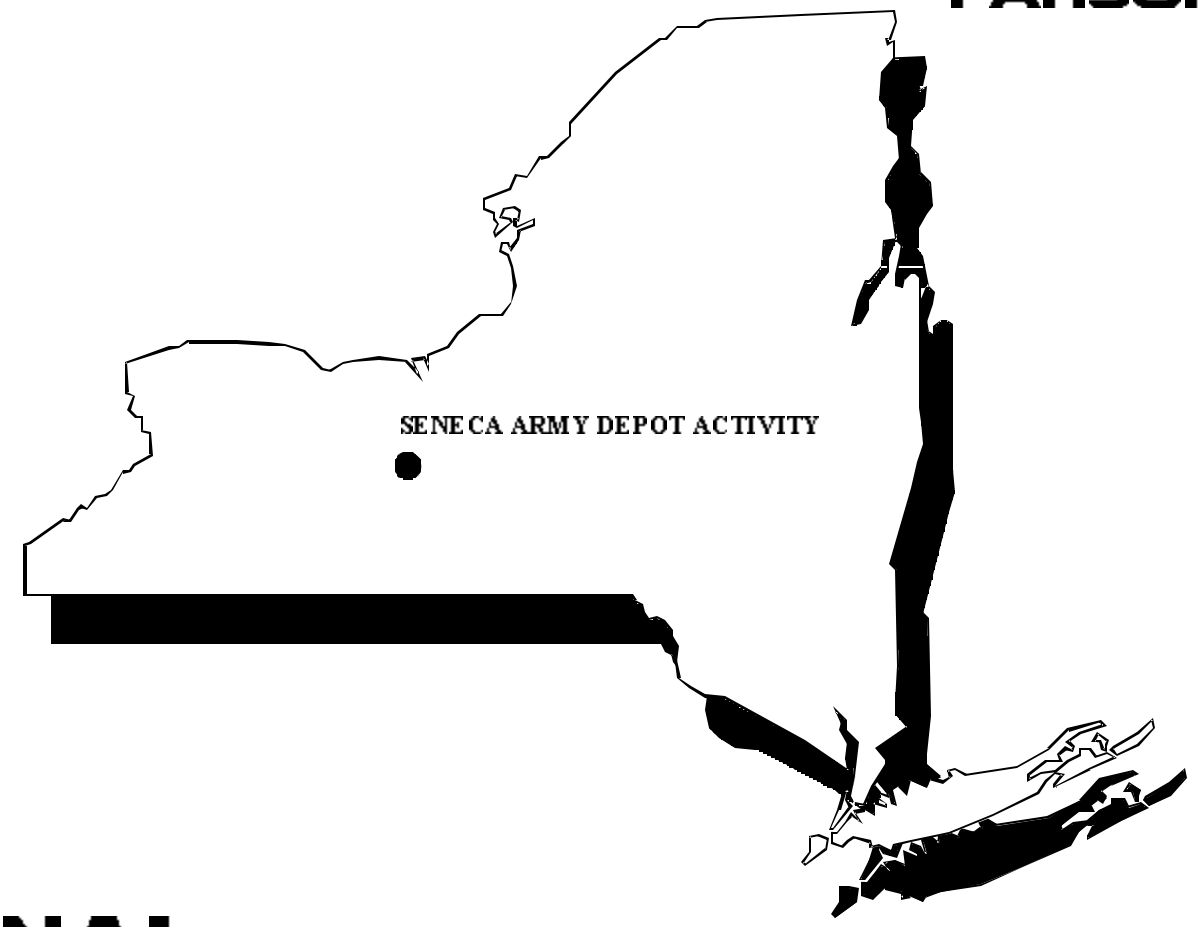
U.S. ARMY ENGINEER DIVISION
HUNTSVILLE, ALABAMA

PARSONS



FINAL

RECORD OF DECISION (ROD)
TWENTY NO ACTION SWMUs (SEADs 7, 9, 10, 18, 19, 20, 21, 22, 33, 35, 36, 37, 42, 47, 49, 51, 53, 55, 65, and 68) AND EIGHT NO FURTHER ACTION SWMUs (SEADs 28, 29, 30, 31, 32, 34, 60, and 61)

SENECA ARMY DEPOT ACTIVITY (SEDA)

September 2003

FINAL

RECORD OF DECISION

FOR

TWENTY NO ACTION SWMUs (SEADs 7, 9, 10, 18, 19, 20, 21, 22, 33, 35, 36, 37, 42, 47, 49, 51, 53, 55, 65, and 68) and EIGHT NO FURTHER ACTION SWMUs (SEADs 28, 29, 30, 31, 32, 34, 60, and 61)

SENECA ARMY DEPOT ACTIVITY

ROMULUS, NEW YORK

Prepared for:

SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK

and

UNITED STATES ARMY CORPS OF ENGINEERS
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Contract Number: DACA87-95-D-0031
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September 2003

TABLE OF CONTENTS

TABLE OF CONTENTS
(continued)

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

Acronym	Definition
AOC	Area of Concern
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CSF	Cancer Slope Factor
COC	Chemical of Concern
COPC	Chemical of Potential Concern
DCGL	Derived Concentration Guideline Level
Depot	Seneca Army Depot Activity
DLA	Defense Logistics Agency
EM	Electromagnetic
EP	Extraction Procedure
EPA	U.S. Environmental Protection Agency
EQ	Ecological Quotient
ERAGS	Ecological Risk Assessment Guidance for Superfund
et seq.	and the following one
FFA	Federal Facility Agreement
FIDLR	Field Instrument for Detecting Low Level Radiation
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
gpd	Gallons per day
gph	Gallons per hour
GPR	Ground Penetrating Radar
HI	Hazard Index
lb/hr	Pound per hour
lb/day	Pounds per day
LRA	Local Redevelopment Authority
LTTD	Low Temperature Thermal Desorption

ACRONYMS AND ABBREVIATIONS
(continued)

Acronym	Definition
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MBtu/hr	Million British Thermal Units per hour
mg/Kg	milligrams per kilogram
mrem/yr	millirem per year
MSL	Mean Sea Level
NA	No Action
NCP	National Oil and Hazardous Substances Pollution Contingency Plan or National Contingency Plan
NFA	No Further Action
NPL	National Priority List
NRC	Nuclear Regulatory Commission
NYS	New York State
NYCRR	Codes, Rules and Regulations of the State of New York
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OE EECA	Ordnance and Explosives Engineering Evaluation and Cost Assessment
OVM	Organic Vapor Meter
PAH(s)	Polynuclear Aromatic Hydrocarbon(s)
PCB	Polychlorinated Biphenyl
ppm	parts per million
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RfD	Reference Dose
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision

ACRONYMS AND ABBREVIATIONS
(continued)

Acronym	Definition
SARA	Superfund Amendments and Reauthorization Act
SCIDA	Seneca County Industrial Development Agency
SEAD	Former acronym for the Seneca Army depot used to designate SWMU numbers
SEDA	Seneca Army Depot Activity
SPDES	State Pollutant Discharge Elimination System
STP	Sewage Treatment Plant
SVOC	Semivolatile Organic Compound
SWMU(s)	Solid Waste Management Unit(s)
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbon
USATHAMA	US Army Toxic and Hazardous Materials Agency
U.S.C	United States Code
ug/Kg	micrograms per Kilograms
USEPA	U.S. Environmental Protection Agency
USA	United States of America
UST	Underground Storage Tank
VOC	Volatile Organic Compound

RECORD OF DECISION

TWENTY NO ACTION SWMUs (SEADs 7, 9, 10, 18, 19, 20, 21, 22, 33, 35, 36, 37, 42, 47, 49, 51, 53, 55, 65, and 68) AND EIGHT NO FURTHER ACTION SWMUs (SEADs 28, 29, 30, 31, 32, 34, 60, and 61)

1.0 DECLARATION OF THE RECORD OF DECISION

Site Name and Location

Seneca Army Depot Activity

CERCLIS ID# NY0213820830

Romulus, Seneca County, New York

Twenty No Action (NA) Sites and Eight No Further Action (NFA) Sites:

SEAD-7, Shale Pit – NA Site
SEAD-9, Old Scrap Wood Site – NA Site
SEAD-10, Scrap Wood Pile – NA Site
SEAD-18, Building 709 – Classified Document Incinerator – NA Site
SEAD-19, Building 801 – Classified Document Incinerator – NA Site
SEAD-20, Sewage Treatment Plant No. 4 – NA Site
SEAD-21, Sewage Treatment Plant No. 715 – NA Site
SEAD-22, Sewage Treatment Plant No. 314 – NA Site
SEAD-28, Building 360 – Underground Waste Oil Tanks (2) – NFA Site
SEAD-29, Building 732 – Underground Waste Oil Tank – NFA Site
SEAD-30, Building 118 – Underground Waste Oil Tank – NFA Site
SEAD-31, Building 117 – Underground Waste Oil Tank – NFA Site
SEAD-32, Building 718 – Underground Waste Oil Tank – NFA Site
SEAD-33, Building 121 – Underground Waste Oil Tank – NA Site
SEAD-34, Building 319 – Underground Waste Oil Tanks (2) – NFA Site
SEAD-35, Building 718 – Waste Oil-Burning Boilers – NA Site
SEAD-36, Building 121, Waste Oil-Burning Boilers – NA Site
SEAD-37, Building 319, Waste Oil-Burning Boilers – NA Site
SEAD-42, Building 106 – Preventative Medicine Laboratory – NA Site
SEAD-47, Buildings 321 and 806 – Radiation Calibration Source Storage – NA Site
SEAD-49, Building 356 – Columbite Ore Storage Area – NA Site
SEAD-51, Herbicide Usage Area – Perimeter of High Security Area – NA Site

SEAD-53, Munitions Storage Igloos – NA Site
SEAD-55, Building 357 – Tannin Storage – NA Site
SEAD-60, Oil Discharge Area Adjacent to Building 609 – NFA Site
SEAD-61, Building 718 – Underground Waste Oil Storage Tank – NFA Site
SEAD-65, Acid Storage Areas – NA Site
SEAD-68, Building S-335 Old Pest Control Shop – NA Site

Statement of Basis and Purpose

This Record of Decision (ROD) presents the U.S. Department of the Army's (Army's) selected remedy for Twenty No Action Sites and Eight No Further Action Sites located at the Seneca Army Depot Activity (SEDA) near Romulus, Seneca County, New York. The decision was developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by Superfund Amendments and Reauthorization Act (SARA), 42 U.S.C. §9601 et seq. and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300. The SEDA Base Realignment and Closure (BRAC) Environmental Coordinator, the Chief of Staff at Army Materiel Command, the Director of the Office of Site Remediation and Restoration, and the U.S. Environmental Protection Agency (USEPA) Region II have been delegated the authority to approve this ROD. The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have been consulted on the planned remedy in accordance with CERCLA 121(f), 42 U.S.C. 9621 (f), and concur with the selected remedy.

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 Town of Willard Public Library. The Administrative Record Index identifies each of the items considered during the selection of the remedial action. This index is included in Appendix A.

The State of New York, through the NYSDEC, has concurred with the selected remedy. The NYSDEC Declaration of Concurrence is provided in Appendix B of this ROD.

Description of the Selected Remedy

Based on the findings of the investigations completed for the sites, the Army has selected No Action as the remedy for Twenty Solid Waste Management Units (SWMUs) (i.e., SEADs 7, 9, 10, 18, 19, 20, 21, 22, 33, 35, 36, 37, 42, 47, 49, 51, 53, 55, 65, and 68) and No Further Action as the remedy for Eight SWMUs (i.e., SEADs 28, 29, 30, 31, 32, 34, 60, and 61). These selections are based on the Army's determination that these sites do not pose a significant threat to human health or the environment.

Statutory Determination

The Army has selected No Action as the remedy for SEADs 7, 9, 10, 18, 19, 20, 21, 22, 33, 35, 36, 37, 42, 47, 49, 51, 53, 55, 65, and 68 and No Further Action as the remedy for SEADs 28, 29, 30, 31, 32, 34, 60, and 61.

Authorizing Signatures and USEPA and NYSDEC Acceptance of Remedy

This Declaration also serves as the formal authorizing signature page for the Twenty No Action Sites and Eight No Further Action Sites ROD. Pursuant to the *Federal Facility Agreement for the Seneca Army Depot* (FFA), the ROD shall be adopted by the Army, USEPA, and NYSDEC if all parties agree to the contents of the ROD. In the event that mutual agreement cannot be reached on the ROD, the Federal Facility Agreement (FFA) designates the responsibility for the selection of the final remedial action to the USEPA Administrator, and further specifies that the USEPA shall then prepare the final ROD. The selection of any remedial action by the USEPA Administrator shall be final and not subject to dispute by the Army.

DECLARATION OF THE RECORD OF DECISION

The selected remedy (i.e., "No Action" or "No Further Action") is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. The remedy uses permanent solutions. The remedy does not require imposition of institutional controls, thus five-year reviews are not necessary.

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
Seneca Army Depot Activity

11 Sep. 03
Date

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DECLARATION OF THE RECORD OF DECISION

The selected remedy (i.e., "No Further Action") is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. The remedy uses permanent solutions. The remedy does not require imposition of institutional controls, thus five-year reviews are not necessary.

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:

James R. Davidson
Director
National Capital Region Field Office
U.S. Army Installation Support
Management Agency

17 September 2003
Date

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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:

Jane M. Kenny
Regional Administrator
U.S. Environmental Protection Agency, Region II

11/22/03
Date

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The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) forwarded to the U.S. Environmental Protection Agency a letter of concurrence regarding the selection of a remedial action in the future. This letter of concurrence is attached in Appendix B.

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2.0 SITE NAME, LOCATION AND DESCRIPTION

The Seneca Army Depot Activity (SEDA or Depot) occupies approximately 10,600 acres of land that is located near the Village of Romulus in Seneca County, New York. The military facility has been owned by the U.S. Government and operated by the Army since 1941. SEDA is located in an uplands area, which forms a divide separating two of the New York Finger Lakes, Cayuga Lake on the east and Seneca Lake on the west. The elevation of the facility is approximately 600 feet above Mean Sea Level (MSL).

The names, locations, and descriptions of the 28 individual sites covered under this ROD are presented in Section 6.

3.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

On July 14, 1989, the USEPA proposed SEDA for inclusion on the National Priorities List (NPL). Supporting its recommendation for listing, the USEPA stated "the Army identified a number of potentially contaminated areas, including an unlined 13-acre landfill in the west-central portion of the depot, where solid waste and incinerator ash were disposed of intermittently for 30 years during 1941-79; two incinerator pits adjacent to the landfill, where refuse was burned at least once a week during 1941-74; a 90-acre open burning/detonation area in the northwest portion of the depot, where explosives and related wastes have been burned and detonated during the past 30 years; and the APE-1236 Deactivation Furnace in the east-central portion of the depot, where small arms are destroyed." The EPA recommendation was approved and finalized on August 30, 1990 when SEDA was listed in Group 14 of the Federal Facilities portion of the NPL. The Depot's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) identification number is NY0213820830.

A final copy of the completion report for 22 SWMUs was submitted to the EPA and NYSDEC in March 2002. This document was titled "Final Decision Document, Twenty-Two No Further Action Sites" (Parsons, 2002c), and provided documentation supporting the Army's claims that the identified sites did "not pose a threat to the public health, welfare, or the environment." The 22 SWMUs for which documentation was provided included 20 No Action SWMUs presented in the SWMU Classification Report (Parsons, 1994) (i.e., SEADs 1, 2, 7, 10, 18, 19, 20, 21, 22, 29, 30, 31, 35, 36, 37, 42, 49, 55, 61, and 65), and two of the sites (i.e., SEAD-32 and SEAD-60) initially classified as Priority AOCs in the SWMU Classification Report (Parsons, 1994). SEADs 32 and 60 were included in this Decision Document based on the results of site investigations that were conducted (SEAD-32) or on the completion of removal action (SEAD-60). The current listing of the No Action or No Further Action SWMUs includes all the SEADs presented in this Decision Document with the exception of SEAD-1 and SEAD-2. The requested "No Further Action" determinations for two of the SWMUs (SEAD-1 and SEAD-2) discussed in the "Final Decision Document, Twenty-Two No Further Action Sites" Report (Parsons, 2002c) have been postponed pending completion of Resource Conservation and Recovery Act (RCRA) ongoing closure actions at these two sites.

A final copy of the Decision Document report for SWMUs that were initially classified as Priority AOCs was submitted to the EPA and NYSDEC in May 2002. This document was titled "Final Decision Document, Mini Risk Assessment" (Parsons, 2002b), and provided mini risk assessment documentation for 21 SEADs that were initially classified as Priority AOCs and SEAD 120B, which was not included in the initial SWMU list provided by the Army. The Decision Document supports the Army's claims that SEADs 9, 28, 32, 33, 34, and 68 did "not pose a threat to the public health, welfare, or the environment." The above SEADs have been included in the current listing of the No Action or No Further Action SWMUs.

In addition, three SWMUs (i.e., SEADs 47, 51, and 53) not previously included in the "Final Decision Document, Twenty-Two No Further Action Sites" Report (Parsons, 2002c) are included in the current listing of the No Action or No Further Action SWMUs. Information supporting the Army's recommendation for these sites is provided in other documents that are highlighted in the applicable subsection of Section 6 and in the administrative record of this Record of Decision.

The Army has prepared this Record of Decision for the Twenty "No Action" SWMUs and Eight "No Further Action" SWMUs as the final step in the CERCLA process required for these sites. Since the listing of SEDA on the NPL in 1990, the Army has worked to develop and prepare the information and data that are needed to support determinations of what remedial actions are needed at each of the identified SWMUs and AOCs to ensure that site conditions are protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. Data and information developed and evaluated by the Army for these sites are summarized in this Record of Decision and are delineated in detail in Completion Reports submitted for SEDA per requirements of the FFA (Section 10.6) listed in the Administrative Record provided as Appendix A. This Record of Decision is submitted to fulfill the requirements of the Section 10.8 of the FFA for the Seneca Army Depot Activity.

The current listing of the No Action and No Further Action SWMUs considered in this ROD is provided in Table 1. The locations of the 28 SWMUs proposed for No Action or No Further Action are shown with relation to the proposed future land use on Figure 1.

4.0 COMMUNITY PARTICIPATION

The Army, the EPA, and the NYSDEC rely on public input to ensure that the concerns of the community are considered in selecting an effective remedy for each Superfund site. The public comment period for the Twnety No Action and Eight No Further Action SWMUs at SEDA was held from July 25, 2003 to August 24, 2003 to provide an opportunity for public participation in the remedy selection process for these sites. A public meeting was held on August 13, 2003 at the Seneca County Hero's Conference Room, located at the Seneca County Office Building in Waterloo, NY beginning at 7 pm.

The Proposed Plan for the 28 No Action or No Further Action SWMUs (Parsons, 2003) was presented at a public meeting on August 13, 2003. At the public meeting, the results of the investigations and the remedial action (RA) at the sites were presented along with a summary of the preferred remedy. At the presentation, a question-and-answer period was held, during which the public had the opportunity to ask questions or submit written comments on the ROD. No formal comments were received from the community during the comment period or during the public meeting, thus none were incorporated into the Proposed Plan or the final ROD.

Information and data summarized within this ROD for each of the 28 SWMUs is presented and described in greater detail within the Final "Decision Document, Twenty-Two No Further Action Sites" Report (Parsons, 2002c), the Final "Decision Document, Mini Risk Assessment" Report (Parsons, 2002b) or within documents that are identified in the appropriate subsections of Section 6 of this Record of Decision, and this information should be reviewed and consulted. The Decision Documents are submitted to fulfill the Army's obligation to provide a Completion Report that documents the efforts conducted under a CERCLA Remedial Investigation/Feasibility Study (RI/FS) for the identified sites. To better understand the listed sites and the investigations and studies that have been conducted at each location, the public is encouraged to review the project documents at the following repository:

Seneca Army Depot Activity
Building 123
5786 State Route 96
Romulus, New York 14541-5001
(607) 869-1309
Hours: Mon – Thur, 8:30 a.m. – 2:30 p.m.

5.0 SCOPE AND ROLE

The Army has selected No Action or No Further Action as the remedy for the 28 sites (i.e., SEADs 7, 9, 10, 18, 19, 20, 21, 22, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 42, 47, 49, 51, 53, 55, 60, 61, 65, and 68) addressed in this ROD. The selected remedy at each site is based on the Army's determination that hazardous waste does not pose a significant threat to human health or the environment at these sites.

6.0 SITE CHARACTERISTICS

6.1 SEAD-7: Shale Pit

The "Shale Pit," SEAD-7, is an excavation pit that covers an area measuring approximately two acres. SEAD-7 is located north of North Patrol Road in the northwestern corner of the Depot. This SWMU is located in a portion of the Depot where the future land use has been designated as institutional development. The institutional development area is a treatment center for troubled youths (KidsPeace). The general location of this SWMU is shown on Figure 1, and presented in greater detail on Figure 2. The Shale Pit is located within 185-acres of land that was transferred by the U.S. Government to the Seneca County Industrial Development Agency (SCIDA) on February 14, 2000. The transferred land is currently leased to KidsPeace and is used as the location of the Seneca Woods Residential Program.

The Shale Pit was created when the Army excavated it to obtain shale that was used for road surfaces at the Depot. Once the excavation was opened, it was used for disposal of construction debris from Depot building and demolition activities. As developed, the Shale Pit holds only concrete, asphalt and wood debris; no other wastes were placed in the Shale Pit during its life. The base of the excavation pit was terminated above the regional groundwater table. No cover material was applied to the debris subsequent to its placement in the pit. The Army managed disposal at the site, and only construction debris, which was inert and free of chemical contamination, and therefore exempt from regulation under New York State Hazardous Waste Regulations, 6 NYCRR Section 360-7.1 (b)(i), was placed into the pit.

