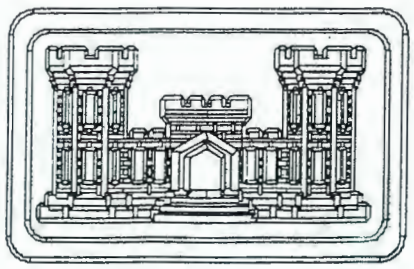
104-27

U.S. ARMY ENGINEER DIVISION
HUNTSVILLE, ALABAMA



SENECA ARMY DEPOT ACTIVITY (SEDA)

PEER REVIEW QUESTIONNAIRE PACKAGE
SEAD-45 OPEN DETONATION AREA

APRIL/MAY 1998

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

SITE SUMMARY QUESTIONNAIRE

SEAD-45 Open Detonation Facility

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 years of operation as an open detonation facility. The OD facility (SEAD-45) consists of a detonation mound which covers approximately 1.0 acre. The hill is glacial material which is moved via a bulldozer in support of OD operations. The detonation area has been in use from 1941 to the present and the operation is regulated under RCRA interim status. The operation of the open detonation facility is regulated under Subpart X of RCRA. The permit application was pending NYSDEC approval at the time the facility was listed as a facility to be closed under BRAC. Subsequent discussions regarding the need to pursue the RCRA permit with the NYSDEC RCRA regulators have resulted in an agreement that the Part B, Subpart X, permit is not required, providing that the facility does not accept any additional new waste but demilitarizes only the wastes that cannot be safely moved.

The process of demilitarization involves detonation of munitions within 13 pits excavated within the Open Detonation (OD) mound. The maximum proposed level of open detonation at Seneca consists of one series of detonations each day in 13 pits for 80 days per year. Army policy limits the maximum OD treatment at Seneca to 3250 lb/day (250 lb Net Explosive Weight (NEW) per pit, once per day, in each of 13 pits). The mound serves as a noise suppression and kick-out prevention mechanism. Although the open detonation process is the safest and the most economical way to demilitarize a variety of waste ordnance, it is an uncontrolled process. During the detonation, it was suspected that most of the organic portions of the Pyrotechnics, Explosives and Propellants (PEP)s were consumed but the inorganic fraction of the ordnance was not.

The site was identified by US Army Toxic and Hazardous Materials Agency (USATHAMA) as one of several "potentially contaminated areas". The USATHAMA recommendation was presented following an assessment of the OD facility, performed in 1979 and reported in January of 1980 (Report No. 157). In this assessment, the demolition area was highlighted as a location of known or suspected waste materials. The area has been in use from 1941 to the present and has been used to demilitarize a variety of materials including white phosphorous, Tetryl, Composition "B", PETN, PETN-Tetryl, PETN-TNT,

PETN-Black Powder, PETN-Composition A-3, Composition A-3, TNT, Tetryl, Tetrytol, and Composition C-4.

In 1982, USAEHA analyzed soil samples collected from 8 locations around this area (pits #2, 4, 6 and 8). Analysis was performed for EP Toxicity (As, Ba, Cd, Cr, Hg, Pb, Se, and Ag) and explosives (HMX, RDX, Tetryl, 2,4, 6-TNT, 2,4-DNT, 2,6-DNT). The analytical results indicated the presence of Cd in the EP Toxicity extract in all samples (0.19-0.45 mg/l). Explosives were also found in each sample (RDX 1.4-1.7 ug/l; Tetryl 1.6-16.3 ug/l; 2,4,6-TNT 2.2-61 ug/l; 2,4-DNT 1.1-1.9 ug/l). From this data, the ground water under this area was determined to be potentially impacted.

As mandated by the EPA Region II and by NYSDEC, the U.S. Army Corps of Engineers commissioned the "Solid Waste Management Unit (SWMU) Classification Report" at SEDA (ERCE 1991). This report was finalized by ES on June 10, 1994. This work was performed to evaluate the effects of past solid waste management practices at identified SWMUs on the facility and to classify 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. AOCs have included land treatment units, such as the OD 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 Open Detonation (OD) Facility (SEAD-45) as a high priority area of concern based on the suspected release of pollutants at the site, (ES, 1994).

Based upon this classification a Preliminary Assessment, an Expanded Site Inspection (ESI), was performed in 1994.

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

a) The potential sources of contamination include residual materials from ordnance detonation activities, including explosive compounds, semivolatile organics and heavy metals. The semivolatile organics and explosives are present as products of incomplete combustion. The metals are present as residuals from the Propellants, Explosives and Pyrotechnics (PEP) and metal fragments.

