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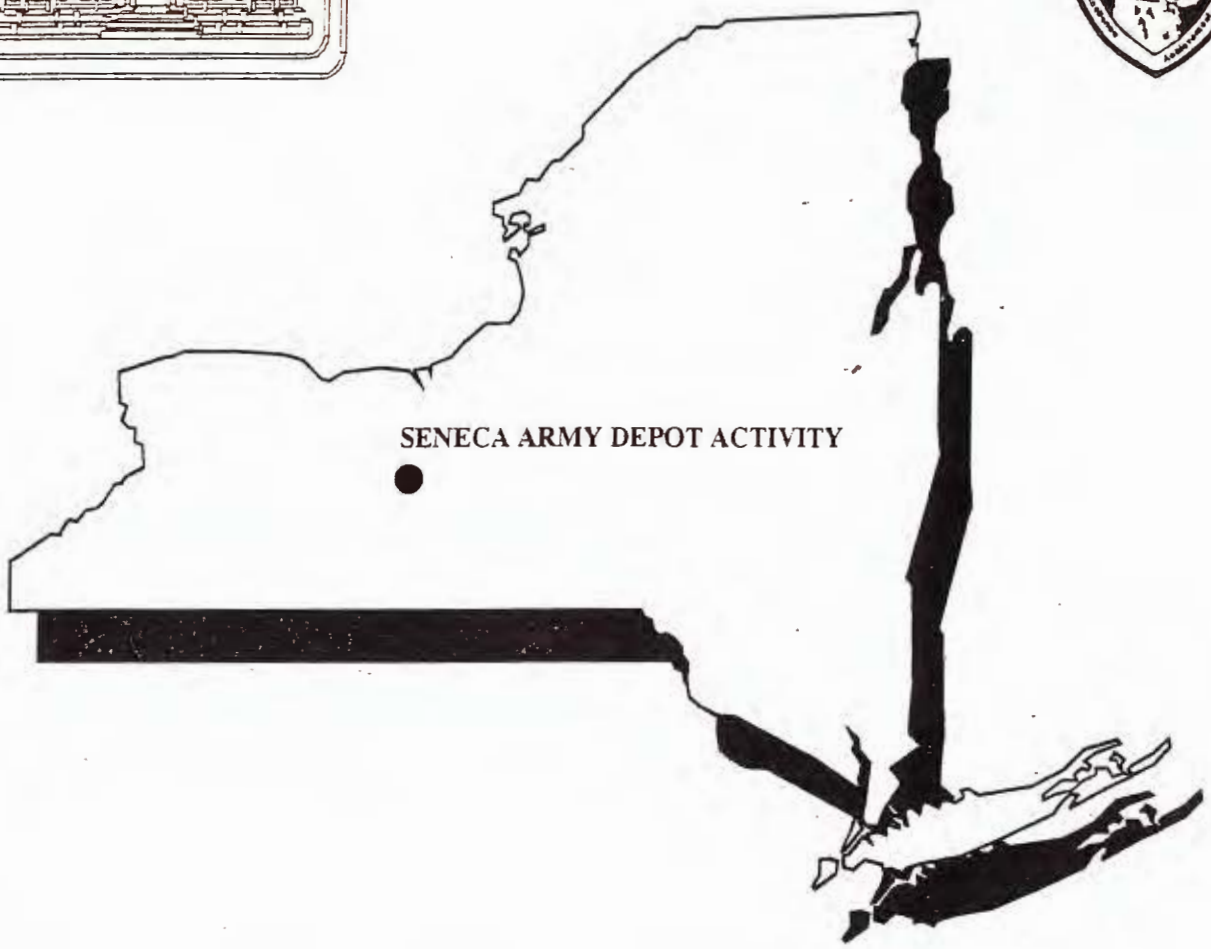
U.S. ARMY ENGINEER DIVISION
HUNTSVILLE, ALABAMA



SENECA ARMY DEPOT ACTIVITY (SEDA)

PEER REVIEW QUESTIONNAIRE PACKAGE
SEAD-13 IRFNA DISPOSAL PITS

APRIL/MAY 1998

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May 1, 1998

Commander
U.S. Army Corps of Engineers
Engineering and Support Center, Huntsville
ATTN: CEHNC-PM-ND (Ms. Alicia Allen)
4820 University Square
Huntsville, AL 35816

SUBJECT: Submittal of Peer Review Questionnaire and Background Information for SEAD-11, SEAD-13, SEAD-45 and SEAD-52/60 at the Seneca Army Depot Activity (SEDA)

Dear Ms. Allen:

Parsons Engineering Science (Parsons ES) is pleased to submit the Peer Review Questionnaire and background information for sites, SEAD-11, SEAD-13, SEAD-45 and SEAD-52/60, at the Seneca Army Depot Activity located in Romulus, New York. This work was performed in accordance with the Scope of Work (SOW) for Task Order 004 to Parsons ES Contract DACA87-95-D-0031.

Parsons ES appreciates the opportunity to provide you with this document. Should you have any questions, please do not hesitate to call me at (781) 401-2492.

Sincerely,

PARSONS ENGINEERING SCIENCE, INC.

Michael Duchesneau, P.E.
Project Manager

cc: Mr. Stephen Absolom, SEDA
Mr. Kevin Healy, CEHNC
Mr. Ed Agy, IOC
Mr. Randall Battaglia, CENAN
Ms. Joan Jackson, AEC
Mr. John Buck, AEC
Mr. Kieth Hoddinott, USACHPPM
Mr. Jim Quinn, NYSDEC
Mr. Daniel Geraghty, NYSDOH
Mr. Robert Scott, NYSDEC, Region 8
Ms. Carla Struble USEPA, Region II

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U.S. Army Environmental Peer Review Program
Installation Information Form

SITE SUMMARY QUESTIONNAIRE

SEAD-13 The Inhibited Red Fuming Nitric Acid (IRFNA) Disposal Pits

1. Summarize the basis for environmental concern at this site (i.e. Why was Preliminary Assessment (PA) performed?). Use a site-specific conceptual site model (CSM) similar to the generic example, to address the following questions for each contaminant source under investigation at the facility.

1) The basis for environmental concern are potential releases that may have occurred during operation of this area as an acid neutralization and disposal facility. The IRFNA Disposal Site (SEAD-13) was active during the early 1960s. The site consisted of six pits which were 30 feet long, 8 feet wide and 4 feet deep and were located in two separate areas. The pits were constructed by excavation to a shale stratum 4 feet below ground. Following excavation, limestone was placed in the bottom of the pits to a depth of approximately 2.5 feet below ground. The sides of the pits were also lined with limestone. Barrels (18.8-gallon capacity) of unserviceable IRFNA were stored on pallets near the west end of the pits. A stainless steel ejector, operated by water pressure, was fitted into a barrel with water flowing through the ejector. The ejector discharged a mixture of water and IRFNA through a long polyethylene hose under the water surface in the pit being used. During this period the IRFNA was allowed to mix with the limestone in the pit to facilitate the neutralization of the acid. Five minutes were required to empty a barrel. Ten barrels were usually discharged into a single pit during a day's operation. The acid was neutralized through the interaction with the lime/limestone. The neutralized liquid was then allowed to seep into the soil. At present, the site has been abandoned but the locations of the pits have been obtained through the use of aerial photography, geophysics and site investigations.

The IRFNA Disposal Site is located in the northeastern portion of SEDA as can be seen in the figure titled "Site Location and Final Land Use Plan". The site includes two IRFNA disposal areas located on the eastern and western sides of the south end of the Duck Pond near the entrance of its source tributary (Figure 1.1-13). Both areas are located less than two feet above the level of the water in the Duck Pond. The eastern area is bound by mostly deciduous trees and East-West Baseline Road to the north, by deciduous trees and grassland to the east and south and by the Duck Pond to the west. The western area is bound by grassland and low brush to the north, west and south and by the Duck Pond to the east. The extension of East-West Baseline Road is located approximately 100 feet north of the western area.

The eastern area is comprised of six elongated disposal pits (possibly seven) that are visible on the ground surface immediately south of a dirt access road off of East-West Baseline Road. The pits which

are each generally 20-30 feet long and whose long axes are oriented east-west, are marked by sparse vegetation, crushed shale and 1-inch limestone pieces at the surface. Vertical water and shower pipes are located west of the pits.

The western area which is located at the end of a dirt road off of East-West Baseline Road is comprised of a broad, low plain which extends to the shoreline of the Duck Pond. The area has no visible evidence of former IRFNA disposal pits at the surface, however, there is an area that is characterized by sparse vegetation and some crushed shale but it does not resemble the pits observed on the eastern side. A vertical shower pipe and head is located in the eastern portion of this area, approximately 50 feet from the Duck Pond.

Historical chemical analysis information for SEAD-13 was obtained in the Report of Sanitary Engineering Study No. 364214-60, Disposal of IRFNA by Soil Absorption (August 16, 1960). Three samples were collected at the disposal site including two samples of materials from within the pits and one surface water sample. On June 10, 1960, samples were collected from two of the acid disposal pits (Nos. 1 and 4) immediately after barrels of IRFNA were dumped into them. Both of these pits are located on the east side of the Duck Pond although their exact locations are not known. Just prior to the sample collection, ten barrels of IRFNA were dumped into Pit No. 1 and, on June 2 and 6, twelve and five barrels, respectively, were dumped into this pit. The second sample was collected from Pit No. 4 after a total of 30 barrels of IRFNA had been dumped into it on June 1, 2, and 6. The disposal operation had been suspended for a few days prior to June 10 to permit the placing of additional limestone in the pits along the earth walls because there had been evidence of diluted acid loss by lateral leaching through the walls above the limestone bed. This was confirmed by the analysis results of sample H, which was the surface water sample collected on June 9, 1960 adjacent to the disposal pits on the east side of the Duck Pond.

The results of the chemical analyses for the surface water sample, H, indicated that the water had a pH of 5.4, a specific conductivity of 40,400 umhos/cm, nitrate-N concentration of 8,820 mg/L, and fluoride concentration of 23.7 mg/L.

The results of the chemical analyses on the two samples of materials collected from the disposal pits indicated that the pH ranged from 1.5 to 3.4, the specific conductivity ranged from 62,800 umhos/cm to 69,000 umhos/cm, the nitrate-N concentration ranged from 13,000 to 16,100 mg/L, and the fluoride concentration ranged from 23.5 to 392 mg/L.

During the initial installation assessment of the Seneca Army Depot reported in January of 1980 (Report No. 157) by the US Army Toxic and Hazardous Materials Agency (USATHAMA), the IRFNA site was identified as a site with the potential for releasing pollutants. In this assessment, the IRFNA disposal site was highlighted as a location of known or suspected waste materials.

This area had previously been identified in a 1960 U.S. Army Environmental Hygiene Agency (AEHA) report. The site was suspected to be comprised of six pits, however, the exact locations of were unknown. The report indicates that five of these pits were used for acid dumping and limestone was used in the pits to neutralize the acid. The resulting constituents after neutralization would be nitrates, nitrates, and fluorides. Jet fuel (JP-4) was also burned in a small furnace in this area. (USATHAMA, 1980). This site was identified as a SWMU, as agreed to by the EPA Region II and by NYSDEC. Identification of all SWMUs was required as part of the RCRA Part B permit application. The U.S. Army Corps of Engineers commissioned the "Solid Waste Management Unit (SWMU) Classification Report" at SEDA (ERCE 1991) to identify and classify all SWMUs at the depot, in response to this RCRA requirement. This report was finalized by Parsons ES on June 10, 1994. This effort also involved evaluation of the effects of past solid waste management practices at identified SWMUs on the facility and classification each SWMU as an area where "No Action is Required" or as an "Area of Concern" (AOC). Areas of Concern include both (a) SWMUs where releases of hazardous substances may have occurred and (b) locations where there has been a threat of a release into the environment of a hazardous substance or constituent. The ranking of SWMUs was conducted in an effort to identify sites that would be investigated first. AOCs have included land treatment units, such as the IRFNA disposal area, that are known to have caused a release into the environment or whose integrity has not been verified. The 1994 Solid Waste Management Unit (SWMU) Classification Study classified the IRFNA facility (SEAD-13) as a moderate priority area of concern based on the suspected release of pollutants at the site, (ES, 1994). At the time of the SWMU Classification Study performed by Parsons Engineering Science, Inc., the IRFNA disposal site was being investigated as an Expanded Site Inspection (ESI) site under the CERCLA process.

a) Describe the potential sources of contamination at each site that are being evaluated.

a) The potential sources of contamination includes residue from acid dumping into the pits and the limestone used to neutralize the acid. The resulting constituents after neutralization would be nitrates, nitrates, and fluorides.

b) Describe the potential migration pathway and receptors for each pathway being evaluated in the CSM. Discuss the release mechanism, the transport media, the potential exposure being evaluated, and the data needed to characterize identified chemical migration pathways, i.e., from the source to the receptor.

b) The attached Exposure Pathway Summary figure, Figure 13-1, presents the conceptual site model for the Inhibited Red Fuming Nitric Acid (IRFNA) Disposal site listed as SEAD-13. A Preliminary Assessment was performed at this facility based upon the subsurface disposal of Nitric Acid at this site. The operation of IRFNA disposal involves excavation of soil and

neutralization of acid in pits. Residuals of the neutralization are dispersed into the soil following a neutralization event. A portion of the residues are expected to migrate. The pits are situated below the subsurface in a level area adjacent to the "Duck Ponds". The residues in the pit are not likely to be subjected to erosion. The Duck Ponds are not classified by the NYSDEC as a surface water body. As a result of the operation and the vegetative cover, migration pathways and transport mechanisms have been identified as:

- Direct burial of IRFNA residues to the subsurface due to continual neutralization events;
- Leaching of residues due to interactions with infiltrating rainfall;
- Runoff to surface water and sediment due to erosion.

The site is currently used for open detonation activities by SEDA workers. Future uses included recreational/conservation uses. Following BRAC closure, this site will be part of a large recreational/conservation area that will potentially be used for hiking, camping, etc. There is also a potential that the area could be a managed recreational area. Realistic future human exposure scenarios include: an adult site worker (ranger), an adult and child site visitor (camper) and a future construction worker. The potential for constructing a shower facility for campers and the site worker have been included, since the site may be used by the state in this manner. The actual future use of the facility has not been established with certainty, other than as a conservation/recreational area, because discussions with the State of New York Fish and Wildlife Service regarding their willingness to accept this and other sites are still ongoing. Based upon the understanding that the site will be used for these purposes, the migration pathways for human health receptors, as shown in Figure 45-1, include the following;

Pathway	Receptors
Ingestion and dermal contact from subsurface soil from burrowing (ecological) and construction activities;	Future Construction Worker, Terrestrial Biota
Inhalation, ingestion and dermal contact to groundwater from drinking and showering;	Future Site Worker, Future Adult/Child Site Visitor
Ingestion and dermal contact to surface water and sediment during wading or swimming (ecological)	Future Adult/Child Site Visitor, Terrestrial and Aquatic Biota

The release mechanisms for these pathways include:

Pathway	Release Mechanisms
Subsurface Soil	Direct deposition;
Groundwater	Infiltration and percolation;
Surface Water and Sediment	Runoff and erosion.

In order to completely evaluate these potential chemical migration pathways, data needs include the following;

Pathway	Data Needs
Subsurface Soil	Subsurface soil samples
Groundwater	Monitoring wells and ground water samples
Surface Water and Sediment	Surface water and sediment samples

c) Describe the potential contaminants of concern (COCs) for each source and chemical migration pathway.

c) The source of COCs is the IRFNA pits and the residuals that may exist within the pits. The primary constituents of concern include:

- Nitrates,
- Fluorides and
- Metals

The chemical migration pathways have been described in Part b.

2. For each identified source, pathway, receptor combination, identify the decisions to be made using the data that have been (will be) collected. For each decision, identify the decision criteria to be used to make the decision. Please identify the specific criteria for making the decisions. Examples of Decision Criteria (D.C.) are shown below:

- *Risk (human health or ecological)*
- *Applicable, Relevant, or Appropriate Requirements (ARARs)*
- *Technology, or*
- *Other (please specify)*

2) Investigatory and remedial efforts have been performed in accordance with the decision process outlined in the Interagency Agreement (IAG), also known as the Federal Facility Agreement (FFA), the requirements of the Army, the New York State Department of Environmental Conservation (NYSDEC) and the U.S. Environmental Protection Agency, Region II (EPA). The IAG established an incremental agenda that began with an initial identification of each SWMU and culminates with a Record of Decision (ROD) for each SWMU. On-going clarifications, improvements and refinements have been incorporated into the decision process.

The overall decision process is depicted in Figure 13-2 titled " Seneca Army Depot Activity Decision Criteria Remediation Flowchart". A key aspect of the process is to allow for a site to exit the process, requiring no further action, if site conditions are shown to meet the decision criteria. In many instances exiting the process occurs prior to conducting a full RI/FS program. This was essential given the nature and extent of contamination at many of the sites and the number of sites that have been identified at SEDA that will required a final outcome decision.

The decision process involves implementing a series of baseline actions. Decisions are integrated into the baseline action process to justify the actions to be taken. Supplemental actions, such as collecting additional data, are conducted, where necessary, to provide support for the baseline actions. The final action for each SWMU or AOC involves preparation of either a completion report, a ROD or a closeout report. These reports provide documentation that site conditions have met the requirements of the decision process.

The process is divided into six (6) distinct phases. These include:

1. The Site Classification Phase,
2. The Preliminary Assessment Phase,
3. The Interim Remedial Measures (IRM) Phase,
4. The Remedial Investigation Phase (RI) Phase,

5. The Feasibility Study (FS) Phase and
6. The Remedial Design/Remedial Action (RD/RA) Phase.

Each phase is further divided into a series of actions that result from the decisions. As depicted in Figure 13-2, each decision is identified with a letter, whereas each action is identified with a number so that the status of each site can be identified. This provides an easy mechanism to understand what decisions have been made and what decisions need to be made. Each of the six phases of the process allow the site to exit the process. The effort involved in exiting the process is dependent upon the phase involved and the information required to document that conditions are within the required limits. In some cases this involves a comparison to an appropriate State and Federal Standard, Guideline and Criteria (SGC). In other instances, this will involve completion of a remedial action or an Interim Remedial Measure (IRM).

The first phase is the site classification phase. Site classification begins with an initial identification of a site and ends with a determination that the site has either impacted the environment or it has not, in which case no further action is required and unrestricted use is allowed. At SEDA, the list of potential sites were compiled, by SEDA staff, during the preparation of the RCRA Part B permit, that requires a listing of SWMUs. The list of SWMUs was developed from a variety of sources. Active, on-going depot operations involving waste generation and management were obvious candidates for SWMUs. Past operations and lesser known disposal practices were identified from interviews with current and former depot employees. The initial list of SWMUs identified in the Part B permit application was 72. Recently, as part of the BRAC closure process, the Environmental Baseline Survey (EBS) was prepared that involved additional interviews with former employees and field reconnaissance. These efforts identified an additional 25 potential SWMUs. The key decision point in this phase involves determining whether or not site conditions have impacted the environment. In many instances this decision was made from historical records or an understanding of the processes involved, without collecting additional field data. In other instances, this required some limited sampling. Twenty-four (24) SWMUs have been eliminated from further consideration during this phases as No-Action SWMUs, although some of the newly identified sites have not been evaluated yet. SWMUs that proceed further in the process are considered to be Areas of Concern (AOC).

The second phase is the Preliminary Assessment Phase. This phase begins with collection of data as part of an Expanded Site Inspection (ESI), as shown in Action 5 of Figure 13-2. The ESI data is then evaluated to determine whether a threat exists at the AOC. This determination is based upon direct comparisons of the site data to background or an appropriate State and/or Federal Standards, Guidelines and Criteria (SGC). Exceedances of an appropriate standard, guideline, or criteria is used to indicate that a threat exists. A quantitative risk analysis is not performed to quantify the threat. Professional judgments are also used to evaluate the significance of the exceedances and are incorporated into the

recommendations for either no further action or additional evaluations, as shown in Decision No. C or Figure 13-2.

Each media have unique SGCs that are used for comparison. Soil data, collected during the ESI, are compared to background concentrations, or the TAGM value for soil. In some instances, in particular for metals in soil, the TAGM value is either background or a pre-determined value. In instances where the TAGM value is background the value chosen represents the 95th percentile of the background data set that has been accumulated at the SEDA. The 95th percentile of the background database was chosen to reduce the possibility of concluding that an exceedance had occurred from a release when the exceedance was from a site sample that represents the high end of background distribution in soil. If no exceedances are determined then the recommendation is for no further action (NFA). However, if exceedances of TAGMs or other media specific SGC are noted then further evaluation of the data is required to determine if exceedances over the Preliminary Remedial Goals (PRG)s, see Decision No. D of Figure 13-2.

As described in the attached letters, PRGs have not been accepted by the NYSDEC or EPA, Region 2. Although the approach of using, site-wide PRG values as a mechanism for determining if a site can be deemed a no further action site is not acceptable, PRGs have value as milestones for determining if conducting a screening risk assessment is worthwhile. PRGs have been developed for each Potential Chemical of Concern (PCOC) and for both human health and ecological protection. The process of developing PRGs has involved backcalculation of allowable soil concentrations from an acceptable risk level. For non-carcinogenic compound this is a Hazard Index (HI) of 1, for carcinogenic compounds this value was 1E-06. For human exposure to soil, ingestion was used as the only pathway as ingestion of soil is normally the pathway that governs all other pathways. PRG values for human exposure were developed for an industrial scenario, a recreational scenario and a construction scenario.

PRG values have also been developed for an ecological receptor. Ecological PRGs were calculated based on the toxicological response of the field mouse to chemicals in the soil. The field mouse has been identified as the ecological receptor for all of the ecological risk assessments that have been conducted at SEDA to date. The route of exposure was assumed to be ingestion with the mouse's diet being chemical containing plants, insects, and soil. The mouse is further assumed to have its entire range wholly contained in the site. The evaluation was conducted using an Ecological Quotient (EQ) approach, similar to the non-carcinogenic calculations performed for the human health evaluation. Ecological Quotients, representing quantitative expressions of risk, were calculated for each chemical of concern. The EQs assumed for this evaluation were 10.

If exceedances of a PRG are noted then it is almost certain that the mini-risk assessment will yield unacceptable risk and therefore there is no need to perform the screening risk assessment. In this instance the decision process enters the Interim Remedial Measures (IRM) phase which begins with

performing a hot spot analysis. If on the other hand, if a PRG is not exceeded then performing the mini-risk assessment is a mechanism of documenting that the site conditions are acceptable and no further action is required. The mini-risk assessment is used to provide a quantitative risk value that can be supportive of a no further action decision. The mini-risk assessment utilizes identical procedures as what would be used for a Baseline Risk Assessment (BRA) but uses the maximum detected concentration as the Exposure Point Concentration (EPC) instead of the Upper 95th Confidence Limit of the mean due to the uncertainties associated with evaluating a site with the smaller ESI database. If the results of the mini-risk assessment indicate acceptable risk, i.e. carcinogenic risks are less than 1E-04 or the HI is less than 1, then the site conditions meet the requirements for no further action. Otherwise the site conditions are not acceptable and the site enters the Interim Remedial Measure (IRM) phase, Decision No. E Figure 13-2.

The IRM phase involves evaluating whether the site can attain a no further action designation via implementation of an IRM. An IRM is most likely to be a non-time critical removal action and are generally considered appropriate if :

- The problems can be attributed to discrete soil or sediment "hot spots";
- The extent of soil or sediment to be excavated is less than 1000 CYs;
- The technologies are limited to "low tech" technologies such as off-site disposal or capping;
- The pollutants involved are amenable to such technologies such as off-site disposal or capping;
- Groundwater or surface water conditions are acceptable

If deemed appropriate, an IRM can be used to eliminate a site from further consideration by preparing an Engineering Evaluation/Cost Analysis (EE/CA). The EECA is the decision document that presents the goals and rational for implementing the IRM and discusses the evaluations that have been conducted in support of the IRM. After the removal action has been performed, confirmatory sampling is required to document the effectiveness of the IRM in attaining the IRM goals. This information is then documented in the project completion report and the ROD.

If the conditions of the site are such that the problems are not readily solvable via an IRM then the site moves into the RI phase. This phase is identical to the process described by CERCLA and involves a multi-media sampling effort and Baseline Risk Assessment (BRA). The results of the BRA may support a no further action if the risk conditions are below the EPA target limits for risk. Otherwise, the site enters the FS stage.