The Army proposed SEAD-7 as a No Action SWMU. This recommendation was documented in the Final SWMU Classification Report (Parsons, 1994), and both EPA and NYSDEC concurred with this recommendation.

A visual site inspection was conducted at the Shale Pit (SEAD-7) on September 13, 1990 and indicated that approximately 50 percent of the pit was filled with construction debris. All materials disposed of in the Shale Pit were visually inspected prior to disposal to ensure that only uncontaminated construction debris or clean fill were placed in the pit. No environmental sampling was performed at SEAD-7.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.2 SEAD-9: Old Scrap Wood Site

The Old Scrap Wood Site (SEAD-9) is located in the eastern-central portion of the Depot about 400 feet north of the intersection of East Kendaia Road and East Patrol Road. This SWMU is located in a portion of the Depot where the future land use has been designated as planned industrial development. The general location of this SWMU is shown on Figure 1, and presented in greater detail on Figure 3. A dirt road leads to a cul-de-sac at the end of which debris is present. The debris consists of numerous piles of

scrap wood, tree stumps, and other miscellaneous items. There are no buildings or existing structures near this site.

Construction debris was deposited at this site from 1977 to 1984, and scrap wood was deposited here from 1984 to 1986. Periodically between 1985 and 1992 the fire department used this area for fire training when they burned scrap wood that could not be sold.

SEAD-9 was designated as an AOC and investigations were subsequently conducted. During the Expanded Site Inspection for Eight Moderately Low Priority AOCs beginning in February 1994 (Parsons, 1995), geophysical surveys including seismic, Electromagnetic (EM), and ground penetrating radar (GPR) surveys were conducted at SEAD-9. In addition, nine soil samples and two groundwater samples were collected from SEAD-9 and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs), Target Analyte List (TAL) metals, cyanide, and total petroleum hydrocarbons. The results of these analyses can be found in Appendix A of the Final Decision Document – Mini Risk Assessment, Seneca Army Depot Activity (Parsons, 2002b), and are summarized in Tables 2 and 3 at the end of this document.

The results of the analysis indicate that VOCs, SVOCs, pesticides, PCBs, and metals were detected in soil. Concentrations of several Polynuclear Aromatic Hydrocarbons (PAHs) [benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, and dibenz(a,h)anthracene] and metals (arsenic, calcium, lead, mercury, sodium, and zinc) exceeded their respective NYSDEC's Technical and Administrative Guidance Memorandum #4046 (TAGM) recommended soil cleanup objectives. Total Petroleum hydrocarbon (TPH) and metals were detected in groundwater samples collected from SEAD-9. The iron and sodium concentrations exceeded NYSDEC's Class GA groundwater standards and the aluminum and manganese concentrations exceeded the federal Secondary Drinking water levels.

A mini risk assessment was conducted for SEAD-9. The results of the mini risk assessment can be found in the Final Decision Document – Mini Risk Assessment, Seneca Army Depot Activity (Parsons, 2002b), and are summarized in Section 8.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.3 SEAD-10: Scrap Wood Pile

SEAD-10 was used for the storage of scrap wood generated from site activities. The Scrap Wood Pile encompassed an area measuring approximately 250 feet long by 185 feet wide that is located on the south side of East Kendaia Road near Building 113. This portion of the Depot is designated for planned industrial development. The general location of this SWMU is shown on Figure 1, and presented in greater detail on Figure 3.

Use of the woodpile began in 1986 and continues in its present location today. Scrap wood from Depot activities is segregated, stored in piles, and is then sold to Depot employees and the public. The storage area is divided into three sections: 1) an area for scrap wood (west pile; 130 feet by 185 feet); 2) an area for disposal of wooden pallets (middle pile; 60 feet by 185 feet); and 3) an area for pressure treated wood and poles (east pile; 60 feet by 185 feet).

SEDA's fire department periodically used wood from the scrap woodpile as fuel for fire training exercises at other locations. Whenever fire training exercises were conducted, the State of New York was notified prior to any burning.

The Army proposed SEAD-10 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC concurred with this recommendation.

Samples of the ash produced by the combustion of scrap wood from fire training exercises in SEAD-10 were collected on September 29, 1992 and analyzed for TCLP constituents prior to their disposal by Waste Management – Syracuse NY. A complete copy of the results obtained from this analysis is provided in Appendix A of the Final Decision Document, Twenty-Two No Further Action Sites, Seneca Army Depot Activity (Parsons, 2002c) and the results are summarized in Table 5 at the end of this document. The results of the analysis indicate that the measured levels did not exceed the regulatory limits (i.e., the Toxicity Characteristic levels defined in 40 CFR §261.24). The ash has been homogenized with wood mulch.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.4 SEAD-18: Building 709 – Classified Document Incinerator

During its operational history, SEAD-18, the Classified Document Incinerator in Building 709, was actually located at two different places within the north-central portion of SEDA. Between 1956 and 1983, the first Building 709 was located southwest of Building 707, at the edge of the parking lot near the North Patrol Road. In 1983, the first Building 709 was torn down, and a second building also designated as Building 709, was constructed in an area between Buildings 701 and 702. The approximate location of the second Building 709 is shown on Figure 1, and in greater detail on Figure 2. Both buildings designated as 709 are located in the north-central portion of SEDA, where the proposed future land use for the site is designated as institutional. Both locations were included in land that was transferred by the U.S. Government to the SCIDA on February 14, 2000. The transferred land is currently leased to KidsPeace and is used as the location of the Seneca Woods Residential Program. The operations of the incinerator were subject to conditions of an air discharge permit (Facility number #453089-0049; point source #0709B). The last incinerator (SEAD-18) was removed prior to the transfer of the land surrounding it to the SCIDA.

The Classified Document Incinerator was a single chamber, propane-fired Washburn and Granger model S-200. As it was configured, the incinerator did not include any form of air pollution control device. The incinerator had a rated capacity of 96 pounds per hour (lb/hr), and SEDA personnel indicated that its normal charging rates were on the order of 30-40 pounds per day (lb/day) of classified paper documents. During its use, the incinerator was predominantly used to burn classified paper wastes that contained minimal levels of plastic, and possibly some glass waste intermixed.

When the incinerator was used, generated ash was tested and accepted for disposal at permitted local landfills during the 1980s and early 1990s. There is no information regarding practices before this time period.

The Army proposed SEAD-18 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and both EPA and NYSDEC concurred with this recommendation.

The ash recovered from the incinerator was tested for Extraction Procedure (EP) Toxicity leaching potential via Method SW-846 1310A prior to disposal, and the analytical results were acceptable for disposal at permitted local landfills during the 1980s and early 1990s.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.5 SEAD-19: Building 801 – Former Classified Document Incinerator

Between 1956 and 1983, the Army operated a Classified Document Incinerator in Building 801, which is located in the north-central portion of the Depot and designed as SEAD-19. The land in this portion of the Depot is designated for a future use of conservation/recreation. The approximate location of the SEAD-19 is shown on Figure 1, and in greater detail on Figure 4.

The incinerator at Building 801 was used to incinerate classified documents. The incinerator is a single chamber, propane-fired Washburn and Granger model S-200 that does not include any air pollution control devices. It has a rated capacity of 96 lb/hr of refuse, but during the time of its use it had a normal charging rate of 30-40 pounds per day (lb/day) of classified paper documents. Personnel of SEDA indicated that the incinerator was predominantly used to burn paper wastes (95%) with some microfilm intermixed.

The incinerator is currently not in use, and it is no longer permitted for use. When the incinerator was used under an air permit (Certificate to Permit Regulated Activities C453089-00460801BNR), generated ash was tested and accepted for disposal at permitted local landfills during the 1980s and early 1990s. There is no information regarding practices before this time period.

The Army proposed SEAD-19 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and this designation was concurred with by the EPA and NYSDEC.

The ash recovered from the incinerator was tested for EP Toxicity leaching potential prior to disposal, and the analytical results were acceptable for disposal at permitted local landfills during the 1980s and early 1990s.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.6 SEAD-20: Sewage Treatment Plant No. 4

Sewage Treatment Plant (STP) No. 4 is located on the south side of West Romulus Road in the east central portion of the Depot. Land surrounding this facility is designated for planned industrial development. The general location of SEAD-20 is shown on **Figure 1,** and in greater detail on **Figure 3.**

STP No. 4 was designed to treat a maximum flow capacity of 250,000 gallons per day (gpd). Inlet flow received includes domestic wastewater with a minimal component of industrial discharges consisting primarily of boiler plant blowdown fluids. The majority of wastewater received originates from the administration area, the warehouse area, the Military Elliot Acres Housing Complex, and the adjacent civilian communities of Romulus and Varick, New York.

STP No. 4 was put online in 1942. Unit operations include a bar screen, a wet well, a dual-chambered Imhoff tank, a covered trickling filter containing plastic media, a secondary clarifier, and two sludge drying beds (each measuring approximately 35 feet by 35 feet). The effluent from STP No. 4 is discharged to an unnamed adjacent stream that flows northerly and enters a wetland that is on the Depot property. The wetlands were used as a substitute for in-situ tertiary treatment.

STP No. 4 operated, and continues to operate today, under two State of New York permit authorizations. STP No. 4's State Pollutant Discharge Elimination System (SPDES) number is NY0021296 and its NYSDEC identification number is 8-4530-00006/00035. Sludge from this unit was initially removed and placed at the location identified as SEAD-5. After 1980, sludge was removed from SEAD-20 and disposed in approved municipal landfills.

Permitted sewage treatment plants are exempted from RCRA regulations, and, therefore, should not be classified as SWMUs. The Army proposed SEAD-20 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

No site investigations have been conducted within or in the immediate vicinity of STP No. 4, SEAD-20.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.7 SEAD-21: Sewage Treatment Plant No. 715

STP No. 715 is located in the north-central to northwestern portion of the Depot, west of the Depot's former north gate where the perimeter fence and the North Patrol Road separate. STP No. 715 is located within a portion of the Depot where the designated future land use is institutional. The approximate location of SEAD-21 is shown on Figure 1 and in greater detail on Figure 2. STP No. 715 is located on land that was transferred by the U.S. Government to the SCIDA on February 14, 2000. The transferred land is currently leased to KidsPeace and is used as the location of the Seneca Woods Residential Program.

When the Army operated STP No. 715, it had a permitted wastewater capacity of 300,000 gpd. The design capacity of the facility is 750,000 gpd. The treatment plant began operations in 1956, and the Army ceased operation of the plant on January 1, 1996 when the troop barracks located in the northern portion of the Depot were closed. During the period of its operation, the wastewater treatment plant only received wastewater from domestic sources.

STP No. 715's equipment inventory consisted of (as of January 1, 1996) a grinder pump and comminutor, a primary settling chamber, two rotating biological contractors, a secondary clarifier, sand filters, a sludge holding tank, a sludge digestion tank (old Imhoff tank), and two concrete-lined sludge drying beds with gravel and sand floors (approximately 40 feet by 15 feet each). STP No. 715 operated under two State of New York permit authorizations. STP No. 715's State Pollutant Discharge Elimination System (SPDES) number was NY0021296 and its NYSDEC identification number was 8-4530-00006/00035. During its life, sludge produced within STP No. 715 was periodically removed and transported to SEAD-5 where it was stored in the sewage sludge waste piles. The treated effluent from STP No. 715 was discharged to Reeder Creek.

Permitted sewage treatment plants are exempted from RCRA regulations, and, therefore, should not be classified as SWMUs. The Army proposed SEAD-21 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

A review of historic operational records maintained by the Army for this facility indicated that violations of the facility's SPDES permit were recorded in 1986 when excessive levels of biological oxygen demand and total suspended solids were measured in the plant's effluent. No other SPDES violations were recorded for the facility prior to its closure in 1996. No site investigations have been conducted within or

in the immediate vicinity of STP No. 715, SEAD-21.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.8 SEAD-22: Sewage Treatment Plant No. 314

STP No. 314 was located in the east central part of Depot where the land's future use is designated as planned industrial development. Figure 1 shows the approximate location of SEAD-22, while Figure 3 shows the area surrounding SEAD-22 in greater detail.

The historic STP No. 314 was constructed in 1941 and continued to operate until October of 1978. In 1978, STP No. 314 was converted to a lift station that serviced STP No. 4 (SEAD-20). The lift station currently continues to occupy the site of the former STP facility. All components of the original STP No. 314 facility were removed or filled and covered with shale and soil subsequent to the shutdown of the plant. The area is grassy, but several pieces of the former facility's foundation are still evident at the site.

The historic STP No. 314 included a bar screen, an Imhoff tank, a 30-foot diameter trickling filter, a secondary clarifier, a chlorination chamber, and a sludge drying bed. The rated wastewater flow capacity of the plant was 100,000 gpd. The wastewater treated at the historic STP No. 314 originated from domestic-type sources only; industrial wastewater was not treated in the facility. Once treated, the effluent from the STP No. 314 was discharged to Kendaia Creek. There is no evidence that a release of solid or hazardous waste occurred from the STP No. 314. Sludge from this unit was initially removed and placed at the location identified as SEAD-5.

The Army proposed SEAD-22 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), the EPA and NYSDEC both concurred with this recommendation.

No site investigations have been conducted within or in the immediate vicinity of STP No. 314, SEAD-22.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.9 SEAD-28: Building 360 – Underground Waste Oil Tanks (2)

SEAD-28 is located in the east-central portion of the Depot where the land's future use is designated as planned industrial development. The general location of this SWMU is shown on Figure 1, and presented

in greater detail on Figure 3. Two underground waste oil storage tanks (Tank IDs: NYS 205 Building 355E and NYS 206 Building 355W) were located in SEAD-28.

Both of the former fiberglass tanks had a capacity of 2,005 gallons. The depth to the top of each tank was 4 feet with overburden conditions being crushed rock. When the two former underground tanks existed, both were used to store waste oil for later use as a fuel supplement in the boiler located in Building 718. The tanks, installed in August 1981, were tested in July 1988, using the "Tegrity Tester." The test results indicated that both tanks were "tight" (compared to a leak rate standard of 0.05 gallons per hour).

During a 1990 site inspection, soil staining was noted in the area surrounding the tanks, and it was presumed that waste oil had been spilled around the tanks. However, there was no evidence that these areas constituted more than surficial contamination. Subsequent to the 1990 inspection, SEDA personnel reported that the surficial soils were removed and disposed of appropriately.

In July of 1993, oil tank 355W and its associated pump-out-pipe were found to contain water. At this time, the Army decided to remove the tank. Upon removal, no residual oil contamination was observed within the excavation that had filled with groundwater. A small crack was observed on the top of the removed tank, but this may have been caused during excavation. The Army concluded that the water found inside the tank had been poured into it with the used oil and that the water inside the pump-out-pipe was trapped there by a thick oil sludge that was in the bottom of the pipe.

The remaining 2,005-gallon, used oil tank, identified as 355E, remained in service until its removal in December of 1994. At the time of its removal, the tank was not leaking and oil was not found in the excavation. Both tanks were closed under the NYS bulk petroleum storage requirements in effect in 1994.

SEAD-28 was designated as an AOC and investigations were subsequently conducted. Following the removal of tank 355E in 1994, a confirmatory sample was taken from the excavation. The sample was a composite soil sample of the bottom, north, south, east, and west sides of the excavation. The sample was analyzed for SVOCs. The results can be found in Appendix C, Table G-1 of the Final Decision Document – Mini Risk Assessment, Seneca Army Depot Activity (Parsons, 2002b), and are summarized in Table 6 at the end of this document.

No SVOCs were detected in the composite sample.

The Army's remedy for this SWMU is "No Further Action" under CERCLA.

6.10 SEAD-29: Building 732 – Underground Waste Oil Tank

SEAD-29 is a former 550-gallon, waste oil underground storage tank (UST) that was used to store waste oil generated from the automotive maintenance shop. The tank was located on the southeast side of Building 732 [NYS Petroleum Bulk Storage (NYSPBS) # 8-416118 Tank #207], which is located within the northern portion of the Depot. This portion of the Depot is designated for institutional use. The approximate location of SEAD-29 is shown on Figure 1, while the vicinity is shown in greater detail on Figure 2. SEAD-29 was located on land that was transferred by the U.S. Government to the SCIDA on February 14, 2000. The transferred land is currently leased to KidsPeace and is used as the location of the Seneca Woods Residential Program.

The tank was originally installed in 1981 and was constructed of fiberglass with galvanized steel piping. The waste oil stored in the tank was used as a fuel supplement in the boilers located in Building 718 (SEAD-35). The Army discontinued the use and the tank was removed under the New York UST Program. The site was closed out on February 11, 1998 under spill number 97-09544.

The Army's remedy for this SWMU is "No Further Action" under CERCLA.

6.11 SEAD-30: Building 118 – Underground Waste Oil Tank

SEAD-30 was a former waste oil UST that was located on the southern side of Building 118 (Tank ID No. NYS 208/EPA Tank #118), near the intersection of South Street and Second Avenue in the east central portion of the Depot. This SWMU is located in the portion of the Depot where the future use is planned industrial development. The approximate location of SEAD-30 is shown on Figure 1, while the area surrounding this SWMU is shown in greater detail on Figure 3.

The tank was installed in 1941 and it was used to store waste automotive oil generated from Depot vehicle maintenance activities. The waste oil stored in the tank was used as a fuel supplement in the boilers located in Buildings 718 (SEAD-35), 121 (SEAD-36), and 319 (SEAD-37). The 550-gallon tank was constructed of steel and it was buried approximately sixteen inches below the surface in native, overburden materials that were grass covered. Galvanized piping was used for the transfer of fluids to and from the tank.

This tank was removed in 1992 in accordance with NYS bulk petroleum storage regulations in effect at the time. At the time of the tank's removal, there was no evidence of any release around the tank. A NYSDEC representative, who oversaw the removal, did not require any confirmational soil sampling when the excavation was open.

The Army's remedy for this SWMU is "No Further Action" under CERCLA.

6.12 SEAD-31: Building 117 - Underground Waste Oil Tank

SEAD-31 was a waste oil UST that was located on the southwest side of Building 117 between Second and Third Avenue (NYSPBS #8-416118 Tank #204). This site is located in the east central portion of the Depot, in an area where the future land use is planned industrial development. The approximate location of SEAD-31 is shown on Figure 1, while the area surrounding this SWMU is shown in greater detail on Figure 3.

The former underground tank was constructed of fiberglass and was equipped with galvanized steel piping. The tank had a capacity of 2,005 gallons and was buried approximately four feet underground in native soil. The ground surface above the tank was grass covered, and the tank site was surrounded by Building 117 on one side, grass on one side, and asphalt pavement on two sides.

Waste oil was stored in the tank for subsequent use as a fuel supplement in the boilers located at Building 718 (SEAD-35). Previously, it was also used as a fuel supplement in the boilers located in Buildings 319 (SEAD-37) and 121 (SEAD-36). The tank was removed from the ground and the site was closed out on October 7, 1999 under spill number 99-70632.

The former 2,005-gallon waste oil tank that comprised SEAD-31 was last tightness tested in 1996 and according to SEDA personnel; the tank passed the 1996 test. The tank was removed and the site was closed out on July 2, 2003.

The Army's remedy for this SWMU is "No Further Action" under CERCLA.

6.13 SEAD-32: Building 718 – Underground Waste Oil Tanks

SEAD-32 was comprised of two waste oil underground storage tanks (USTs - Tanks A and B). This site is located in an area where the future land use is designated as institutional. The approximate location of SEAD-32 is shown on Figure 1, and in greater detail on Figure 2. The area where the two underground storage tanks comprising SEAD-32 were formerly located in the property that was transferred by the U.S. Government to the SCIDA on February 14, 2000. The SCIDA removed the tanks on August 20, 2000 and it was closed out with spill number 0070201 on June 21, 2001.

Once installed in 1956, the underground tanks of SEAD-32 were primarily used for the storage of No. 6 fuel oil. Tank A (NYSPBS #8-416118 Tank #194) had a maximum storage capacity of 40,000 gallons, while Tank B (NYSPBS #8-416118 Tank #195) had a maximum storage capacity of 20,000 gallons. With the imposition of RCRA requirements in 1980 – 1981, SEDA altered its historic waste oil management practices, and tried to recover energy value from waste oil that was generated at the Depot. As such, waste oil was routinely blended with the No. 6 fuel oil whenever bulk (i.e., 7,000-gallon) deliveries occurred. The combined No. 6 fuel/waste oil mixture was used as fuel for space heating and

generation of hot water supplies. In 1989, the practice of blending waste and virgin oil in SEAD-32 tanks was discontinued when a new 10,000 gallon dual walled fiberglass waste oil tank with an interstitial space monitoring system was constructed at Building 718 (SEAD-61).

A limited site investigation was performed in SEAD-32 in 1994 to investigate possible releases of No. 6/waste oil to the soil and groundwater. Two soil borings and two groundwater wells were installed and sampled as part of this investigation.

The results of the soil sampling indicated that two low levels of total petroleum hydrocarbons [TPH – 90 and 81 parts per million (ppm)], and one hit of methylene chloride were found in soil. No other volatile organic compounds were detected in the samples analyzed. The single value reported for methylene chloride [1 microgram per kilogram (mg/Kg)] was believed to be a laboratory artifact and was below the TAGM recommended soil cleanup objective of 100 mg/Kg.

The results of the groundwater investigation indicate that no volatile organic compounds were detected in groundwater, while one well contained TPH (MW32-1 at 0.69 ppm). There is no TAGM recommended groundwater cleanup objective for TPH.

