements (6 NYCRR 370-376)
- New York State Solid Waste Management and Siting Restrictions (6 NYCRR 360-361).
- New York State Hazardous Waste Generator and Transporter Requirements for Manifesting Waste for Off-Site Disposal (6 NYCRR 364 and 372).
- New York State Inactive Hazardous Waste Disposal Sites—Remedy Selection (6 NYCRR 375.10(b)(“At a minimum, the remedy selected shall eliminate or mitigate all significant threats to the public health and to the environment presented by hazardous waste disposed at the site through the proper application of scientific and engineering principles.”).
- New York State Inactive Hazardous Waste Disposal Sites--Interim Remedial Measures (IRMs) (6 NYCRR 375-1.3(n) and 375.1.11)