The FS phase involves an initial evaluation of presumptive remedies. Presumptive remedies includes a variety of technologies for both groundwater and soil such as bioventing, off-site disposal, capping or deed restriction for soils and alternative water supply, air sparging, zero-valence iron treatment or natural attenuation with monitoring for groundwater. If presumptive remedies are not appropriate then an FS is prepared.

The final phase is the preparation of a remedial design and implementation of the remedial action. Both the FS and the RD/RA will follow guidance provided by both the EPA and the NYSDEC.

3. Has a re-use plan been developed and agreed upon for the site? If so, please attach the plan and a corresponding map. Compare the current use to the planned re-use and explain how the relationship between contaminant sources and chemical transport from these sources was used to develop the planned re-use.

A reuse plan for the Seneca Army Depot was developed by RKG Associates, Inc. in December of 1996. This is shown the figure titled "Final Land Use Plan". This site is currently an abandoned inhibited red fuming nitric acid (IRFNA) disposal site. The proposed future use for this site is for conservation and recreational purposes. The proposed future use was not based upon a review of the present nature of potential contaminants at this site.

4. What COCs were identified for each source? Were COCs compared to risk-based screening criteria? Was planned reuse used to determine the future land use exposure scenarios for the risk assessment?

The primary constituents of concern are heavy metals, nitrates, and fluoride. An Expanded Site Inspection has been completed at SEAD-13. As part of the ESI report, the analytical data for the site was compared to available State and Federal standards, guidelines and criteria (SGC) to determine if a threat to human health, welfare, or the environment exists. Exceedances of an appropriate standard, guideline, or criteria was used to indicate that a threat existed. A quantitative risk analysis was not performed to quantify the threat. Professional judgments were also used to evaluate the significance of the exceedances and incorporated into recommendations for further evaluation, shown as Decision No. C of Figure 13-2. If no exceedances had been detected then the recommendation for SEAD-13 would have been for a No Further Action (NFA) determination. However, exceedances of TAGMs were noted , as described below, and further evaluation of the data was required to determine if either a mini-risk assessment evaluation was appropriate or a Interim Remedial Measure (IRM) was appropriate. An earlier investigation of ERCE indicated that the pits were located near the west end of the East-West Baseline Road on the south side of the road (ERCE 1991).

Abandoned aboveground piping was observed in the areas southeast and southwest of the Duck Pond. Some of this piping could have been used during the IRFNA disposal project as an emergency shower. An IRFNA disposal study stated that a deluge shower was used for personnel decontamination. Additionally, an abandoned water hydrant was observed southwest of the Duck Pond. Possibly this water hydrant was used to supply water pressure to the stainless steel ejector.

The pits were lined with limestone which neutralized some or all of the IRFNA. The neutralized wastewater may have migrated to the water table. In addition to groundwater, another potential migration pathway could be surface water via the Duck Pond.

Geophysics

To locate the six abandoned disposal pits and to evaluate the potential presence of IRFNA barrels in the subsurface, both GPR and EM-31 surveys were conducted. The GPR method was used to identify areas of disturbed soils that could be associated with the IRFNA pits. The EM-31 data was collected on profiles spaced at 10-foot intervals throughout the two areas where the pits are presumed to be. EM-31 measurements were made at 5-foot spacings along each profile. A total of 12,180 linear feet of EM-31 surveys was conducted at SEAD-13. The GPR data were collected along profiles spaced at 20-foot intervals. Additional GPR data were collected in order to delineate the extent of the pits. A total of 7,495 linear feet of GPR surveys was conducted at SEAD-13.

Four 115-foot seismic refraction surveys were performed along two lines laid out perpendicular to each other on each side of the Duck Pond. Data from the surveys were used to determine the direction of groundwater flow, adjust the location of the monitoring wells to located a well upgradient and a well downgradient of the AOC.

Soils

Ten borings were drilled at this AOC. Three soil borings were advanced within each of the two disposal areas (refer to Figure 2.4-2) at locations tentatively identified as IRFNA disposal pits. Two borings were also drilled on each side of the pond to obtain soil quality data at a background location (SB13-1 and -4) and near the pond (SB13-3 and -6). Three samples were collected from each boring.

Groundwater

A total of seven monitoring wells were installed at this AOC (Figure 2.4-2). One monitoring well was installed upgradient of each of the two disposal areas to obtain background water quality data (MW13-1 and -4). One well was located within each of the disposal areas (MW13-2 and 5). One well was installed in an area, downgradient edge of the west disposal area (MW13-6) and two wells were installed near the downgradient edge of the east disposal area (MW13-3 and -7).

Except at MW13-3, one monitoring well was constructed at each designated location and was screened over the entire thickness of the aquifer above competent bedrock. At MW13-3, an additional shallower well, MW13-7, was installed and screened between 5.0 and 7 0 feet below the ground surface. Both

wells were dry. Following installation and development, one groundwater sample was collected from each of the five wells.

Surface Water and Sediment

To assess the potential impact of the IRFNA disposal pits on adjacent surface water bodies, three sediment and surface water sample sets were collected from within the Duck Pond (Figure 2.4-2). One surface water and sediment sample set (SW13-3 and SD13-3) was used to obtain background surface water and sediment quality data. The exact locations of the other two sample sets were determined based on an inspection of the site. Criteria to select these locations included stressed vegetation, proximity to the pits, and surface water discharge points that originate from the area of the pits. Sediment and surface water sample sets were collected at the same location and were tested for the parameter listed in the following section.

A total of 30 soil samples, 5 groundwater samples, 3 surface water and 3 sediment samples were collected from SEAD-13 for chemical testing. All the samples were analyzed for the following: the TCL VOCs, SVOs, and Pesticides/PCBs and TAL Metals and Cyanide according to the NYSDEC CLP SOW. Herbicides were analyzed by EPA Method 8150, Nitrates were analyzed by EPA Method 352.2, and fluoride was analyzed by EPA Method 340.2. A summary of the analytical program for SEAD-13 is presented in tables.

Further evaluation was conducted to determine if exceedances over the Preliminary Remedial Goals (PRG)s were noted, Decision No. D of Figure 13-2. PRGs were recently developed and this comparison was only recently added to the decision criteria process. For SEAD-13 exceedances of the PRGs were also noted for mercury in soil. The next step in the decision process involved performing a hot spot analysis, Action No. 8 of Figure 13-2. Since the PRG exceedances for mercury were noted over a wide area away from the actual OD mound, it was determined that a removal action was not appropriate since hot spots were not identified. Excavation of the entire OD mound and surrounding areas, yet to be fully determined, was considered beyond the scope of a removal action. Removal actions are intended to be applicable to well-defined areas where the threat can be eliminated quickly and cost effectively. Neither aspect applied in this situation. The next action to be conducted involves performing an Remedial Investigation (RI) and a Baseline Risk Assessment (BRA), Action No. 13 of Figure 13-2.

Soil Data Summary

A comparison of the SEAD-13 soil data to the NYSDEC TAGMs is presented in the attached Collapsed Data Summary And Summary Statistics tables. The following compounds were found to exceed the NYSDEC TAGM screening guidelines for soil:

4-Methylphenol	Iron
Phenol	Lead
Aluminum	Magnesium
Arsenic	Nickel
Barium	Silver
Chromium	Sodium
Copper	Zinc

The soil at SEAD-13 was also compared to Residential and Ecological PRGs as shown in the attached Collapsed Data Summary and Summary Statistics tables. Barium was the only analyte found at concentrations which exceeded the Ecological PRG. It exceeded this guideline in 19 samples. There were no exceedances of the Recreational PRG in the soil sampled at SEAD-13.

Groundwater Data Summary

A comparison of the groundwater at SEAD-13 to the NYSDEC Class GA Standards is presented in the attached Collapsed Data Summary and Summary Statistics tables. The four metals, chromium, iron, lead, and manganese were found at concentrations which exceeded the GA standard. Iron levels exceeded the criteria in 4 of the 5 groundwater samples collected.

The groundwater at SEAD-13 was also compared to the Drinking Water PRGs as shown in the attached Collapsed Data Summary and Summary Statistics tables. One semivolatile organic compound (bis(2-ethylhexyl)phthalate) and eight metals (aluminum, antimony, arsenic, barium, beryllium, chromium, iron, and manganese) were found at concentrations which exceeded the Drinking Water PRGs

The attached Figure 4.2-1 presents the nitrate concentrations found at each groundwater sampling location.

Surface Water and Sediment Data Summary

Surface water and sediment has been classified by NYSDEC as Class C and therefore surface water and sediment collected on-site was compared to the NYSDEC Class C Ambient Water Quality Standards as presented in the NYSDEC Division of Water, Technical and Operational Guidance Series 1.1.1 (TOGS). Surface water sampled at SEAD-13 was found to have aluminum, iron, and lead at concentrations which exceed the Class C standards for surface water. There were no detections of any of the parameters analyzed for in the sediment samples and therefore, no exceedences of the Class C standards for sediment. The attached Collapsed Data Summary and Summary Statistics tables for surface water and sediment present these results.

5. For each source area, identify the decisions that supported the need for additional investigation. Identify the data used to evaluate the alternative of additional investigation compared to a removal action option. Was this removal action considered? As part of the decision making process, were COC concentrations compared to risk-based criteria, either site-specific or generic screening level risk-based criteria?

The initial decision to perform a preliminary site assessment at SEAD-13 was based upon releases that may have occurred during the IRFNA neutralization process. The ESI conducted at SEAD-13 indicates that impacts to the groundwater have occurred at this site. The connection between the groundwater and the surface water of the adjacent "Duck Ponds" have not been fully evaluated, although it appears that the most significant component that has been released is nitrate/nitrite-nitrogen. Concerns regarding the pH of the groundwater and surface water does not appear to be an issue. The results of the ESI suggests that the groundwater at the site has been impacted by the release of nitrate/nitrite-nitrogen and possibly heavy metals. Elevated nitrite/nitrate- nitrogen levels were identified in one well downgradient of the former disposal pits. This elevated value is consistent with what would have been expected to be released from the disposal and neutralization practices that were followed at SEAD-13. While no TAGM exists for nitrite\nitrate nitrogen in soils, the soil samples collected at the site indicate that elevated levels of nitrite\nitrate nitrogen are present in many of the soil samples analyzed. TAGM exceedances were also noted for several heavy metals, in particular aluminum, arsenic, chromium, copper, iron, nickel, and thallium were found at the highest concentrations and in the largest number of samples above the associated TAGM values.

Six metals, antimony, chromium, iron, lead, magnesium, and manganese were found in the groundwater samples at concentrations above the criteria value. Magnesium was found in all of the monitoring wells at concentrations above the criteria value of 35,000 µg/L. The maximum concentration for magnesium. 188,000 µg/L, was found in the groundwater sample collected from monitoring well MW13-2. Iron exceeded the NYSDEC Class GA criteria in four of the five wells sampled, MW13-1, MW13-2, MW13-4, and MW13-6. The maximum concentration, 69,400 µg/L, was detected in the groundwater sample collected from monitoring well MW13-1. Manganese was found in three of the five samples at concentrations exceeding the NYSDEC Class GA groundwater standard of 300 µg/L, with a maximum concentration of 1120 µg/L found in the groundwater sample collected from monitoring well MW13-1. Chromium and lead were found in one well at a concentration above the criteria value. A concentration of 69.4 µg/L for chromium and 34.8 µg/L for lead were both found in the groundwater sample collected from monitoring well MW13-1. Antimony was found in four of the five samples at concentrations exceeding the NYSDEC Class GA groundwater standard of 3 µg/L and the federal MCL standard of 6 µg/L. A maximum concentration of 52.7J µg/L was found in the groundwater sample collected from monitoring well MW13-6. These data do not appear to be the result of turbidities of the groundwater samples since the sample with the highest heavy metal concentrations generally had low turbidity values.

Based upon the results of the ESI conducted at SEAD-13 a threat exists due to the presence of elevated nitrite\nitrate-nitrogen and heavy metal concentrations in the groundwater and surface water. Therefore, it is recommended that an RI/FS be conducted to fully define the impacts and the risks from site soils and surface water and groundwater.

6. Was a site-specific risk assessment performed? Describe the results:

a) Did site-specific current or potential future health risks exceed the acceptable carcinogenic risk range or Hazard Index (HI) level? Define these with respect to the site.

b) If the answer to 6a is yes, please identify the media, pathway(s), and receptor(s) that had potentially unacceptable health risk. Identify any deviations from USEPA risk assessment guidance that were used to estimate potential risk.

An Expanded Site Inspection (ESI) has been completed at SEAD-13, however, no risk assessment has been performed.

7. Was an alternatives analysis performed (i.e. Feasibility Study/Corrective Measures Study (FS/CMS))? If so, describe the analysis and the selected alternative.

Only an Expanded Site Inspection (ESI) has been completed at SEAD-13. No Feasibility Study or Corrective Measures Study has been performed to date.

8. Identify and discuss the data used to support the decision that remediation to risk-based criteria was practicable.

a) If remediation to risk-based criteria was practicable, was a remedial action (RA) completed? Describe the completed RA and the remedial alternatives considered.

b) If remediation to risk-based criteria was not practicable, was an interim removal action (IRA) completed? Describe the completed IRA and any alternatives considered.

The work at SEAD-13 has not progressed to this point. While an Interim Removal Action (IRA) has not been completed, this step was evaluated as a possible recommendation of the ESI report.

9. What is the current site status? If applicable, provide a discussion of long-term monitoring requirements including frequency of monitoring, list of measured parameters, number of sample locations, and the criteria established to terminate or complete the monitoring program.

An ESI has been completed at SEAD-13. This project is waiting to perform an RI/BRA.

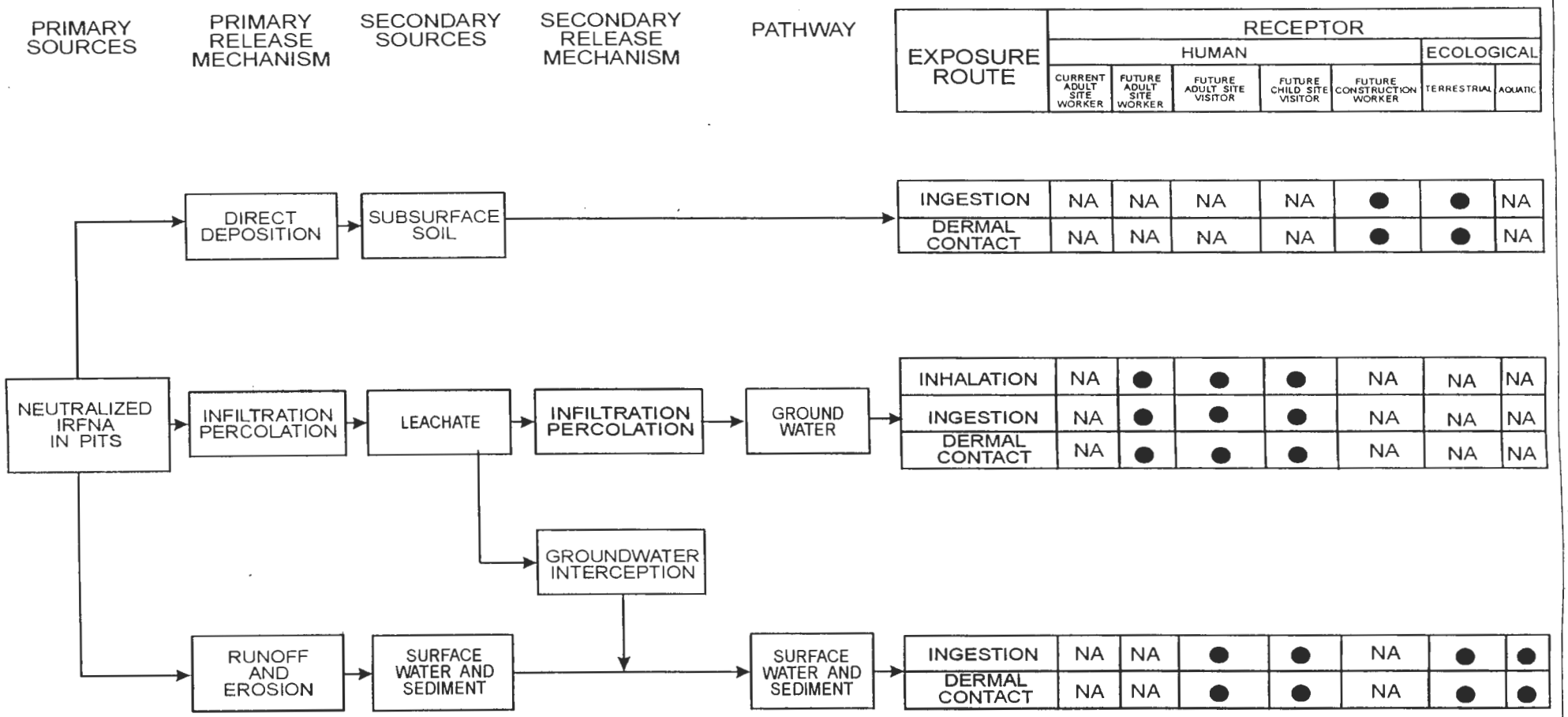
Project Funding

1. Provide total past environmental restoration expenditures.
2. Provide total planned environmental restoration expenditures (with schedule).

Attachments

Maps: Location maps, boring maps with data, well maps with data, potentiometric surface maps, geologic maps, etc.

Data Tables: Tabular presentation of data that is considered to be a driver for additional work, risk, or clean-up.



EXPOSURE ROUTE	RECEPTOR						
	HUMAN					ECOLOGICAL	
	CURRENT ADULT SITE WORKER	FUTURE ADULT SITE WORKER	FUTURE ADULT SITE VISITOR	FUTURE CHILD SITE VISITOR	FUTURE CONSTRUCTION WORKER	TERRESTRIAL	AQUATIC
INGESTION	NA	NA	NA	NA	●	●	NA
DERMAL CONTACT	NA	NA	NA	NA	●	●	NA
INHALATION	NA	●	●	●	NA	NA	NA
INGESTION	NA	●	●	●	NA	NA	NA
DERMAL CONTACT	NA	●	●	●	NA	NA	NA
INGESTION	NA	NA	●	●	NA	●	●
DERMAL CONTACT	NA	NA	●	●	NA	●	●

● - PATHWAY CONSIDERED TO POSE POTENTIAL RISK

NA - NOT APPLICABLE TO RECEPTOR

FUTURE LAND USE - CONSERVATION/RECREATION

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CLIENT/PROJECT TITLE

SENECA ARMY DEPOT ACTIVITY ENVIRONMENTAL PEER REVIEW PROGRAM

DEPT: ENVIRONMENTAL ENGINEERING | DWG NO: 729895-01002

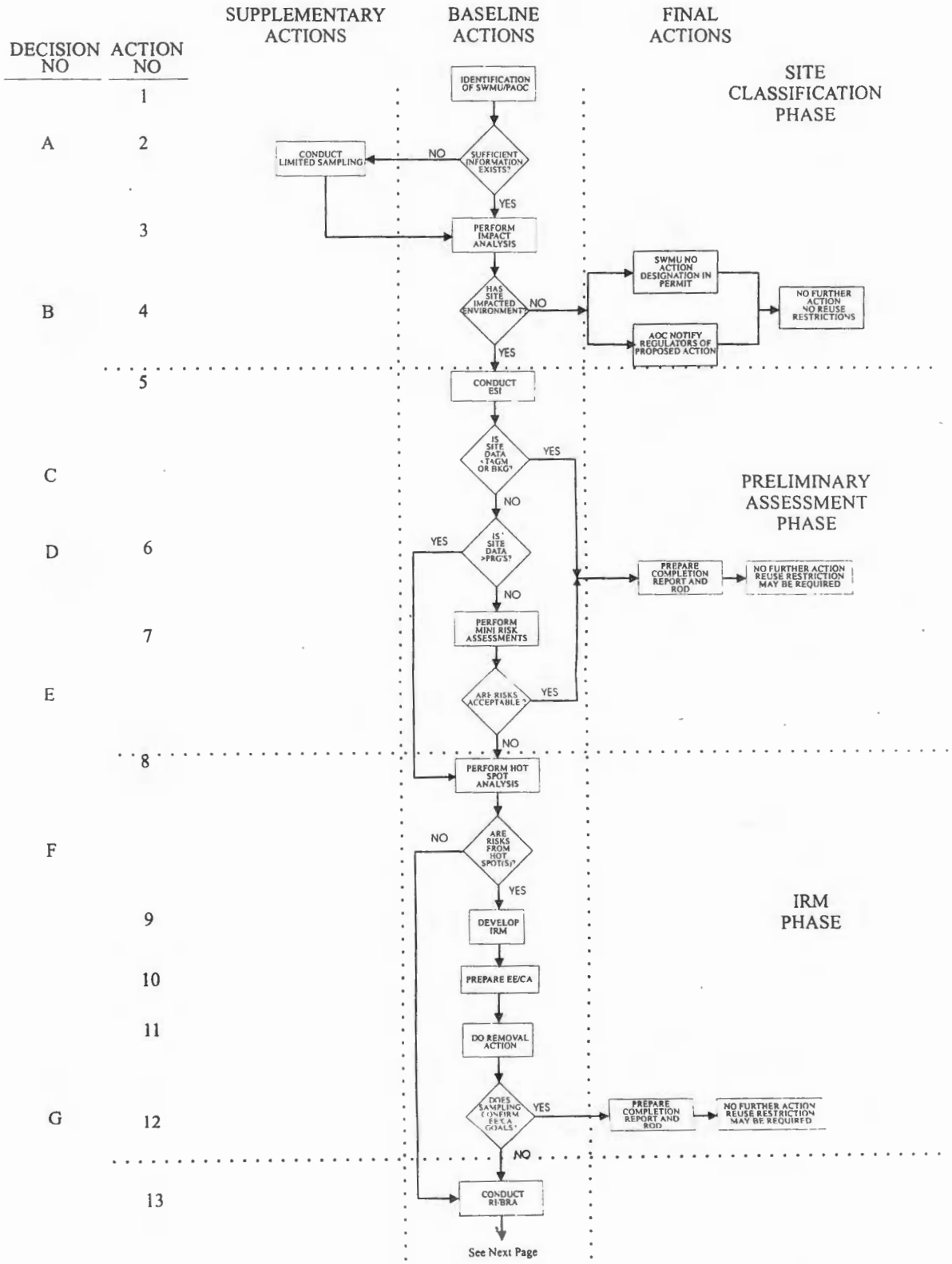
FIGURE 13-1

EXPOSURE PATHWAY SUMMARY FOR SEAD-13

SCALE: NA | DATE: APRIL 1998

G:\GRAPHICS\SENECA\EXPSM\EXP13.CDR

Decision Criteria Flowchart



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DEPT. ENVIRONMENTAL ENGINEERING

DWG NO

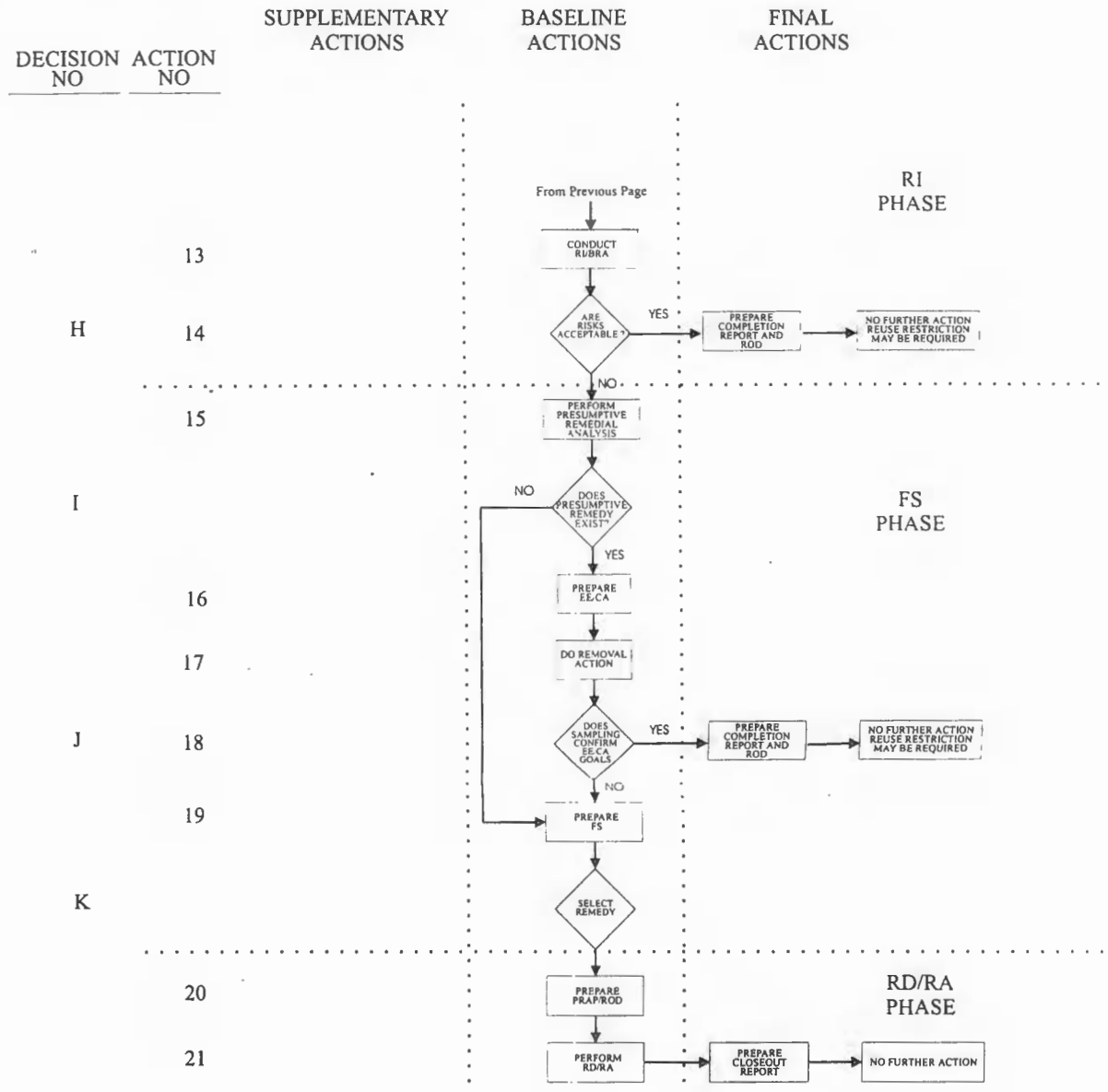
FIGURE 13-2

Decision Criteria
Remediation Flowchart

Page 1 of 2

SCALE N.A.