Refer to Appendix B of the Final Decision Document, Twenty-Two No Further Action Sites, Seneca Army Depot Activity (Parsons, 2002c) for full data tables from this sampling event. Summary tables from this event are provided as Tables 7 and 8 at the end of this document.

The Army's remedy for this SWMU is "No Further Action" under CERCLA.

6.14 SEAD-33: Building 121 - Underground Waste Oil Tank

SEAD-33 is located in the eastern central portion of the Depot where the future land use is designated as planned industrial development. SEAD-33 is comprised of the 30,000-gallon, steel underground oil tank at Building 121 (NYSPBS #8-416118 Tank #198). The approximate location of SEAD-33 is shown on Figure 1, and in greater detail on Figure 3. The tank remains in place and continues to be managed under the NYS bulk petroleum storage program. If the tank is removed in the future, it will be closed out in accordance with NYS bulk petroleum storage requirements in effect at the time of close out.

Once installed in 1943, the primary use of the tank was for the storage of fuel (primarily No. 6 fuel). With recycling initiatives starting in 1980 – 1981, SEDA altered its historic waste oil management practices, and tried to recover energy value from waste oil that was generated at the Depot. As such, waste oil was routinely blended with the No. 6 fuel oil whenever bulk (i.e., 7,000-gallon) deliveries occurred. The combined No. 6 fuel/waste oil mixture was used as fuel for space heating and generation of hot water supplies. In 1989, the practice of blending waste and virgin oil in SEAD-33 tanks was discontinued.

A sampling program was performed in 1994 at SEAD-33. One boring was advanced downgradient of the tank location and one was advanced at the upgradient location. The borings were continuously sampled and screened in the field with an organic vapor meter (OVM). One soil sample from each boring was submitted for TCL VOC and TPH analyses. A monitoring well was installed in each boring. At the time of the sampling, no groundwater was present in the well and thus, no groundwater samples were obtained and analyzed.

No VOCs were detected in the three soil boring samples collected and analyzed. TPH was detected at 470 milligrams per kilogram (mg/Kg) in one of the borings at a depth of 4 to 6 feet below grade and 78 mg/Kg in the other boring at a depth of 2-4 ft below grade. There is no TAGM recommended soil or groundwater cleanup objective for TPH. Additionally, as no groundwater was detected at the site, and since the soil samples containing TPH are covered by a minimum of 2 feet of soil, there is no exposure pathway present.

Soil sample results can be found in Appendix E, Table E-1 of the Final Decision Document – Mini Risk Assessment, Seneca Army Depot Activity (Parsons, 2002b), and are summarized in Table 9 at the end of this document.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.15 SEAD-34: Building 319 - Underground Waste Oil Tanks (2)

SEAD-34 is located in the eastern central portion of the Depot where the future land use is designated as planned industrial development. It is comprised of the two underground oil tanks (Tank A and Tank B – NYSPBS #8-416118 Tank # 196 and NYSPBS #8-416118 Tank #197, respectively) at Building 319. The approximate location of SEAD-34 is shown on Figure 1, and in greater detail on Figure 3.

Tanks A and B had been in use from 1951 to 1989. Tank A has a maximum storage capacity of 30,000 gallons. Tank B has a maximum storage capacity of 20,000 gallons. Both tanks are constructed of steel. Since 1956, the primary use of the tanks was for the storage of fuel (primarily No. 6 fuel). With recycling initiatives starting in 1980 – 1981, SEDA altered its historic waste oil management practices, and tried to recover energy value from waste oil that was generated at the Depot. As such, waste oil was routinely blended with the No. 6 fuel oil whenever bulk (i.e., 7,000-gallon) deliveries occurred. The combined No. 6 fuel/waste oil mixture was used as fuel for space heating and generation of hot water supplies. In 1989, the practice of blending waste and virgin oil in SEAD-34 tanks was discontinued.

A visual site inspection has shown that waste oil had been spilled around the tanks' fill pipes. However, there was no visual evidence that these areas constituted more than surficial contamination. Since the visual site inspection, SEDA personnel have reported that the surficial soils have been removed and

disposed of appropriately in accordance with the NYS UST program. The tanks remain in place and continue to be managed under the NYS UST program.

A sampling program was performed at SEAD-34 in 1993. One boring was advanced downgradient of the two tank locations and a second was advanced upgradient of the tank locations. The borings were continuously sampled and screened in the field for VOC with an OVM. One soil sample was collected from each boring. A monitoring well was installed in each boring and one groundwater sample was obtained from each well. Both soil and groundwater samples were analyzed for TCL VOCs and TPH. Results of the chemical analyses can be found in Appendix F of the Final Decision Document – Mini Risk Assessment, Seneca Army Depot Activity (Parsons, 2002b), and are summarized in Table 10 at the end of this document.

No VOCs were detected in the soil or groundwater samples. TPH was detected in the soil samples and the maximum concentration was 93 mg/Kg. TPH was not detected in the groundwater samples. There is no TAGM recommended soil or groundwater cleanup objective for TPH.

The Army's remedy for this SWMU is "No Further Action" under CERCLA.

6.16 SEAD-35: Building 718 - Waste Oil-Burning Boilers

SEAD-35 consisted of three oil-fired boilers that are located in Building 718, each of which is designed to burn either fuel oil or waste oil/fuel oil mixtures. Building 718 is located in the north-central portion of the Depot in an area where the land use is designated as institutional. Building 718, and its contents, was included in the property that was transferred by the U.S. Government to the SCIDA on February 14, 2000. The approximate location of SEAD-35 is shown on Figure 1, and in greater detail on Figure 2.

The three boilers units were used to produce heat that was used for space heating and for the production of hot water. The three boilers were regulated under NYSDEC Division of Air Resources Emission Point Source Permit Identification Number 453089-0046-07183. Each of the boilers is rated at a 10 million British Thermal Unit per hour (MBtu/hr) capacity, with a stated combustion rate of 15.5 gallons per hour (gph). Between 1982 and 1989, the Army commonly used a mixture of No. 6 oil and waste oil as the fuel for these boilers. After 1989, SEDA discontinued use of waste oil as a fuel supplement due to difficulties that were encountered during the preparation of the waste oil/No. 6 oil blends to yield proper combustion characteristics. Therefore, after 1989 only No. 6 fuel oil was burned in the three boilers.

The Army proposed SEAD-35 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

No site investigations have been conducted at SEAD-35, the former Waste Oil Burning Boilers in

Building 718.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.17 SEAD-36: Building 121 - Waste Oil-Burning Boilers

Building 121 contains two boilers capable of burning waste oil and fuel oil mixtures. Building 121 is located in the east central portion of the Depot in an area of the site where the future land use is planned industrial development. The approximate location of Building 121 (SEAD-36) is shown on Figure 1, and the area surrounding this SEAD is shown in greater detail on Figure 3.

The boilers are rated at 6.6 MBtu/hr capacity and the stated combustion rate of oil for the two waste oil fired units is 10.6 gph. A waste oil/No. 6 oil blend was burned in the oil-fired boilers between 1982 and 1989. The two boilers were regulated under NYSDEC Division of Air Resources Emission Point Source Permit Identification Number 453089-0046-00121.

The boilers were originally used to produce heat that was used for space heating and the production of hot water. There is no information available to indicate that waste oil was released from either of the burners during the period of their use. The boilers are no longer in use.

The Army proposed SEAD-36 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

No site investigations have been conducted at SEAD-36, the former Waste Oil Burning Boilers in Building 121.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.18 SEAD-37: Building 319 - Waste Oil-Burning Boilers

Building 319 contains two boilers (i.e., Boiler A and B) that are capable of burning waste oil/fuel oil blends. Building 319 (SEAD-37) is located in the east central portion of SEDA in a portion of the Depot where the future land use is designated as planned industrial development. The approximate location of SEAD-37 is shown on Figure 1, and the area surrounding this SEAD is shown in greater detail on Figure 3.

The NYSDEC Division of Air Resources Identification Number for the two boiler units is 453089-0046-00319. Boilers A and B have rated capacities of 12.0 and 16.1 MBtu/hr, respectively. Each boiler has a combustion rate of 32.9 gph of fuel. Between 1982 and 1989, both of these units used a waste oil/No. 6

fuel oil mixture as fuel for space heating and hot water production. There is no information available to indicate that waste oil was released from either of the boilers during the time of their use with waste oil. The boilers are no longer in use.

The Army proposed SEAD-37 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

No site investigations have been conducted at SEAD-37, the former Waste Oil Burning Boilers in Building 319.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.19 SEAD-42: Building 106 - Preventative Medicine Laboratory

According to information provided in a USATHAMA published site inspection report (USATHAMA, 1980) for SEDA, Building 106 once housed a Preventative Medicine Laboratory. This building is located in the east, central portion of SEDA, in the area designated for planned industrial development. The approximate location of SEAD-42 is shown on Figure 1, and in greater detail on Figure 3.

Building 106 is a brick building measuring 167 feet long by 63 feet wide that was constructed in approximately 1975. Reportedly, the Preventive Medicine Laboratory was located in the northwest section of Building 106. This laboratory is believed to have measured 12 feet by 28 feet in size. Based on information provided in the 1980 USATHAMA report, clinical laboratory work and potable water analyses were performed in the laboratory.

The Army proposed SEAD-42 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

A site inspection and interview was performed at Building 106 on November 28, 1990 and the results of this inspection/interview were unable to confirm the accuracy of the prior information that indicated that a Preventative Medicine Laboratory existed. Building personnel stated that they were unaware of this laboratory. They further stated that the laboratory used for clinical analyses was not the area shown as the Preventive Medicine Laboratory on historic construction drawings, but was an area located southeast and identified as the Clinical Analysis Laboratory. They also stated that potable water analyses were not conducted in the building, as samples collected for this purpose at the Depot were shipped to Fort Drum for analysis. Finally, the Army reported that all sanitary discharges from the building were collected and treated at Sewage Treatment Plant Number 4.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.20 SEAD-47: Buildings 321 And 806 - Radiation Calibration Source Storage

Building 321 is located in the east, central portion of SEDA, in a parcel of land whose future use is designated as planned industrial development. Building 806 is located in the north central portion of the Depot, in a parcel of land whose future use is designated as conservation/recreational land. Figure 1 shows the location of the two buildings comprising this SWMU. The location of Building 321 is displayed in greater detail on Figure 3, while the location of Building 806 is shown in greater detail on Figure 2.

Building 321 measures approximately 200 feet long by 60 feet wide. The building's floor is concrete and the walls are concrete block construction. The building has two docks each measuring approximately 200 feet long by 6 feet wide. The docks are located on the east and west sides of the building.

Building 806 is a steel structure that measures approximately 100 feet long by 40 feet wide. This building has a concrete floor. This building is located in the "Q" or the former special weapons area.

Both of these buildings were sites where radiation calibration sources were stored. Radiation sources are disks that contain a known, small amount of radioactive material that is used to calibrate measurement equipment such as Field Instrument for Detecting Low Level Radiation (FIDLR), Geiger counters, and other detectors. A license under the Nuclear Regulatory Commission (NRC) is required to possess, use and store these sources. However, Buildings 321 and 806 did not require a license. Unneeded sources were transferred to other government agencies upon facility closure.

Stored calibration sources included cobalt-60, uranium-235, radium-226, strontium-90/yttrium-90, and plutonium-239 isotopes. Calibration sources are no longer present in either of the buildings. Sources were removed from Building 806 in the 1991 to 1993 time frame, while sources were removed from Building 321 in the 1997 to 1998 time period.

These calibration labs generated no hazardous wastes.

The Army proposed SEAD-47 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

An area including Building 806 is currently being investigated by the Army under the SEAD-12 and SEAD-63 Project Scoping Plan (Parsons, 1998). As part of this work, detailed investigations of SEAD-12 (Building-804 and associated Radiological Burial Site) including geophysical investigations (1996); radiological scans and surface water and sediment sampling (1997); surface and subsurface soil sampling

and duct and drain investigations (1998); and building wipes and shallow soil sampling (1999) were completed. Wipe samples of the floor drains and vents in Building 806 were collected and results of these samples indicated no radiological measurements above detection limits. Tabulated results from the wipe samples from within Building 806 are summarized in Table 11 at the end of this document. The results for wipe samples were reported to the Agencies in the "Final Radiological Survey Building Report" (Parsons 2003).

In addition, in 2001, as part of the RI/FS for SEAD-12, a radiological survey was conducted at Building 806. The radiological survey performed using Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) protocols (EPA et al., 2000). The survey findings were based on building guideline values, referred to in MARSSIM as Derived Concentration Guideline Levels (DCGLs), which are defined as residual levels of radioactive material that corresponds to allowable radiation dose standards and are developed based on site- specific release criteria. The release criteria developed for SEAD-12 is based on the NYSDEC TAGM of 10 millirem per year (mrem/yr) as an acceptable dose equivalent exposure. The radiological survey included alpha, beta, and gamma direct and scanning measurements, exposure rate measurements, radon surveys, gross alpha/beta/ gamma smear samples, tritium smear samples, gamma spectroscopy, and material sampling. Based on the investigation results, it was determined that Building 806 met the release criterion demonstrating compliance with the regulations. Results of the findings can be found in the Final Radiological Survey Report - SEAD-12 (Parsons, 2003) and in the SEAD-12 RI Report (Parsons, 2002d).

Radiological surveys were conducted at Building 321 on 10/16/1997, 10/22/1997, and 10/28/1997 and no readings were found above background level.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.21 SEAD-49: Building 356 - Columbite Ore Storage Area

SEAD-49 is located in the southeastern portion of the Depot in a parcel of land whose future use is designated as warehousing space. The approximate location of Building 356 is shown on Figure 1. Greater detail of the area surrounding Building 356 is provided on Figure 5.

Building 356 is a concrete block warehouse with concrete floors. The warehouse measures 200 feet wide by 1,000 feet long and is divided into 5 separate cells. Each cell is separated from the next by a concrete masonry firewall.

Columbite ore is a raw material, comprised of a mixture of the oxides of iron, manganese, niobium, and tantalum. Columbite ore was stored in Buildings 324, 356, and 357 (SEAD-55) at SEDA. Although neither niobium nor tantalum has any naturally occurring radioactive isotopes, radium-226 and thorium-232, which are naturally occurring radioactive material, may have been present in the mixture as

impurities. Available information indicates that the Columbite ore was stored in Building 324 from 1954 to 1973, Building 357 from 1954 to 1984 – 1985, and Building 356 from 1984 – 1985 to 1993. The ore was originally kept in burlap bags, but later it was stored in 55-gallon drums. After the ore was moved from one building to the next, the former storage location was swept clean. In May 1993, all of the Columbite ore (5,284 drums) was transferred from Building 356 to a Defense Logistics Agency (DLA) facility in Binghamton, New York. Subsequent to this time, Building 356 was swept clean. NYSDEC performed a radioactive survey of the building and found no concerns.

The Army proposed SEAD-49 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

Personnel of NYSDEC and NYSDOH performed a radiological survey of SEAD-49 (including Buildings 324, 356, and 357) in June of 1993, approximately two weeks after the Columbite ore had been removed. The results of these surveys are presented in Appendix C of the Final Decision Document, Twenty-Two No Further Action Sites, Seneca Army Depot Activity (Parsons, 2002c), and are summarized in Table 12 at the end of this document. These results indicate that there are no residual levels of radiological activity above levels typical of background. Based on these results, NYSDEC personnel in a letter dated September 21, 1993 recommended a "No Action" classification for SEAD-49.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.22 SEAD-51: Herbicide Usage Area - Perimeter of High Security Area

Herbicides were applied to a 50-foot wide strip of land that surrounds the entire Exclusion Area (the "Q") that is located at the northern end of SEDA. The zone that was treated with herbicide is in the immediate vicinity of three security fences that encompass the Exclusion Area. This area encompasses land whose future land use is designated as conservation/recreational. The approximate location of SEAD-51 is shown on Figure 1. Greater detail of the area surrounding SEAD-51 is provided on Figure 4.

The Special Weapons Storage Area was constructed by the Army between mid-1955 to 1957 and became operational in 1957. The herbicide treatment was used to maintain clear line-of-sight in the area of the security fence, and to eliminate vegetation that may overgrow and breach the security of the fences. In 1983, after approximately 25 years of repeated applications of herbicides, a testing program was conducted to assess potential exposure to herbicides for Army personnel who were installing security systems within the security fence line that surrounded the Special Weapons Storage Area. The analysis results for the 1983 survey were presented in the SWMU Classification Report (Parsons, 1994) and are summarized in Table 13 at the end of this document.

No herbicides were found in air samples at the time of sample collection. Of the sixteen soil samples collected, only three contained herbicides (2,4-D: 0.04 ppm, 0.078 ppm, and 0.055 ppm; 2,4,5-T: 0.008 ppm and 0.011 ppm). EPA Regions III's current risk-based concentrations (EPA, 2003) for 2,4-D and 2,4,5-T in soils are both 780 ppm for residential soils. The NYSDEC recommended clean-up criteria level in TAGM # 4046 is 0.5 ppm for 2,4-D and 1.9 ppm for 2,4,5-T. The concentrations detected in soils in 1983 were all well below current federal and state guidance values after 25 years of routine application. Application of herbicides at SEAD-51 continued in an equivalent manner until 1996 when the mission of the Depot was terminated. The Army reports that the level of herbicide application for the additional 13 years was similar to the first 25 years. Since the herbicide levels detected in 1983 were several orders of magnitude lower than the applicable criteria and that herbicides degrade with time, there is no reason to believe that residual levels would exceed standards.

SEDA no longer applies herbicide to this area and this practice was discontinued in roughly 1996. The application of herbicides was a planned operation and personnel who were licensed to apply the material completed the application. Review of available information indicates that there is no evidence of unplanned applications or releases of herbicides in the area of the Exclusion Area security fences during the 39-year period when they were used. The Army reports that there is new growth of vegetation within the area where herbicides were used.

The Army's remedy for this SWMU is "No Action" under CERCLA since there is no evidence that any release ever occurred and detected concentrations of herbicides found were below all applicable standards.

6.23 SEAD-53: Munitions Storage Igloos

The Munitions Storage Igloos are located within the central portion of the SEDA. The igloo area encompasses a large portion of the Depot, spanning a zone that measures roughly 4.5 miles north-to-south and 1 mile, east-to-west. The planned land use for all of this area is designated as conservation/recreational land. The approximate location of SEAD-53 is shown on Figure 1. Greater detail of the area surrounding SEAD-53 is provided on Figures 2 through 5.

There are 508 igloos associated with this SWMU and located within the Depot. These igloos are spaced along 45 parallel access roads that run east-to-west throughout the interior portion of the Depot, starting inside the Special Weapons Storage Area at the north end to within roughly one mile of the southern boundary of the Depot. Each of the munitions storage igloos is constructed of reinforced concrete and measures approximately 26 feet 8 inches wide by 81 feet long by 13 feet high. All of the igloos are covered with a minimum of two feet of soil that are covered with an extensive growth of grasses, weeds, and small shrubs. When built, each of the igloos was oriented in a north-to-south configuration, such that the entry door to each individual igloo faced north. Each igloo entry door opens onto a concrete pad that was used for munitions off-loading, transfer and loading operations. In addition to the entry door, each

igloo has one roof vent and two drainage openings at ground level (one on the northwest, the other on the northeast corner).

Munitions and other munition containing material were stored in the igloos between the time of Depot inception (1941) and the termination of the Depot mission (September 30, 1999). As part of the termination of SEDA's mission, the Army inspected each igloo and prepared a certification that all munitions and associated materials were removed. A copy of the individual closeout certificates for each of the 508 igloos is available in the office of the BRAC Environmental Coordinator.

Under an NRC license, 118 of the 508 certified igloos were used to store depleted uranium (DU) ammunition. These igloos were surveyed as part of the request for termination of the NRC license (Parsons, 2002a). These igloos are identified in Table 14. Radiological screening data from the 118 igloos is summarized in Table 15 and indicates that all but seven of the igloos show no indication of residual radiological levels above background. One of the remaining seven igloos has a residual alpha radiation level that is above background, while the other six igloos contain residual gamma measures that are considered elevated above site background. The results from these seven igloos have been compared to derived concentration guideline levels (DCGLs) that are based on the most conservative NYSDEC's 10 mrem/yr dose criterion defined in TAGM # 4003. The NRC accepted SEDA's DCGLs and has allowed their use as criteria for decommissioning of the facilities at the SEDA (NRC, 2003). In summary, all readings obtained from all 118 igloos met the NRC-approved criteria based on NYSDEC's most conservative dosage criteria. Accordingly, it was determined that no remediation is required. Pending final termination of the NRC license, the Army will lock the 118 igloos and maintain access control to all igloos associated with the NRC license.

Eleven igloos, designated as E0801 to E0811, located at the extreme southern end of the Munitions Storage Igloos area are designated as SEAD-48 and are not part of this SWMU site. These 11 igloos (not included in the 508 igloos) are currently subject to additional investigations as part of the SEAD-48 close-out. The Army will also lock and maintain access control to these 11 igloos pending completion of the SEAD-48 close-out.

The Army performed a Depot-wide ordnance investigation following the CERCLA process. This involved an Archive Search Report (USACE, 1998), which involved site visits, interviews, and archival data searches related to any historical operations, and an Ordnance and Explosives Engineering Evaluation and Cost Assessment (OE EECA; Parsons, 2001a), which further investigated any potential ordnance risks based upon the Archive Search Report. This effort included the ammunition igloos and the property around the igloos. This investigation determined that there were no ordnance issues in and around the igloos based upon historical information and the OE EECA surveys.

The Army proposed SEAD-53 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this

recommendation.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.24 SEAD-55: Building 357 - Tannin Storage

Building 357 is located in the southwestern portion of SEDA, in land where the planned future use is warehousing. The approximate location of SEAD-55 is presented on Figure 1, and greater detail of the area is provided on Figure 5.

Building 357 is a concrete block warehouse built on a concrete foundation that measures 200 feet wide by 1,000 feet long and consists of five (5) separate sections. The individual sections are divided by a concrete masonry firewall.

Building 357 was used for storage of Columbite ore between the dates of 1954 and 1984 – 1985 when the ore was transferred to Building 356 (SEAD-49). Subsequent to its use for storage of Columbite ore, the section was swept clean of all residues. Building 357 was also used for storage of Tannin between the dates of approximately 1978 and roughly 1994. Tannin has many industrial uses, such as a chemical treatment additive for its boiler plant water. The Army stored Tannin as a dry solid in bags, and the bags were stored in Section 2 of Building 357 on pallets. Section 2 of Building 357 was swept clean once storage of Tannin ceased. Tannin is not a hazardous substance under CERCLA, RCRA, DOT, or other regulatory statute.

The Army proposed SEAD-55 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

Personnel of NYSDEC and NYSDOH performed a radiological survey of Building 357 as part of the investigation of former Columbite ore storage facilities at SEDA. The results of these surveys are presented in Appendix C of the Final Decision Document, Twenty-Two No Further Action Sites, Seneca Army Depot Activity (Parsons, 2002c), and are summarized in Table 16 at the end of this document.

No evidence or records of a release of Tannin in Building 357 were observed or found. As Tannin was received and stored in bags stacked together in wooden frames, it is unlikely that a release could have occurred during storage. If a bag did break, and Tannin was released, the release would be contained by the concrete floor and could be cleaned up according to proper procedures. As is noted above, the building was swept clean, once all Tannin was removed from storage, so there is no evidence of a continuing source present at the site.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.25 SEAD-60: Oil Discharge Area Adjacent to Building 609

SEAD-60 is located in the southeastern portion of the Depot in a portion of the site where the future land use is designated as Prison. The approximate location of this SWMU is identified on Figure 1, and is shown in greater detail on Figure 5. The area encompassing SEAD-60 was transferred by the Army to the State of New York, and is now included in the land that comprises the grounds of New York State Department of Correctional Services' Five Points Correctional Facility.

Evidence of a release of oil in this area was first observed in 1989. The extent of the noted release area measured approximately 25 feet long by 10 feet wide and this area was adjacent to Building 609. SEDA personnel reported that the spill area was caused by a release from a pipe that was located inside of Building 609.

A removal action was undertaken at SEAD-60. On March 3 and 4, 1999 approximately 150 cubic yards of soil from the release area were excavated and stockpiled at the Deactivation Furnace (SEAD-17). This soil was subsequently used as the feedstock during a low temperature thermal desorption (LTTD) demonstration completed at the Deactivation system. This demonstration occurred in August and September of 2000. The removal action successfully resulted in the elimination of all potential contamination once believed to be present. The performance and completion of the removal action was documented in a letter to Mr. Thomas Grasek at the Depot issued by NYSDEC Division of Environmental Remediation (Scott Rodabaugh, P.E.), dated July 13, 1999.

An expanded site inspection of SEAD-60 was performed in 1994 (Parsons, 1996). Under this effort, nine soil samples were collected and analyzed from the area of the historic spill. Additionally, three groundwater, three surface water and three sediment samples were collected from the area surrounding the release. Samples were analyzed for volatile and semi-volatile organic compounds, polychlorinated biphenyls and pesticides, metals and total petroleum hydrocarbons. Resulting data for the soils indicated that there was evidence that volatile and semi-volatile organic compounds (primarily comprised of PAHs), polychlorinated biphenyls, total petroleum hydrocarbons and metals were present in the soils, especially in the shallower soils that were collected. Soil, groundwater, surface water and sediment data are provided in Tables 17, 18, 19, and 20.

Groundwater samples indicated the presence of two volatile organic compounds, one pesticide, total petroleum hydrocarbons and several metals; however, in many cases the highest hits found were seen in the sample collected from the upgradient well. Metals were the only analytes detected in the surface water samples. Sediment samples contained many of the same semi-volatile organic compounds that were found in the soil samples, but typically these were found at significantly lower levels than were seen in the soil samples. All of the data are presented in tabular form located in Appendix D of the Final

Decision Document, Twenty-Two No Further Action Sites, Seneca Army Depot Activity (Parsons, 2002c).

Based on the data discussed above, an RA was undertaken at SEAD-60. On March 3 and 4, 1999 approximately 150 cubic yards of soil from the release area were excavated from the site and stockpiled in the vicinity of the Deactivation Furnace (SEAD-17). Personnel of NYSDEC performed an inspection of the spill site after the excavation and indicated in a letter dated July 13, 1999 to Mr. Thomas Grasek at the Depot "No visible contamination noted, no readings above background on HNu meter. Based on inspection plus previous analytical results, no further excavation to be required." This soil was subsequently used as the feedstock during an LTTD demonstration scheduled for the Deactivation system. The LTTD demonstration occurred in August and September of 2000.

The Army's remedy for this SWMU is "No Further Action" under CERCLA.

6.26 SEAD-61: Building 718 - Underground Waste Oil Storage Tank

SEAD-61 consisted of an underground waste oil storage tank that is located near Building 718 in the north-central portion of the Depot. This tank (NYSPBS #8-416118 Tank #038) was subject to the requirements of NYS underground storage tank regulations as specified in 6 NYCCR Part 614. This SWMU is located on land that is designated for institutional use. The approximate location of this SWMU is shown on Figure 1, while additional detail of the area is provided on Figure 2. The underground storage tank that comprised SEAD-61 was included in the property that was transferred by the U.S. Government to the SCIDA on February 14, 2000.

The underground storage tank was previously used for the storage of waste oil prior to its burning in the adjacent boiler plant, located in Building 718 (SEAD-35). The tank had double-wall fiberglass construction and has a storage capacity of 10,000 gallons. As designed and constructed, the tank met the specifications of 6 NYCRR Part 614. The tank was installed in 1989.

The tank was removed from the ground on June 27, 2000 under spill number 00-70201. The site was closed out on August 20, 2000.

The Army proposed SEAD-61 as a No Action SWMU. This recommendation was documented in the final SWMU Classification Report (Parsons, 1994), and the EPA and NYSDEC both concurred with this recommendation.

No site investigations were conducted at SEAD-61, the Underground Waste Oil Storage Tank, at Building 718.

The Army's remedy for this SWMU is "No Further Action" under CERCLA.

6.27 SEAD-65: Acid Storage Areas

SEAD-65 consists of three separate areas, each of which is located near the central western border of the Depot. The three areas are located in the portion of SEDA that is designated as conservation/recreation land. The approximate locations of these three areas are shown on Figure 1, while additional detail of the area is provided on Figure 4.

SEAD-65A measures approximately 120 feet by 130 feet and is the most southerly situated of the three storage areas. During a site inspection conducted on November 27, 1990, portions of a concrete foundation were observed in the area. Otherwise, the area was covered with vegetation including scrub brush and weeds.

SEAD-65B measures approximately 65 feet by 100 feet and is the centrally located of the three areas. Remnants of a concrete foundation were also found at this site during the site inspection. The area is primarily covered with weeds and wild grass vegetation.

SEAD-65C is approximately 50 feet by 100 feet in size and is the most northerly located of the three former storage areas. A flagpole and a concrete pad were found in this area on the day of inspection (November 27, 1990); however, like the other two portions of this SWMU, the area was found to be predominantly overlain by natural scrub brush and grass vegetation.

Each of these areas was rumored to be used for the storage of acids (USATHAMA, 1980), although no information is available to conclusively determine whether acid storage was actually performed in these areas. Additionally, if acid storage did occur in these areas, no specific information is known relative to the dates when such storage occurred.

SEAD-65 was designated as an AOC and investigations were subsequently conducted. No evidence of any releases was observed in any of the three areas in SEAD-65 during the November 1990 inspection.

A limited site inspection was performed in 1993 and surficial soil samples (0 to 6 inches) were collected from fifteen locations in the three acid storage areas. One soil sample was collected from the corner of each of the storage areas, while the last sample was collected from the approximate center of each area. These samples were analyzed in the field for pH. The results of these tests are presented in Table 21 at the end of the document. All samples tested were found to have a pH in the range of 6.59 to 8.09. These levels of pH are in the normal range for soils and do not provide evidence of a release.

The Army's remedy for this SWMU is "No Action" under CERCLA.

6.28 SEAD-68: Building S-335 Old Pest Control Shop

SEAD-68 is comprised of a 100-foot by 40-foot single story wooden building, the Old Pesticide Control Shop, which is located in the east-central portion of SEDA. There are doors located on the west, north and east sides of the building. A large garage (bay) door entrance is on the southern end of the building. An asphalt and gravel (i.e., crushed shale) area that is used for vehicle parking and staging is located to the north and east of the building. This SWMU is located on land that is designated for planned industrial development land use. The approximate location of these three areas is shown on Figure 1, while additional detail of the area is provided in on Figure 3.

It has been rumored that a pest control shop was once located in Building S-335 (USATHAMA, 1980). The building is currently closed. No documented or visual evidence of a release has been discovered.

SEAD-68 was designated as an AOC and investigations were subsequently conducted. Surface soil sampling and soil borings were performed at SEAD-68 in 1998. A total of five surface soil samples were collected exterior of doorways from the building. Three of the samples were collected near three doors located on the west, north, and east sides of the building. The other two samples were collected from locations to the northwest and southeast of the large garage door. Two soil borings were performed at the site, one located on either side of the large garage door, beyond the surface soil sample locations mentioned above. The borings were in grassy areas that are likely disposal areas due to the good infiltration of the areas and their location near drainage ditches. Two soil samples were collected from each boring location. The soil samples were analyzed for VOCs, pesticides, and arsenic. Results of the chemical analyses for soil can be found in Appendix R, Table R-1 of the Final Decision Document – Mini Risk Assessment, Seneca Army Depot Activity (Parsons, 2002b), and are summarized in Table 22 at the end of this document.

Benzo(a)anthracene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, and arsenic were detected in one or more soil samples at levels that exceeded TAGMs. All exceedances were from surface soil samples, collected at a depth of 0-0.2 feet.

A mini risk assessment was conducted for SEAD-68. The results of the mini-risk assessment indicate that even though some compounds were detected at levels above NYSDEC's TAGMs, the total cancer risk for all industrial and residential receptors evaluated were below or within the EPA target range. Additionally, the total non-cancer hazard indices from all exposure routes were less than one for all receptors. Finally, only the hazard quotient calculated for the robin versus di-octyl phthalate was higher than 1, and this arises due to a single measurement of this compound within the seven samples collected. Therefore, since the area of SEAD-68 is small compared to the robin's home range, and since SEAD-68 is located in an area of planned industrial use where there is no grass and few trees, this value is not considered significant.. The results of the mini risk assessment can be found in the Final Decision Document – Mini Risk Assessment, Seneca Army Depot Activity (Parsons, 2002b), and are summarized

in Section 8.

The Army's remedy for this SWMU is "No Action" under CERCLA.

7.0 CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

In accordance with the requirements of the BRAC process, 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 is to plan and oversee the redevelopment of the Depot. The Reuse Plan and Implementation Strategy for Seneca Army Depot was adopted by the LRA and approved by the Seneca County Board of Supervisors on October 22, 1996. Under this plan and subsequent amendment, areas within the Depot were classified according to their most likely future use. These areas currently include:

- housing;
- institutional;
- planned industrial office development;
- warehousing;
- conservation/recreational land;
- an area designated for a future prison;
- an area for an airfield, special events, institutional, and training; and
- an area to be transferred from one federal entity to another (i.e., an area for the existing navigational LORAN transmitter).

A map summarizing the currently recommended future land use for the No Action or No Further Action sites at SEDA is presented as **Figure** 1. The approximate locations of the 28 sites are also shown on this figure.

8.0 SUMMARY OF MINI RISK ASSESSMENT

Mini risk assessments were conducted for two sites that were originally classified as Areas of Concern (i.e., SEADs 9 and 68). The mini risk assessment were conducted using data developed by the Army during limited or expanded site inspections under CERCLA. The mini risk assessment estimated the human health and the ecological risk that could result from the site if no remedial action were taken.

Under the mini risk process, the maximum concentration of compounds detected in samples collected during the limited sampling programs was used in place of the more traditional 95 upper confidence level (UCL) value as the reasonable maximum exposure level and this value was used as the basis upon which risk was calculated. This substitution was made due to the restricted size of the available data set. If no risk or hazard was noted based on the maximum value detected in the data set, it was reasonable to assume that larger data sets and 95 UCL values would show similar results.

Human Health Risk Assessment

The reasonable maximum human exposure was evaluated. The human health risk assessment methodology is shown in **Figure 6**. A four-step process was used for assessing site-related human health risks for a reasonable maximum exposure scenario:

- *Hazard Identification*--identified the chemical of concern (COC) 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).
- *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).

The risk assessment addressed the potential risks to human health by identifying several potential exposure pathways by which the public may be exposed to contaminant releases at the site under current and future land use scenarios. **Figure 7** shows the exposure pathways considered for the media of concern.

Both SEAD-9 and SEAD-68 are located in a portion of the Depot where the future land use has been designated as planned industrial development. The receptors evaluated for each SWMU in the mini risk assessment included industrial worker, future on-site construction worker, future worker at on-site day care center, and future child at on-site day care center.

The exposure pathways evaluated reflect the projected future use of each area. The following exposure pathways were considered, if applicable:

1. Inhalation of particulate matter in ambient air (all receptors);
2. Ingestion and dermal contact to on-site surface soils (all receptors);
3. Ingestion and dermal contact to on-site surface and subsurface soils (on-site construction worker);
4. Ingestion of groundwater (daily) (industrial worker, day care center worker, and day care center child).

In addition, risks to residential receptors (i.e., residential adult and residential child) have been evaluated for SEADs 9 and 68. The following exposure pathways were evaluated, if applicable:

1. Inhalation of particulate matter in ambient air;
2. Ingestion and dermal contact to on-site surface soils;
3. Ingestion of groundwater (daily);
4. Dermal contact to groundwater while showering;
5. Inhalation of groundwater while showering.

Under current USEPA guidelines, the likelihood of carcinogenic and non-carcinogenic effects due to exposure to site-related contaminants are considered separately. Non-carcinogenic risks were assessed by calculation of a Hazard Index (HI), which is an expression of the chronic daily intake of a contaminant divided by its Reference Dose (RfD). An HI that exceeds 1.0 indicates the potential for non-carcinogenic effects to occur. Carcinogenic risks were evaluated using a Cancer Slope Factor (CSF), which is a measure of the cancer-causing potential of a chemical. Cancer 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 established an acceptable cancer risk range of 10^{-4} to 10^{-6} (one-in-ten thousand to one-in-one million).

Ecological Risk Assessment

The reasonable maximum environmental exposure was evaluated for SEADs 9 and 68. A four-step process was used for assessing site-related ecological risks for a reasonable maximum exposure scenario:

- *Characterization of the Unit and the Ecological Communities it May Affect*—Includes ecological conditions observed at the unit, site habitat characterization, wildlife resources that are present in the area, and ecological resource values to wildlife and to humans. Ecological receptors identified at this step for the above sites include deer mouse, short-tailed shrew, and American robin.
- *Exposure Assessment*—Discusses chemicals of potential concern (COPCs), exposure point concentrations, and exposure assessments. COPC distribution at the site and its uptake through

various pathways are also discussed in this section. Daily intakes of COPCs through environmental media are quantified as well.

- *Toxicity Assessment*—Assesses ecological effects that potentially may result from receptor exposure to COPCs. Evaluates potential toxicity of each COPC in each medium and defines toxicity benchmark values that will be used to calculate the ecological quotient (EQ)
- *Risk Characterization*—Integrates the results of the preceding elements of the assessment. It estimates risk with respect to the assessment endpoints, based on the predicted exposure to and toxicity of each COPC.

Ecological risk was then presented in terms of an EQ, which is derived from the results of the exposure quantification and the toxicity assessment for each COPC. The EQs are based on relevant measurement endpoints and are indicative of the potential for each chemical to pose an ecological risk to receptors. Step 2 of the screening-level exposure estimate and risk calculation in "Ecological risk Assessment Guidance for Superfund (ERAGS): Process for Designing and Conducting ecological Risk Assessments" (USEPA 1997) suggests that EQs less than or equal to 1 present no probable risk. EQs between 1 and 10 present a small potential for environmental effects, EQs between 10 and 100 present a significant potential that effects could result from greater exposure, and EQs greater than 100 indicate the highest potential for expected effects.

The following sections present a summary of human health and ecological risks posed by contaminants at SEADs 9 and 68, respectively.

8.1 SEAD-9: Old Scrap Wood Site

The total cancer risks from all exposure routes are within the EPA target range for all receptors under industrial land use scenario and residential scenario. Likewise, the total non-cancer hazard indices from all exposure routes are less than one for all receptors. The results of total cancer risk and total non-cancer hazard index can be found in Table 3.5-1 and Table V-3 of the Final Decision Document – Mini Risk Assessment, Seneca Army Depot Activity (Parsons, 2002b), and are summarized in Table 4.

An ecological risk assessment was conducted at SEAD-9. No significant ecological risk was found.

Based on the results of the mini risk assessment, no remedial action is necessary to ensure protection of human health and the environment.

8.2 SEAD-68: Building S-335 Old Pest Control Shop

The total cancer risks from all exposure routes are below or within the EPA target range for all receptors under industrial land use and residential use scenario. Likewise, the total non-cancer hazard indices from all exposure routes are less than one for all receptors. The results of total cancer risk and total non-cancer

hazard index can be found in Table 3.5-4 and Table V-3 of the Final Decision Document – Mini Risk Assessment, Seneca Army Depot Activity (Parsons, 2002b), and are summarized in Table 23.

An ecological risk assessment was conducted at SEAD-68. No significant ecological risk was found.

Based on the results of the mini risk assessment, no remedial action is necessary to ensure protection of human health and the environment.

9.0 SUMMARY OF SITE RISKS

The US Army has selected No Action or No Further Action as the remedy for the 28 sites (i.e., SEADs 7, 9, 10, 18, 19, 20, 21, 22, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 42, 47, 49, 51, 53, 55, 60, 61, 65, and 68) addressed in this ROD. This determination is based on the Army's determination that these sites do not pose a significant threat to human health or the environment. This determination is based on the following findings and conclusions:

- SEADs 7 and 10: solid waste managed (construction debris and wood) at these sites. SEAD-7 is part of land transferred to SCIDA and currently leased to KidsPeace.
- SEADs 9 and 68: the sites do not pose a significant threat to human health or the environment.
- SEADs 18 and 19: Former incinerator sites used to burn solid waste, both units have been removed. SEAD-18 is part of land transferred to SCIDA and currently leased to KidsPeace.
- SEADs 20 and 21: Active wastewater treatment facilities currently operating under SPDES permits. SEAD-21 is part of land transferred to SCIDA and currently leased to KidsPeace.
- SEAD 22: Former wastewater treatment plant, all original equipment removed.
- SEADs 28, 29, 30, and 31: Former waste oil tanks removed from the ground. SEAD 29 was located in property transferred to SCIDA and is currently leased to KidsPeace.
- SEADs 32, 33, and 34: Tanks no longer used for waste oil storage; only No. 6 oil is stored in these tanks. SEAD 32 is part of property transferred to SCIDA and currently leased to KidsPeace.
- SEADs 35, 36, and 37: Boilers no longer used to burn waste oil; fired on No. 6 fuel oil only. SEAD 35 boilers no longer used by Army, but are part of KidsPeace campus.
- SEAD 42: Building no longer used by Army. No historic records of hazardous material release at this facility.
- SEAD 47: Calibration sources removed from Building 806 and Building 321. Radiological surveys performed at the site shows no residual radiological contamination.
- SEAD 49: Columbite ore removed from Depot and the building was swept clean. Radiation survey performed by State shows no residual radiological contamination.
- SEAD-51: The herbicide concentrations measured in soil are lower than current day federal and state guidance criteria. Although herbicides were applied for approximately 39 years there is no evidence that spills or releases ever occurred and current conditions indicate that new vegetative growth is occurring in the area.
- SEAD-53: There were no ordnance issues in and around the igloos based upon historical information and the OE EECA surveys. All igloos used for storage of depleted uranium materials and pitchblende have been surveyed and the NRC has accepted SEDA recommended DCGLs for decommissioning of the units.
- SEAD 55: Columbite ore removed from Depot and the building was swept clean. Radiation survey performed by State shows no residual radiological contamination. Tannin removed from Depot and building swept clean.

- SEAD 60: Site of apparent oil release excavated and soil treated in LTTD. Removal site inspected by NYSDEC.
- SEAD 61: Army terminated use of tank and pumped the tank dry in 1996. SEAD-61 is part of property transferred to SCIDA and currently leased to KidsPeace.
- SEAD 65: Limited site investigation did not identify any evidence of release. Historic records do not provide evidence of any hazardous material release.

10.0 SELECTED REMEDY

Based on the findings of the investigations completed for the sites, the Army has selected No Action as the remedy for the Twenty SWMUs (i.e., SEADs 7, 9, 10, 18, 19, 20, 21, 22, 33, 35, 36, 37, 42, 47, 49, 51, 53, 55, 65, and 68) and No Further Action as the remedy for the Eight SWMUs (i.e., SEADs 28, 29, 30, 31, 32, 34, 60, and 61). This determination is based on the Army's determination that these sites do not pose a significant threat to human health or the environment.