SENECA ARMY DEPOT ACTIVITY
Decision Criteria Flowchart



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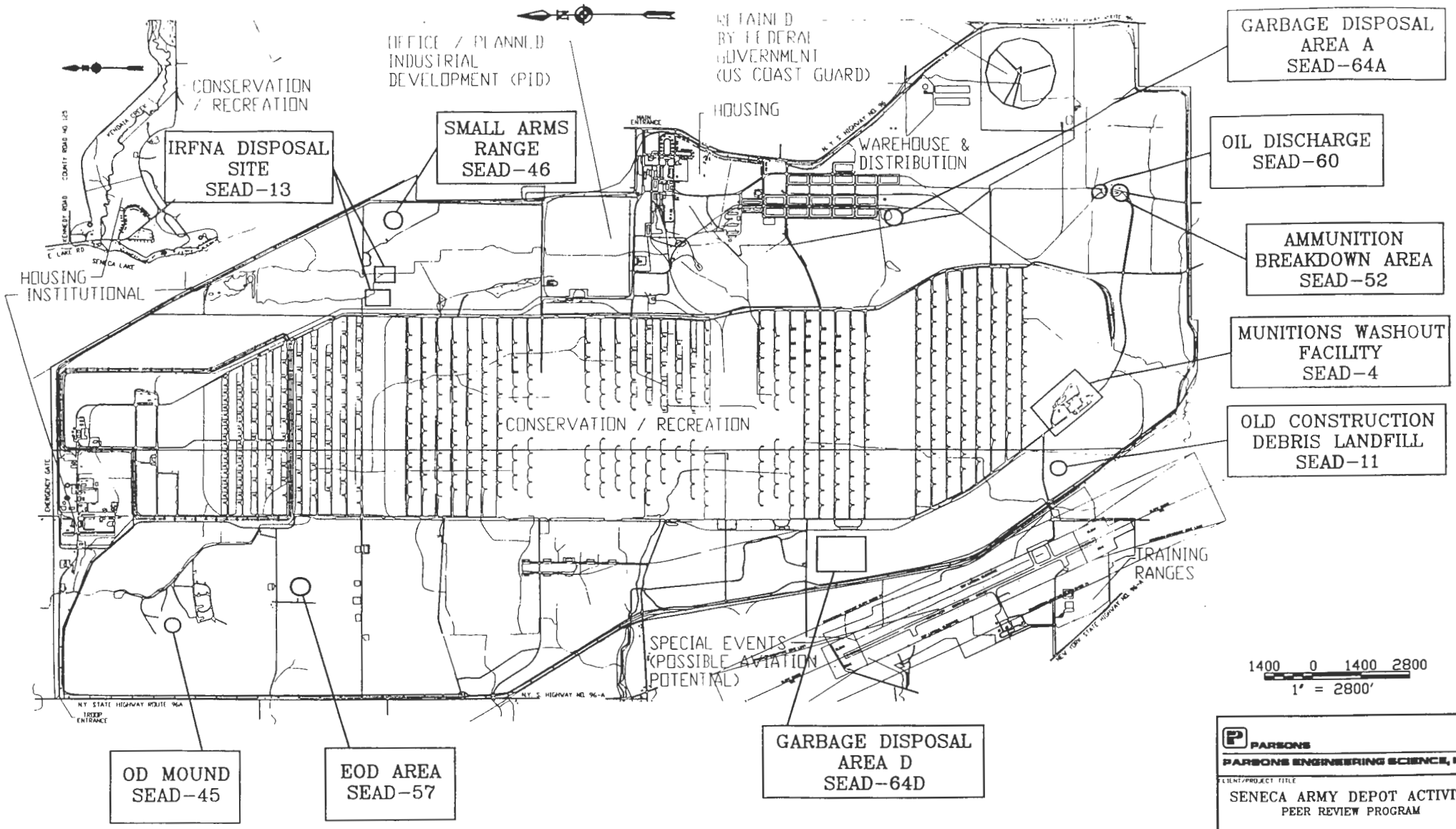
ENVIRONMENTAL PEER REVIEW PROGRAM

ENVIRONMENTAL ENGINEERING

FIGURE 13-2

Decision Criteria
Remediation Flowchart



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PARSONS ENGINEERING SCIENCE, INC.

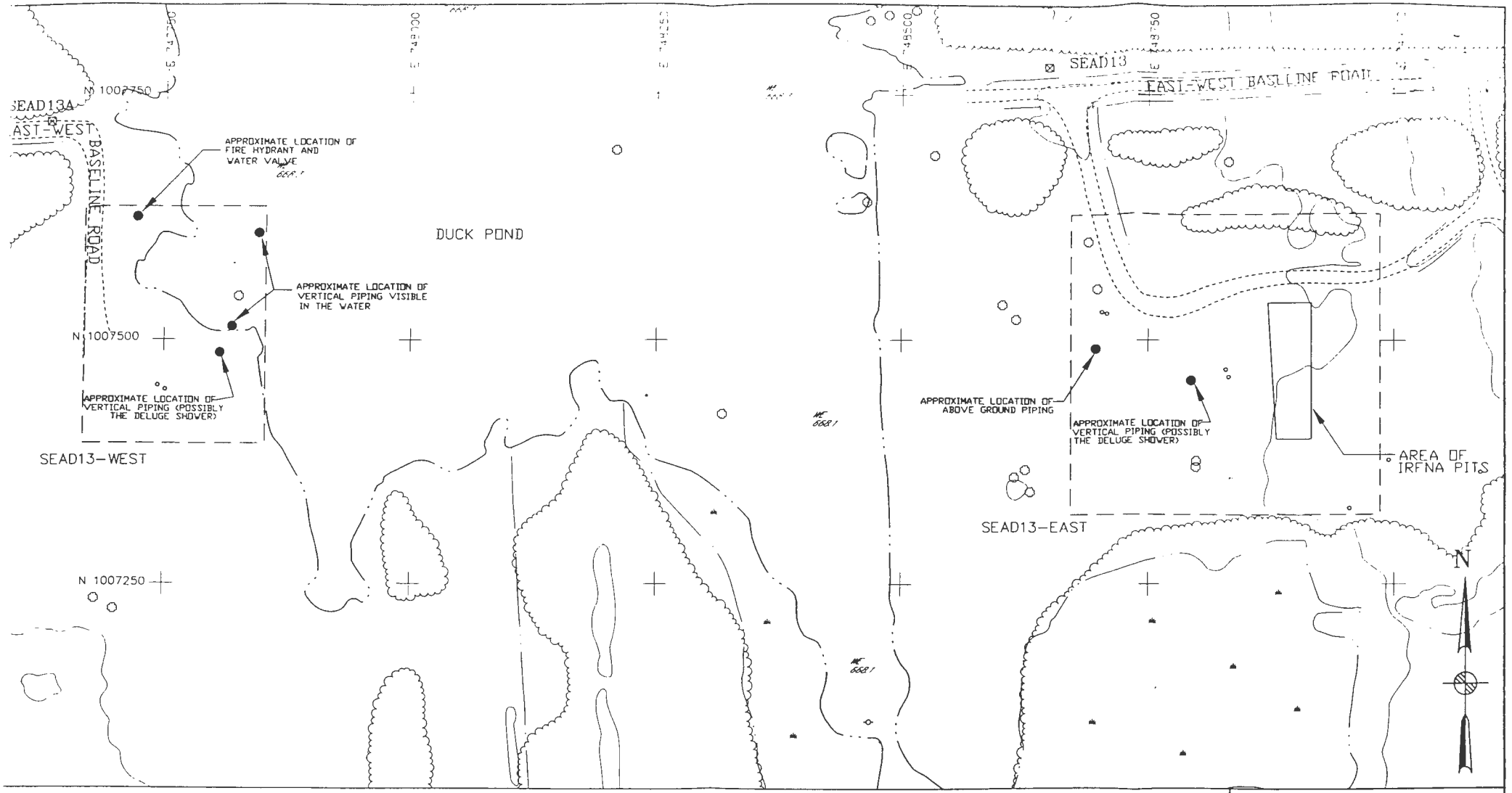
CLIENT/PROJECT TITLE

SENECA ARMY DEPOT ACTIVITY
PEER REVIEW PROGRAM

DEPT: ENVIRONMENTAL ENGINEERING | Dwg. No: 72810-02007

SITE LOCATION AND FINAL LAND USE PLAN

SCALE: 1" = 2800' | DATE: APRIL 1996 | REV: A



LEGEND

- MINOR WATERWAY
- MAJOR WATERWAY
- FENCE
- UNPAVED ROAD
- BRUSH LINE
- LANDFILL EXTENT
- RAILROAD
- GROUND SURFACE ELEVATION CONTOUR (768)
- SURVEY MONUMENT
- ROAD SIGN
- DECIDUOUS TREE
- FIRE HYDRANT
- MANHOLE
- GUIDE POST
- POLE
- UTILITY BOX
- COORDINATE GRID (250' GRID)
- OVERHEAD UTILITY POLE
- MAILBOX/RR SIGNAL

50 0 50 100 (Feet)

PARSONS

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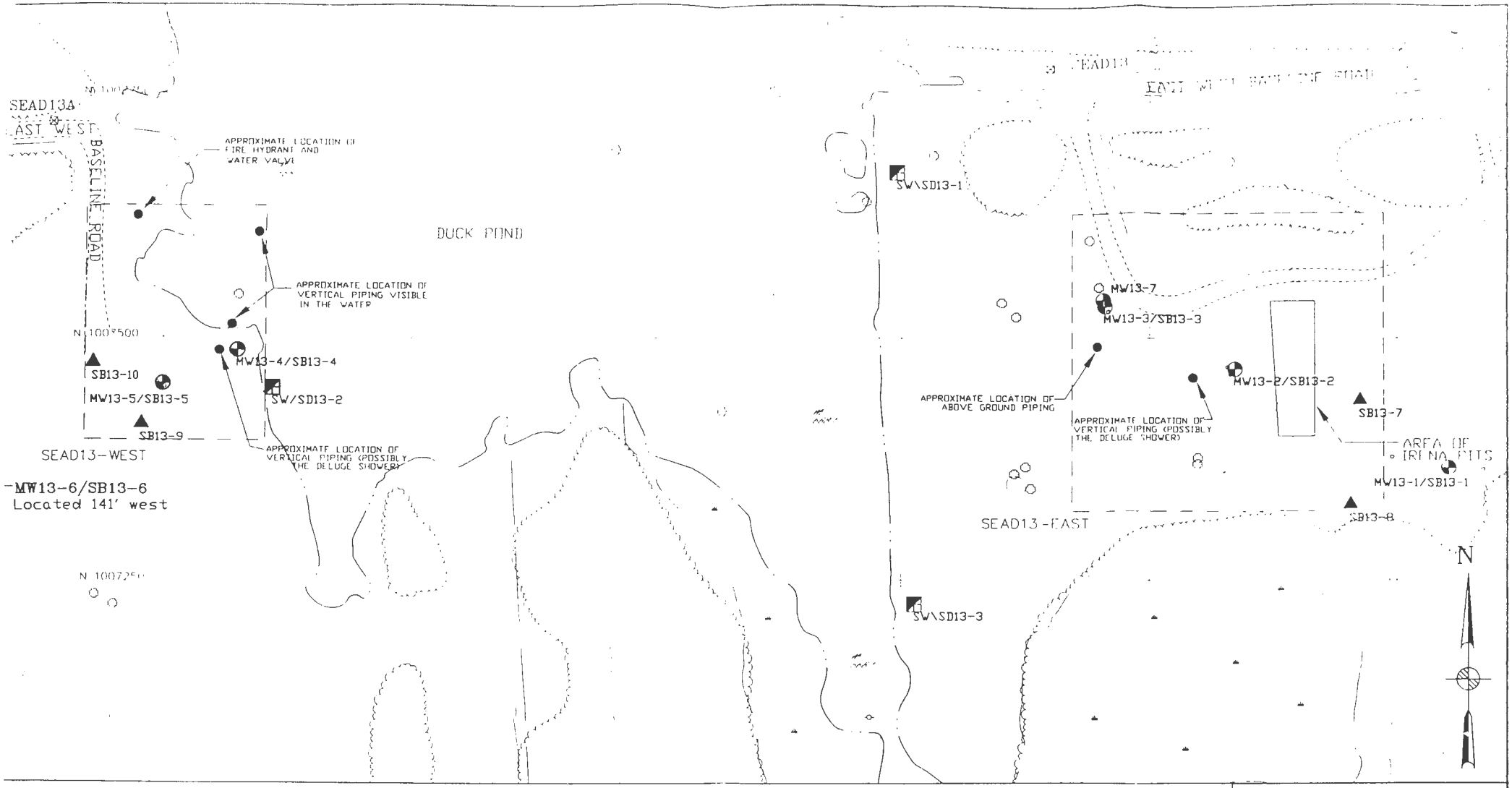
CLIENT/PROJECT TITLE

SENECA ARMY DEPOT ACTIVITY
EXPANDED SITE INSPECTION OF
3 MODERATE-PRIORITY SWMU'S

DEPT: ENVIRONMENTAL ENGINEERING | Dwg No: 720478-02000

FIGURE 1.1-13
SEAD-13 IRFNA DISPOSAL SITE
SITE PLAN

SCALE: 1" = 100' | DATE: JUNE 1995 | REV: A



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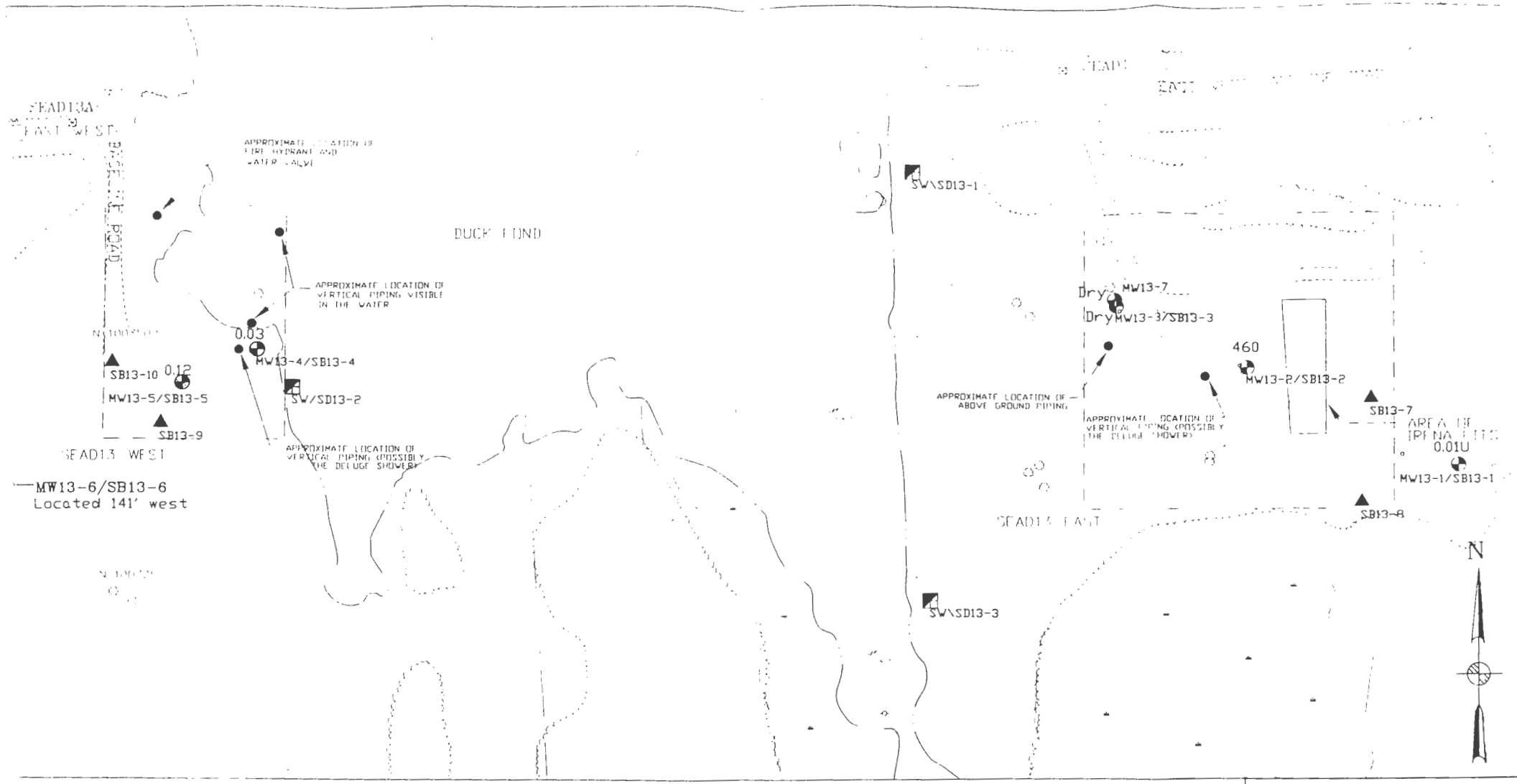
SENECA ARMY DEPOT ACTIVITY
EXPANDED SITE INSPECTION OF
3 MODERATE-PRIORITY SWMU'S

ENVIRONMENTAL ENGINEERING | Dwg No. 720476-02000

FIGURE 2.4-2
SEAD-13 IRFNA DISPOSAL SITE
LOCATION OF SAMPLING POINTS

1" = 100' | JUNE 1996 | A



LEGEND

- MINOR WATERWAY
- MAJOR WATERWAY
- FENCE
- UNPAVED ROAD
- BRUSH LINE
- LANDFILL EXTENT
- RAILROAD
- GROUND SURFACE ELEVATION CONTOUR

SURVEY MONUMENT
ROAD SIGN
DECIDUOUS TREE
FIRE HYDRANT
MANHOLE
GUIDE POST
POLE
UTILITY BOX
COORDINATE GRID (250' GRID)
OVERHEAD UTILITY POLE
MAILBOX
RR SIGNAL

0.03 EXISTING MONITORING WELL & CONCENTRATION (mg/L)
EXISTING SOIL BORING
EXISTING SURFACE WATER/SEDIMENT SAMPLE

50 0 50 100
FEET

PARSONS
PARSONS ENGINEERING SCIENCE, INC.

SENECA army DEPOT ACTIVITY
EXPANDED SITE INSPECTION OF
3 MODERATE-PRIORITY SWMU'S

ENVIRONMENTAL ENGINEERING | 720476 02000

FIGURE 4 2 1
SEAD-13 IRFNA DISPOSAL SITE
NITRATES IN GROUNDWATER (mg/L)

1" = 100' | JUNE 1995

SEAD-13

SOIL

COLLAPSED DATA TABLES

AND

SUMMARY STATISTICS TABLES

Seneca Army Depot Activity
SEAD-13 Soils
Summary Statistics
Comparison to NYSDEC TAGM 4046

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
Volatile Organics									
1,1,1-Trichloroethane	UG/KG	33	0	0.00%		0	36,850,961.54	957.110	800
1,1,2,2-Tetrachloroethane	UG/KG	33	0	0.00%		0	3,439,423.077		600
1,1,2-Trichloroethane	UG/KG	33	0	0.00%		0	1,206,815.115		
1,1-Dichloroethane	UG/KG	33	0	0.00%		0	105,288,461.5		200
1,1-Dichloroethene	UG/KG	33	0	0.00%		0	114,647.436		400
1,2-Dichloroethane	UG/KG	33	0	0.00%		0	755,917.16		100
1,2-Dichloroethene (total)	UG/KG	33	0	0.00%		0			
1,2-Dichloropropane	UG/KG	33	0	0.00%		0	1,011,595.023		
Acetone	UG/KG	33	1	3.03%	86.	0	105,288,461.5	34.270.	200
Benzene	UG/KG	33	0	0.00%		0	2,372,015.915	247.370.	60
Bromodichloromethane	UG/KG	33	0	0.00%		0	1,109,491.315		
Bromoform	UG/KG	33	0	0.00%		0	8,707,400.195		
Carbon disulfide	UG/KG	33	1	3.03%	2.	0	105,288,461.5	53.000.	2,700
Carbon tetrachloride	UG/KG	33	0	0.00%		0	529,142.012		600.
Chlorobenzene	UG/KG	33	0	0.00%		0	21,057,692.31		1,700
Chlorodibromomethane	UG/KG	33	0	0.00%		0	818,910.256		
Chloroethane	UG/KG	33	0	0.00%		0	421,153,846.2		1,900
Chloroform	UG/KG	33	0	0.00%		0	10,528,846.15	194.610.	300
Cis-1,3-Dichloropropene	UG/KG	33	0	0.00%		0			
Ethyl benzene	UG/KG	33	0	0.00%		0	105,288,461.5	1,720,290.	5,500.
Methyl bromide	UG/KG	33	0	0.00%		0	1,505,625.		
Methyl butyl ketone	UG/KG	33	0	0.00%		0			
Methyl chloride	UG/KG	33	0	0.00%		0	5,291,420.118		
Methyl ethyl ketone	UG/KG	33	1	3.03%	26.	0		421,380.	300
Methyl isobutyl ketone	UG/KG	33	0	0.00%		0	84,230,769.23		1,000
Methylene chloride	UG/KG	33	3	9.09%	4.	0	9,171,794.872	132,030.	100
Styrene	UG/KG	33	0	0.00%		0			
Tetrachloroethene	UG/KG	33	0	0.00%		0	1,322,855.03	6,454,550.	1,400
Toluene	UG/KG	33	1	3.03%	6.	0	210,576,923.1	1,552,560.	1,500
Total Xylenes	UG/KG	33	0	0.00%		0	2,105,769,231.	5,642,680.	1,200.
Trans-1,3-Dichloropropene	UG/KG	33	0	0.00%		0			
Trichloroethene	UG/KG	33	0	0.00%		0	6,253,496.503		700
Vinyl chloride	UG/KG	33	0	0.00%		0	36,204.453		200
Herbicides									
2,4,5-T	UG/KG	33	0	0.00%		0			1,900
2,4,5-TP/Silvex	UG/KG	33	0	0.00%		0			700
2,4-D	UG/KG	33	0	0.00%		0			500
2,4-DB	UG/KG	33	0	0.00%		0			
Dalapon	UG/KG	33	0	0.00%		0			
Dicamba	UG/KG	33	0	0.00%		0		22,600.	
Dichloroprop	UG/KG	33	0	0.00%		0			
Dinoseb	UG/KG	33	0	0.00%		0			
MCPA	UG/KG	33	0	0.00%		0			
MCPP	UG/KG	33	0	0.00%		0		818,180.	
Nitroaromatics									
1,3,5-Trinitrobenzene	UG/KG	6	0	0.00%		0	52,644.231		
1,3-Dinitrobenzene	UG/KG	6	0	0.00%		0	105,288.462		
2,4,6-Trinitrotoluene	UG/KG	6	0	0.00%		0	526,442.308		
2,4-Dinitrotoluene	UG/KG	6	0	0.00%		0	2,105,769.231	5,060.	
2,6-Dinitrotoluene	UG/KG	6	0	0.00%		0	1,052,884.615		1,000
2-amino-4,6-Dinitrotoluene	UG/KG	6	0	0.00%		0			
4-amino-2,6-Dinitrotoluene	UG/KG	6	0	0.00%		0			
HMX	UG/KG	6	0	0.00%		0			
RDX	UG/KG	6	0	0.00%		0			
Tetryl	UG/KG	6	0	0.00%		0			
Semivolatile Organics									
1,2,4-Trichlorobenzene	UG/KG	33	0	0.00%		0	10,528,846.15	1,132,060.	3,400
1,2-Dichlorobenzene	UG/KG	33	0	0.00%		0	94,759,615.38		7,900
1,3-Dichlorobenzene	UG/KG	33	0	0.00%		0	93,706,730.77		1,600
1,4-Dichlorobenzene	UG/KG	33	1	3.03%	3,300.	0	2,866,185.897		8,500
2,2'-oxybis(1-Chloropropane	UG/KG	33	0	0.00%		0			
2,4,5-Trichlorophenol	UG/KG	33	0	0.00%		0	105,288,461.5		100
2,4,6-Trichlorophenol	UG/KG	33	0	0.00%		0	6,253,496.503		
2,4-Dichlorophenol	UG/KG	33	0	0.00%		0	3,158,653.846		400
2,4-Dimethylphenol	UG/KG	33	0	0.00%		0	21,057,692.31		
2,4-Dinitrophenol	UG/KG	33	0	0.00%		0	2,105,769.231		200
2,4-Dinitrotoluene	UG/KG	33	0	0.00%		0	2,105,769.231	5,060	
2,6-Dinitrotoluene	UG/KG	33	0	0.00%		0	1,052,884.615		1,000
2-Chloronaphthalene	UG/KG	33	0	0.00%		0			
2-Chlorophenol	UG/KG	33	0	0.00%		0	5,264,423.077	83.200	800
2-Methylnaphthalene	UG/KG	33	0	0.00%		0		962,620	36,400
2-Methylphenol	UG/KG	33	0	0.00%		0	52,644,230.77		100
2-Nitroaniline	UG/KG	33	0	0.00%		0	63,173.077		430
2-Nitrophenol	UG/KG	33	0	0.00%		0			330