TABLE 1
NO ACTION (NA) AND NO FURTHER ACTION (NFA) SWMUs CONSIDERED IN THIS ROD

UNIT NUMBER	UNIT NAME	Recommendation	Basis of NA/NFA Determination [1]	Reference [2]
SEAD-7	Shale Pit	No Action	A	Parsons, 2002c
SEAD-9	Old Scrap Wood Site	No Action	D	Parsons, 2002b
SEAD-10	Present Scrap Wood Site	No Action	C	Parsons, 2002c
SEAD-18	Building 709 – Classified Document Incinerator	No Action	C	Parsons, 2002c
SEAD-19	Building 801 – Classified Document Incinerator	No Action	C	Parsons, 2002c
SEAD-20	Sewage Treatment Plant No. 4	No Action	A	Parsons, 2002c
SEAD-21	Sewage Treatment Plant No. 715	No Action	A	Parsons, 2002c
SEAD-22	Sewage Treatment Plant No. 314	No Action	A	Parsons, 2002c
SEAD-28	Building 360 – Underground Waste Oil Tanks (2)	No Further Action	C, E	Parsons, 2002b
SEAD-29	Building 732 - Underground Waste Oil Tanks (2 units)	No Further Action	E	Parsons, 2002c
SEAD-30	Building 118 – Underground Waste Oil Tank	No Further Action	E	Parsons, 2002c
SEAD-31	Building 117 – Underground Waste Oil Tank	No Further Action	E	Parsons, 2002c
SEAD-32	Building 718 – Underground Waste Oil Tanks	No Further Action	C, E	Parsons, 2002b
SEAD-33	Building 121 – Underground Waste Oil Tank	No Action	C	Parsons, 2002b
SEAD-34	Building 319 – Underground Waste Oil Tanks (2)	No Further Action	C, E	Parsons, 2002b
SEAD-35	Building 718 - Waste Oil-Burning Boilers (3 units)	No Action	A	Parsons, 2002c
SEAD-36	Building 121 - Waste Oil-Burning Boilers (2 units)	No Action	A	Parsons, 2002c
SEAD-37	Building 319 - Waste Oil-Burning Boilers (2 units)	No Action	A	Parsons, 2002c
SEAD-42	Building 106 - Preventive Medicine Laboratory	No Action	B	Parsons, 2002c
SEAD-47	Buildings 321 And 806 – Radiation Calibration Source Storage	No Action	C	Parsons, 2003
SEAD-49	Building 356 – Columbite Ore Storage	No Action	C	Parsons, 2002c
SEAD-51	Herbicide Usage Area – Perimeter of High Security Area	No Action	C	Parsons, 1994 and EPA 2003

TABLE 1 (continued)
NO ACTION (NA) AND NO FURTHER ACTION (NFA) SWMUs
CONSIDERED IN THIS ROD

UNIT NUMBER	UNIT NAME	Recommendation	Basis of NA/NFA Determination [1]	Reference [2]
SEAD-53	Munitions Storage Igloos	No Action	A	NRC, 2003
SEAD-55	Building 357 - Tannin Storage	No Action	A	Parsons, 2002c
SEAD-60	Oil Discharge Adjacent to Building 609	No Further Action	E	Parsons, 2002b
SEAD-61	Building 718 - Underground Waste Oil Tank	No Further Action	A, E	Parsons, 2002c
SEAD-65	Acid Storage Areas	No Action	A	Parsons, 2002c
SEAD-68	Building S-335 Old Pest Control Shop	No Action	D	Parsons, 2002b

Notes:

1. The SWMU was determined No Action (NA) or No Further Action (NFA) based on compliance with at least one of the following five criteria:

   A - Some sites initially listed were based on a 1980 Army report listing suspect or potential sites (USATHAMA, 1980). Subsequent evaluation of historic records and information indicate that there is no evidence or indication of petroleum product, hazardous materials or solid wastes present or released to the environment. These SWMUs would be classified as No Action (NA).

   B – Interviews or records suggested the presence of a potential site or SWMU, however no identifiable location was found. This SWMU is recommended for No Action.

   C – Based on the analysis of collected sampling data, the Army has determined that there are no instances where hazardous materials have been detected; or if hazardous chemicals have been detected in specific media, the concentrations at which they have been found do not exceed promulgated regulatory criteria defined [e.g., New York Class C surface water criteria, New York GA Groundwater Standards, federal Maximum Contaminant Levels (MCLs), etc.] by the State of New York or the federal government. This SWMU is recommended for No Action.

   D - If data indicates that hazardous chemicals are present above criteria limits, the results of a human health risk assessment indicate that the land encompassed by the identified SWMU is suitable for unrestricted use (residential use). This SWMU is recommended for No Action.

   E - Action on a site was taken, and the site was closed out under another regulatory program (e.g., tank removal). This SWMU is recommended for No Further Action.

2. See Appendix A, Administrative Record.

TABLE 2
SUMMARY OF SOIL ANALYSIS RESULTS – SEAD-9

COMPOUND	UNITS	MAXIMUM	FREQUENCY OF DETECTION	TAGM	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES
VOLATILE ORGANICS							
Toluene	ug/Kg	1	22%	1500	0	2	9
Chlorobenzene	ug/Kg	2	11%	1700	0	1	9
Ethylbenzene	ug/Kg	1	11%	5500	0	1	9
Xylene (total)	ug/Kg	2	11%	1200	0	1	9
SEMIVOLATILE ORGANICS							
Naphthalene	ug/Kg	360	56%	13000	0	5	9
2-Methylnaphthalene	ug/Kg	140	33%	36400	0	3	9
Acenaphthylene	ug/Kg	40	44%	41000	0	4	9
Acenaphthene	ug/Kg	790	44%	50000*	0	4	9
Dibenzofuran	ug/Kg	360	44%	6200	0	4	9
Fluorine	ug/Kg	610	44%	50000*	0	4	9
Phenanthrene	ug/Kg	4300	67%	50000*	0	6	9
Anthracene	ug/Kg	1100	56%	50000*	0	5	9
Carbazole	ug/Kg	860	44%	50000*	0	4	9
Di-n-butylphthalate	ug/Kg	70	56%	8100	0	5	9
Fluoranthene	ug/Kg	6200	78%	50000*	0	7	9
Pyrene	ug/Kg	5100	78%	50000*	0	7	9
Benzo(a)anthracene	ug/Kg	2600	56%	220	5	5	9
Chrysene	ug/Kg	2300	56%	400	5	5	9
bis(2-Ethylhexyl)phthalate	ug/Kg	240	67%	50000*	0	6	9
Benzo(b)fluoranthene(I)	ug/Kg	4700	125%	1100	4	5	4
Benzo(a)pyrene	ug/Kg	2100	56%	61	5	5	9
Indeno(1,2,3-cd)pyrene	ug/Kg	1100	44%	3200	0	4	9
Dibenz(a,h)anthracene	ug/Kg	670	44%	14	4	4	9
Benzo(g,h,i)perylene	ug/Kg	760	44%	50000*	0	4	9
PESTICIDES/PCBs							
delta-BHC	ug/Kg	0.94	11%	300	0	1	9
gamma-BHC (Lindane)	ug/Kg	1.3	11%	60	0	1	9
Heptachlor	ug/Kg	5.7	11%	100	0	1	9
Aldrin	ug/Kg	2.4	11%	41	0	1	9
Heptachlor epoxide	ug/Kg	1.1	11%	20	0	1	9
Dieldrin	ug/Kg	3	11%	44	0	1	9
4,4'-DDE	ug/Kg	55	67%	2100	0	6	9
4,4'-DDD	ug/Kg	16	67%	2900	0	6	9
4,4'-DDT	ug/Kg	73	67%	2100	0	6	9
alpha-Chlordane	ug/Kg	16	56%	540	0	5	9
gamma-Chlordane	ug/Kg	19	33%	540	0	3	9
Aroclor-1254	ug/Kg	140	11%	1000/10000 (b)	0	1	9

TABLE 2
SUMMARY OF SOIL ANALYSIS RESULTS – SEAD-9 (CONTINUED)

COMPOUND	UNITS	MAXIMUM	FREQUENCY OF DETECTION	TAGM	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES
METALS							
Aluminum	mg/Kg	15000	100%	19300	0	9	9
Antimony	mg/Kg	0.71	56%	5.9	0	5	9
Arsenic	mg/Kg	8.5	100%	8.2	1	9	9
Barium	mg/Kg	101	100%	300	0	9	9
Beryllium	mg/Kg	0.78	100%	1.1	0	9	9
Cadmium	mg/Kg	1.1	100%	2.3	0	9	9
Calcium	mg/Kg	217000	100%	121000	1	9	9
Chromium	mg/Kg	22.8	100%	29.6	0	9	9
Cobalt	mg/Kg	12	100%	30	0	9	9
Copper	mg/Kg	33	100%	33	0	9	9
Iron	mg/Kg	28600	100%	36500	0	9	9
Lead	mg/Kg	85.1	100%	24.8	4	9	9
Magnesium	mg/Kg	13000	100%	21500	0	9	9
Manganese	mg/Kg	984	100%	1060	0	9	9
Mercury	mg/Kg	0.26	100%	0.1	1	9	9
Nickel	mg/Kg	41.6	100%	49	0	9	9
Potassium	mg/Kg	2140	100%	2380	0	9	9
Selenium	mg/Kg	0.9	78%	2	0	7	9
Sodium	mg/Kg	185	89%	172	1	8	9
Vanadium	mg/Kg	26.8	100%	150	0	9	9
Zinc	mg/Kg	126	100%	110	1	9	9
OTHER ANALYSES							
Total Petroleum Hydrocarbons	mg/Kg	15900	89%		0	8	9
Total Solids	%W/W	93.9	1		0	9	9

NOTES:

a) TAGM = Technical and Administrative Guidance Memorandum HWR-94-4046 (January 24, 1994)

b) The TAGM value for PCBs is 1000ug/kg for surface soils and 10,000 ug/kg for subsurface soils.

c) * = As per proposed TAGM, total VOCs < 10 ppm, total SVOCs < 500 ppm, and individual SVOCs < 50 ppm.

TABLE 3
SUMMARY OF GROUNDWATER ANALYSIS RESULTS – SEAD-9

COMPOUND	UNITS	MAXIMUM	FREQUENCY OF DETECTION	CRITERIA LEVEL	NUMBER ABOVE CRITERIA	NUMBER OF DETECTIONS	NUMBER OF ANALYSES
METALS							
Aluminum	ug/L	5000	100%	50 (a)	NA	2	2
Arsenic	ug/L	1.6	50%	3 (b)	0	1	2
Barium	ug/L	105	100%	1000 (b)	0	2	2
Beryllium	ug/L	0.13	50%	4 (c)	0	1	2
Calcium	ug/L	192000	100%	NA	NA	2	2
Chromium	ug/L	8.4	100%	50 (b)	0	2	2
Cobalt	ug/L	5.6	100%	NA	NA	2	2
Copper	ug/L	5.4	100%	200 (b)	0	2	2
Iron	ug/L	9350	100%	300 (b)	2	2	2
Lead	ug/L	1.7	50%	25 (b)	0	1	2
Magnesium	ug/L	30900	100%	NA	NA	2	2
Manganese	ug/L	411	100%	50 (a)	1	2	2
Nickel	ug/L	13	100%	100 (b)	0	2	2
Potassium	ug/L	2700	100%	NA	NA	2	2
Silver	ug/L	1	50%	50 (b)	0	1	2
Sodium	ug/L	106000	100%	20000 (b)	2	2	2
Vanadium	ug/L	7	100%	NA	NA	2	2
Zinc	ug/L	29.1	100%	5000 (a)	0	2	2
OTHER ANALYSES							
Total Petroleum Hydrocarbons	mg/L	3	100%	NA	NA	2	2
pH	Standard Units	7.7	100%	NA	NA	2	2
Conductivity	umhos/cm	1100	100%	NA	NA	2	2
Temperature	°C	14.1	100%	NA	NA	2	2
Turbidity	NTU	309	100%	NA	NA	2	2

NOTES:

a) Secondary Drinking Water Regulations

b) NY State Class GA Groundwater Regulations

c) Maximum Contaminant Level
NA = Not Available

.

TABLE 4

SUMMARY OF TOTAL NONCARCINOGENIC AND CARCINOGENIC RISKS – SEAD-9

INDUSTRIAL USE SCENARIO				RESIDENTIAL SCENARIO			
RECEPTOR	**EXPOSURE ROUTE**	**HAZARD Index INDEX**	**CANCER RISK**	**RECEPTOR**	**EXPOSURE ROUTE**	**HAZARD Index INDEX**	**CANCER RISK [1]**
INDUSTRIAL WORKER	Inhalation of Dust in Ambient Air	2E-6	1E-10	**RESIDENTIAL ADULT**	Inhalation of Dust in Ambient Air	6E-6	4E-10
	Ingestion of Soil	8E-3	4E-6		Ingestion of Soil	1E-2	2E-5
	Dermal Contact to Soil	3E-2	4E-7		Dermal Contact to Soil	4E-2	7E-7
	Ingestion of Groundwater	NQ	NQ		Inhalation of Groundwater	NQ	NQ
	TOTAL RECEPTOR RISK (Nc & Car)	**3E-2**	**4E-6**		Ingestion of Groundwater	NQ	NQ
CONSTRUCTION WORKER	Inhalation of Dust in Ambient Air	5E-5	5E-11		Dermal Contact of Groundwater	NQ	NQ
	Ingestion of Soil	4E-2	2E-6		**TOTAL RECEPTOR RISK (Nc & Car)**	**5E-2**	**2E-5**
	Dermal Contact to Soil	3E-2	2E-8	**RESIDENTIAL CHILD**	Inhalation of Dust in Ambient Air	1E-5	
	TOTAL RECEPTOR RISK (Nc & Car)	**7E-2**	**2E-6**		Ingestion of Soil	1E-1	
WORKER AT ON-SITE DAY CARE CENTER	Inhalation of Dust in Ambient Air	2E-6	8E-11		Dermal Contact to Soil	7E-2	
	Ingestion of Soil	8E-3	4E-6		Inhalation of Groundwater	NQ	
	Dermal Contact to Soil	3E-2	4E-7		Ingestion of Groundwater	NQ	
	Ingestion of Groundwater	NQ	NQ		Dermal Contact of Groundwater	NQ	
	TOTAL RECEPTOR RISK (Nc & Car)	**3E-2**	**4E-6**		**TOTAL RECEPTOR RISK (Nc & Car)**	**2E-1**	
CHILD AT ON-SITE DAY CARE CENTER	Inhalation of Dust in Ambient Air	4E-6	5E-11				
	Ingestion of Soil	7E-2	9E-6				
	Dermal Contact to Soil	5E-2	2E-7				
	Ingestion of Groundwater	NQ	NQ				
	TOTAL RECEPTOR RISK (Nc & Car)	**1E-1**	**9E-6**				

Note: NQ = Not qualified due to lack of toxicity data.

1. Cancer risk was calculated for resident (ages 0-70 yr).

TABLE 5
ASH SAMPLE ANALYSIS RESULTS - SEAD-10

Parameter	Sample ID AA18459 Submitted: 09/29/92 Matrix: Wood Ash Results	Method Detection Limit	Regulatory Limits (mg/L)
TCLP Arsenic	0.16 mg/L	0.01 mg/L	5.0
TCLP Barium	0.27 mg/L	0.01 mg/L	100.0
TCLP Cadmium	Not Detected	0.01 mg/L	1.0
TCLP Chromium	0.47 mg/L	0.01 mg/L	5.0
TCLP Lead	Not Detected	0.01 mg/L	5.0
TCLP Mercury	Not Detected	0.005 mg/L	0.2
TCLP Selenium	Not Detected	0.01 mg/L	1.0
TCLP Silver	Not Detected	0.01 mg/L	5.0
Total TCLP Volatiles (11 Compounds Reported)	Not Detected	5 ug/L per analyte	
Total TCLP Semivolatiles (11 Compounds Reported)	Not Detected	10 to 50 ug/L per analyte	
Total TCLP Pesticides (7 Compound Reported)	Not Detected	0.05 to 1.0 ug/L per analyte	
Total TCLP Herbicides (2 Compounds Reported)	Not Detected	1 to 5 ug/L per analyte	
Free Liquids	Negative	-----	
Flash Point	Greater than 200 degrees F	-----	>140 degrees F for liquid
Percent Solids	96.7%	-----	
pH	12.4	-----	between 2 and 12.5 for aqueous
Corrosivity	Negative	-----	pH between 2 and 12.5 for aqueous
Reactivity – Cyanide	Not Detected	0.5 mg/Kg	
Reactivity – Sulfide	Not Detected	10 mg/Kg	
Reactivity	Negative	-----	

Note: Regulatory limits from 40CFR§261.24, 40CFR§261.21, 40CFR§261.22.

TABLE 6

SUMMARY OF SOIL ANALYSIS RESULTS – SEAD-28

PARAMETER	UNIT	Maximum Conc	Frequency of Detection	NYSDEC TAGM Criteria (1)	Number above Criteria (1)	Times Detected	Times Analyzed
SEMI VOLATILE ORGANICS							
Analyses were performed on one samples for 14 PA Hs. None of the PAHs was detected in the sample.							

(1) The TAGM Criteria are identified in NYSDEC's Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Jan 24, 1994.

TABLE 7

SUMMARY OF SOIL ANALYSIS RESULTS – SEAD-32

PARAMETER	UNIT	Maximum Conc	Frequency of Detection	NYSDEC TAGM Criteria (1)	Number above Criteria (1)	Times Detected	Times Analyzed
VOLATILE ORGANICS							
Methylene Chloride	ug/kg	1	50%	100	0	1	2
Analyses were performed on two samples for 33 Volatile Organic Compounds. None of the Volatile Organic Compounds was detected in either of the samples with the exception of methylene chloride, as listed above.							
OTHER ANALYTES							
Total Solids	%W/W	83.2	100%	NA	0	2	2
Total Petroleum Hydrocarbons	mg/Kg	90	100%	NA	0	2	2

(1) The TAGM Criteria are identified in NYSDEC's Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Jan 24, 1994.

NA means "Not Available."

TABLE 8

SUMMARY OF GROUNDWATER ANALYSIS RESULTS – SEAD-32

COMPOUND	UNIT	Maximum Conc	Frequency of Detection	NYSDEC GA Standard (1)	Number above Standard (1)	Times Detected	Times Analyzed
VOLATILE ORGANICS							
Analyses were performed on three samples for 33 Volatile Organic Compounds. None of the Volatile Organic Compounds was detected in any of the three samples.							
OTHER ANALYTES							
Total Petroleum Hydrocarbons	mg/L	0.69	67%	NA	0	2	3

(1) The TAGM Criteria are identified in NYSDEC's Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Jan 24, 1994.

(1) The GA Standards are identified in NYSDEC's Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998 as amended January 1999 and April 2000.

TABLE 9

SUMMARY OF SOIL ANALYSIS RESULTS – SEAD-33

COMPOUND	UNIT	Maximum Conc	Frequency of Detection	NYSDEC GA Standard (1)	Number above Standard (1)	Times Detected	Times Analyzed
VOLATILE ORGANICS							
Analyses were performed on three samples for 33 Volatile Organic Compounds. None of the Volatile Organic Compounds was detected in any of the three samples.							
OTHER ANALYTES							
Total Petroleum Hydrocarbons	mg/Kg	470	100%	NA	0	2	2

(1) The GA Standards are identified in NYSDEC's Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998 as amended January 1999 and April 2000.

TABLE 10

SUMMARY OF SOIL AND GROUNDWATER ANALYSIS RESULTS – SEAD-34

COMPOUND	UNIT	Maximum Conc	Frequency of Detection	NYSDEC GA Standard (1)	Number above Standard (1)	Times Detected	Times Analyzed
Soil							
VOLATILE ORGANICS							
Analyses were performed on three samples for 33 Volatile Organic Compounds. None of the Volatile Organic Compounds was detected in any of the three samples.							
OTHER ANALYTES							
Total Petroleum Hydrocarbons	mg/Kg	93	100%	NA	0	2	2
Groundwater							
VOLATILE ORGANICS							
Analyses were performed on three samples for 33 Volatile Organic Compounds. None of the Volatile Organic Compounds was detected in any of the three samples.							
OTHER ANALYTES							
Total Petroleum Hydrocarbons	mg/L	0	0%	NA	0	0	2

(1) The TAGM Criteria are identified in NYSDEC's Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Jan 24, 1994.

(2) The GA Standards are identified in NYSDEC's Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998 as amended January 1999 and April 2000.

TABLE 11
SUMMARY OF RADIOLOGICAL DATA FOR BUILDING 806 – SEAD-47

Identification		DPM		
Location	**Sample Number**	**Alpha**	**Beta**	**Gamma**
806V1A	124145	0.0	3.4	0.0
806V2	124146	0.0	0.0	0.0
806V3	124147	0.0	0.0	0.0
806V4	124148	0.0	2.8	0.0
806V5	124149	0.0	0.0	0.0
806V6	124150	0.0	0.0	0.0
806V7	124151	0.0	0.0	0.0
806V8	124152	1.0	4.3	0.0
806V9	124153	0.0	0.0	0.0
806V10	124154	0.0	4.3	0.0
806V11	124155	0.0	2.8	0.0
806V12	124156	0.0	5.2	0.0
806V1B	124157	0.0	2.8	0.0
806D1	124158	0.0	0.0	0.0
806V13	124159	0.0	2.8	0.0
806V14	124160	0.0	0.0	0.0
806V15	124161	0.0	6.6	0.0
806V16	124162	0.0	0.0	0.0
806V19	124163	1.0	2.8	0.0

Sample Code - "806V1" indicates that sample was collected from Building 806 at location V1.
V indicates vent from building. D indicates floor drain.

Data presented in the table above extracted from Appendix G, Duct and Drain Results, SEAD-12, Seneca Army Depot Activity, “Final Radiological Survey Report”, Parsons, March 2003.