Seneca Army Depot Activity
SEAD-13 Soils
Summary Statistics
Comparison to NYSDEC TAGM 4046

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
3,3'-Dichlorobenzidine	UG/KG	33	0	0.00%		0	152,863.248		
3-Nitroaniline	UG/KG	33	0	0.00%		0	3,158,653.846		500
4,6-Dinitro-2-methylphenol	UG/KG	33	0	0.00%		0			
4-Bromophenyl phenyl ether	UG/KG	33	0	0.00%		0	61,067,307.69		
4-Chloro-3-methylphenol	UG/KG	33	0	0.00%		0			240
4-Chloroaniline	UG/KG	33	0	0.00%		0	4,211,538.462		220
4-Chlorophenyl phenyl ether	UG/KG	33	0	0.00%		0			
4-Methylphenol	UG/KG	33	1	3.03%	9,200	1			900
4-Nitroaniline	UG/KG	33	0	0.00%		0	3,158,653.846		
4-Nitrophenol	UG/KG	33	0	0.00%		0	63,173,076.92	18,680	100
Acenaphthene	UG/KG	33	1	3.03%	650.	0		2,268,070.	50,000
Acenaphthylene	UG/KG	33	0	0.00%		0		33,460	41,000
Anthracene	UG/KG	33	0	0.00%		0	315,865,384.6	1,269,040	50,000
Benzo[a]anthracene	UG/KG	33	0	0.00%		0	94,230,769	1,476,040	224
Benzo[a]pyrene	UG/KG	33	0	0.00%		0	9,423,077	562,720.	61
Benzo[b]fluoranthene	UG/KG	33	0	0.00%		0	94,230,769	59,750	1,100
Benzo[ghi]perylene	UG/KG	33	1	3.03%	20	0		76,250	50,000
Benzo[k]fluoranthene	UG/KG	33	0	0.00%		0	942,307,692	72,640	1,100
Bis(2-Chloroethoxy)methane	UG/KG	33	0	0.00%		0			
Bis(2-Chloroethyl)ether	UG/KG	33	0	0.00%		0	62,534,965		
Bis(2-Ethylhexyl)phthalate	UG/KG	33	7	21.21%	1,900.	0	4,913,461,538	39,350	50,000
Butylbenzylphthalate	UG/KG	33	0	0.00%		0	210,576,923.1		50,000
Carbazole	UG/KG	33	1	3.03%	180.	0	3,439,423,077		
Chrysene	UG/KG	33	0	0.00%		0	9,423,076,923	93,300.	400
Di-n-butylphthalate	UG/KG	33	1	3.03%	20.	0		94,697,730.	8,100
Di-n-octylphthalate	UG/KG	33	3	9.09%	210.	0	21,057,692.31		50,000
Dibenz[a,h]anthracene	UG/KG	33	0	0.00%		0	9,423,077	53,680.	14
Dibenzofuran	UG/KG	33	1	3.03%	340	0	4,211,538,462		6,200
Diethyl phthalate	UG/KG	33	0	0.00%		0	842,307,692.3	7,665,910.	7,100
Dimethylphthalate	UG/KG	33	0	0.00%		0	10,528,846,150.		2,000
Fluoranthene	UG/KG	33	1	3.03%	800.	0	42,115,384.62	7,849,900.	50,000
Fluorene	UG/KG	33	0	0.00%		0	42,115,384.62	1,755,510.	50,000
Hexachlorobenzene	UG/KG	33	0	0.00%		0	42,992.788		410
Hexachlorobutadiene	UG/KG	33	0	0.00%		0	210,576,923		
Hexachlorocyclopentadiene	UG/KG	33	0	0.00%		0	7,370,192.308		
Hexachloroethane	UG/KG	33	0	0.00%		0	1,052,884.615		
Indeno[1,2,3-cd]pyrene	UG/KG	33	0	0.00%		0	94,230.769	47,630	3,200
Isophorone	UG/KG	33	0	0.00%		0			4,400
N-Nitrosodiphenylamine	UG/KG	33	0	0.00%		0	14,038,461.54		
N-Nitrosodipropylamine	UG/KG	33	0	0.00%		0	9,826.923	1,454,550.	
Naphthalene	UG/KG	33	1	3.03%	510.	0	42,115,384.62	149,740	13,000
Nitrobenzene	UG/KG	33	0	0.00%		0	526,442.308		200
Pentachlorophenol	UG/KG	33	0	0.00%		0	573,237.18	1,415,560.	1,000
Phenanthrene	UG/KG	33	1	3.03%	1,400.	0		325,820.	50,000
Phenol	UG/KG	33	1	3.03%	14,000	1	631,730,769.2	79,520.	30
Pyrene	UG/KG	33	1	3.03%	540.	0	31,586,538.46	2,420,460.	50,000
Pesticides/PCBs									
4,4'-DDD	UG/KG	33	0	0.00%		0	286,618.59	874,990	2,900
4,4'-DDE	UG/KG	33	1	3.03%	3.6	0	202,319.005	86,590.	2,100
4,4'-DDT	UG/KG	33	0	0.00%		0	202,319.005	8,870.	2,100
Aldrin	UG/KG	33	0	0.00%		0	4,046.38	2,750.	41
Alpha-BHC	UG/KG	33	0	0.00%		0			110
Alpha-Chlordane	UG/KG	33	0	0.00%		0		142,090.	
Aroclor-1016	UG/KG	33	0	0.00%		0	73,701.923		
Aroclor-1221	UG/KG	33	0	0.00%		0			
Aroclor-1232	UG/KG	33	0	0.00%		0			
Aroclor-1242	UG/KG	33	0	0.00%		0		12,879,550.	
Aroclor-1248	UG/KG	33	0	0.00%		0			
Aroclor-1254	UG/KG	33	0	0.00%		0	21,057.692	3,925,000.	10,000
Aroclor-1260	UG/KG	33	0	0.00%		0		2,272,730.	10,000
Beta-BHC	UG/KG	33	0	0.00%		0		11,060	200
Delta-BHC	UG/KG	33	0	0.00%		0			300
Dieldrin	UG/KG	33	0	0.00%		0	4,299.279		44
Endosulfan I	UG/KG	33	0	0.00%		0	6,317,307.692	131,820.	900
Endosulfan II	UG/KG	33	0	0.00%		0	6,317,307.692		900
Endosulfan sulfate	UG/KG	33	0	0.00%		0		15,820.	1,000
Endrin	UG/KG	33	0	0.00%		0	315,865.385	240,910	100
Endrin aldehyde	UG/KG	33	0	0.00%		0	315,865.385	6,350	
Endrin ketone	UG/KG	33	0	0.00%		0	315,865.385	6,350	
Gamma-BHC/Lindane	UG/KG	33	0	0.00%		0	52,914.201		60
Gamma-Chlordane	UG/KG	33	0	0.00%		0		47,360	540
Heptachlor	UG/KG	33	0	0.00%		0	15,286.325	28,620	100
Heptachlor epoxide	UG/KG	33	0	0.00%		0	7,559.172	10	20
Methoxychlor	UG/KG	33	0	0.00%		0	5,264,423.077		
Toxaphene	UG/KG	33	0	0.00%		0			

Seneca Army Depot Activity
SEAD-13 Soils
Summary Statistics
Comparison to NYSDEC TAGM 4046

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
Metals									
Aluminum	UG/KG	33	33	100.00%	21,200,000	3	1,052,884,615		19,520,000
Antimony	UG/KG	33	8	24.24%	5,800	0	421,153,846	18,437,230	6,000
Arsenic	UG/KG	33	33	100.00%	10,200	3	45,858,974	223,670	8,900
Barium	UG/KG	33	33	100.00%	584,000	1	73,701,923,08	91,840	300,000
Beryllium	UG/KG	33	33	100.00%	1,100	0	15,997,317	6,570	1,130
Cadmium	UG/KG	33	0	0.00%		0	526,442,308	737,770	2,460
Calcium	UG/KG	33	33	100.00%	98,100,000	0			125,300,000
Chromium	UG/KG	33	33	100.00%	35,800	4	1,052,884,615	850,430	30,000
Cobalt	UG/KG	33	33	100.00%	18,900	0	63,173,076.92		30,000
Copper	UG/KG	33	33	100.00%	45,200	3	42,115,384.62	827,810	33,000
Cyanide	UG/KG	33	0	0.00%		0		13,636,360.	350
Iron	UG/KG	33	33	100.00%	42,500,000	2	315,865,384.6		37,410,000
Lead	UG/KG	33	20	60.61%	25,600	1		181,460	24,400
Magnesium	UG/KG	33	33	100.00%	25,600,000.	1			21,700,000
Manganese	UG/KG	33	33	100.00%	934,000	0	24,216,346.15	8,821,860	1,100,000
Mercury	UG/KG	33	20	60.61%	80.	0	315,865,385	1,710.	100
Nickel	UG/KG	33	33	100.00%	57,100.	4	21,057,692.31	2,833,820.	50,000
Potassium	UG/KG	33	33	100.00%	2,590,000	0			2,623,000.
Selenium	UG/KG	33	29	87.88%	1,400	0	5,264,423,077	193,140	2,000
Silver	UG/KG	33	1	3.03%	1,000.	1	5,264,423,077		800
Sodium	UG/KG	33	33	100.00%	196,000.	1			188,000
Thallium	UG/KG	33	14	42.42%	910	1	84,230,769		855
Vanadium	UG/KG	33	33	100.00%	35,800.	0	7,370,192,308		150,000
Zinc	UG/KG	33	33	100.00%	103,000	0	315,865,384.6		115,000
Other Analyses									
Fluonde	UG/KG	33	32	96.97%	193,000	0	63,173,076.92		
Nitrate/Nitrite	UG/KG	33	33	100.00%	176,000	0			

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

STUDY ID:					ESI		ESI		ESI		ESI				
SITE:					SEAD-13		SEAD-13		SEAD-13		SEAD-13				
LOC ID:					MW13-1		MW13-1		MW13-1		MW13-6				
LOC TYPE:					BACKGROUND		BACKGROUND		BACKGROUND		BACKGROUND				
SAMP_ID:					SB13-1-1		SB13-1-3		SB13-1-4		SB13-6-1				
QC CODE:					SA		SA		SA		SA				
SAMP. DETH TOP:					0		6		8		0				
SAMP. DEPTH BOT:					2		8		10		2				
MATRIX:					SOIL		SOIL		SOIL		SOIL				
SAMP. DATE:					08-Dec-93		08-Dec-93		08-Dec-93		15-Dec-93				
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q		
4-Methylphenol	UG/KG	1			900	400	U	360	U	350	U	410	U		
Phenol	UG/KG	1	631,730,769.2	79,520.	30	400.	U	360	U	350	U	410	U		
Aluminum	UG/KG	3	1,052,884,615.		19,520,000	18,300,000.		8,250,000		11,700,000		16,000,000			
Arsenic	UG/KG	3	45,858.974	223,670.	8,900.	7,000.		6,200		5,700		4,600			
Barium	UG/KG	1	73,701,923.08	91,840.	300,000	106,000		88,100		33,900		103,000			
Chromium	UG/KG	4	1,052,884,615.	850,430.	30,000	29,400.		13,300		19,600		21,500			
Copper	UG/KG	3	42,115,384.62	827,810.	33,000	11,600.		18,400.		17,600		16,000			
Iron	UG/KG	2	315,865,384.6		37,410,000.	32,500,000.		17,400,000		24,700,000		25,300,000			
Lead	UG/KG	1		181,460.	24,400.	15,000	R	9,000	R	11,700	R	13,800			
Magnesium	UG/KG	1			21,700,000.	5,890,000		20,800,000.		12,600,000		3,750,000			
Nickel	UG/KG	4	21,057,692.31	2,833,820.	50,000.	34,900.		24,000.		33,100		22,700			
Silver	UG/KG	1	5,264,423.077		800.	900	U	710	U	540	U	620	U		
Sodium	UG/KG	1			188,000.	80,600	J	155,000	J	134,000	J	61,900	J		
Thallium	UG/KG	1	84,230.769		855.	430	J	430	J	640	J	180	U		

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

					STUDY ID	ESI		ESI		ESI		ESI	
					SITE	SEAD-13		SEAD-13		SEAD-13		SEAD-13	
					LOC ID	MW13-6		MW13-6		MW13-2		MW13-2	
					LOC TYPE	BACKGROUND		BACKGROUND		SITE		SITE	
					SAMP_ID	SB13-6-3		SB13-6-4		SB13-2-1		SB13 2-3	
					QC CODE	SA		SA		SA		SA	
					SAMP DETH TOP	4		6		0		4	
					SAMP DEPTH BOT	6		8		2		6	
					MATRIX	SOIL		SOIL		SOIL		SOIL	
					SAMP DATE	15-Dec-93		15-Dec-93		09-Nov-93		09 Nov-93	
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
4-Methylphenol	UG/KG	1			900	370	U	350	U	360	U	380	U
Phenol	UG/KG	1	631,730,769 2	79,520	30	370	U	350	U	360	U	380	U
Aluminum	UG/KG	3	1,052,884,615		19,520,000	13,500,000		10,200,000		10,700,000		12,700,000	
Arsenic	UG/KG	3	45,858 974	223,670	8,900	2,700		2,300		5,600		5,400	
Barium	UG/KG	1	73,701,923.08	91,840	300,000	60,400		56,800		58,800		94,900	
Chromium	UG/KG	4	1,052,884,615.	850,430	30,000	23,500		17,800		21,200		22 900	
Copper	UG/KG	3	42,115,384 62	827,810	33,000	27,400		14,500		**45,200**		23,500	
Iron	UG/KG	2	315,865,384 6		37,410,000	26,900,000		20,700,000		25,000,000		27,700,000	
Lead	UG/KG	1		181,460	24,400	11,600		11,700		**25,600**		9,300	
Magnesium	UG/KG	1			21,700,000	6,640,000		5,220,000		5,380,000		13,300,000	
Nickel	UG/KG	4	21,057,692 31	2,833,820	50,000	41,900		33,000		46,600		40,800	
Silver	UG/KG	1	5,264,423 077		800	490	U	560	U	800	UJ	1 500	UJ
Sodium	UG/KG	1			188,000	116,000	J	141,000	J	90,200	J	131,000	J
Thallium	UG/KG	1	84,230 769		855	140	U	230	U	350	J	270	U

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

					STUDY ID	ESI		ESI		ESI		ESI	
					SITE	SEAD-13		SEAD-13		SEAD-13		SEAD-13	
					LOC ID	MW13-2		MW13-3		MW13-3		MW13-3	
					LOC TYPE	SITE		SITE		SITE		SITE	
					SAMP_ID	SB13-2-5		SB13-3-1		SB13-3-3		SB13-3-5	
					QC CODE	SA		SA		SA		SA	
					SAMP DETH TOP	8		0		4		8	
					SAMP DEPTH BOT	10		2		6		10	
					MATRIX	SOIL		SOIL		SOIL		SOIL	
					SAMP DATE	09-Nov-93		08-Dec-93		08-Dec-93		08-Dec-93	
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
4-Methylphenol	UG/KG	1			900	370	U	400	U	370	U	360	U
Phenol	UG/KG	1	631,730,769.2	79,520	30.	370	U	400	U	370	U	360	U
Aluminum	UG/KG	3	1,052,884,615.		19,520,000.	5,700,000.		10,800,000		8,720,000		13,100,000	
Arsenic	UG/KG	3	45,858.974	223,670	8,900	5,300		5,500		6,700		6,500	
Barium	UG/KG	1	73,701,923.08	91,840	300,000.	71,700		54,300		97,800		137,000	
Chromium	UG/KG	4	1,052,884,615	850,430	30,000	10,700		17,100		14,100		20,700	
Copper	UG/KG	3	42,115,384.62	827,810	33,000	18,900		26,900		23,400		23,700	
Iron	UG/KG	2	315,865,384.6		37,410,000	13,600,000		23,100,000		18,500,000		26,400,000	
Lead	UG/KG	1		181,460	24,400	7,700		10,600	R	11,900	R	14,100	R
Magnesium	UG/KG	1			21,700,000	21,200,000		25,600,000		21,700,000		14,300,000	
Nickel	UG/KG	4	21,057,692.31	2,833,820	50,000	20,000		31,400		27,100		34,400	
Silver	UG/KG	1	5,264,423.077		800	1,100	UJ	880	U	650	U	790	U
Sodium	UG/KG	1			188,000	145,000	J	163,000	J	152,000	J	163,000	J
Thallium	UG/KG	1	84,230.769		855	250	U	910	J	710	J	750	J

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

STUDY ID:					ESI	ESI	ESI	ESI
SITE:					SEAD-13	SEAD-13	SEAD-13	SEAD-13
LOC ID:					MW13-4	MW13-4	MW13-4	MW13-5
LOC TYPE:					SITE	SITE	SITE	SITE
SAMP_ID:					SB13-4-1	SB13-4-2	SB13-4-3	SB13-5-1
QC CODE:					SA	SA	SA	SA
SAMP DETH TOP:					0	2	4	0
SAMP DEPTH BOT:					2	4	6	1
MATRIX:					SOIL	SOIL	SOIL	SOIL
SAMP DATE					15-Dec-93	15-Dec-93	15-Dec-93	08-Nov-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
4-Methylphenol	UG/KG	1			900.	410. U	380. U	360 U	370 U
Phenol	UG/KG	1	631,730,769.2	79,520.	30.	410 U	380. U	360 U	370 U
Aluminum	UG/KG	3	1,052,884,615.		19,520,000.	21,200,000	15,500,000.	20,400,000	13,000,000
Arsenic	UG/KG	3	45,858.974	223,670.	8,900.	8,100.	6,800.	9,600	4,600
Barium	UG/KG	1	73,701,923.08	91,840	300,000.	129,000.	96,900.	79,100	56,700
Chromium	UG/KG	4	1,052,884,615.	850,430.	30,000	31,200	25,800.	35,800	25,400
Copper	UG/KG	3	42,115,384.62	827,810.	33,000.	21,600.	21,100.	26,500	31,200
Iron	UG/KG	2	315,865,384.6		37,410,000.	31,600,000.	30,100,000.	42,500,000	28,600,000
Lead	UG/KG	1		181,460.	24,400.	13,600.	13,600	7,100	21,300
Magnesium	UG/KG	1			21,700,000	8,780,000	10,600,000.	9,660,000	6,740,000
Nickel	UG/KG	4	21,057,692.31	2,833,820.	50,000.	38,100.	43,200.	53,000	46,100.
Silver	UG/KG	1	5,264,423.077		800.	770. U	690 U	630. U	990 UJ
Sodium	UG/KG	1			188,000.	81,500. J	183,000. J	87,800 J	94,700 J
Thallium	UG/KG	1	84,230.769		855.	220. U	200 U	180 U	200 U

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

					STUDY ID:	ESI		ESI		ESI
					SITE:	SEAD-13		SEAD-13		SEAD-13
					LOC ID:	MW13-5		MW13-5		SB13-10
					LOC TYPE:	SITE		SITE		SITE
					SAMP_ID:	SB13-5-3		SB13-5-5		SB13-10-10
					QC CODE:	SA		SA		DU
					SAMP_DETH TOP:	2		12		0
					SAMP_DEPTH BOT:	4		13		2
					MATRIX:	SOIL		SOIL		SOIL
					SAMP_DATE:	08-Nov-93		08-Nov-93		17-Dec-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE	Q	VALUE	Q	VALUE	Q
4-Methylphenol	UG/KG	1			900.	380	U	370	U	370	UJ
Phenol	UG/KG	1	631,730,769.2	79,520.	30.	380	U	370	U	370	UJ
Aluminum	UG/KG	3	1,052,884,615.		19,520,000.	14,000,000.		8,230,000.		18,500,000	
Arsenic	UG/KG	3	45,858.974	223,670.	8,900.	6,300.		4,700.		5,700	
Barium	UG/KG	1	73,701,923.08	91,840.	300,000.	98,600.		132,000.		157,000	
Chromium	UG/KG	4	1,052,884,615.	850,430.	30,000.	23,300.		14,800.		27,200	
Copper	UG/KG	3	42,115,384.62	827,810.	33,000.	26,400.		26,500.		26,600	J
Iron	UG/KG	2	315,865,384.6		37,410,000.	24,300,000.		19,600,000.		29,000,000	
Lead	UG/KG	1		181,460.	24,400.	12,800.		8,300.		11,000.	
Magnesium	UG/KG	1			21,700,000.	8,990,000.		20,700,000.		6,210,000.	
Nickel	UG/KG	4	21,057,692.31	2,833,820.	50,000.	36,800.		29,000.		32,600.	
Silver	UG/KG	1	5,264,423.077		800.	1,100	UJ	1,000	UJ	950	U
Sodium	UG/KG	1			188,000.	87,000	J	187,000	J	57,000	J
Thallium	UG/KG	1	84,230.769		855.	270	U	190	U	270	U