TABLE 12
SUMMARY OF RADIOLOGICAL SURVEY RESULTS FOR BUILDING 356 – SEAD-49

SURVEY METER READINGS		
Location	**Ludlum MicroR Meter micro Rems per hour (microR/hr)**	**EM Survey Meter Counts per minute (cpm)**
Background	4 – 15	20 – 40
Building 356, Section 4, wipe #1	12	20
Building 356, Section 4, wipe #2	12	----
Building 356, Section 4, wipe #3	9.4	20
WIPE SAMPLE RESULTS		
Location	**Gross Alpha Decays per minute (dpm)**	**EM Survey Meter Dpm**
Building 356, Section 4, wipe #1	Less than 20	Less than 20
Building 356, Section 4, wipe #2	Less than 20	Less than 20
Building 356, Section 4, wipe #3	Less than 20	Less than 20

TABLE 13
SUMMARY OF HERBICIDE ANALYSIS RESULTS – SEAD-51

Sample Type and Location	Pesticide Concentration	Sample Type and Location	Pesticide Concentration
Soil, SW Corner Inner Fence Surface	ND[2]	Soil, South Boundary Fresh Excavation Surface	2,4-D 0.055ppm 2,4,5-T 0.011ppm
Soil, SW Corner Inner Fence 3" depth	ND[2]	Soil, NE Corner Outer Fence Surface	ND[2]
Soil, NW Corner Inner Fence Surface	ND[2]	Soil, NE Corner Outer Fence 6" depth	ND[2]
Soil, NW Corner Inner Fence 3" depth	ND[2]	Soil, NE Corner Outer Fence 12' depth	ND[2]
Soil, SE Corner Inner Fence Surface	2,4-D 0.04ppm 2,4,5-T 0.008ppm	Soil, NW Corner Outer Fence Surface	ND[2]
Soil, SE Corner Inner Fence 4" depth	ND[2]	Soil, NW Corner Outer Fence 3" depth	ND[2]
Soil, NE Corner Inner Fence Surface	ND[2]	Water, SW Corner Inner Fence	ND[2]
Soil, NE Corner Inner Fence 4" depth	ND[2]	Air, NW Corner Inner Fence	ND[2]
Soil, Middle East Side Inner Fence Surface	2,4-D 0.078ppm	Air, SE Corner Inner Fence	ND[2]
Soil, Middle East Side Inner Fence 4" depth	ND[2]		

Notes:

1. Samples were collected August 10-11, 1983. Two air samples, 16 soil samples, and one water sample were collected from the area between the fences of the high security area at SEAD.
2. No pesticides detected at the detection limits.

TABLE 14

STORAGE IGLOOS INCLUDED IN RADIOLOGICAL SURVEY NRC LICENSE TERMINATION SURVEYS SENECA ARMY DEPOT ACTIVITY AREA – SEAD-53

IGLOO NUMBER[a, b]				
A0201	B0709	C0510	D0107	E0112
A0316	B0711	C0511	D0108	E0211
A0317	B0801	C0513	D0110	E0301
A0508	B0802	C0603	D0113	E0302
A0701[c]	B0804	C0604	D0206	E0303
A0706	B0809	C0605	D0207	E0312
A0707	B0810	C0606	D0305	E0402
A0710	B0811	C0608	D0306	E0410
A0711	B0909	C0701	D0312	E0411
A0901	C0203	C0706	D0401	E0413
A0905	C0303	C0707	D0406	E0504
A1108	C0307	C0708	D0407	E0506
A1109	C0308	C0801	D0413	E0508
B0109	C0401	C0803	D0601	E0510
B0411	C0403	C0807	D0604	E0512
B0501	C0405	C0809	D0607	E0602
B0602	C0406	C0901	D0704	E0604
B0603	C0407	C0902	D0705	E0609
B0609	C0408	C0906	D0711	E0610
B0610	C0501	C0907	D0712	E0702
B0701	C0503	C0808	D0801	E0706
B0705	C0504	C0909	D0805	E0711
B0707	C0505	D0104	E0103	
B0708	C0508	D0105	E0105	

Notes:

a) Unless otherwise noted, igloos were used for storage of packaged DU ammunition under NRC license SUC-1275.
b) The list of igloos requiring surveying under the SEDA NRC License Termination program was compiled from *Seneca Army Depot-License Termination and License Release Plan*, ANL, January 2002.

c) Igloo A0701 was used for the storage of light anti-tank rockets that contained Promethium-147 under license BML 12-00722-07.

TABLE 15
SUMMARY OF IGLOO SURVEY UNITS ABOVE/BELOW BACKGROUND
NRC LICENSE TERMINATION SURVEYS
SENECA ARMY DEPOT ACTIVITY

Igloo	Elevated above Background?	Elevated above Background + DCGL?
A0201	**NO**	
A0316	**NO**	
A0317	**NO***	
A0508	YES (gamma)	
A0701	**NO**	
A0706	YES (gamma)*	
A0707	**NO***	
A0710	**NO***	
A0711	**NO***	
A0901	**NO***	
A0905	**NO***	
A1108	**NO**	
A1109	**NO**	
11 of 13 igloos passed		

Igloo	Elevated above Background?	Elevated above Background + DCGL?
E0103	YES (gamma)	
E0105	**NO***	
E0112	**NO***	
E0211	**NO**	
E0301	**NO**	
E0302	**NO**	
E0303	**NO***	
E0312	**NO**	
E0402	**NO**	
E0410	**NO**	
E0411	**NO**	
E0413	**NO**	
E0504	**NO***	
E0506	**NO**	
E0508	**NO***	
E0510	**NO***	
E0512	**NO**	
E0602	**NO***	
E0604	YES (alpha)	
E0609	**NO**	
E0610	**NO**	
E0702	**NO**	
E0706	**NO**	
E0711	**NO**	
E0801	**NO**	
E0802	**NO**	
24 of 26 igloos passed		

Igloo	Elevated above Background?	Elevated above Background + DCGL?
B0109	**NO**	
B0411	**NO**	
B0501	**NO**	
B0602	**NO**	
B0603	**NO**	
B0609	**NO**	
B0610	**NO**	
B0701	**NO**	
B0705	**NO**	
B0707	**NO**	
B0708	**NO**	
B0709	**NO**	
B0711	**NO**	
B0801	**NO**	
B0802	**NO**	
B0804	**NO**	
B0809	**NO***	
B0810	**NO***	
B0811	**NO**	
B0909	YES (gamma)	
19 of 20 igloos passed		

Total No. of igloos survey units:	120
Total No. of igloo survey units *not elevated* above background based on WRS:	83
Total No. of igloo survey units *not elevated* above background based on WRS and box-and-whisker plots:	113
% of igloos *below* background:	94%

Igloo	Elevated above Background?	Elevated above Background + DCGL?
C0203	**NO***	
C0303	**NO**	
C0307	**NO**	
C0308	**NO**	
C0401	**NO**	
C0403	**NO**	
C0405	**NO**	
C0406	**NO**	
C0407	**NO**	
C0408	**NO**	
C0501	**NO**	
C0503	**NO**	
C0504	**NO**	
C0505	**NO**	
C0508	**NO**	
C0510	**NO**	
C0511	**NO**	
C0513	**NO**	
C0603	**NO**	
C0604	**NO**	
C0605	**NO**	
C0606	**NO**	
C0608	**NO**	
C0701	**NO**	
C0706	**NO**	
C0707	**NO**	
C0708	**NO**	
C0801	**NO***	
C0803	**NO***	
C0807	**NO**	
C0808	**NO**	
C0809	**NO**	
C0901	**NO***	
C0902	**NO***	
C0906	**NO***	
C0907	**NO**	
C0909	**NO**	
37 of 37 igloos passed		

Igloo	Elevated above Background?	Elevated above Background + DCGL?
D0104	**NO**	
D0105	**NO**	
D0107	**NO***	
D0108	**NO***	
D0110	**NO**	
D0113	**NO**	
D0206	**NO**	
D0207	**NO**	
D0305	**NO**	
D0306	**NO***	
D0312	**NO***	
D0401	**NO**	
D0406	YES (gamma)	
D0407	**NO***	
D0413	**NO***	
D0601	**NO***	
D0604	YES (gamma)*	
D0607	**NO**	
D0704	**NO***	
D0705	**NO***	
D0711	**NO**	
D0712	**NO**	
D0801	**NO**	
D0805	**NO**	
22 of 24 igloos passed		

Notes:

1.) Igloos where WRS test results ("**NO**") or graphical analysis ("**NO***") indicate that the survey unit is not elevated above background need no further statistical analysis. Therefore, the cells for those igloos are shaded in the "elevated above background + DCGL?" column.

2.) Blank cells in the "elevated above background + DCGL?" column will be filled in when the WRS analysis can be performed comparing site survey units to the DCGL adjusted background data set.

Additional graphical analyses of the A0706 alpha data set and the D0604 beta data set indicated that these data were not elevated above background (refer to text).

TABLE 16
SUMMARY OF RADIOLOGICAL SURVEY RESULTS FOR BUILDING 357 – SEAD-55

SURVEY METER READINGS		
Location	**Ludlum MicroR Meter micro Rems per hour (microR/hr)**	**EM Survey Meter Counts per minute (cpm)**
Background	4 – 15	20 – 40
Building 357, Section 4, wipe #2	6	20
Building 357, Section 4, wipe #3	6	20
WIPE SAMPLE RESULTS		
Location	**Gross Alpha Decays per minute (dpm)**	**EM Survey Meter Dpm**
Building 357, Section 4, wipe #2	Less than 20	Less than 20
Building 357, Section 4, wipe #3	Less than 20	Less than 20

TABLE 17

SUMMARY OF SOIL ANALYSIS RESULTS – SEAD-60

Parameter	Units	Maximum Concentration	Frequency of Detection	NYSDEC TAGM Criteria (1)	Number Exceeding Criteria (1)	Number of Times Detected	Number of Analyses
VOLATILES							
Acetone	ug/Kg	160	8%	200	0	1	12
Carbon disulfide	ug/Kg	2	17%	2700	0	2	12
Ethyl benzene	ug/Kg	2	17%	5500	0	2	12
Methyl butyl ketone	ug/Kg	1	8%		0	1	12
Methyl ethyl ketone	ug/Kg	20	8%	300	0	1	12
Methylene chloride	ug/Kg	54	42%	100	0	5	12
Tetrachloroethene	ug/Kg	3	8%	1400	0	1	12
Toluene	ug/Kg	13	33%	1500	0	4	12
Total Xylenes	ug/Kg	5	8%	1200	0	1	12
SEMIVOLATILES							
2-Methylnaphthalene	ug/Kg	1100	8%	36400	0	1	12
Acenaphthene	ug/Kg	1400	17%	50000	0	2	12
Anthracene	ug/Kg	2000	25%	50000	0	3	12
Benzo(a)anthracene	ug/Kg	340	17%	224	1	2	12
Benzo(a)pyrene	ug/Kg	350	17%	61	2	2	12
Benzo(b)fluoranthene	ug/Kg	16000	33%	1100	2	4	12
Benzo(ghi)perylene	ug/Kg	1600	25%	50000	0	3	12
Benzo(k)fluoranthene	ug/Kg	190	8%	1100	0	1	12
Bis(2-Ethylhexyl)phthalate	ug/Kg	380	42%	50000	0	5	12
Carbazole	ug/Kg	79	8%		0	1	12
Chrysene	ug/Kg	17000	42%	400	2	5	12
Di-n-butylphthalate	ug/Kg	1500	25%	8100	0	3	12
Dibenz(a,h)anthracene	ug/Kg	1100	25%	14	3	3	12
Dibenzofuran	ug/Kg	29	8%	6200	0	1	12
Fluoranthene	ug/Kg	14000	67%	50000	0	8	12
Fluorene	ug/Kg	1300	17%	50000	0	2	12
Indeno(1,2,3-cd)pyrene	ug/Kg	1100	25%	3200	0	3	12
Naphthalene	ug/Kg	38	8%	13000	0	1	12
Phenanthrene	ug/Kg	8900	50%	50000	0	6	12
Pyrene	ug/Kg	27000	83%	50000	0	10	12

(1) The TAGM Criteria are identified in NYSDEC's Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Jan 24, 1994.

TABLE 17

SUMMARY OF SOIL ANALYSIS RESULTS – SEAD-60 (continued**)**

Parameter	Units	Maximum Concentration	Frequency of Detection	NYSDEC TAGM Criteria (1)	Number Exceeding Criteria (1)	Number of Times Detected	Number of Analyses
PESTICIDES							
4,4'-DDD	ug/Kg	100	25%	2900	0	3	12
4,4'-DDE	ug/Kg	110	50%	2100	0	6	12
4,4'-DDT	ug/Kg	130	33%	2100	0	4	12
Aldrin	ug/Kg	16	17%	41	0	2	12
Alpha-BHC	ug/Kg	5	8%	110	0	1	12
Alpha-Chlordane	ug/Kg	27	25%		0	3	12
Aroclor-1242	ug/Kg	970	8%		0	1	12
Aroclor-1248	ug/Kg	2100	8%		0	1	12
Aroclor-1260	ug/Kg	4400	25%	10000	0	3	12
Endosulfan I	ug/Kg	34	42%	900	0	5	12
Endrin ketone	ug/Kg	14	17%		0	2	12
Gamma-Chlordane	ug/Kg	10	17%	540	0	2	12
METALS							
Aluminum	mg/Kg	14100	100%	19300	0	12	12
Antimony	mg/Kg	1.8	67%	5.9	0	8	12
Arsenic	mg/Kg	8.1	100%	8.2	0	12	12
Barium	mg/Kg	679	100%	300	3	12	12
Beryllium	mg/Kg	0.67	100%	1.1	0	12	12
Cadmium	mg/Kg	2	100%	2.3	0	12	12
Calcium	mg/Kg	102000	100%	121000	0	12	12
Chromium	mg/Kg	23.3	100%	29.6	0	12	12
Cobalt	mg/Kg	13.1	100%	30	0	12	12
Copper	mg/Kg	190	100%	33	3	12	12
Iron	mg/Kg	32100	100%	36500	0	12	12
Lead	mg/Kg	66.7	100%	24.8	4	12	12
Magnesium	mg/Kg	25400	100%	21500	1	12	12
Manganese	mg/Kg	536	100%	1060	0	12	12
Mercury	mg/Kg	0.08	83%	0.1	0	10	12
Nickel	mg/Kg	44.3	100%	49	0	12	12
Potassium	mg/Kg	1920	100%	2380	0	12	12
Selenium	mg/Kg	1.5	33%	2	0	4	12
Sodium	mg/Kg	140	100%	172	0	12	12
Vanadium	mg/Kg	26.2	100%	150	0	12	12
Zinc	mg/Kg	569	100%	110	4	12	12

(1) The TAGM Criteria are identified in NYSDEC's Technical and Administrative Guidance Memorandum #4046, Determination of Soil Cleanup Objectives and Cleanup Levels, Jan 24, 1994.

TABLE 18

SUMMARY OF GROUNDWATER ANALYSIS RESULTS – SEAD-60

Parameter	Units	Maximum Concentration	Frequency of Detection	Type of Standard	Standard Level (1)	Number Exceeding Standard	Number of Times Detected	Number of Analyses
Volatile Organics								
Acetone	ug/L	77	75%			0	3	4
Benzene	ug/L	1	25%	GA	1	0	1	4
Pesticides								
Beta-BHC	ug/L	0.049	25%	GA	0.04	1	1	4
Metals								
Aluminum	ug/L	376	100%	SEC	50	3	4	4
Barium	ug/L	88.7	100%	GA	1000	0	4	4
Calcium	ug/L	113000	100%			0	4	4
Chromium	ug/L	0.56	50%	GA	50	0	2	4
Cobalt	ug/L	0.72	25%			0	1	4
Copper	ug/L	0.99	25%	GA	200	0	1	4
Iron	ug/L	1440	100%	GA	300	4	4	4
Magnesium	ug/L	55100	100%			0	4	4
Manganese	ug/L	377	100%	SEC	50	4	4	4
Mercury	ug/L	0.05	50%	GA	0.7	0	2	4
Nickel	ug/L	1.6	25%	GA	100	0	1	4
Potassium	ug/L	8760	100%			0	4	4
Sodium	ug/L	59400	100%	GA	20000	1	4	4
Thallium	ug/L	1.8	25%	MCL	2	0	1	4
Vanadium	ug/L	1.5	50%			0	2	4
Zinc	ug/L	6.9	75%	SEC	5000	0	3	4

(1) GA – State of New York GA Groundwater Standard, NYSDEC TOGS 1.1.1, 1998 as amended in 1999 and 2000
MCL –Maximum Contaminant Level, National Primary Drinking Water Standards, EPA 816-F-01-007, March 2001
SEC –Secondary Drinking Water Regulations, EPA 810/K-92-001, July 1992.

TABLE 19

SUMMARY OF SURFACE WATER ANALYSIS RESULTS – SEAD-60

Parameter	Units	Maximum Concentration	Frequency of Detection	Type of Standard (1)	Standard Level	Number Exceeding Standard	Number of Times Detected	Number of Analyses
METALS								
Aluminum	ug/L	259	100%	AWQS CLASS C	100	1	4	4
Arsenic	ug/L	1.6	25%	AWQS CLASS C	150	0	1	4
Barium	ug/L	49.4	100%			0	4	4
Calcium	ug/L	89000	100%			0	4	4
Chromium	ug/L	0.68	50%	AWQS CLASS C	139.45	0	2	4
Copper	ug/L	2	100%	AWQS CLASS C	17.32	0	4	4
Iron	ug/L	453	100%	AWQS CLASS C	300	1	4	4
Magnesium	ug/L	22000	100%			0	4	4
Manganese	ug/L	28.5	100%			0	4	4
Nickel	ug/L	1.8	75%	AWQS CLASS C	99.92	0	3	4
Potassium	ug/L	1430	100%			0	4	4
Sodium	ug/L	53800	100%			0	4	4
Vanadium	ug/L	0.85	25%	AWQS CLASS C	14	0	1	4
Zinc	ug/L	9.6	100%	AWQS CLASS C	159.25	0	4	4

(1) State of New York Class C, Aquatic Species, NYSDEC TOGS 1.1.1, 1998 as amended in 1999 and 2000.

TABLE 20

SUMMARY OF SEDIMENT ANALYSIS RESULTS – SEAD-60

Parameter	Units	Maximum Concen-tration	Frequency of Detection	Type of Standard (1)	Standard Level	Number Exceeding Standard	Number of Times Detected	Number of Analyses
VOLATILES								
Chloroform	ug/Kg	3	25%			0	1	4
SEMIVOLATILES								
Benzo(a)anthracene	ug/Kg	68	75%	HHBAC	50.8	3	3	4
Benzo(a)pyrene	ug/Kg	79	75%	HHBAC	50.8	3	3	4
Benzo(b)fluoranthene	ug/Kg	120	75%	HHBAC	50.8	3	3	4
Benzo(ghi)perylene	ug/Kg	93	75%			0	3	4
Benzo(k)fluoranthene	ug/Kg	97	75%	HHBAC	50.8	3	3	4
Bis(2-Ethylhexyl)phthalate	ug/Kg	1100	100%	BALCTC	7801	0	4	4
Chrysene	ug/Kg	160	75%	HHBAC	50.8	3	3	4
Fluoranthene	ug/Kg	200	75%	BALCTC	39887	0	3	4
Indeno(1,2,3-cd)pyrene	ug/Kg	68	75%	HHBAC	50.8	2	3	4
Phenanthrene	ug/Kg	70	75%	BALCTC	4693	0	3	4
Pyrene	ug/Kg	250	75%	BALCTC	37580	0	3	4
PESTICIDES								
4,4'-DDE	ug/Kg	5.4	50%	HHBAC	0.39	2	2	4
4,4'-DDT	ug/Kg	3.4	50%	HHBAC	0.39	2	2	4
Alpha-Chlordane	ug/Kg	1.9	25%	HHBAC	0.04	1	1	4
Endosulfan I	ug/Kg	2.1	50%	BALCTC	1.17	2	2	4
METALS								
Aluminum	mg/Kg	12700	100%			0	4	4
Arsenic	mg/Kg	4.8	100%	LEL	6	0	4	4
Barium	mg/Kg	97.6	100%			0	4	4
Beryllium	mg/Kg	0.62	100%			0	4	4
Cadmium	mg/Kg	0.44	100%	LEL	0.6	0	4	4
Calcium	mg/Kg	227000	100%			0	4	4
Chromium	mg/Kg	19.5	100%	LEL	26	0	4	4
Cobalt	mg/Kg	9.6	100%			0	4	4
Copper	mg/Kg	21.1	100%	LEL	16	1	4	4
Cyanide	mg/Kg	3.3	50%			0	2	4
Iron	mg/Kg	25000	100%	LEL	20000	2	4	4
Lead	mg/Kg	24.6	100%	LEL	31	0	4	4
Magnesium	mg/Kg	8380	100%			0	4	4
Manganese	mg/Kg	509	100%	LEL	460	2	4	4
Mercury	mg/Kg	0.05	75%	LEL	0.15	0	3	4
Nickel	mg/Kg	27.2	100%	LEL	16	3	4	4
Potassium	mg/Kg	1610	100%			0	4	4
Sodium	mg/Kg	134	75%			0	3	4
Thallium	mg/Kg	0.55	25%			0	1	4
Vanadium	mg/Kg	23.9	100%			0	4	4
Zinc	mg/Kg	101	100%	LEL	120	0	4	4

(1) NYSDEC Technical Guidance for Screening Contaminated Sediments, November 1993, as amended July 1994, March 1998, and January 1999.
BALCTC = Benthic Aquatic Life Chronic Toxicity Criteria
HHBAC = Human Health Bioaccumulation Criteria
LEL = Lowest Effect Level