					STUDY ID:	ESI				
					SITE:	SEAD-13				
					LOC ID:	SB13-10				
					LOC TYPE:	SITE				
					SAMP_ID:	SB13-10-1				
					QC CODE:	SA				
					SAMP_DETH TOP:	0				
					SAMP_DEPTH BOT:	2				
					MATRIX:	SOIL				
					SAMP_DATE:	17-Dec-93				
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE	Q			
4-Methylphenol	UG/KG	1			900.	9,200	J			
Phenol	UG/KG	1	631,730,769.2	79,520.	30.	14,000	J			
Aluminum	UG/KG	3	1,052,884,615.		19,520,000.	12,000,000				
Arsenic	UG/KG	3	45,858.974	223,670.	8,900.	3,800				
Barium	UG/KG	1	73,701,923.08	91,840.	300,000.	72,200				
Chromium	UG/KG	4	1,052,884,615.	850,430.	30,000.	16,200				
Copper	UG/KG	3	42,115,384.62	827,810.	33,000.	7,500	J			
Iron	UG/KG	2	315,865,384.6		37,410,000.	16,500,000				
Lead	UG/KG	1		181,460.	24,400.	9,000.				
Magnesium	UG/KG	1			21,700,000.	2,840,000				
Nickel	UG/KG	4	21,057,692.31	2,833,820.	50,000.	14,100				
Silver	UG/KG	1	5,264,423.077		800.	850	U			
Sodium	UG/KG	1			188,000.	40,000	J			
Thallium	UG/KG	1	84,230.769		855.	270	U			

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

				STUDY ID	ESI	ESI	ESI	ESI
				SITE	SEAD-13	SEAD-13	SEAD-13	SEAD-13
				LOC ID	SB13-10	SB13-10	SB13-7	SB13-7
				LOC TYPE	SITE	SITE	SITE	SITE
				SAMP_ID	SB13-10-4	SB13-10-5	SB13-7-10	SB13-7-1
				QC CODE	SA	SA	DU	SA
				SAMP DETH TOP	6	8	0	0
				SAMP DEPTH BOT	8	10	2	2
				MATRIX	SOIL	SOIL	SOIL	SOIL
				SAMP DATE	17-Dec-93	18-Dec-93	07-Dec-93	07-Dec 93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
4-Methylphenol	UG/KG	1			900.	340 U	320 U	390 U	390 U
Phenol	UG/KG	1	631,730,769.2	79,520.	30.	340 U	320 U	390 U	390 U
Aluminum	UG/KG	3	1,052,884,615.		19,520,000.	12,100,000.	17,100,000.	14,900,000	9,810,000
Arsenic	UG/KG	3	45,858.974	223,670.	8,900.	6,600.	4,500.	8,500.	10,000.
Barium	UG/KG	1	73,701,923.08	91,840.	300,000.	174,000.	[redacted]	89,500	37,300 J
Chromium	UG/KG	4	1,052,884,615.	850,430.	30,000.	20,100.	[redacted]	21,700	17,600
Copper	UG/KG	3	42,115,384.62	827,810.	33,000.	[redacted]	17,100	26,900	31,800
Iron	UG/KG	2	315,865,384.6		37,410,000.	25,800,000.	36,800,000.	24,800,000	23,000,000
Lead	UG/KG	1		181,460	24,400.	14,800.	12,500	31,600 R	26,800 R
Magnesium	UG/KG	1			21,700,000.	16,100,000.	8,700,000.	4,850,000	4,800,000
Nickel	UG/KG	4	21,057,692.31	2,833,820.	50,000.	[redacted]	[redacted]	31,900	38,700
Silver	UG/KG	1	5,264,423.077		800.	720 U	[redacted] J	870 U	860 U
Sodium	UG/KG	1			188,000.	166,000. J	125,000. J	77,200 J	86,300 J
Thallium	UG/KG	1	84,230.769		855.	130 U	190 U	470 J	550 J

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

STUDY ID					ESI		ESI		ESI		ESI	
SITE					SEAD-13		SEAD-13		SEAD-13		SEAD-13	
LOC ID					SB13-7		SB13-7		SB13-8		SB13-8	
LOC TYPE					SITE		SITE		SITE		SITE	
SAMP_ID:					SB13-7-2		SB13-7-4		SB13-8-1		SB13-8-2	
QC CODE:					SA		SA		SA		SA	
SAMP. DETH TOP:					2		6		0		2	
SAMP DEPTH BOT					4		8		2		4	
MATRIX:					SOIL		SOIL		SOIL		SOIL	
SAMP DATE:					07-Dec-93		07-Dec-93		07-Dec-93		07-Dec-93	
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
4-Methylphenol	UG/KG	1			900	400.	U	370	U	440	U	400	U
Phenol	UG/KG	1	631,730,769.2	79,520	30	400.	U	370	U	440	U	400	U
Aluminum	UG/KG	3	1,052,884,615.		19,520,000.	14,200,000		8,490,000		15,500,000		19,600,000	
Arsenic	UG/KG	3	45,858 974	223,670.	8,900.	6,200		5,900		8,200.		10,200	
Barium	UG/KG	1	73,701,923 08	91,840	300,000.	79,100		62,700.		125,000		96,000	
Chromium	UG/KG	4	1,052,884,615.	850,430.	30,000.	23,000.		14,400		22,000		32,400	
Copper	UG/KG	3	42,115,384.62	827,810.	33,000.	27,600.		21,600.		19,400		31,500	
Iron	UG/KG	2	315,865,384.6		37,410,000.	29,500,000		18,400,000		25,500,000		41,100,000	
Lead	UG/KG	1		181,460.	24,400	17,900	R	10,500	R	19,000	R	10,000	R
Magnesium	UG/KG	1			21,700,000	18,400,000		17,200,000		4,130,000		7,940,000	
Nickel	UG/KG	4	21,057,692.31	2,833,820	50,000.	38,100		34,000		24,700		35,600	
Silver	UG/KG	1	5,264,423.077		800	890	U	700	U	1,100	U	600	U
Sodium	UG/KG	1			188,000	108,000	J	148,000	J	63,900	J	62,000	J
Thallium	UG/KG	1	84,230.769		855	780	J	620	J	300	J	500	J

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

STUDY ID:	ESI	ESI	ESI	ESI
SITE:	SEAD-13	SEAD-13	SEAD-13	SEAD-13
LOC ID:	SB13-8	SB13-9	SB13-9	SB13-9
LOC TYPE:	SITE	SITE	SITE	SITE
SAMP_ID:	SB13-8-3	SB13-9-7	SB13-9 1	SB13 9 4
QC CODE:	SA	DU	SA	SA
SAMP DETH TOP:	4	0	0	6
SAMP DEPTH BOT:	6	2	2	8
MATRIX:	SOIL	SOIL	SOIL	SOIL
SAMP DATE:	07-Dec-93	16-Dec-93	16-Dec-93	16 Dec 93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
4-Methylphenol	UG/KG	1			900.	360 U	400 U	430 U	360 U
Phenol	UG/KG	1	631,730,769.2	79,520.	30.	360 U	400 U	430 U	360 U
Aluminum	UG/KG	3	1,052,884,615.		19,520,000.	9,710,000	14,200,000	18,300,000	12,000,000
Arsenic	UG/KG	3	45,858.974	223,670.	8,900	6,000	5,300	7,800	8,000
Barium	UG/KG	1	73,701,923.08	91,840.	300,000.	119,000	105,000	124,000	191,000
Chromium	UG/KG	4	1,052,884,615.	850,430.	30,000	15,300	20,200	26,200	21,200
Copper	UG/KG	3	42,115,384.62	827,810.	33,000.	22,200	24,200	27,800	44,000
Iron	UG/KG	2	315,865,384.6		37,410,000.	19,600,000	24,300,000	31,700,000	25,200,000
Lead	UG/KG	1		181,460.	24,400.	11,200 R	14,400	13,300	14,400
Magnesium	UG/KG	1			21,700,000	19,500,000	4,350,000	5,250,000	17,700,000
Nickel	UG/KG	4	21,057,692.31	2,833,820.	50,000	31,400	28,500	35,400	45,900
Silver	UG/KG	1	5,264,423.077		800	840 U	780 U	1,100 U	930 U
Sodium	UG/KG	1			188,000	144,000 J	42,600 J	56,000 J	196,000 J
Thallium	UG/KG	1	84,230.769		855	750 J	200 U	270 U	240 U

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

STUDY ID	ESI
SITE	SEAD-13
LOC ID	SB13-9
LOC TYPE	SITE
SAMP_ID	SB13-9-6
QC CODE	SA
SAMP DETH TOP	10
SAMP DEPTH BOT	12
MATRIX	SOIL
SAMP DATE	16-Dec-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE	Q
4-Methylphenol	UG/KG	1			900	350	U
Phenol	UG/KG	1	631,730,769 2	79,520	30	350	U
Aluminum	UG/KG	3	1,052,884,615		19,520,000	13,800,000	
Arsenic	UG/KG	3	45,858 974	223,670	8,900	5,500	
Barium	UG/KG	1	73,701,923 08	91,840	300,000	173,000	
Chromium	UG/KG	4	1,052,884,615	850,430	30,000	24,600	
Copper	UG/KG	3	42,115,384 62	827,810	33,000	32,700	
Iron	UG/KG	2	315,865,384 6		37,410,000	26,800,000	
Lead	UG/KG	1		181,460	24,400	10,400	
Magnesium	UG/KG	1			21,700,000	19,800,000	
Nickel	UG/KG	4	21,057,692 31	2,833,820	50,000	40,900	
Silver	UG/KG	1	5,264,423 077		800	840	U
Sodium	UG/KG	1			188,000	175,000	J
Thallium	UG/KG	1	84,230 769		855	240	U

Seneca Army Depot Activity
SEAD-13 Soils
Summary Statistics
Comparison to Ecological PRG

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
Volatile Organics									
1,1,1-Trichloroethane	UG/KG	33	0	0.00%		0	36,850,961.54	957.110	800
1,1,2,2-Tetrachloroethane	UG/KG	33	0	0.00%		0	3,439,423.077		600
1,1,2-Trichloroethane	UG/KG	33	0	0.00%		0	1,206,815.115		
1,1-Dichloroethane	UG/KG	33	0	0.00%		0	105,288,461.5		200
1,1-Dichloroethene	UG/KG	33	0	0.00%		0	114,647.436		400
1,2-Dichloroethane	UG/KG	33	0	0.00%		0	755,917.16		100
1,2-Dichloroethene (total)	UG/KG	33	0	0.00%		0			
1,2-Dichloropropane	UG/KG	33	0	0.00%		0	1,011,595.023		
Acetone	UG/KG	33	1	3.03%	86.	0	105,288,461.5	34,270.	200
Benzene	UG/KG	33	0	0.00%		0	2,372,015.915	247.370	60
Bromodichloromethane	UG/KG	33	0	0.00%		0	1,109,491.315		
Bromoform	UG/KG	33	0	0.00%		0	8,707,400.195		
Carbon disulfide	UG/KG	33	1	3.03%	2.	0	105,288,461.5	53,000.	2,700
Carbon tetrachloride	UG/KG	33	0	0.00%		0	529,142.012		600
Chlorobenzene	UG/KG	33	0	0.00%		0	21,057,692.31		1,700
Chlorodibromomethane	UG/KG	33	0	0.00%		0	818,910.256		
Chloroethane	UG/KG	33	0	0.00%		0	421,153,846.2		1,900
Chloroform	UG/KG	33	0	0.00%		0	10,528,846.15	194,610.	300.
Cis-1,3-Dichloropropene	UG/KG	33	0	0.00%		0			
Ethyl benzene	UG/KG	33	0	0.00%		0	105,288,461.5	1,720,290.	5,500
Methyl bromide	UG/KG	33	0	0.00%		0	1,505,625.		
Methyl butyl ketone	UG/KG	33	0	0.00%		0			
Methyl chloride	UG/KG	33	0	0.00%		0	5,291,420.118		
Methyl ethyl ketone	UG/KG	33	1	3.03%	26.	0		421,380.	300
Methyl isobutyl ketone	UG/KG	33	0	0.00%		0	84,230,769.23		1,000.
Methylene chloride	UG/KG	33	3	9.09%	4.	0	9,171,794.872	132,030.	100.
Styrene	UG/KG	33	0	0.00%		0			
Tetrachloroethene	UG/KG	33	0	0.00%		0	1,322,855.03	6,454,550.	1,400
Toluene	UG/KG	33	1	3.03%	6.	0	210,576,923.1	1,552,560.	1,500
Total Xylenes	UG/KG	33	0	0.00%		0	2,105,769,231.	5,642,680.	1,200
Trans-1,3-Dichloropropene	UG/KG	33	0	0.00%		0			
Trichloroethene	UG/KG	33	0	0.00%		0	6,253,496.503		700
Vinyl chloride	UG/KG	33	0	0.00%		0	36,204.453		200
Herbicides									
2,4,5-T	UG/KG	33	0	0.00%		0			1,900.
2,4,5-TP/Silvex	UG/KG	33	0	0.00%		0			700.
2,4-D	UG/KG	33	0	0.00%		0			500.
2,4-DB	UG/KG	33	0	0.00%		0			
Dalapon	UG/KG	33	0	0.00%		0			
Dicamba	UG/KG	33	0	0.00%		0		22,600.	
Dichloroprop	UG/KG	33	0	0.00%		0			
Dinoseb	UG/KG	33	0	0.00%		0			
MCPA	UG/KG	33	0	0.00%		0			
MCPP	UG/KG	33	0	0.00%		0		818,180.	
Nitroaromatics									
1,3,5-Trinitrobenzene	UG/KG	6	0	0.00%		0	52,644.231		
1,3-Dinitrobenzene	UG/KG	6	0	0.00%		0	105,288.462		
2,4,6-Trinitrotoluene	UG/KG	6	0	0.00%		0	526,442.308		
2,4-Dinitrotoluene	UG/KG	6	0	0.00%		0	2,105,769.231	5,060.	
2,6-Dinitrotoluene	UG/KG	6	0	0.00%		0	1,052,884.615		1,000.
2-amino-4,6-Dinitrotoluene	UG/KG	6	0	0.00%		0			
4-amino-2,6-Dinitrotoluene	UG/KG	6	0	0.00%		0			
HMX	UG/KG	6	0	0.00%		0			
RDX	UG/KG	6	0	0.00%		0			
Tetryl	UG/KG	6	0	0.00%		0			
Semivolatile Organics									
1,2,4-Trichlorobenzene	UG/KG	33	0	0.00%		0	10,528,846.15	1,132,060.	3,400
1,2-Dichlorobenzene	UG/KG	33	0	0.00%		0	94,759,615.38		7,900
1,3-Dichlorobenzene	UG/KG	33	0	0.00%		0	93,706,730.77		1,600
1,4-Dichlorobenzene	UG/KG	33	1	3.03%	3,300	0	2,866,185.897		8,500
2,2'-oxybis(1-Chloropropane)	UG/KG	33	0	0.00%		0			
2,4,5-Trichlorophenol	UG/KG	33	0	0.00%		0	105,288,461.5		100
2,4,6-Trichlorophenol	UG/KG	33	0	0.00%		0	6,253,496.503		
2,4-Dichlorophenol	UG/KG	33	0	0.00%		0	3,158,653.846		400
2,4-Dimethylphenol	UG/KG	33	0	0.00%		0	21,057,692.31		
2,4-Dinitrophenol	UG/KG	33	0	0.00%		0	2,105,769.231		200
2,4-Dinitrotoluene	UG/KG	33	0	0.00%		0	2,105,769.231	5,060	
2,6-Dinitrotoluene	UG/KG	33	0	0.00%		0	1,052,884.615		1,000
2-Chloronaphthalene	UG/KG	33	0	0.00%		0			
2-Chlorophenol	UG/KG	33	0	0.00%		0	5,264,423.077	83,200	800
2-Methylnaphthalene	UG/KG	33	0	0.00%		0		962,620	36,400
2-Methylphenol	UG/KG	33	0	0.00%		0	52,644,230.77		100

Seneca Army Depot Activity
SEAD-13 Soils
Summary Statistics
Comparison to Ecological PRG

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
2-Nitroaniline	UG/KG	33	0	0.00%		0	63,173.077		430
2-Nitrophenol	UG/KG	33	0	0.00%		0			330
3,3`-Dichlorobenzidine	UG/KG	33	0	0.00%		0	152,863.248		
3-Nitroaniline	UG/KG	33	0	0.00%		0	3,158,653.846		500
4,6-Dinitro-2-methylphenol	UG/KG	33	0	0.00%		0			
4-Bromophenyl phenyl ether	UG/KG	33	0	0.00%		0	61,067,307.69		
4-Chloro-3-methylphenol	UG/KG	33	0	0.00%		0			240
4-Chloroaniline	UG/KG	33	0	0.00%		0	4,211,538.462		220
4-Chlorophenyl phenyl ether	UG/KG	33	0	0.00%		0			
4-Methylphenol	UG/KG	33	1	3.03%	9,200.	0			900
4-Nitroaniline	UG/KG	33	0	0.00%		0	3,158,653.846		
4-Nitrophenol	UG/KG	33	0	0.00%		0	63,173,076.92	18,680.	100
Acenaphthene	UG/KG	33	1	3.03%	650.	0		2,268,070.	50,000
Acenaphthylene	UG/KG	33	0	0.00%		0		33,460.	41,000
Anthracene	UG/KG	33	0	0.00%		0	315,865,384.6	1,269,040.	50,000
Benzo[a]anthracene	UG/KG	33	0	0.00%		0	94,230.769	1,476,040.	224
Benzo[a]pyrene	UG/KG	33	0	0.00%		0	9,423.077	562,720.	61
Benzo[b]fluoranthene	UG/KG	33	0	0.00%		0	94,230.769	59,750.	1,100
Benzo[ghi]perylene	UG/KG	33	1	3.03%	20.	0		76,250.	50,000
Benzo[k]fluoranthene	UG/KG	33	0	0.00%		0	942,307.692	72,640.	1,100
Bis(2-Chloroethoxy)methane	UG/KG	33	0	0.00%		0			
Bis(2-Chloroethyl)ether	UG/KG	33	0	0.00%		0	62,534.965		
Bis(2-Ethylhexyl)phthalate	UG/KG	33	7	21.21%	1,900.	0	4,913,461.538	39,350.	50,000
Butylbenzylphthalate	UG/KG	33	0	0.00%		0	210,576,923.1		50,000
Carbazole	UG/KG	33	1	3.03%	180.	0	3,439,423.077		
Chrysene	UG/KG	33	0	0.00%		0	9,423,076.923	93,300.	400
Di-n-butylphthalate	UG/KG	33	1	3.03%	20.	0		94,697,730.	8,100
Di-n-octylphthalate	UG/KG	33	3	9.09%	210.	0	21,057,692.31		50,000
Dibenz[a,h]anthracene	UG/KG	33	0	0.00%		0	9,423.077	53,680.	14
Dibenzofuran	UG/KG	33	1	3.03%	340.	0	4,211,538.462		6,200
Diethyl phthalate	UG/KG	33	0	0.00%		0	842,307,692.3	7,665,910.	7,100
Dimethylphthalate	UG/KG	33	0	0.00%		0	10,528,846,150.		2,000
Fluoranthene	UG/KG	33	1	3.03%	800.	0	42,115,384.62	7,849,900.	50,000
Fluorene	UG/KG	33	0	0.00%		0	42,115,384.62	1,755,510.	50,000
Hexachlorobenzene	UG/KG	33	0	0.00%		0	42,992.788		410
Hexachlorobutadiene	UG/KG	33	0	0.00%		0	210,576.923		
Hexachlorocyclopentadiene	UG/KG	33	0	0.00%		0	7,370,192.308		
Hexachloroethane	UG/KG	33	0	0.00%		0	1,052,884.615		
Indeno[1,2,3-cd]pyrene	UG/KG	33	0	0.00%		0	94,230.769	47,630.	3,200
Isophorone	UG/KG	33	0	0.00%		0			4,400
N-Nitrosodiphenylamine	UG/KG	33	0	0.00%		0	14,038,461.54		
N-Nitrosodipropylamine	UG/KG	33	0	0.00%		0	9,826.923	1,454,550.	
Naphthalene	UG/KG	33	1	3.03%	510.	0	42,115,384.62	149,740.	13,000
Nitrobenzene	UG/KG	33	0	0.00%		0	526,442.308		200
Pentachlorophenol	UG/KG	33	0	0.00%		0	573,237.18	1,415,560.	1,000
Phenanthrene	UG/KG	33	1	3.03%	1,400.	0		325,820.	50,000
Phenol	UG/KG	33	1	3.03%	14,000.	0	631,730,769.2	79,520.	30
Pyrene	UG/KG	33	1	3.03%	540.	0	31,586,538.46	2,420,460.	50,000
Pesticides/PCBs									
4,4`-DDD	UG/KG	33	0	0.00%		0	286,618.59	874,990.	2,900
4,4`-DDE	UG/KG	33	1	3.03%	3.6	0	202,319.005	86,590.	2,100
4,4`-DDT	UG/KG	33	0	0.00%		0	202,319.005	8,870.	2,100
Aldrin	UG/KG	33	0	0.00%		0	4,046.38	2,750.	41
Alpha-BHC	UG/KG	33	0	0.00%		0			110
Alpha-Chlordane	UG/KG	33	0	0.00%		0		142,090.	
Aroclor-1016	UG/KG	33	0	0.00%		0	73,701.923		
Aroclor-1221	UG/KG	33	0	0.00%		0			
Aroclor-1232	UG/KG	33	0	0.00%		0			
Aroclor-1242	UG/KG	33	0	0.00%		0		12,879,550.	
Aroclor-1248	UG/KG	33	0	0.00%		0			
Aroclor-1254	UG/KG	33	0	0.00%		0	21,057.692	3,925,000.	10,000
Aroclor-1260	UG/KG	33	0	0.00%		0		2,272,730.	10,000
Beta-BHC	UG/KG	33	0	0.00%		0		11,060.	200
Delta-BHC	UG/KG	33	0	0.00%		0			300
Dieldrin	UG/KG	33	0	0.00%		0	4,299.279		44
Endosulfan I	UG/KG	33	0	0.00%		0	6,317,307.692	131,820	900
Endosulfan II	UG/KG	33	0	0.00%		0	6,317,307.692		900
Endosulfan sulfate	UG/KG	33	0	0.00%		0		15,820	1,000
Endrin	UG/KG	33	0	0.00%		0	315,865.385	240,910	100
Endrin aldehyde	UG/KG	33	0	0.00%		0	315,865.385	6,350	
Endrin ketone	UG/KG	33	0	0.00%		0	315,865.385	6,350	
Gamma-BHC/Lindane	UG/KG	33	0	0.00%		0	52,914.201		60
Gamma-Chlordane	UG/KG	33	0	0.00%		0		47,360	540

Seneca Army Depot Activity
SEAD-13 Soils
Summary Statistics
Comparison to Ecological PRG

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
Heptachlor	UG/KG	33	0	0.00%		0	15,286.325	28.620	100
Heptachlor epoxide	UG/KG	33	0	0.00%		0	7.559 172	10	20
Methoxychlor	UG/KG	33	0	0.00%		0	5,264,423.077		
Toxaphene	UG/KG	33	0	0.00%		0			
Metals									
Aluminum	UG/KG	33	33	100.00%	21,200,000.	0	1,052,884,615.		19,520,000
Antimony	UG/KG	33	8	24 24%	5,800.	0	421,153.846	18,437,230.	6.000
Arsenic	UG/KG	33	33	100.00%	10,200	0	45,858.974	223,670.	8,900
Banum	UG/KG	33	33	100.00%	584,000.	19	73,701,923.08	91,840.	300.000
Beryllium	UG/KG	33	33	100.00%	1,100	0	15,997.317	6,570.	1,130.
Cadmium	UG/KG	33	0	0.00%		0	526,442.308	737,770.	2,460
Calcium	UG/KG	33	33	100.00%	98,100,000.	0			125,300,000
Chromium	UG/KG	33	33	100.00%	35,800.	0	1,052,884.615.	850,430.	30,000
Cobalt	UG/KG	33	33	100.00%	18,900.	0	63,173,076.92		30,000
Copper	UG/KG	33	33	100.00%	45,200	0	42,115,384.62	827,810	33,000
Cyanide	UG/KG	33	0	0.00%		0		13,636,360.	350
Iron	UG/KG	33	33	100.00%	42,500,000.	0	315,865,384.6		37,410,000
Lead	UG/KG	33	20	60.61%	25,600.	0		181,460.	24,400
Magnesium	UG/KG	33	33	100.00%	25,600,000.	0			21,700,000
Manganese	UG/KG	33	33	100.00%	934,000.	0	24,216,346.15	8,821,860.	1,100,000.
Mercury	UG/KG	33	20	60.61%	80.	0	315,865.385	1,710.	100
Nickel	UG/KG	33	33	100.00%	57,100.	0	21,057,692.31	2,833,820.	50,000.
Potassium	UG/KG	33	33	100.00%	2,590,000.	0			2,623,000.
Selenium	UG/KG	33	29	87.88%	1,400.	0	5,264,423.077	193,140.	2,000
Silver	UG/KG	33	1	3.03%	1,000.	0	5,264,423.077		800
Sodium	UG/KG	33	33	100.00%	196,000.	0			188,000
Thallium	UG/KG	33	14	42.42%	910.	0	84,230.769		855
Vanadium	UG/KG	33	33	100.00%	35,800.	0	7,370,192.308		150,000
Zinc	UG/KG	33	33	100.00%	103,000.	0	315,865,384.6		115,000
Other Analyses									
Fluoride	UG/KG	33	32	96.97%	193,000.	0	63,173,076.92		
Nitrate/Nitrite	UG/KG	33	33	100.00%	176,000.	0			
		0	0	100.00%		0			

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID	ESI	ESI	ESI	ESI
					SITE:	SEAD-13	SEAD-13	SEAD-13	SEAD-13
					LOC ID	MW13-1	MW13-1	MW13-1	MW13-6
					LOC TYPE	BACKGROUND	BACKGROUND	BACKGROUND	BACKGROUND
					SAMP_ID	SB13-1-1	SB13-1-3	SB13-1-4	SB13-6-1
					QC CODE	SA	SA	SA	SA
					SAMP DETH TOP	0	6	8	0
					SAMP DEPTH BOT	2	8	10	2
					MATRIX	SOIL	SOIL	SOIL	SOIL
					SAMP DATE	08-Dec-93	08-Dec-93	08-Dec-93	15-Dec-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Barium	UG/KG	19	73,701,923 08	91,840	300,000	**106,000**	88,100	33,900	**103,000**

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID:	ESI	ESI	ESI	ESI
					SITE:	SEAD-13	SEAD-13	SEAD-13	SEAD-13
					LOC ID:	MW13-6	MW13-6	MW13-2	MW13-2
					LOC TYPE:	BACKGROUND	BACKGROUND	SITE	SITE
					SAMP_ID:	SB13-6-3	SB13-6-4	SB13-2-1	SB13-2-3
					QC CODE:	SA	SA	SA	SA
					SAMP DETH TOP:	4	6	0	4
					SAMP DEPTH BOT:	6	8	2	6
					MATRIX:	SOIL	SOIL	SOIL	SOIL
					SAMP DATE:	15-Dec-93	15-Dec-93	09-Nov-93	09 Nov-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Barium	UG/KG	19	73,701,923.08	91,840	300,000.	60,400.	56,800	58,800	94,900

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID	ESI	ESI	ESI	ESI
					SITE	SEAD-13	SEAD-13	SEAD-13	SEAD-13
					LOC ID	MW13-2	MW13-3	MW13-3	MW13-3
					LOC TYPE	SITE	SITE	SITE	SITE
					SAMP_ID	SB13-2-5	SB13-3-1	SB13-3-3	SB13 3-5
					QC CODE	SA	SA	SA	SA
					SAMP DETH TOP	8	0	4	8
					SAMP DEPTH BOT	10	2	6	10
					MATRIX	SOIL	SOIL	SOIL	SOIL
					SAMP DATE	09-Nov-93	08-Dec-93	08-Dec-93	08 Dec 93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Barium	UG/KG	19	73,701,923 08	91,840	300,000	71,700	54,300	97,800.	137,000.

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID:	ESI	ESI	ESI	ESI
					SITE	SEAD-13	SEAD-13	SEAD-13	SEAD-13
					LOC ID:	MW13-4	MW13-4	MW13-4	MW13-5
					LOC TYPE:	SITE	SITE	SITE	SITE
					SAMP_ID	SB13-4-1	SB13-4-2	SB13-4-3	SB13-5-1
					QC CODE:	SA	SA	SA	SA
					SAMP DETH TOP:	0	2	4	0
					SAMP DEPTH BOT:	2	4	6	1
					MATRIX:	SOIL	SOIL	SOIL	SOIL
					SAMP DATE	15-Dec-93	15-Dec-93	15-Dec-93	08-Nov-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Barium	UG/KG	19	73,701,923.08	91,840	300,000	[redacted]	[redacted]	79,100	56,700

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID	ESI	ESI	ESI	ESI
					SITE	SEAD-13	SEAD-13	SEAD-13	SEAD-13
					LOC ID.	MW13-5	MW13-5	SB13-10	SB13-10
					LOC TYPE	SITE	SITE	SITE	SITE
					SAMP_ID.	SB13-5-3	SB13-5-5	SB13-10-10	SB13-10-1
					QC CODE	SA	SA	DU	SA
					SAMP DETH TOP	2	12	0	0
					SAMP DEPTH BOT	4	13	2	2
					MATRIX	SOIL	SOIL	SOIL	SOIL
					SAMP DATE	08-Nov-93	08-Nov-93	17-Dec-93	17-Dec-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Barium	UG/KG	19	73,701,923.08	91,840	300,000	98,600	132,000	157,000	72,200

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID	ESI	ESI	ESI	ESI
					SITE	SEAD-13	SEAD-13	SEAD-13	SEAD-13
					LOC ID	SB13-10	SB13-10	SB13-7	SB13-7
					LOC TYPE	SITE	SITE	SITE	SITE
					SAMP_ID	SB13-10-4	SB13-10-5	SB13-7-10	SB13-7 1
					QC CODE	SA	SA	DU	SA
					SAMP DETH TOP	6	8	0	0
					SAMP DEPTH BOT	8	10	2	2
					MATRIX	SOIL	SOIL	SOIL	SOIL
					SAMP DATE	17-Dec-93	18-Dec-93	07-Dec-93	07 Dec-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Barium	UG/KG	19	73,701,923.08	91,840	300,000	[redacted] 174,000	[redacted] 584,000	89,500	37.300 J

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID	ESI	ESI	ESI	ESI
					SITE	SEAD-13	SEAD-13	SEAD-13	SEAD-13
					LOC ID	SB13-7	SB13-7	SB13-8	SB13-8
					LOC TYPE	SITE	SITE	SITE	SITE
					SAMP_ID	SB13-7-2	SB13-7-4	SB13-8-1	SB13-8-2
					QC CODE	SA	SA	SA	SA
					SAMP DETH TOP	2	6	0	2
					SAMP DEPTH BOT	4	8	2	4
					MATRIX	SOIL	SOIL	SOIL	SOIL
					SAMP DATE	07-Dec-93	07-Dec-93	07-Dec-93	07-Dec-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Barium	UG/KG	19	73,701,923.08	91,840	300,000	79,100	62,700	[illegible] 125,000	[illegible] 96,000

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID:	ESI	ESI	ESI	ESI
					SITE:	SEAD-13	SEAD-13	SEAD-13	SEAD-13
					LOC ID:	SB13-8	SB13-9	SB13-9	SB13-9
					LOC TYPE:	SITE	SITE	SITE	SITE
					SAMP_ID:	SB13-8-3	SB13-9-7	SB13-9-1	SB13-9 4
					QC CODE:	SA	DU	SA	SA
					SAMP DETH TOP:	4	0	0	6
					SAMP. DEPTH BOT:	6	2	2	8
					MATRIX:	SOIL	SOIL	SOIL	SOIL
					SAMP DATE:	07-Dec-93	16-Dec-93	16-Dec-93	16-Dec-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Barium	UG/KG	19	73,701,923.08	91,840.	300,000.	[redacted] 119,000.	[redacted] 105,000.	[redacted] 124,000.	[redacted] 191,000.

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Ecological PRG

STUDY ID:	ESI
SITE:	SEAD-13
LOC ID:	SB13-9
LOC TYPE:	SITE
SAMP_ID:	SB13-9-6
QC CODE:	SA
SAMP DETH TOP:	10
SAMP DEPTH BOT:	12
MATRIX:	SOIL
SAMP DATE:	16-Dec-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q
Barium	UG/KG	19	73,701,923 08	91,840	300,000	[redacted]

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Recreational PRG

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
Volatile Organics									
1,1,1-Trichloroethane	UG/KG	33	0	0.00%		0	36,850,961.54	957,110.	800
1,1,2,2-Tetrachloroethane	UG/KG	33	0	0.00%		0	3,439,423.077		600
1,1,2-Trichloroethane	UG/KG	33	0	0.00%		0	1,206,815.115		
1,1-Dichloroethane	UG/KG	33	0	0.00%		0	105,288,461.5		200
1,1-Dichloroethene	UG/KG	33	0	0.00%		0	114,647.436		400
1,2-Dichloroethane	UG/KG	33	0	0.00%		0	755,917.16		100
1,2-Dichloroethene (total)	UG/KG	33	0	0.00%		0			
1,2-Dichloropropane	UG/KG	33	0	0.00%		0	1,011,595.023		
Acetone	UG/KG	33	1	3.03%	86.	0	105,288,461.5	34,270.	200.
Benzene	UG/KG	33	0	0.00%		0	2,372,015.915	247,370.	60.
Bromodichloromethane	UG/KG	33	0	0.00%		0	1,109,491.315		
Bromoform	UG/KG	33	0	0.00%		0	8,707,400.195		
Carbon disulfide	UG/KG	33	1	3.03%	2.	0	105,288,461.5	53,000.	2,700.
Carbon tetrachloride	UG/KG	33	0	0.00%		0	529,142.012		600
Chlorobenzene	UG/KG	33	0	0.00%		0	21,057,692.31		1,700.
Chlorodibromomethane	UG/KG	33	0	0.00%		0	818,910.256		
Chloroethane	UG/KG	33	0	0.00%		0	421,153,846.2		1,900.
Chloroform	UG/KG	33	0	0.00%		0	10,528,846.15	194,610.	300
Cis-1,3-Dichloropropene	UG/KG	33	0	0.00%		0			
Ethyl benzene	UG/KG	33	0	0.00%		0	105,288,461.5	1,720,290.	5,500.
Methyl bromide	UG/KG	33	0	0.00%		0	1,505,625.		
Methyl butyl ketone	UG/KG	33	0	0.00%		0			
Methyl chloride	UG/KG	33	0	0.00%		0	5,291,420.118		
Methyl ethyl ketone	UG/KG	33	1	3.03%	26.	0		421,380.	300.
Methyl isobutyl ketone	UG/KG	33	0	0.00%		0	84,230,769.23		1,000.
Methylene chloride	UG/KG	33	3	9.09%	4.	0	9,171,794.872	132,030.	100.
Styrene	UG/KG	33	0	0.00%		0			
Tetrachloroethene	UG/KG	33	0	0.00%		0	1,322,855.03	6,454,550.	1,400.
Toluene	UG/KG	33	1	3.03%	6.	0	210,576,923.1	1,552,560.	1,500.
Total Xylenes	UG/KG	33	0	0.00%		0	2,105,769,231.	5,642,680.	1,200.
Trans-1,3-Dichloropropene	UG/KG	33	0	0.00%		0			
Trichloroethene	UG/KG	33	0	0.00%		0	6,253,496.503		700.
Vinyl chloride	UG/KG	33	0	0.00%		0	36,204.453		200.
Herbicides									
2,4,5-T	UG/KG	33	0	0.00%		0			1,900
2,4,5-TP/Silvex	UG/KG	33	0	0.00%		0			700
2,4-D	UG/KG	33	0	0.00%		0			500.
2,4-DB	UG/KG	33	0	0.00%		0			
Dalapon	UG/KG	33	0	0.00%		0			
Dicamba	UG/KG	33	0	0.00%		0		22,600.	
Dichloroprop	UG/KG	33	0	0.00%		0			
Dinoseb	UG/KG	33	0	0.00%		0			
MCPA	UG/KG	33	0	0.00%		0			
MCPP	UG/KG	33	0	0.00%		0		818,180.	
Nitroaromatics									
1,3,5-Trinitrobenzene	UG/KG	6	0	0.00%		0	52,644.231		
1,3-Dinitrobenzene	UG/KG	6	0	0.00%		0	105,288.462		
2,4,6-Trinitrotoluene	UG/KG	6	0	0.00%		0	526,442.308		
2,4-Dinitrotoluene	UG/KG	6	0	0.00%		0	2,105,769.231	5,060.	
2,6-Dinitrotoluene	UG/KG	6	0	0.00%		0	1,052,884.615		1,000
2-amino-4,6-Dinitrotoluene	UG/KG	6	0	0.00%		0			
4-amino-2,6-Dinitrotoluene	UG/KG	6	0	0.00%		0			
HMX	UG/KG	6	0	0.00%		0			
RDX	UG/KG	6	0	0.00%		0			
Tetryl	UG/KG	6	0	0.00%		0			
Semivolatile Organics									
1,2,4-Trichlorobenzene	UG/KG	33	0	0.00%		0	10,528,846.15	1,132,060.	3,400
1,2-Dichlorobenzene	UG/KG	33	0	0.00%		0	94,759,615.38		7,900
1,3-Dichlorobenzene	UG/KG	33	0	0.00%		0	93,706,730.77		1,600
1,4-Dichlorobenzene	UG/KG	33	1	3.03%	3,300	0	2,866,185.897		8,500
2,2'-oxybis(1-Chloropropane	UG/KG	33	0	0.00%		0			
2,4,5-Trichlorophenol	UG/KG	33	0	0.00%		0	105,288,461.5		100
2,4,6-Trichlorophenol	UG/KG	33	0	0.00%		0	6,253,496.503		
2,4-Dichlorophenol	UG/KG	33	0	0.00%		0	3,158,653.846		400
2,4-Dimethylphenol	UG/KG	33	0	0.00%		0	21,057,692.31		
2,4-Dinitrophenol	UG/KG	33	0	0.00%		0	2,105,769.231		200
2,4-Dinitrotoluene	UG/KG	33	0	0.00%		0	2,105,769.231	5,060.	
2,6-Dinitrotoluene	UG/KG	33	0	0.00%		0	1,052,884.615		1,000
2-Chloronaphthalene	UG/KG	33	0	0.00%		0			
2-Chlorophenol	UG/KG	33	0	0.00%		0	5,264,423.077	83,200.	800
2-Methylnaphthalene	UG/KG	33	0	0.00%		0		962,620.	36,400
2-Methylphenol	UG/KG	33	0	0.00%		0	52,644,230.77		100
2-Nitroaniline	UG/KG	33	0	0.00%		0	63,173.077		430
2-Nitrophenol	UG/KG	33	0	0.00%		0			330

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Recreational PRG

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
3,3'-Dichlorobenzidine	UG/KG	33	0	0.00%		0	152,863.248		
3-Nitroaniline	UG/KG	33	0	0.00%		0	3,158,653.846		500.
4,6-Dinitro-2-methylphenol	UG/KG	33	0	0.00%		0			
4-Bromophenyl phenyl ether	UG/KG	33	0	0.00%		0	61,067,307.69		
4-Chloro-3-methylphenol	UG/KG	33	0	0.00%		0			240.
4-Chloroaniline	UG/KG	33	0	0.00%		0	4,211,538.462		220.
4-Chlorophenyl phenyl ether	UG/KG	33	0	0.00%		0			
4-Methylphenol	UG/KG	33	1	3.03%	9,200.	0			900.
4-Nitroaniline	UG/KG	33	0	0.00%		0	3,158,653.846		
4-Nitrophenol	UG/KG	33	0	0.00%		0	63,173,076.92	18,680.	100.
Acenaphthene	UG/KG	33	1	3.03%	650.	0		2,268,070.	50,000
Acenaphthylene	UG/KG	33	0	0.00%		0		33,460.	41,000.
Anthracene	UG/KG	33	0	0.00%		0	315,865,384.6	1,269,040.	50,000
Benzo[a]anthracene	UG/KG	33	0	0.00%		0	94,230.769	1,476,040.	224.
Benzo[a]pyrene	UG/KG	33	0	0.00%		0	9,423.077	562,720.	61.
Benzo[b]fluoranthene	UG/KG	33	0	0.00%		0	94,230.769	59,750.	1,100.
Benzo[ghi]perylene	UG/KG	33	1	3.03%	20.	0		76,250.	50,000
Benzo[k]fluoranthene	UG/KG	33	0	0.00%		0	942,307.692	72,640.	1,100.
Bis(2-Chloroethoxy)methane	UG/KG	33	0	0.00%		0			
Bis(2-Chloroethyl)ether	UG/KG	33	0	0.00%		0	62,534.965		
Bis(2-Ethylhexyl)phthalate	UG/KG	33	7	21.21%	1,900	0	4,913,461.538	39,350.	50,000.
Butylbenzylphthalate	UG/KG	33	0	0.00%		0	210,576,923.1		50,000.
Carbazole	UG/KG	33	1	3.03%	180.	0	3,439,423.077		
Chrysene	UG/KG	33	0	0.00%		0	9,423,076.923	93,300.	400.
Di-n-butylphthalate	UG/KG	33	1	3.03%	20.	0		94,697,730.	8,100.
Di-n-octylphthalate	UG/KG	33	3	9.09%	210.	0	21,057,692.31		50,000.
Dibenz[a,h]anthracene	UG/KG	33	0	0.00%		0	9,423.077	53,680.	14.
Dibenzofuran	UG/KG	33	1	3.03%	340.	0	4,211,538.462		6,200
Diethyl phthalate	UG/KG	33	0	0.00%		0	842,307,692.3	7,665,910.	7,100.
Dimethylphthalate	UG/KG	33	0	0.00%		0	10,528,846,150.		2,000.
Fluoranthene	UG/KG	33	1	3.03%	800.	0	42,115,384.62	7,849,900.	50,000.
Fluorene	UG/KG	33	0	0.00%		0	42,115,384.62	1,755,510.	50,000.
Hexachlorobenzene	UG/KG	33	0	0.00%		0	42,992.788		410.
Hexachlorobutadiene	UG/KG	33	0	0.00%		0	210,576.923		
Hexachlorocyclopentadiene	UG/KG	33	0	0.00%		0	7,370,192.308		
Hexachloroethane	UG/KG	33	0	0.00%		0	1,052,884.615		
Indeno[1,2,3-cd]pyrene	UG/KG	33	0	0.00%		0	94,230.769	47,630.	3,200
Isophorone	UG/KG	33	0	0.00%		0			4,400.
N-Nitrosodiphenylamine	UG/KG	33	0	0.00%		0	14,038,461.54		
N-Nitrosodipropylamine	UG/KG	33	0	0.00%		0	9,826.923	1,454,550.	
Naphthalene	UG/KG	33	1	3.03%	510.	0	42,115,384.62	149,740.	13,000.
Nitrobenzene	UG/KG	33	0	0.00%		0	526,442.308		200.
Pentachlorophenol	UG/KG	33	0	0.00%		0	573,237.18	1,415,560.	1,000.
Phenanthrene	UG/KG	33	1	3.03%	1,400.	0		325,820.	50,000.
Phenol	UG/KG	33	1	3.03%	14,000.	0	631,730,769.2	79,520.	30.
Pyrene	UG/KG	33	1	3.03%	540.	0	31,586,538.46	2,420,460.	50,000
Pesticides/PCBs									
4,4'-DDD	UG/KG	33	0	0.00%		0	286,618.59	874,990.	2,900
4,4'-DDE	UG/KG	33	1	3.03%	3.6	0	202,319.005	86,590.	2,100
4,4'-DDT	UG/KG	33	0	0.00%		0	202,319.005	8,870.	2,100
Aldrin	UG/KG	33	0	0.00%		0	4,046.38	2,750.	41.
Alpha-BHC	UG/KG	33	0	0.00%		0			110.
Alpha-Chlordane	UG/KG	33	0	0.00%		0		142,090.	
Aroclor-1016	UG/KG	33	0	0.00%		0	73,701.923		
Aroclor-1221	UG/KG	33	0	0.00%		0			
Aroclor-1232	UG/KG	33	0	0.00%		0			
Aroclor-1242	UG/KG	33	0	0.00%		0		12,879,550.	
Aroclor-1248	UG/KG	33	0	0.00%		0			
Aroclor-1254	UG/KG	33	0	0.00%		0	21,057.692	3,925,000.	10,000
Aroclor-1260	UG/KG	33	0	0.00%		0		2,272,730.	10,000
Beta-BHC	UG/KG	33	0	0.00%		0		11,060.	200
Delta-BHC	UG/KG	33	0	0.00%		0			300
Dieldrin	UG/KG	33	0	0.00%		0	4,299.279		44
Endosulfan I	UG/KG	33	0	0.00%		0	6,317,307.692	131,820.	900
Endosulfan II	UG/KG	33	0	0.00%		0	6,317,307.692		900
Endosulfan sulfate	UG/KG	33	0	0.00%		0		15,820.	1,000
Endrin	UG/KG	33	0	0.00%		0	315,865.385	240,910.	100
Endrin aldehyde	UG/KG	33	0	0.00%		0	315,865.385	6,350.	
Endrin ketone	UG/KG	33	0	0.00%		0	315,865.385	6,350.	
Gamma-BHC/Lindane	UG/KG	33	0	0.00%		0	52,914.201		60
Gamma-Chlordane	UG/KG	33	0	0.00%		0		47,360.	540
Heptachlor	UG/KG	33	0	0.00%		0	15,286.325	28,620.	100
Heptachlor epoxide	UG/KG	33	0	0.00%		0	7,559.172	10.	20
Methoxychlor	UG/KG	33	0	0.00%		0	5,264,423.077		
Toxaphene	UG/KG	33	0	0.00%		0			

Seneca Army Depot Activity
SEAD-13 Soils
Collapsed Data Summary
Comparison to Recreational PRG

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
Metals									
Aluminum	UG/KG	33	33	100.00%	21,200,000.	0	1,052,884,615.		19,520,000
Antimony	UG/KG	33	8	24.24%	5,800.	0	421,153.846	18,437,230.	6,000
Arsenic	UG/KG	33	33	100.00%	10,200.	0	45,858.974	223,670.	8,900
Barium	UG/KG	33	33	100.00%	584,000.	0	73,701,923.08	91,840.	300,000
Beryllium	UG/KG	33	33	100.00%	1,100.	0	15,997.317	6,570.	1,130.
Cadmium	UG/KG	33	0	0.00%	.	0	526,442.308	737,770.	2,460
Calcium	UG/KG	33	33	100.00%	98,100,000.	0			125,300,000
Chromium	UG/KG	33	33	100.00%	35,800.	0	1,052,884,615.	850,430.	30,000.
Cobalt	UG/KG	33	33	100.00%	18,900.	0	63,173,076.92		30,000.
Copper	UG/KG	33	33	100.00%	45,200.	0	42,115,384.62	827,810.	33,000.
Cyanide	UG/KG	33	0	0.00%	.	0		13,636,360.	350
Iron	UG/KG	33	33	100.00%	42,500,000.	0	315,865,384.6		37,410,000.
Lead	UG/KG	33	20	60.61%	25,600.	0		181,460.	24,400.
Magnesium	UG/KG	33	33	100.00%	25,600,000.	0			21,700,000.
Manganese	UG/KG	33	33	100.00%	934,000.	0	24,216,346.15	8,821,860.	1,100,000.
Mercury	UG/KG	33	20	60.61%	80.	0	315,865.385	1,710.	100.
Nickel	UG/KG	33	33	100.00%	57,100.	0	21,057,692.31	2,833,820.	50,000
Potassium	UG/KG	33	33	100.00%	2,590,000.	0			2,623,000.
Selenium	UG/KG	33	29	87.88%	1,400.	0	5,264,423.077	193,140.	2,000
Silver	UG/KG	33	1	3.03%	1,000.	0	5,264,423.077		800.
Sodium	UG/KG	33	33	100.00%	196,000.	0			188,000.
Thallium	UG/KG	33	14	42.42%	910.	0	84,230.769		855.
Vanadium	UG/KG	33	33	100.00%	35,800.	0	7,370,192.308		150,000
Zinc	UG/KG	33	33	100.00%	103,000.	0	315,865,384.6		115,000
Other Analyses									
Fluoride	UG/KG	33	32	96.97%	193,000.	0	63,173,076.92		
Nitrate/Nitrite	UG/KG	33	33	100.00%	176,000.	0			

SEAD-13

GROUNDWATER

COLLAPSED DATA TABLES

AND

SUMMARY STATISTICS TABLES

Seneca Army Depot Activity
SEAD-13 Summary Satistics - Groundwater
NYS Class GA Standards