TABLE 21

SUMMARY OF SOIL ANALYSIS RESULTS – SEAD-65

Sample No.	Sample Location	Control Temp ^{o}C	pH	Comments
65-A1	NW Corner-Location A	21.1	7.29	High Clay Content
65-A2	NE Corner-Location A	21.1	7.16	
65-A3	Center-Location A	21.2	7.74	
65-A4	SE Corner-Location A	21.1	7.81	High Clay Content
65-A5	SW Corner-Location A	21.1	7.27	
65-A2 (Dup)	Duplicate of 65-A2	20.9	7.24	
65-B1	W Corner-Location B	20.8	7.51	
65-B2	N Corner-Location B	20.8	7.82	
65-B3	Center-Location B	20.9	8.09	High Clay Content
65-B4	E Corner-Location B	20.7	7.79	
65-B5	S Corner-Location B	20.8	7.67	
65-C1	W Corner-Location C	20.8	7.58	
65-C2	N Corner-Location C	20.7	7.57	High Clay Content
65-C3	Center-Location C	20.6	7.92	High Clay Content
65-C4	E Corner-Location C	20.7	6.59	High Clay Content
65-C5	S Corner-Location C	20.7	6.94	

TABLE 22

SUMMARY OF SOIL ANALYSIS RESULTS – SEAD-68

COMPOUND	UNIT	MAXIMUM	FREQUENCY OF DETECTION	TAGM (a)	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES
VOLATILE ORGANICS							
Benzene	UG/KG	3	11.11%	60	0	1	9
Chloroform	UG/KG	4	11.11%	300	0	1	9
Tetrachloroethene	UG/KG	8	11.11%	1400	0	1	9
Toluene	UG/KG	87	66.67%	1500	0	6	9
Total Xylenes	UG/KG	6	22.22%	1200	0	2	9
Trichloroethene	UG/KG	4	11.11%	700	0	1	9
SEMIVOLATILE ORGANICS							
2-Methylnaphthalene	UG/KG	310	44.44%	36400	0	4	9
Acenaphthene	UG/KG	49	44.44%	50000	0	4	9
Anthracene	UG/KG	97	66.67%	50000	0	6	9
Benzo(a)anthracene	UG/KG	900	88.89%	224	2	8	9
Benzo(a)pyrene	UG/KG	770	88.89%	61	5	8	9
Benzo(b)fluoranthene	UG/KG	940	88.89%	1100	0	8	9
Benzo(ghi)perylene	UG/KG	420	88.89%	50000	0	8	9
Benzo(k)fluoranthene	UG/KG	830	88.89%	1100	0	8	9
Bis(2-Ethylhexyl)phthalate	UG/KG	150	11.11%	50000	0	1	9
Butylbenzylphthalate	UG/KG	18	55.56%	50000	0	5	9
Carbazole	UG/KG	80	66.67%	NA	0	6	9
Chrysene	UG/KG	1000	100.00%	400	2	9	9
Di-n-butylphthalate	UG/KG	4.2	11.11%	8100	0	1	9
Di-n-octylphthalate	UG/KG	18	11.11%	50000	0	1	9
Dibenz(a,h)anthracene	UG/KG	220	88.89%	14	6	8	9
Dibenzofuran	UG/KG	43	44.44%	6200	0	4	9
Fluoranthene	UG/KG	1500	100.00%	50000	0	9	9
Fluorene	UG/KG	34	44.44%	50000	0	4	9
Indeno(1,2,3-cd)pyrene	UG/KG	400	88.89%	3200	0	8	9
Naphthalene	UG/KG	78	22.22%	13000	0	2	9
Pentachlorophenol	UG/KG	24	11.11%	1000	0	1	9
Phenanthrene	UG/KG	480	77.78%	50000	0	7	9
Pyrene	UG/KG	1500	100.00%	50000	0	9	9
PESTICIDES							
4,4'-DDE	UG/KG	260	77.78%	2100	0	7	9
4,4'-DDT	UG/KG	130	44.44%	2100	0	4	9
Alpha-Chlordane	UG/KG	21	33.33%	NA	0	3	9
Gamma-Chlordane	UG/KG	23	44.44%	540	0	4	9
Heptachlor epoxide	UG/KG	4	44.44%	20	0	4	9
2,4,5-T	UG/KG	25	11.11%	1900	0	1	9
2,4-DB	UG/KG	90	11.11%	NA	0	1	9
METALS							
Arsenic	MG/KG	11.3	100.00%	8.2	2	9	9

a) TAGM = Technical and Administrative Guidance Memorandum HWR-94-4046 (January 24, 1994); NA = Not Available

TABLE 23

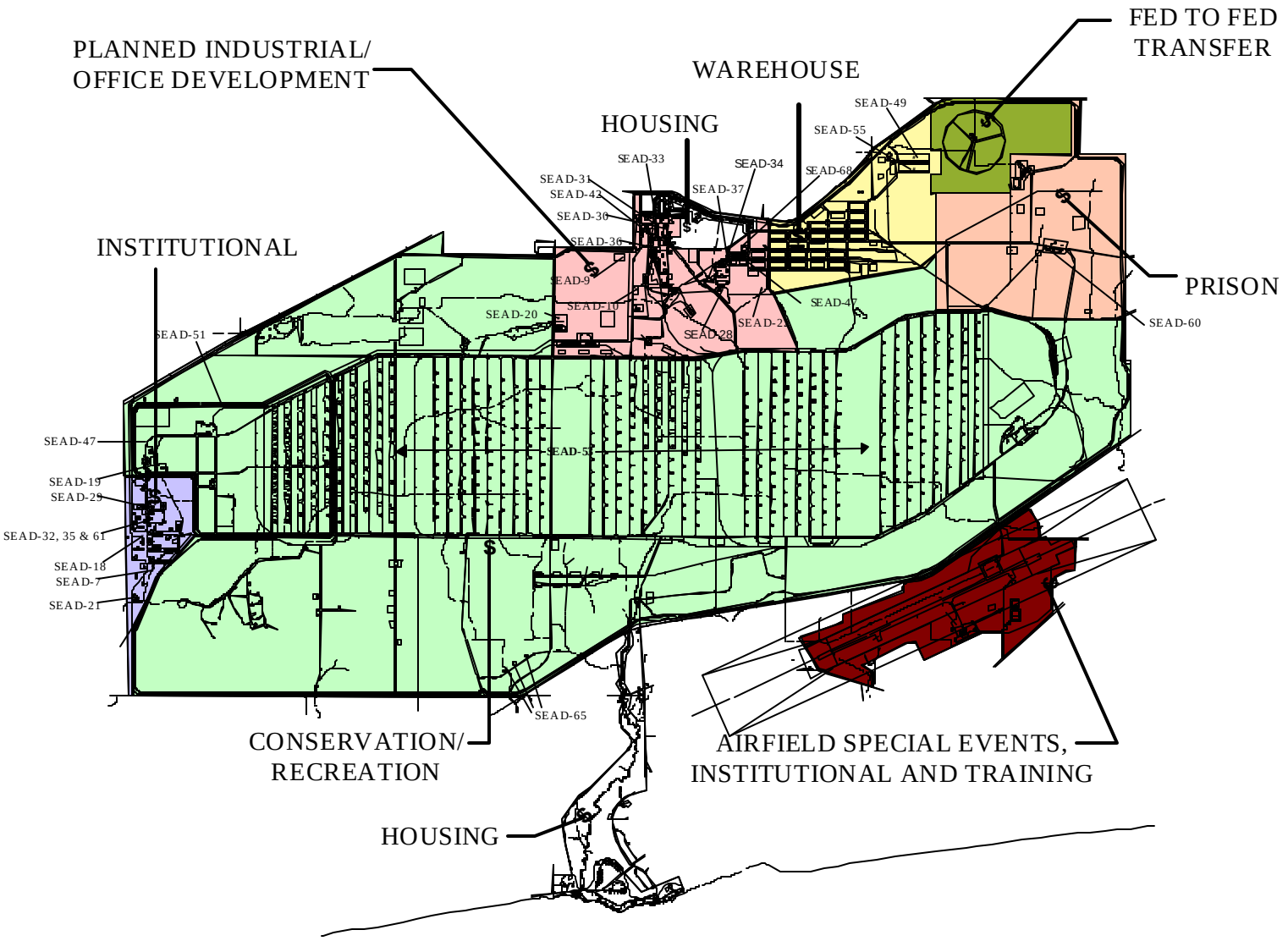
SUMMARY OF TOTAL NONCARCINOGENIC AND CARCINOGENIC RISKS – SEAD-68

INDUSTRIAL USE SCENARIO				RESIDENTIAL SCENARIO			
RECEPTOR	**EXPOSURE ROUTE**	**HAZARD INDEX**	**CANCER RISK**	**RECEPTOR**	**EXPOSURE ROUTE**	**HAZARD Index INDEX**	**CANCER RISK[1]**
INDUSTRIAL WORKER	Inhalation of Dust in Ambient Air	5E-7	5E-11	**RESIDENTIAL ADULT**	Inhalation of Dust in Ambient Air	1E-6	2E-10
	Ingestion of Soil	8E-4	3E-6		Ingestion of Soil	1E-3	1E-5
	Dermal Contact to Soil	5E-7	6E-10		Dermal Contact to Soil	6E-7	1E-9
	TOTAL RECEPTOR RISK (Nc & Car)	**8E-4**	**3E-6**		Inhalation of Groundwater	ND	ND
CONSTRUCTION WORKER	Inhalation of Dust in Ambient Air	5E-6	2E-11		Ingestion of Groundwater	ND	ND
	Ingestion of Soil	4E-3	2E-11		Dermal Contact of Groundwater	ND	ND
	Dermal Contact to Soil	5E-7	2E-11		**TOTAL RECEPTOR RISK (Nc & Car)**	**5E-2**	**2E-5**
	TOTAL RECEPTOR RISK (Nc & Car)	**4E-3**	**6E-7**	**RESIDENTIAL CHILD**	Inhalation of Dust in Ambient Air	3E-6	
WORKER AT DAY CARE CENTER	Inhalation of Dust in Ambient Air	4E-7	5E-11		Ingestion of Soil	1E-2	
	Ingestion of Soil	8E-4	3E-6		Dermal Contact to Soil	1E-6	
	Dermal Contact to Soil	5E-7	6E-10		Inhalation of Groundwater	ND	
	TOTAL RECEPTOR RISK (Nc & Car)	**8E-4**	**3E-6**		Ingestion of Groundwater	ND	
CHILD AT DAY CARE CENTER	Inhalation of Dust in Ambient Air	1E-6	3E-11		Dermal Contact of Groundwater	ND	
	Ingestion of Soil	7E-3	7E-6		**TOTAL RECEPTOR RISK (Nc & Car)**	**1E-2**	
	Dermal Contact to Soil	8E-7	2E-10				
	TOTAL RECEPTOR RISK (Nc & Car)	**7E-3**	**7E-6**				

Notes:

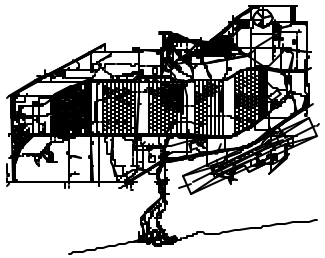
1. Cancer risk was calculated for resident (ages 0-70 yr).

NQ = Not qualified due to lack of toxicity data. ND = No data available.



LEGEND

- Airfield
- Conservation
- Federal
- Industrial
- Institutional
- Prison
- Warehouse
- Housing



PARSONS

Seneca Army Depot Activity
Record of Decision - NA/NFA Sites

Figure 1
Future Land Use

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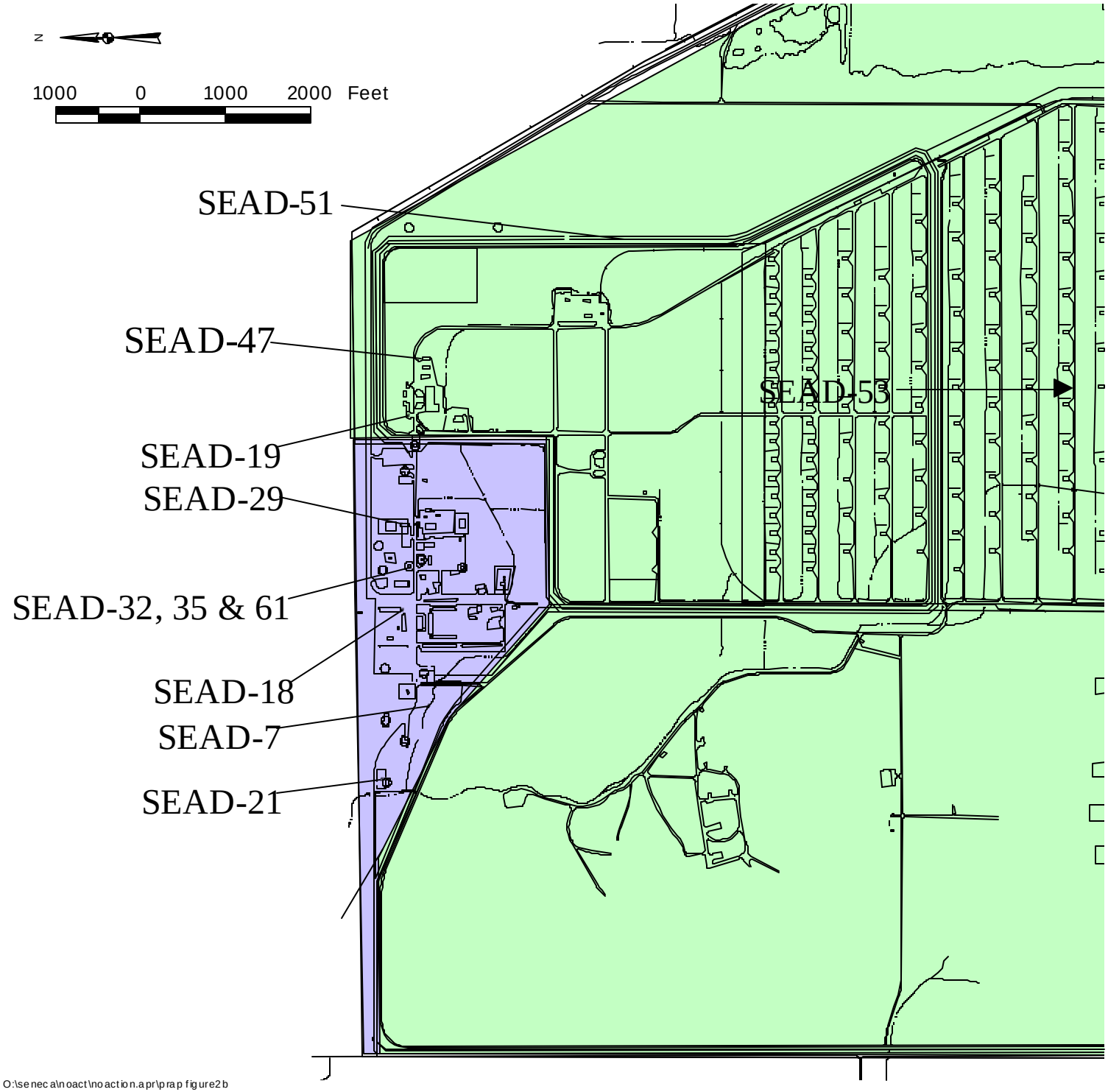
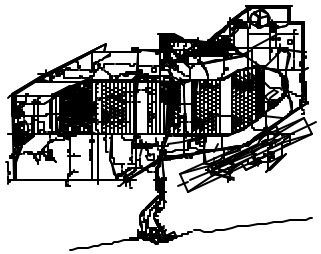
Project: 736026-01001	September 2003