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard
Volatiles								
1,1,1-Trichloroethane	UG/L	5	0	0.00%		0	792.549	5
1,1,2,2-Tetrachloroethane	UG/L	5	0	0.00%		0	.521	5
1,1,2-Trichloroethane	UG/L	5	0	0.00%		0	.188	
1,1-Dichloroethane	UG/L	5	0	0.00%		0	811.742	5
1,1-Dichloroethene	UG/L	5	0	0.00%		0	.044	5
1,2-Dichloroethane	UG/L	5	0	0.00%		0	.116	5.
1,2-Dichloroethene (total)	UG/L	5	0	0.00%		0		5.
1,2-Dichloropropane	UG/L	5	0	0.00%		0	.989	5.
Acetone	UG/L	5	0	0.00%		0	3,650.	
Benzene	UG/L	5	0	0.00%		0	.364	7
Bromodichloromethane	UG/L	5	0	0.00%		0	1.084	
Bromoform	UG/L	5	0	0.00%		0	2.354	
Carbon disulfide	UG/L	5	0	0.00%		0	1,042.857	
Carbon tetrachloride	UG/L	5	0	0.00%		0	.163	5.
Chlorobenzene	UG/L	5	0	0.00%		0	39.431	5.
Chlorodibromomethane	UG/L	5	0	0.00%		0	.8	
Chloroethane	UG/L	5	0	0.00%		0	8,591.77	5.
Chloroform	UG/L	5	0	0.00%		0	.153	7
Cis-1,3-Dichloropropene	UG/L	5	0	0.00%		0		5.
Ethyl benzene	UG/L	5	0	0.00%		0	1,328.117	5.
Methyl bromide	UG/L	5	0	0.00%		0	8.699	
Methyl butyl ketone	UG/L	5	0	0.00%		0		
Methyl chloride	UG/L	5	0	0.00%		0	1.436	5.
Methyl ethyl ketone	UG/L	5	0	0.00%		0		50
Methyl isobutyl ketone	UG/L	5	0	0.00%		0	158.118	
Methylene chloride	UG/L	5	0	0.00%		0	4.124	5.
Styrene	UG/L	5	0	0.00%		0		
Tetrachloroethene	UG/L	5	0	0.00%		0	1.069	5
Toluene	UG/L	5	0	0.00%		0	747.038	5.
Total Xylenes	UG/L	5	0	0.00%		0	73,000.	5.
Trans-1,3-Dichloropropene	UG/L	5	0	0.00%		0		5
Trichloroethene	UG/L	5	0	0.00%		0	1.556	5
Vinyl chlonde	UG/L	5	0	0.00%		0	.019	2.
Herbicides								
2,4,5-T	UG/L	5	0	0.00%		0		35.
2,4,5-TP/Silvex	UG/L	5	0	0.00%		0		26
2,4-D	UG/L	5	0	0.00%		0		4 4
2,4-DB	UG/L	5	0	0.00%		0		
Dalapon	UG/L	5	0	0.00%		0		50.
Dicamba	UG/L	5	0	0.00%		0		44
Dichloroprop	UG/L	5	0	0.00%		0		
Dinoseb	UG/L	5	0	0.00%		0		1
MCPA	UG/L	5	0	0.00%		0		44
MCPP	UG/L	5	0	0.00%		0		
Semivolatile Organics								
1,2,4-Trichlorobenzene	UG/L	5	0	0.00%		0	194.599	5.
1,2-Dichlorobenzene	UG/L	5	0	0.00%		0	268.163	4 7
1,3-Dichlorobenzene	UG/L	5	0	0.00%		0	3,248.5	5
1,4-Dichlorobenzene	UG/L	5	0	0.00%		0	2.802	4 7
2,2'-oxybis(1-Chloropropane)	UG/L	5	0	0.00%		0		
2,4,5-Trichlorophenol	UG/L	5	0	0.00%		0	3,650.	
2,4,6-Trichlorophenol	UG/L	5	0	0.00%		0	.967	
2,4-Dichlorophenol	UG/L	5	0	0.00%		0	109.5	
2,4-Dimethylphenol	UG/L	5	0	0.00%		0	730.	5
2,4-Dinitrophenol	UG/L	5	0	0.00%		0	73.	
2,4-Dinitrotoluene	UG/L	5	0	0.00%		0	73.	5
2,6-Dinitrotoluene	UG/L	5	0	0.00%		0	36.5	5
2-Chloronaphthalene	UG/L	5	0	0.00%		0		
2-Chlorophenol	UG/L	5	0	0.00%		0	182.5	
2-Methylnaphthalene	UG/L	5	0	0.00%		0		
2-Methylphenol	UG/L	5	0	0.00%		0	1,825.	5
2-Nitroaniline	UG/L	5	0	0.00%		0	.35	
2-Nitrophenol	UG/L	5	0	0.00%		0		
3,3'-Dichlorobenzidine	UG/L	5	0	0.00%		0	149	
3-Nitroaniline	UG/L	5	0	0.00%		0	109.5	
4,6-Dinitro-2-methylphenol	UG/L	5	0	0.00%		0		5
4-Bromophenyl phenyl ether	UG/L	5	0	0.00%		0	2,117	
4-Chloro-3-methylphenol	UG/L	5	0	0.00%		0		

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard
4-Chloroaniline	UG/L	5	0	0.00%		0	146	5
4-Chlorophenyl phenyl ether	UG/L	5	0	0.00%		0		
4-Methylphenol	UG/L	5	0	0.00%		0		5
4-Nitroaniline	UG/L	5	0	0.00%		0	109.5	5
4-Nitrophenol	UG/L	5	0	0.00%		0	2,190.	
Acenaphthene	UG/L	5	0	0.00%		0		
Acenaphthylene	UG/L	5	0	0.00%		0		
Anthracene	UG/L	5	0	0.00%		0	10,950.	
Benzo[a]anthracene	UG/L	5	0	0.00%		0	.017	
Benzo[a]pyrene	UG/L	5	0	0.00%		0	.002	10
Benzo[b]fluoranthene	UG/L	5	0	0.00%		0	.017	
Benzo[ghi]perylene	UG/L	5	0	0.00%		0		
Benzo[k]fluoranthene	UG/L	5	0	0.00%		0	.168	
Bis(2-Chloroethoxy)methane	UG/L	5	0	0.00%		0		
Bis(2-Chloroethyl)ether	UG/L	5	0	0.00%		0	.009	
Bis(2-Ethylhexyl)phthalate	UG/L	5	2	40.00%	23.	0	4.803	50.
Butylbenzylphthalate	UG/L	5	0	0.00%		0	7,300.	
Carbazole	UG/L	5	0	0.00%		0	3.362	
Chrysene	UG/L	5	0	0.00%		0	1.679	
Di-n-butylphthalate	UG/L	5	0	0.00%		0		50.
Di-n-octylphthalate	UG/L	5	0	0.00%		0	730.	
Dibenz[a,h]anthracene	UG/L	5	0	0.00%		0	.002	
Dibenzofuran	UG/L	5	0	0.00%		0	146.	
Diethyl phthalate	UG/L	5	0	0.00%		0	29,200.	
Dimethylphthalate	UG/L	5	0	0.00%		0	365,000.	
Fluoranthene	UG/L	5	0	0.00%		0	1,460.	
Fluorene	UG/L	5	0	0.00%		0	1,460.	
Hexachlorobenzene	UG/L	5	0	0.00%		0	.007	.35
Hexachlorobutadiene	UG/L	5	0	0.00%		0	.137	
Hexachlorocyclopentadiene	UG/L	5	0	0.00%		0	.146	
Hexachloroethane	UG/L	5	0	0.00%		0	.754	
Indeno[1,2,3-cd]pyrene	UG/L	5	0	0.00%		0	.017	
Isophorone	UG/L	5	0	0.00%		0		
N-Nitrosodiphenylamine	UG/L	5	0	0.00%		0	13.722	
N-Nitrosodipropylamine	UG/L	5	0	0.00%		0	.01	
Naphthalene	UG/L	5	0	0.00%		0	1,460.	
Nitrobenzene	UG/L	5	0	0.00%		0	3.393	
Pentachlorophenol	UG/L	5	0	0.00%		0	.56	1.
Phenanthrene	UG/L	5	0	0.00%		0		
Phenol	UG/L	5	0	0.00%		0	21,900.	1.
Pyrene	UG/L	5	0	0.00%		0	1,095.	
Pesticides/PCBs								
4,4`-DDD	UG/L	5	0	0.00%		0	.28	1
4,4`-DDE	UG/L	5	0	0.00%		0	.198	.1
4,4`-DDT	UG/L	5	0	0.00%		0	.031	.1
Aldrin	UG/L	5	0	0.00%		0	.001	.055
Alpha-BHC	UG/L	5	0	0.00%		0		
Alpha-Chlordane	UG/L	5	0	0.00%		0		5.
Aroclor-1016	UG/L	5	0	0.00%		0	2.555	
Aroclor-1221	UG/L	5	0	0.00%		0		
Aroclor-1232	UG/L	5	0	0.00%		0		
Aroclor-1242	UG/L	5	0	0.00%		0		
Aroclor-1248	UG/L	5	0	0.00%		0		
Aroclor-1254	UG/L	5	0	0.00%		0	.73	.1
Aroclor-1260	UG/L	5	0	0.00%		0		1
Beta-BHC	UG/L	5	0	0.00%		0		5
Delta-BHC	UG/L	5	0	0.00%		0		
Dieldrin	UG/L	5	0	0.00%		0	.001	1
Endosulfan I	UG/L	5	0	0.00%		0	219.	
Endosulfan II	UG/L	5	0	0.00%		0	219.	
Endosulfan sulfate	UG/L	5	0	0.00%		0		
Endrin	UG/L	5	0	0.00%		0	10.95	1
Endrin aldehyde	UG/L	5	0	0.00%		0	10.95	5
Endrin ketone	UG/L	5	0	0.00%		0	10.95	5
Gamma-BHC/Lindane	UG/L	5	0	0.00%		0	.052	5
Gamma-Chlordane	UG/L	5	0	0.00%		0		
Heptachlor	UG/L	5	0	0.00%		0	.002	05
Heptachlor epoxide	UG/L	5	0	0.00%		0	.001	05
Methoxychlor	UG/L	5	0	0.00%		0	182.5	35
Toxaphene	UG/L	5	0	0.00%		0		
Metals								

Seneca Army Depot Activity
SEAD-13 Summary Satistics - Groundwater
NYS Class GA Standards

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard
Aluminum	UG/L	5	5	100.00%	42,400	0	36,500.	
Antimony	UG/L	5	4	80.00%	52.7	0	14.6	
Arsenic	UG/L	5	2	40.00%	9.3	0	.007	25
Barium	UG/L	5	5	100.00%	337	0	1,043	1,000
Beryllium	UG/L	5	1	20.00%	2.2	0	.001	
Cadmium	UG/L	5	0	0.00%		0	.002	10
Calcium	UG/L	5	5	100.00%	592,000	0		
Chromium	UG/L	5	3	60.00%	69.4	1	.004	50
Cobalt	UG/L	5	2	40.00%	34.6	0	2,190.	
Copper	UG/L	5	2	40.00%	23.3	0	1,460.	200
Cyanide	UG/L	5	0	0.00%		0		100
Iron	UG/L	5	5	100.00%	69,400	4	10,950.	300
Lead	UG/L	5	3	60.00%	34.8	1		25
Magnesium	UG/L	5	5	100.00%	188,000	0		
Manganese	UG/L	5	5	100.00%	1,120.	3	.104	300
Mercury	UG/L	5	1	20.00%	.05	0	.592	2.
Nickel	UG/L	5	5	100.00%	99.8	0	730.	
Potassium	UG/L	5	5	100.00%	10,100	0		
Selenium	UG/L	5	4	80.00%	3.6	0	182.5	10
Silver	UG/L	5	0	0.00%		0	182.5	50
Sodium	UG/L	5	5	100.00%	17,000	0		20,000
Thallium	UG/L	5	0	0.00%		0	2.92	
Vanadium	UG/L	5	3	60.00%	70.8	0	255.5	
Zinc	UG/L	5	5	100.00%	143	0	10,950.	300
Other Analyses								
Turbidity	NTU	5	5	100.00%	195.	0		
pH	SU	5	5	100.00%	7.72	0		

Seneca Army Depot Activity
SEAD-13
Collapsed Data Summary - Groundwater
Comparison to NYS Class GA Standard

STUDY ID:	ESI	ESI	ESI	ESI	ESI	ESI
SITE :	SEAD-13	SEAD-13	SEAD-13	SEAD-13	SEAD-13	SEAD-13
LOC ID:	MW13-1	MW13-2	MW13-4	MW13-4	MW13-5	MW13 6
LOC TYPE:	BACKGROUND	SITE	SITE	SITE	SITE	BACKGROUND
SAMP_ID:	MW13-1	MW13-2	MW13-8	MW13-4	MW13-5	MW13-6
QC CODE:	SA	SA	DU	SA	SA	SA
SAMP. DETH TOP:	4 3	6 3	3 5	3 5	6 3	5
SAMP. DEPTH BOT:	11 1	15.3	7 5	7 5	15 3	9
MATRIX:	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
SAMP. DATE:	03-Feb-94	18-Nov-93	04-Feb-94	04-Feb-94	05-Feb-94	04 Feb-94

PARAMETER	UNIT	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard	VALUE Q	VALUE Q	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Chromium	UG/L	1	004	50.	[redacted]	2 5 U		9 9 J	2 6 U	6 1 J
Iron	UG/L	4	10,950	300.	[redacted]	[redacted]		[redacted]	75 8 J	[redacted]
Lead	UG/L	1		25.	[redacted]	6 U		3 1	5 U	1 5 J
Manganese	UG/L	3	104	300.	[redacted]	[redacted]		299	143	[redacted]

Seneca Army Depot Activity
SEAD-13 - Groundwater Summary Statistics
Comparison to Drinking Water PRG

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard
Volatiles								
1,1,1-Trichloroethane	UG/L	5	0	0.00%		0	792.549	5
1,1,2,2-Tetrachloroethane	UG/L	5	0	0.00%		0	.521	5
1,1,2-Trichloroethane	UG/L	5	0	0.00%		0	188	
1,1-Dichloroethane	UG/L	5	0	0.00%		0	811.742	5
1,1-Dichloroethene	UG/L	5	0	0.00%		0	.044	5
1,2-Dichloroethane	UG/L	5	0	0.00%		0	.116	5
1,2-Dichloroethene (total)	UG/L	5	0	0.00%		0		5
1,2-Dichloropropane	UG/L	5	0	0.00%		0	989	5
Acetone	UG/L	5	0	0.00%		0	3,650.	
Benzene	UG/L	5	0	0.00%		0	.364	7
Bromodichloromethane	UG/L	5	0	0.00%		0	1.084	
Bromoform	UG/L	5	0	0.00%		0	2.354	
Carbon disulfide	UG/L	5	0	0.00%		0	1,042.857	
Carbon tetrachloride	UG/L	5	0	0.00%		0	.163	5
Chlorobenzene	UG/L	5	0	0.00%		0	39.431	5.
Chlorodibromomethane	UG/L	5	0	0.00%		0	.8	
Chloroethane	UG/L	5	0	0.00%		0	8,591.77	5
Chloroform	UG/L	5	0	0.00%		0	.153	7.
Cis-1,3-Dichloropropene	UG/L	5	0	0.00%		0		5
Ethyl benzene	UG/L	5	0	0.00%		0	1,328.117	5.
Methyl bromide	UG/L	5	0	0.00%		0	8.699	
Methyl butyl ketone	UG/L	5	0	0.00%		0		
Methyl chloride	UG/L	5	0	0.00%		0	1.436	5.
Methyl ethyl ketone	UG/L	5	0	0.00%		0		50
Methyl isobutyl ketone	UG/L	5	0	0.00%		0	158.118	
Methylene chloride	UG/L	5	0	0.00%		0	4.124	5.
Styrene	UG/L	5	0	0.00%		0		
Tetrachloroethene	UG/L	5	0	0.00%		0	1.069	5.
Toluene	UG/L	5	0	0.00%		0	747.038	5
Total Xylenes	UG/L	5	0	0.00%		0	73,000.	5.
Trans-1,3-Dichloropropene	UG/L	5	0	0.00%		0		5.
Trichloroethene	UG/L	5	0	0.00%		0	1.556	5.
Vinyl chloride	UG/L	5	0	0.00%		0	.019	2.
Herbicides								
2,4,5-T	UG/L	5	0	0.00%		0		35.
2,4,5-TP/Silvex	UG/L	5	0	0.00%		0		26
2,4-D	UG/L	5	0	0.00%		0		4 4
2,4-DB	UG/L	5	0	0.00%		0		
Dalapon	UG/L	5	0	0.00%		0		50.
Dicamba	UG/L	5	0	0.00%		0		44
Dichloroprop	UG/L	5	0	0.00%		0		
Dinoseb	UG/L	5	0	0.00%		0		1.
MCPA	UG/L	5	0	0.00%		0		44
MCPP	UG/L	5	0	0.00%		0		
Semivolatile Organics								
1,2,4-Trichlorobenzene	UG/L	5	0	0.00%		0	194.599	5.
1,2-Dichlorobenzene	UG/L	5	0	0.00%		0	268.163	4 7
1,3-Dichlorobenzene	UG/L	5	0	0.00%		0	3,248.5	5.
1,4-Dichlorobenzene	UG/L	5	0	0.00%		0	2.802	4 7
2,2'-oxybis(1-Chloropropane)	UG/L	5	0	0.00%		0		
2,4,5-Trichlorophenol	UG/L	5	0	0.00%		0	3,650.	
2,4,6-Trichlorophenol	UG/L	5	0	0.00%		0	.967	
2,4-Dichlorophenol	UG/L	5	0	0.00%		0	109.5	
2,4-Dimethylphenol	UG/L	5	0	0.00%		0	730.	5
2,4-Dinitrophenol	UG/L	5	0	0.00%		0	73.	
2,4-Dinitrotoluene	UG/L	5	0	0.00%		0	73.	5
2,6-Dinitrotoluene	UG/L	5	0	0.00%		0	36.5	5
2-Chloronaphthalene	UG/L	5	0	0.00%		0		
2-Chlorophenol	UG/L	5	0	0.00%		0	182.5	
2-Methylnaphthalene	UG/L	5	0	0.00%		0		
2-Methylphenol	UG/L	5	0	0.00%		0	1,825.	5
2-Nitroaniline	UG/L	5	0	0.00%		0	35	
2-Nitrophenol	UG/L	5	0	0.00%		0		
3,3'-Dichlorobenzidine	UG/L	5	0	0.00%		0	.149	

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard
3-Nitroaniline	UG/L	5	0	0.00%		0	109.5	
4,6-Dinitro-2-methylphenol	UG/L	5	0	0.00%		0		5
4-Bromophenyl phenyl ether	UG/L	5	0	0.00%		0	2,117	
4-Chloro-3-methylphenol	UG/L	5	0	0.00%		0		
4-Chloroaniline	UG/L	5	0	0.00%		0	146	5
4-Chlorophenyl phenyl ether	UG/L	5	0	0.00%		0		
4-Methylphenol	UG/L	5	0	0.00%		0		5
4-Nitroaniline	UG/L	5	0	0.00%		0	109.5	5
4-Nitrophenol	UG/L	5	0	0.00%		0	2,190.	
Acenaphthene	UG/L	5	0	0.00%		0		
Acenaphthylene	UG/L	5	0	0.00%		0		
Anthracene	UG/L	5	0	0.00%		0	10,950.	
Benzo[a]anthracene	UG/L	5	0	0.00%		0	017	
Benzo[a]pyrene	UG/L	5	0	0.00%		0	002	10.
Benzo[b]fluoranthene	UG/L	5	0	0.00%		0	.017	
Benzo[ghi]perylene	UG/L	5	0	0.00%		0		
Benzo[k]fluoranthene	UG/L	5	0	0.00%		0	.168	
Bis(2-Chloroethoxy)methane	UG/L	5	0	0.00%		0		
Bis(2-Chloroethyl)ether	UG/L	5	0	0.00%		0	.009	
Bis(2-Ethylhexyl)phthalate	UG/L	5	2	40.00%	23.	2	4.803	50.
Butylbenzylphthalate	UG/L	5	0	0.00%		0	7,300.	
Carbazole	UG/L	5	0	0.00%		0	3.362	
Chrysene	UG/L	5	0	0.00%		0	1.679	
Di-n-butylphthalate	UG/L	5	0	0.00%		0		50.
Di-n-octylphthalate	UG/L	5	0	0.00%		0	730.	
Dibenz[a,h]anthracene	UG/L	5	0	0.00%		0	.002	
Dibenzofuran	UG/L	5	0	0.00%		0	146.	
Diethyl phthalate	UG/L	5	0	0.00%		0	29,200.	
Dimethylphthalate	UG/L	5	0	0.00%		0	365,000.	
Fluoranthene	UG/L	5	0	0.00%		0	1,460.	
Fluorene	UG/L	5	0	0.00%		0	1,460.	
Hexachlorobenzene	UG/L	5	0	0.00%		0	.007	35
Hexachlorobutadiene	UG/L	5	0	0.00%		0	.137	
Hexachlorocyclopentadiene	UG/L	5	0	0.00%		0	.146	
Hexachloroethane	UG/L	5	0	0.00%		0	.754	
Indeno[1,2,3-cd]pyrene	UG/L	5	0	0.00%		0	.017	
Isophorone	UG/L	5	0	0.00%		0		
N-Nitrosodiphenylamine	UG/L	5	0	0.00%		0	13.722	
N-Nitrosodipropylamine	UG/L	5	0	0.00%		0	.01	
Naphthalene	UG/L	5	0	0.00%		0	1,460.	
Nitrobenzene	UG/L	5	0	0.00%		0	3.393	
Pentachlorophenol	UG/L	5	0	0.00%		0	.56	1.
Phenanthrene	UG/L	5	0	0.00%		0		
Phenol	UG/L	5	0	0.00%		0	21,900.	1
Pyrene	UG/L	5	0	0.00%		0	1,095.	
Pesticides/PCBs								
4,4`-DDD	UG/L	5	0	0.00%		0	.28	.1
4,4`-DDE	UG/L	5	0	0.00%		0	.198	1
4,4`-DDT	UG/L	5	0	0.00%		0	.031	.1
Aldrin	UG/L	5	0	0.00%		0	.001	.055
Alpha-BHC	UG/L	5	0	0.00%		0		
Alpha-Chlordane	UG/L	5	0	0.00%		0		5
Aroclor-1016	UG/L	5	0	0.00%		0	2.555	
Aroclor-1221	UG/L	5	0	0.00%		0		
Aroclor-1232	UG/L	5	0	0.00%		0		
Aroclor-1242	UG/L	5	0	0.00%		0		
Aroclor-1248	UG/L	5	0	0.00%		0		
Aroclor-1254	UG/L	5	0	0.00%		0	.73	1
Aroclor-1260	UG/L	5	0	0.00%		0		1
Beta-BHC	UG/L	5	0	0.00%		0		5
Delta-BHC	UG/L	5	0	0.00%		0		
Dieldrin	UG/L	5	0	0.00%		0	.001	1
Endosulfan I	UG/L	5	0	0.00%		0	219.	
Endosulfan II	UG/L	5	0	0.00%		0	219	
Endosulfan sulfate	UG/L	5	0	0.00%		0		
Endrin	UG/L	5	0	0.00%		0	10.95	1
Endrin aldehyde	UG/L	5	0	0.00%		0	10.95	5
Endrin ketone	UG/L	5	0	0.00%		0	10.95	5

Seneca Army Depot Activity
SEAD-13 - Groundwater Summary Statistics
Comparison to Drinking Water PRG

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard
Gamma-BHC/Lindane	UG/L	5	0	0.00%		0	.052	5
Gamma-Chlordane	UG/L	5	0	0.00%		0		
Heptachlor	UG/L	5	0	0.00%		0	.002	.05
Heptachlor epoxide	UG/L	5	0	0.00%		0	.001	.05
Methoxychlor	UG/L	5	0	0.00%		0	182.5	35
Toxaphene	UG/L	5	0	0.00%		0		
Metals								
Aluminum	UG/L	5	5	100.00%	42,400.	1	36,500.	
Antimony	UG/L	5	4	80.00%	52.7	4	14.6	
Arsenic	UG/L	5	2	40.00%	9.3	2	.007	25.
Barium	UG/L	5	5	100.00%	337.	5	1.043	1,000.
Beryllium	UG/L	5	1	20.00%	2.2	1	.001	
Cadmium	UG/L	5	0	0.00%		0	.002	10.
Calcium	UG/L	5	5	100.00%	592,000.	0		
Chromium	UG/L	5	3	60.00%	69.4	3	.004	50.
Cobalt	UG/L	5	2	40.00%	34.6	0	2,190.	
Copper	UG/L	5	2	40.00%	23.3	0	1,460.	200.
Cyanide	UG/L	5	0	0.00%		0		100.
Iron	UG/L	5	5	100.00%	69,400.	1	10,950.	300.
Lead	UG/L	5	3	60.00%	34.8	0		25.
Magnesium	UG/L	5	5	100.00%	188,000.	0		
Manganese	UG/L	5	5	100.00%	1,120.	5	.104	300.
Mercury	UG/L	5	1	20.00%	.05	0	.592	2.
Nickel	UG/L	5	5	100.00%	99.8	0	730.	
Potassium	UG/L	5	5	100.00%	10,100.	0		
Selenium	UG/L	5	4	80.00%	3.6	0	182.5	10.
Silver	UG/L	5	0	0.00%		0	182.5	50.
Sodium	UG/L	5	5	100.00%	17,000.	0		20,000.
Thallium	UG/L	5	0	0.00%		0	2.92	
Vanadium	UG/L	5	3	60.00%	70.8	0	255.5	
Zinc	UG/L	5	5	100.00%	143.	0	10,950.	300.
Other Analyses								
Turbidity	NTU	5	5	100.00%	195.	0		
pH	SU	5	5	100.00%	7.72	0		

Seneca Army Depot Activity
SEAD-13
Collapsed Data Summary - Groundwater
Comparison to Drinking Water PRG

STUDY ID	ESI	ESI	ESI	ESI	ESI	ESI
SITE	SEAD-13	SEAD-13	SEAD-13	SEAD-13	SEAD-13	SEAD-13
LOC ID	MW13-1	MW13-2	MW13-4	MW13-4	MW13-5	MW13-6
LOC TYPE	BACKGROUND	SITE	SITE	SITE	SITE	BACKGROUND
SAMP_ID	MW13-1	MW13-2	MW13-8	MW13-4	MW13-5	MW13-6
QC CODE	SA	SA	DU	SA	SA	SA
SAMP_DETH TOP	4.3	6.3	3.5	3.5	6.3	5
SAMP_DEPTH BOT	11.1	15.3	7.5	7.5	15.3	9
MATRIX	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
SAMP_DATE	03-Feb-94	18-Nov-93	04-Feb-94	04-Feb-94	05-Feb-94	04-Feb-94

PARAMETER	UNIT	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard	VALUE Q	VALUE Q	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Bis(2-Ethylhexyl)phthalate	UG/L	2	4.803	50.	11. U	11. U		[redacted]	[redacted]	10 U
Aluminum	UG/L	1	36,500.		[redacted]	89.6 J		5,540	53.1 J	2,810
Antimony	UG/L	4	14.6	[redacted] J		52.5 U		[redacted] J	[redacted] J	[redacted] J
Arsenic	UG/L	2	.007	25. [redacted] J		[redacted] J		1.4 U	1.4 U	1.4 U
Barium	UG/L	5	1.043	1,000.		[redacted] J		[redacted] J	[redacted] J	[redacted] J
Beryllium	UG/L	1	.001	[redacted] J		3 U		4 U	4 U	4 U
Chromium	UG/L	3	.004	50.		2.5 U		[redacted] J	2.6 U	[redacted] J
Iron	UG/L	1	10,950.	300.		562.		8,010	75.8 J	4,550
Manganese	UG/L	5	.104	300.	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]

SEAD-13

SURFACE WATER

COLLAPSED DATA TABLES

AND

SUMMARY STATISTICS TABLES

Seneca Army Depot Activity
SEAD-13
Summary Statistics - Surface Water
NYS Class C

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	NYS Class C
Volatiles							
1,1,1-Trichloroethane	UG/L	3	0	0.00%	0	0	
1,1,2,2-Tetrachloroethane	UG/L	3	0	0.00%	0	0	
1,1,2-Trichloroethane	UG/L	3	0	0.00%	0	0	
1,1-Dichloroethane	UG/L	3	0	0.00%	0	0	
1,1-Dichloroethene	UG/L	3	0	0.00%	0	0	
1,2-Dichloroethane	UG/L	3	0	0.00%	0	0	
1,2-Dichloroethene (total)	UG/L	3	0	0.00%	0	0	
1,2-Dichloropropane	UG/L	3	0	0.00%	0	0	
Acetone	UG/L	3	0	0.00%	0	0	
Benzene	UG/L	3	0	0.00%	0	0	
Bromodichloromethane	UG/L	3	0	0.00%	0	0	
Bromoform	UG/L	3	0	0.00%	0	0	
Chlorobenzene	UG/L	3	0	0.00%	0	0	5.
Chloroethane	UG/L	3	0	0.00%	0	0	
Chloroform	UG/L	3	0	0.00%	0	0	
Styrene	UG/L	3	0	0.00%	0	0	
Tetrachloroethene	UG/L	3	0	0.00%	0	0	
Toluene	UG/L	3	0	0.00%	0	0	
Trichloroethene	UG/L	3	0	0.00%	0	0	
Herbicides							
2,4,5-T	UG/L	3	0	0.00%	0	0	
2,4-D	UG/L	3	0	0.00%	0	0	
2,4-DB	UG/L	3	0	0.00%	0	0	
Dalapon	UG/L	3	0	0.00%	0	0	
Dicamba	UG/L	3	0	0.00%	0	0	
Dichloroprop	UG/L	3	0	0.00%	0	0	
Dinoseb	UG/L	3	0	0.00%	0	0	
MCPA	UG/L	3	0	0.00%	0	0	
MCPP	UG/L	3	0	0.00%	0	0	
Nitroaromatics		0	0	0.00%	0	0	
1,3,5-Trinitrobenzene	UG/L	3	0	0.00%	0	0	
1,3-Dinitrobenzene	UG/L	3	0	0.00%	0	0	
2,4,6-Trinitrotoluene	UG/L	3	0	0.00%	0	0	
2,4-Dinitrotoluene	UG/L	3	0	0.00%	0	0	
2,6-Dinitrotoluene	UG/L	3	0	0.00%	0	0	
2-amino-4,6-Dinitrotoluene	UG/L	3	0	0.00%	0	0	
4-amino-2,6-Dinitrotoluene	UG/L	3	0	0.00%	0	0	
HMX	UG/L	3	0	0.00%	0	0	
RDX	UG/L	3	0	0.00%	0	0	
Tetryl	UG/L	3	0	0.00%	0	0	
Semivolatile Organics							
1,2,4-Trichlorobenzene	UG/L	3	0	0.00%	0	0	5.
1,2-Dichlorobenzene	UG/L	3	0	0.00%	0	0	5.
1,3-Dichlorobenzene	UG/L	3	0	0.00%	0	0	5.
1,4-Dichlorobenzene	UG/L	3	0	0.00%	0	0	5.
2,2'-oxybis(1-Chloropropane)	UG/L	3	0	0.00%	0	0	
2,4,5-Trichlorophenol	UG/L	3	0	0.00%	0	0	
2,4,6-Trichlorophenol	UG/L	3	0	0.00%	0	0	
2,4-Dichlorophenol	UG/L	3	0	0.00%	0	0	
2,4-Dimethylphenol	UG/L	3	0	0.00%	0	0	
2,4-Dinitrophenol	UG/L	3	0	0.00%	0	0	
2,4-Dinitrotoluene	UG/L	3	0	0.00%	0	0	
2,6-Dinitrotoluene	UG/L	3	0	0.00%	0	0	
2-Chloronaphthalene	UG/L	3	0	0.00%	0	0	
2-Chlorophenol	UG/L	3	0	0.00%	0	0	
2-Methylnaphthalene	UG/L	3	0	0.00%	0	0	
2-Methylphenol	UG/L	3	0	0.00%	0	0	
2-Nitroaniline	UG/L	3	0	0.00%	0	0	
2-Nitrophenol	UG/L	3	0	0.00%	0	0	
3-Nitroaniline	UG/L	3	0	0.00%	0	0	
4,6-Dinitro-2-methylphenol	UG/L	3	0	0.00%	0	0	
4-Chloro-3-methylphenol	UG/L	3	0	0.00%	0	0	
4-Chloroaniline	UG/L	3	0	0.00%	0	0	
4-Methylphenol	UG/L	3	0	0.00%	0	0	
4-Nitroaniline	UG/L	3	0	0.00%	0	0	
4-Nitrophenol	UG/L	3	0	0.00%	0	0	
Acenaphthene	UG/L	3	0	0.00%	0	0	
Acenaphthylene	UG/L	3	0	0.00%	0	0	
Anthracene	UG/L	3	0	0.00%	0	0	
Butylbenzylphthalate	UG/L	3	0	0.00%	0	0	

Seneca Army Depot Activity
SEAD-13
Summary Statistics - Surface Water
NYS Class C

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	NYS Class C
Carbazole	UG/L	3	0	0.00%	0	0	
Chrysene	UG/L	3	0	0.00%	0	0	
Di-n-butylphthalate	UG/L	3	0	0.00%	0	0	
Di-n-octylphthalate	UG/L	3	0	0.00%	0	0	
Dibenzofuran	UG/L	3	0	0.00%	0	0	
Dimethylphthalate	UG/L	3	0	0.00%	0	0	
Fluoranthene	UG/L	3	0	0.00%	0	0	
Fluorene	UG/L	3	0	0.00%	0	0	
Hexachlorobenzene	UG/L	3	0	0.00%	0	0	
Hexachlorobutadiene	UG/L	3	0	0.00%	0	0	
Hexachlorocyclopentadiene	UG/L	3	0	0.00%	0	0	
Hexachloroethane	UG/L	3	0	0.00%	0	0	
Isophorone	UG/L	3	0	0.00%	0	0	
N-Nitrosodiphenylamine	UG/L	3	0	0.00%	0	0	
Naphthalene	UG/L	3	0	0.00%	0	0	
Nitrobenzene	UG/L	3	0	0.00%	0	0	
Pentachlorophenol	UG/L	3	0	0.00%	0	0	.4
Phenanthrene	UG/L	3	0	0.00%	0	0	
Phenol	UG/L	3	0	0.00%	0	0	5.
Pyrene	UG/L	3	0	0.00%	0	0	
Pesticides/PCBs							
Aldrin	UG/L	3	0	0.00%	0	0	
Aroclor-1016	UG/L	3	0	0.00%	0	0	
Aroclor-1221	UG/L	3	0	0.00%	0	0	
Aroclor-1232	UG/L	3	0	0.00%	0	0	
Aroclor-1242	UG/L	3	0	0.00%	0	0	
Aroclor-1248	UG/L	3	0	0.00%	0	0	
Aroclor-1254	UG/L	3	0	0.00%	0	0	.001
Aroclor-1260	UG/L	3	0	0.00%	0	0	.001
Dieldrin	UG/L	3	0	0.00%	0	0	
Endosulfan I	UG/L	3	0	0.00%	0	0	
Endosulfan II	UG/L	3	0	0.00%	0	0	
Endosulfan sulfate	UG/L	3	0	0.00%	0	0	
Endrin	UG/L	3	0	0.00%	0	0	.002
Endrin aldehyde	UG/L	3	0	0.00%	0	0	
Endrin ketone	UG/L	3	0	0.00%	0	0	
Heptachlor	UG/L	3	0	0.00%	0	0	.001
Heptachlor epoxide	UG/L	3	0	0.00%	0	0	.001
Methoxychlor	UG/L	3	0	0.00%	0	0	.03
Toxaphene	UG/L	3	0	0.00%	0	0	
Metals							
Aluminum	UG/L	3	3	100.00%	3830	3	100.
Antimony	UG/L	3	0	0.00%	0	0	
Arsenic	UG/L	3	0	0.00%	0	0	190.
Barium	UG/L	3	3	100.00%	91.6	0	
Beryllium	UG/L	3	0	0.00%	0	0	1.111
Cadmium	UG/L	3	0	0.00%	0	0	1.863
Calcium	UG/L	3	3	100.00%	75300	0	
Chromium	UG/L	3	1	33.33%	5.4	0	347.27
Cobalt	UG/L	3	0	0.00%	0	0	5.
Copper	UG/L	3	1	33.33%	6.6	0	20.288
Cyanide	UG/L	3	0	0.00%	0	0	5.2
Iron	UG/L	3	3	100.00%	5790	3	300.
Lead	UG/L	3	2	66.67%	7.5	1	7.164
Magnesium	UG/L	3	3	100.00%	14200	0	
Manganese	UG/L	3	3	100.00%	296	0	
Mercury	UG/L	3	0	0.00%	0	0	
Nickel	UG/L	3	2	66.67%	7.1	0	154.489
Potassium	UG/L	3	3	100.00%	7200	0	
Selenium	UG/L	3	0	0.00%	0	0	1.
Silver	UG/L	3	0	0.00%	0	0	.1
Sodium	UG/L	3	3	100.00%	70000	0	
Thallium	UG/L	3	0	0.00%	0	0	8.
Vanadium	UG/L	3	1	33.33%	6.2	0	14.
Zinc	UG/L	3	2	66.67%	27.7	0	141.38
Other Analyses							
Conductivity	UMHOS/CM	3	3	100.00%	485	0	
Fluoride	UG/L	3	3	100.00%	390	0	3,759,104.317
pH	SU	3	3	100.00%	7.68	0	

Seneca Army Depot Activity
SEAD-13
Collapsed Data Summary - Surface Water
Comparison to NYS Class C

		STUDY ID:	ESI	ESI	ESI
		SITE:	SEAD-13	SEAD-13	SEAD-13
		LOC ID:	SWSD13-1	SWSD13-2	SWSD13-3
		LOC TYPE:	SITE	SITE	SITE
		SAMP_ID:	SW13-1	SW13-2	SW13-3
		QC CODE:	SA	SA	SA
		SAMP. DETH TOP:	0	0	0
		SAMP. DEPTH BOT:	0.1	0.1	0.1
		MATRIX:	SURFACE WATER	SURFACE WATER	SURFACE WATER
		SAMP. DATE:	03-Nov-93	03-Nov-93	04-Nov-93
PARAMETER	UNIT	Number of Exceedances	NYS Class C	VALUE Q	VALUE Q	VALUE Q
Aluminum	UG/L	3	100.	[redacted]	[redacted]	[redacted] J
Iron	UG/L	3	300.	[redacted] J	[redacted] J	[redacted] J
Lead	UG/L	1	7.164	4.4	[redacted]	.8 U

SEAD-13

SEDIMENT

COLLAPSED DATA TABLES

AND

SUMMARY STATISTICS TABLES

Seneca Army Depot Activity
SEAD-13
Summary Statistics - Sediment
Comparison to Minimum Sediment Criteria

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Source of Criteria	Minimum Sediment Criteria
Volatiles								
1,1,1-Trichloroethane	UG/KG	0	0		0	0		
1,1,2,2-Tetrachloroethane	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	300.
1,1,2-Trichloroethane	UG/KG	0	0		0	0		
1,1-Dichloroethane	UG/KG	0	0		0	0		
1,1-Dichloroethene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	20.
1,2-Dichloroethane	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	700.
1,2-Dichloroethene (total)	UG/KG	0	0		0	0		
1,2-Dichloropropane	UG/KG	0	0		0	0		
Acetone	UG/KG	0	0		0	0		
Benzene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	600.
Bromodichloromethane	UG/KG	0	0		0	0		
Bromoform	UG/KG	0	0		0	0		
Carbon disulfide	UG/KG	0	0		0	0		
Carbon tetrachloride	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	600.
Chlorobenzene	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	3,500.
Chlorodibromomethane	UG/KG	0	0		0	0		
Chloroethane	UG/KG	0	0		0	0		
Chloroform	UG/KG	0	0		0	0		
Cis-1,3-Dichloropropene	UG/KG	0	0		0	0		
Ethyl benzene	UG/KG	0	0		0	0		
Methyl bromide	UG/KG	0	0		0	0		
Methyl butyl ketone	UG/KG	0	0		0	0		
Methyl chloride	UG/KG	0	0		0	0		
Methyl ethyl ketone	UG/KG	0	0		0	0		
Methyl isobutyl ketone	UG/KG	0	0		0	0		
Methylene chloride	UG/KG	0	0		0	0		
Styrene	UG/KG	0	0		0	0		
Tetrachloroethene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	800.
Toluene	UG/KG	0	0		0	0		
Total Xylenes	UG/KG	0	0		0	0		
Trans-1,3-Dichloropropene	UG/KG	0	0		0	0		
Trichloroethene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	2,000.
Vinyl chloride	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	70.
Herbicides								
2,4,5-T	UG/KG	0	0		0	0		
2,4,5-TP/Silvex	UG/KG	0	0		0	0		
2,4-D	UG/KG	0	0		0	0		
2,4-DB	UG/KG	0	0		0	0		
Dalapon	UG/KG	0	0		0	0		
Dicamba	UG/KG	0	0		0	0		
Dichloroprop	UG/KG	0	0		0	0		
Dinoseb	UG/KG	0	0		0	0		
MCPA	UG/KG	0	0		0	0		
MCPP	UG/KG	0	0		0	0		
Nitroaromatics								
1,3,5-Trinitrobenzene	UG/KG	0	0		0	0		
1,3-Dinitrobenzene	UG/KG	0	0		0	0		
2,4,6-Trinitrotoluene	UG/KG	0	0		0	0		
2,4-Dinitrotoluene	UG/KG	0	0		0	0		
2,6-Dinitrotoluene	UG/KG	0	0		0	0		
2-amino-4,6-Dinitrotoluene	UG/KG	0	0		0	0		
4-amino-2,6-Dinitrotoluene	UG/KG	0	0		0	0		
HMX	UG/KG	0	0		0	0		
RDX	UG/KG	0	0		0	0		
Tetryl	UG/KG	0	0		0	0		
Semivolatile Organics								
1,2,4-Trichlorobenzene	UG/KG	0	0		0	0		
1,2-Dichlorobenzene	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	12,000.
1,3-Dichlorobenzene	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	12,000.
1,4-Dichlorobenzene	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	12,000.
2,2'-oxybis(1-Chloropropane)	UG/KG	0	0		0	0		
2,4,5-Trichlorophenol	UG/KG	0	0		0	0		
2,4,6-Trichlorophenol	UG/KG	0	0		0	0		
2,4-Dichlorophenol	UG/KG	0	0		0	0		
2,4-Dimethylphenol	UG/KG	0	0		0	0		
2,4-Dinitrophenol	UG/KG	0	0		0	0		
2,4-Dinitrotoluene	UG/KG	0	0		0	0		
2,6-Dinitrotoluene	UG/KG	0	0		0	0		
2-Chloronaphthalene	UG/KG	0	0		0	0		
2-Chlorophenol	UG/KG	0	0		0	0		
2-Methylnaphthalene	UG/KG	0	0		0	0		
2-Methylphenol	UG/KG	0	0		0	0		
2-Nitroaniline	UG/KG	0	0		0	0		
2-Nitrophenol	UG/KG	0	0		0	0		
3,3'-Dichlorobenzidine	UG/KG	0	0		0	0		
3-Nitroaniline	UG/KG	0	0		0	0		
4,6-Dinitro-2-methylphenol	UG/KG	0	0		0	0		
4-Bromophenyl phenyl ether	UG/KG	0	0		0	0		
4-Chloro-3-methylphenol	UG/KG	0	0		0	0		
4-Chloroaniline	UG/KG	0	0		0	0		
4-Chlorophenyl phenyl ether	UG/KG	0	0		0	0		
4-Methylphenol	UG/KG	0	0		0	0		
4-Nitroaniline	UG/KG	0	0		0	0		
4-Nitrophenol	UG/KG	0	0		0	0		
Acenaphthene	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	140,000.
Acenaphthylene	UG/KG	0	0		0	0		
Anthracene	UG/KG	0	0		0	0		
Benzo(a)anthracene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.
Benzo(a)pyrene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.
Benzo(b)fluoranthene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.
Benzo(ghi)perylene	UG/KG	0	0		0	0		
Benzo(k)fluoranthene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.

Seneca Army Depot Activity
SEAD-13
Summary Statistics - Sediment
Comparison to Minimum Sediment Criteria

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Source of Criteria	Minimum Sediment Criteria
Volatiles								
Bis(2-Chloroethoxy)methane	UG/KG	0	0		0	0		
Bis(2-Chloroethyl)ether	UG/KG	0	0		0	0		
Bis(2-Ethylhexyl)phthalate	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	200,000
Butylbenzylphthalate	UG/KG	0	0		0	0		
Carbazole	UG/KG	0	0		0	0		
Chrysene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.
Di-n-butylphthalate	UG/KG	0	0		0	0		
Di-n-octylphthalate	UG/KG	0	0		0	0		
Dibenz[a,h]anthracene	UG/KG	0	0		0	0		
Dibenzofuran	UG/KG	0	0		0	0		
Diethyl phthalate	UG/KG	0	0		0	0		
Dimethylphthalate	UG/KG	0	0		0	0		
Fluoranthene	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	1,020,000.
Fluorene	UG/KG	0	0		0	0		
Hexachlorobenzene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	150.
Hexachlorobutadiene	UG/KG	0	0		0	0		
Hexachlorocyclopentadiene	UG/KG	0	0		0	0		
Hexachloroethane	UG/KG	0	0		0	0		
Indeno[1,2,3-cd]pyrene	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.
Isophorone	UG/KG	0	0		0	0		
N-Nitrosodiphenylamine	UG/KG	0	0		0	0		
N-Nitrosodipropylamine	UG/KG	0	0		0	0		
Naphthalene	UG/KG	0	0		0	0		
Nitrobenzene	UG/KG	0	0		0	0		
Pentachlorophenol	UG/KG	0	0		0	0		
Phenanthrene	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	120,000.
Phenol	UG/KG	0	0		0	0		
Pyrene	UG/KG	0	0		0	0		
Pesticides/PCBs								
4,4'-DDD	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	10.
4,4'-DDE	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	10.
4,4'-DDT	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	10.
Aldrin	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	100.
Alpha-BHC	UG/KG	0	0		0	0		
Alpha-Chlordane	UG/KG	0	0		0	0		
Aroclor-1016	UG/KG	0	0		0	0		
Aroclor-1221	UG/KG	0	0		0	0		
Aroclor-1232	UG/KG	0	0		0	0		
Aroclor-1242	UG/KG	0	0		0	0		
Aroclor-1248	UG/KG	0	0		0	0		
Aroclor-1254	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	8.
Aroclor-1260	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	8.
Beta-BHC	UG/KG	0	0		0	0		
Delta-BHC	UG/KG	0	0		0	0		
Dieldrin	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	100.
Endosulfan I	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	30.
Endosulfan II	UG/KG	0	0		0	0	NYS BENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	30.
Endosulfan sulfate	UG/KG	0	0		0	0		
Endrin	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	800.
Endrin aldehyde	UG/KG	0	0		0	0		
Endrin ketone	UG/KG	0	0		0	0		
Gamma-BHC/Lindane	UG/KG	0	0		0	0		
Gamma-Chlordane	UG/KG	0	0		0	0		
Heptachlor	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	8.
Heptachlor epoxide	UG/KG	0	0		0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	8.
Methoxychlor	UG/KG	0	0		0	0		
Toxaphene	UG/KG	0	0		0	0		
Metals								
Aluminum	UG/KG	0	0		0	0		
Antimony	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	2,000.
Arsenic	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	6,000.
Barium	UG/KG	0	0		0	0		
Beryllium	UG/KG	0	0		0	0		
Cadmium	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	600.
Calcium	UG/KG	0	0		0	0		
Chromium	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	26,000.
Cobalt	UG/KG	0	0		0	0		
Copper	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	16,000.
Cyanide	UG/KG	0	0		0	0		
Iron	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	20,000,000.
Lead	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	31,000.
Magnesium	UG/KG	0	0		0	0		
Manganese	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	460,000.
Mercury	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	150.
Nickel	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	16,000.
Potassium	UG/KG	0	0		0	0		
Selenium	UG/KG	0	0		0	0		
Silver	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	1,000.
Sodium	UG/KG	0	0		0	0		
Thallium	UG/KG	0	0		0	0		
Vanadium	UG/KG	0	0		0	0		
Zinc	UG/KG	0	0		0	0	NYS LOWEST EFFECT LEVEL	120,000.
Other Analyses								
Fluoride	UG/KG	0	0		0	0		
Nitrate/Nitrite	UG/KG	0	0		0	0		