Airfield
Conservation
Federal
Industrial
Institutional
Prison
Warehouse
Housing



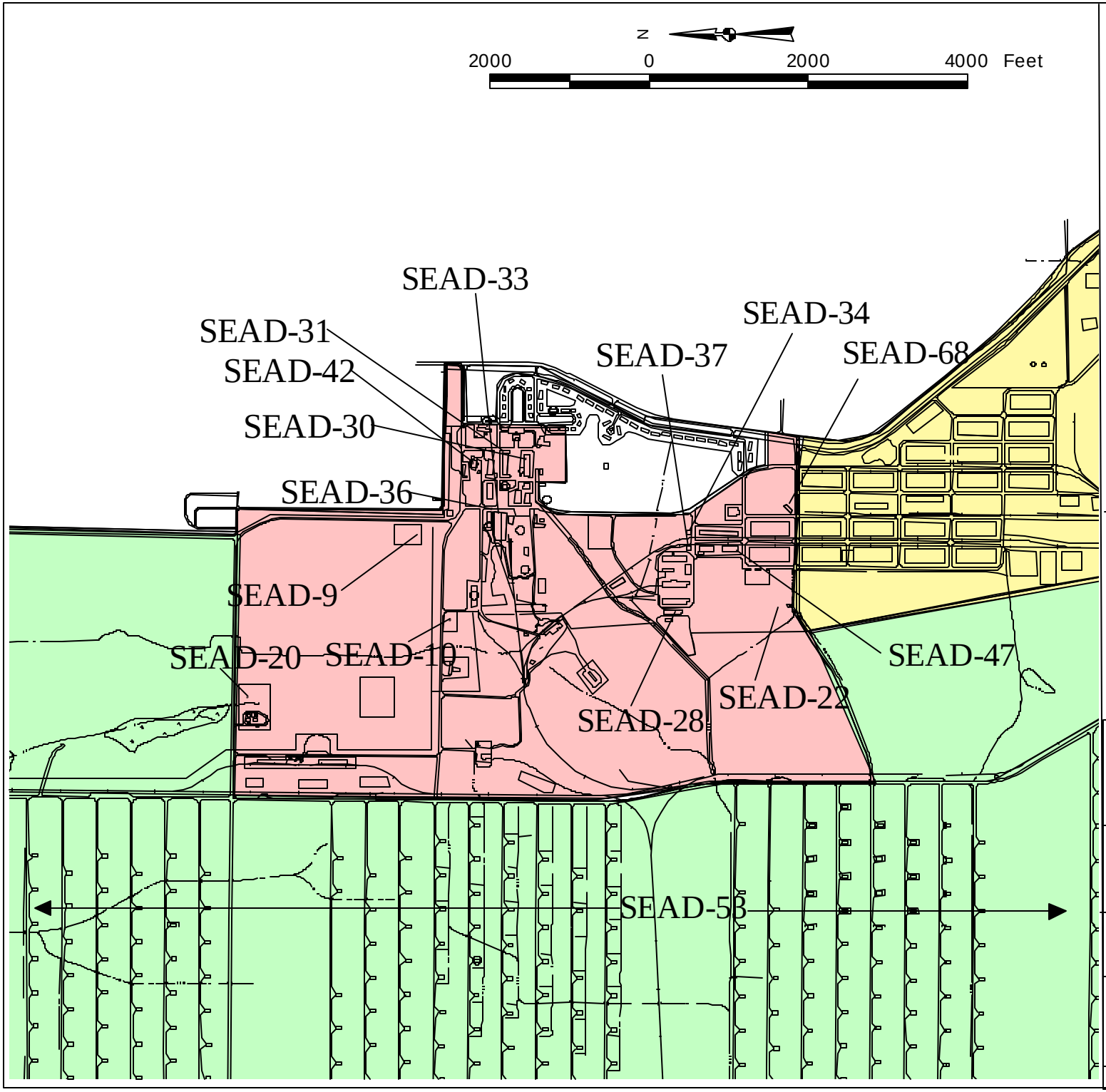
PARSONS

Seneca Army Depot Activity
Record of Decision - NA/NFA Sites

Figure 2
Location of NA/NFA SWMUs
Institutional Area

Project: 736026-01001 | September 2003

O:\seneca\noact\noaction.apr\prap figure2b



Airfield

Conservation

Federal

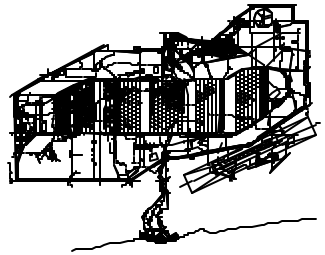
Industrial

Institutional

Prison

Warehouse

Housing

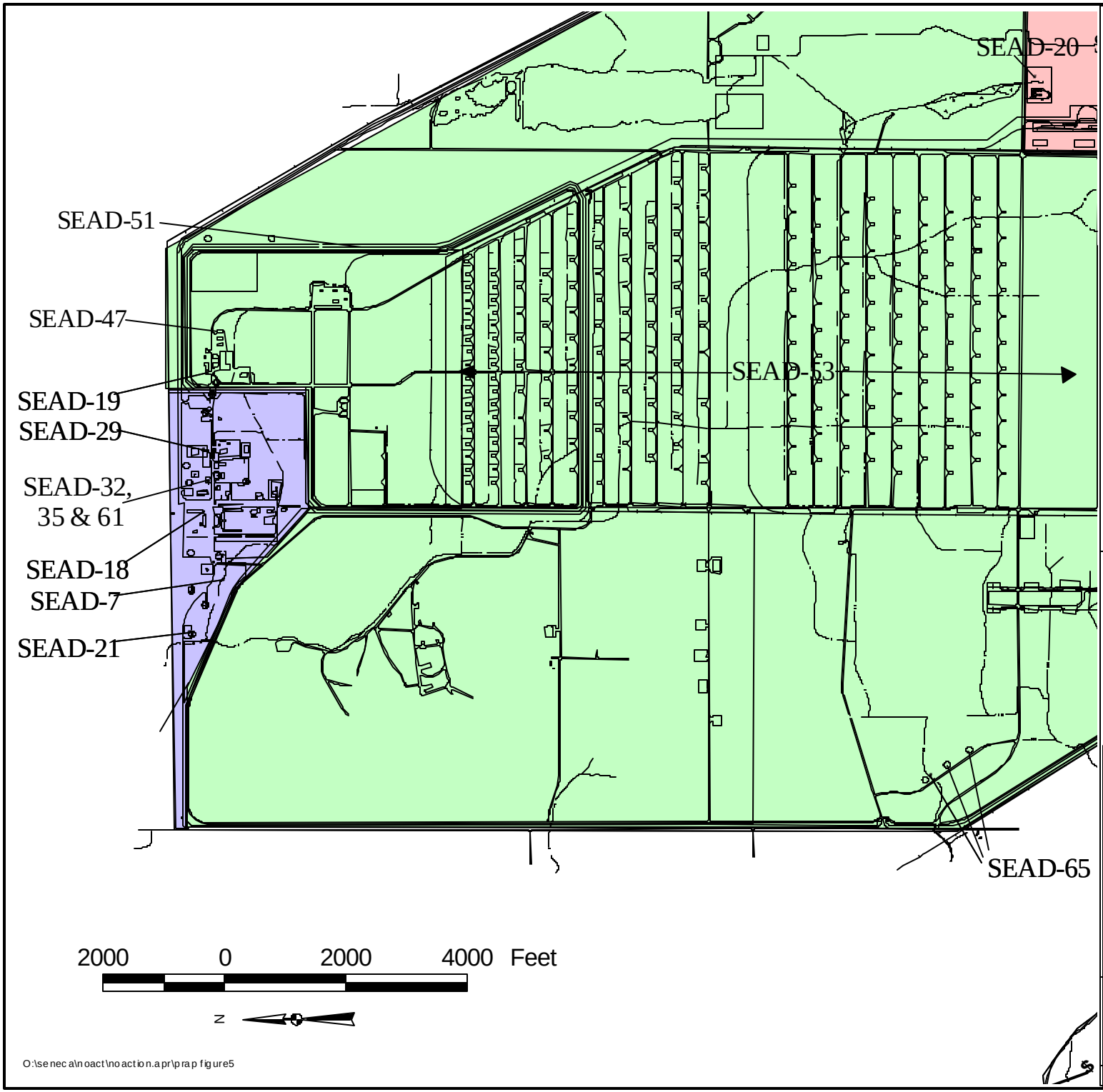


PARSONS

Seneca Army Depot Activity
Record of Decision - NA/NFA Sites

Figure 3
Location of NA/NFA SWMUs
Industrial Development Area

Project: 736026-01001	September 2003



Airfield

Conservation

Federal

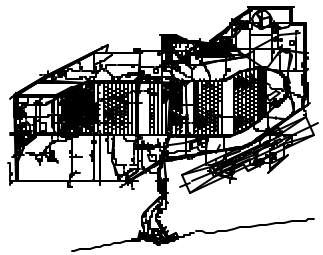
Industrial

Institutional

Prison

Warehouse

Housing



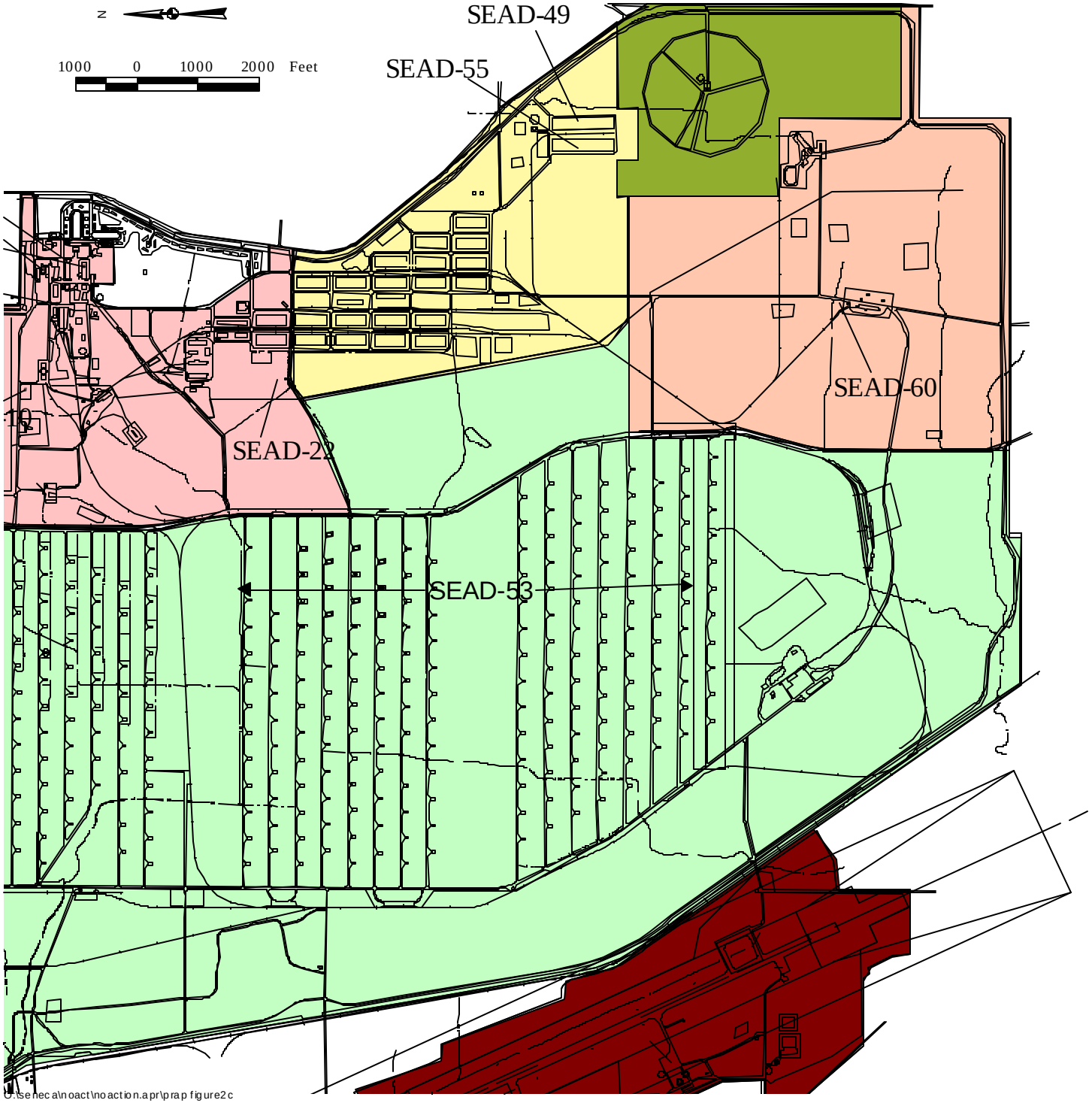
PARSONS

Seneca Army Depot Activity
Record of Decision - NA/NFA Sites

Figure 4
Location of NA/NFA SWMUs
Northern Conservation/Recreational Area

Project: 736026-01001	September 2003

O:\seneca\noact\noaction.apr\prap figure5



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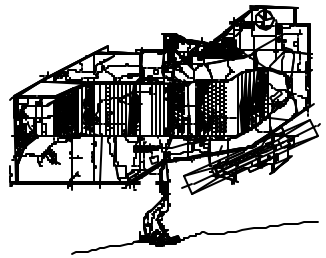
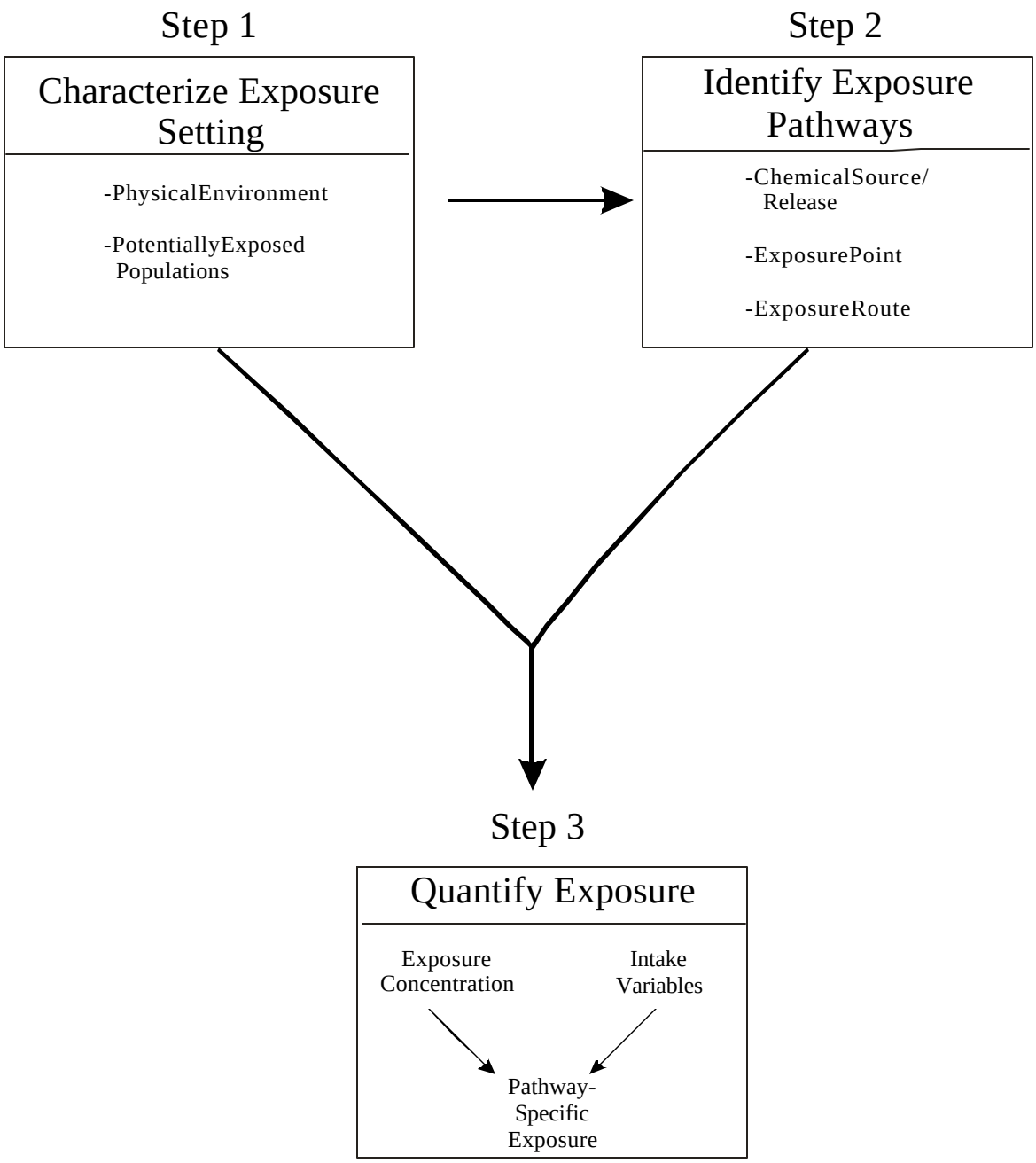


PARSONS

Seneca Army Depot Activity
Record of Decision - NA/NFA Sites

Figure 5
Location of NA/NFA SWMUs
Warehouse, Prison, and Southern
Conservation/Recreation Area

Project: 736026-01001 | September 2003



Source:USEPA1989a

PARSONS

CLIENT/PROJECTTITLE

SENECA ARMY DEPOT
RECORD OF DECISION
TWENTY NO ACTION SWMUs
and
EIGHT NO FURTHER ACTION SWMUs

ENVIRONMENTALENGINEERING	763026-01001

FIGURE 6

EXPOSURE ASSESSMENT PROCESS

SCALE	NA	SEPT 2003

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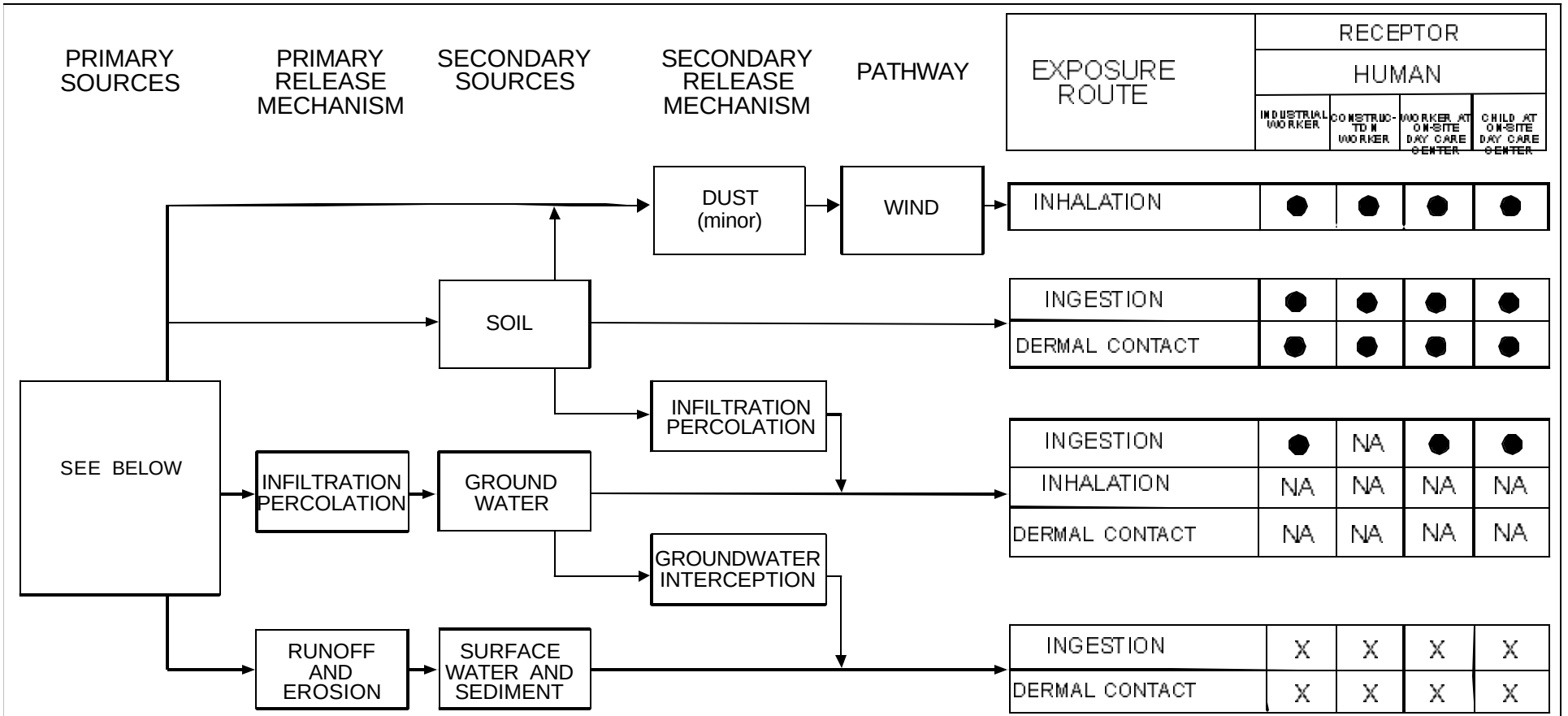

NOTE: EXPOSURE ROUTES APPLICABLE BASED ON PRESENCE OF MEDIA AT SITE AS SHOWN BELOW.

SEAD	PRIMARY SOURCE	SOIL	GW
9	OLD SCRAP WOOD SITE	✓	✓
68	PESTICIDE CONTROL SHOP	✓	NA

● PATHWAY CONSIDERED TO POSE POTENTIAL RISK

X PATHWAY NOT CONSIDERED

NA NOT APPLICABLE TO RECEPTOR

PARSONS

CLIENT/PROJECTTITLE

SENECA ARMY DEPOT

RECORD OF DECISION
TWENTY NO ACTION SWMUs
and
EIGHT NO FURTHER ACTION SWMUs

DEPT. ENVIRONMENTALENGINEERING | DWGNO. 763026-01001

FIGURE 7

EXPOSURE PATHWAY SUMMARY FOR PLANNED INDUSTRIAL DEVELOPMENT SCENARIO

SCALE NA | DATE SEPT2003

P:\pit\projects\seneca\noaction rod-DO#21\rod\draft final\figures\fig7.CDR

APPENDIX A

ADMINISTRATIVE RECORD INDEX

ADMINISTRATIVE RECORD

EPA, Army, and NYSDEC, 1993 - Federal Facility Agreement Under CERCLA Section 120, Docket Number: II-CERCLA-FFA-00202, January 1993.

EPA, 1999 - A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents, EPA 540-R-98-031, OSWER 9200.1-23P, PB98-963241, July 1999.

EPA, 2003 – Risk-Based Concentration Table, U.S. EPA,m Region III, April 17, 2003.

NRC, 2003 – Letter from Nuclear Regulatory Comission (Ms. Betsy Ullrich) to Commander's Representative, Seneca Army Depot (Stephen Absolom) regarding Department of the Army, Issuance of License Amendment, Control No. 12746, dated June 11, 2003, Docket No. 04008526 License No. SUC-1275.

Parsons, 2003 - Radiological Survey Report- SEAD-12, Phase I and Phase II Surveys, Seneca Army Depot Activity, Volume I-IV, March 2003.

Parsons, 2002a – U.S. Nuclear Regulatory Commission License Termination and License Release Work Plan, Seneca Army Depot Activity, Draft, June 2002.

Parsons, 2002b - Decision Document, Mini Risk Assessment SEAD 9, 27, 28, 32, 33, 34, 43, 44A, 44B, 52, 56, 58, 62, 64A, 64B, 64C, 64D, 66, 68, 69, 70, and 120B, Seneca Army Depot Activity, Final, May 2002.

Parsons, 2002c - Decision Document, Twenty-Two No Further Action Sites, Seneca Army Depot Activity, Final, March 2002.

Parsons, 2002d - SEAD-12 RI Report, Seneca Army Depot Activity, February 2002.

Parsons, 2001a - Ordnance and Explosives Engineering Evaluation and Cost Assessment, Seneca Army Depot Activity, Draft Final, September 2001.

Parsons, 1998 - SEAD-12 and SEAD-63 Project Scoping Plan for Performing a CERCLA Remedial Investigation/Feasibility Study (RI/FS) at Building 804, and the Associated Radioactive Waste Burial Sites (SEAD-12) and the Miscellaneous Components Burial Site (SEAD-63), Seneca Army Depot Activity, Final, June 1998.

Parsons, 1996 - Expanded Site Inspection, Seven Low Priority AOCs, SEADs 60, 62, 63, 64(A, B, C, D), 67, 70, 71, Draft Final, April 1996

Parsons, 1995 - 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, Seneca Army Depot Activity, Two Volumes, Draft Final, December 1995.

Parsons, 1994 - SWMU Classification Report, Seneca Army Depot Activity, Final, September 1994.

APPENDIX B

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DECLARATION OF CONCURRENCE

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, New York 12233-7011
Phone: (518) 402-9706 • **FAX:** (518) 402-9020
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

OCT 23 2003

Mr. George Pavlou
Director
Emergency & Remedial Response Division
US Environmental Protection Agency
Floor 19 - #E38
290 Broadway
New York, New York 10007-1866

RE: Seneca Army Depot, Site 850006
Record of Decision
20 No Action & 8 No Further Action SWMUs

Dear Mr. Pavlou:

The New York State Department of Environmental Conservation and the New York State Department of Health have reviewed the above referenced Record of Decision (ROD). The State concurs with this selected remedy as stated in the ROD received September 12, 2003.

If you have any questions please contact Dr. Chittibabu Vasudevan at (518) 402-9625.

Sincerely,

Dale A. Desnoyers
Director
Division of Environmental Remediation

cc: B. Wing, USEPA
J. Vasquez, USEPA

bc: S. Ervolina

ecc: C. Vasudevan
J. Swartwout
J. White, Bureau A, Section C
B. Putzig, Region 8
F. Ricotta, Region 8
G. Litwin, NYSDOH
S. Bates, NYSDOH
C. Bethoney, NYSDOH
B. Wing, USEPA
J. Vasquez, USEPA

APPENDIX C

PUBLIC COMMENTS AND RESPONSIVENESS SUMMARY

PUBLIC COMMENTS AND RESPONSIVENESS SUMMARY

TWENTY NO ACTION SWMUs (SEADs 7, 9, 10, 18, 19, 20, 21, 22, 33, 35, 36, 37, 42, 47, 49, 51, 53, 55, 65, and 68) and EIGHT NO FURTHER ACTION SWMUs (SEADs 28, 29, 30, 31, 32, 34, 60, and 61)
SENECA ARMY DEPOT ACTIVITY – ROMULUS, NEW YORK

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 Restoration Advisory Board (RAB). 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 RAB 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 Restoration Advisory Board (RAB). The BCT was comprised of several of the TRC members with the addition of additional Army and regulatory representatives. The RAB increased the frequency of the meetings to a monthly basis. Since the formation of the TRC and the RAB, 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 RAB.

SUMMARY OF COMMUNITY RELATIONS ACTIVITIES

The related Decision Documents and the Proposed Plan for the sites have been 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 notice of availability for the above-referenced documents was published in the Finger Lake Times on July 27, 2003, July 28, 2003, and July 29, 2003. The public comment period on these documents was held from July 25, 2003 to August 24, 2003.

On August 13, 2003, the Army, the EPA 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 site, 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, EPA 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 comment period. There is no official transcript since no comments were provided. In addition, no formal comments were received from the community during the public meeting.