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 45-1, presents the conceptual site model for the Open Detonation Facility, (SEAD-45). The operation of open detonation involves earth

moving operations including burial of waste ordnance within the 10 to 15 foot OD mound. As the volume of the mound is decreased due to repeated detonations, soil is pushed back into the mound from the surrounding area. Residuals of the OD process are dispersed following a detonation. A large portion of the residues are expected to remain within or near the OD mound. For purposes of safety and fire control, the OD mound and surrounding area is intentionally devoid of vegetation and is located in an open, exposed, easily accessible area. The mound is situated in a high point and is subjected to erosion. Reeder Creek, a Class C surface water body, is located adjacent to the OD area. As a result of the operation and the poor vegetative cover, migration pathways and transport mechanisms have been identified as :

- Suspension of soil particulates due to the wind;
- Direct deposition of ordnance residues in the surface soil following a detonation;
- Direct burial of ordnance residues to the subsurface due to continual reworking of the area;
- Leaching of ordnance residues due to dissolution 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 include 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
Inhalation of fugitive dust from atmospheric resuspension of surface soil;	Current/Future Site Worker, Future Adult/Child Site Visitor, Future Construction Worker, Terrestrial Biota
Ingestion and dermal contact from surface soil;	Current/Future Site Worker, Future Adult/Child Site Visitor, Future Construction Worker, Terrestrial Biota
Ingestion and dermal contact from subsurface soil from	Future Construction Worker, Terrestrial Biota

burrowing (ecological) and construction activities;	
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**
Dust	Atmospheric resuspension of soil;
Surface Soil	Erosion/direct deposition;
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**
Dust	Surface soils samples
Surface Soil	Surface soil samples
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 OD mound and the ordnance residuals that exist within the mound. The potential contaminants of concern at this site include;

- Semi volatile compounds
- Explosives
- 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 45-2 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 45-2, 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 phase 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 45-2. 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). Exceedences 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 used to evaluate the significance of the exceedences and are incorporated into the

recommendations for either no further action or additional evaluations, as shown in Decision No. C of Figure 45-2.

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. The NYSDEC TAGM is attached for review. Correspondence between SEDA and NYSDEC regarding the use and application of the TAGM is also provided. 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 exceedence had occurred from a release when the exceedence was from a site sample that represents the high end of background distribution in soil. If no exceedences are determined then the recommendation is for no further action (NFA). For sediment, values presented in the NYSDEC document "Technical Guidance for Screening Contaminated Sediments" are used for comparison. This document is also reproduced for review. If exceedences of TAGMs or other media specific SGC are noted, further evaluation of the data is required to determine if exceedences are over the Preliminary Remedial Goals (PRG)s, see Decision No. D of Figure 45-2.

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 back calculation of allowable soil concentrations from an acceptable risk level. For non-carcinogenic compounds this is a Hazard Index (HI) of 1, for carcinogenic compounds this value is 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 exceedences 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, a PRG is not exceeded, 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 45-2.

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 able to be solved 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". The current use for this site is as a munitions destruction area. 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?

An Expanded Site Inspection has been completed at SEAD-45. 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. Exceedences 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 used to evaluate the significance of the exceedences and incorporate them into recommendations for further evaluation, shown as Decision No. C of Figure 45-2. If no exceedences had been detected then the recommendation for SEAD-45 would have been for a No Further Action (NFA) determination. However, exceedences 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.

Further evaluation was conducted to determine if exceedences over the Preliminary Remedial Goals (PRG)s were noted, Decision No. D of Figure 45-2. PRGs were recently developed and this comparison was only recently added to the decision criteria process. For SEAD-45 exceedences 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 45-2. Since the PRG exceedences 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 45-2.

The ESI conducted at SEAD-45 indicated that impacts to the surface soils and sediments, from the release of heavy metals and nitroaromatic compounds, and to a lesser extent by semivolatile compounds, has occurred at this site. Surface soils collected from around the Open Detonation mound showed an irregular distribution of elevated levels of nitroaromatic and heavy metal compounds. The results of the soil sampling from within the mound itself showed elevated concentrations of semivolatile, heavy metal, and nitroaromatic compounds. The groundwater investigation completed at SEAD-45 indicated that no adverse impacts to the groundwater have occurred.

Even though a risk assessment has not yet been completed for this site, exposure scenarios have been based upon the planned land re-use classification for this site.

The initial decisions that have been made for SEAD-45 have been described in response to Question 1. We believe that the next step in the decision process involves Action No. 13, Conduct an RI/BRA. The decision process is summarized briefly as follows. SEAD-45 was identified as a SWMU after an evaluation of historical uses and available information. It was determined that SEAD-45 had impacted the environment and was an "Area of Concern" (AOC). Additional data collection was justified in order to evaluate the threat to human health and the environment. The data collection process involved performing an Expanded Site Inspection (ESI), shown as Action No. 5 in Figure 45-2.

This site was grouped as a high priority site, in order to initiate the data collection process as soon as possible. Additional data was required to support the decision as to whether or not the site poses a threat. The location of the sampling points and other significant features of the site are shown in the attached Figure 2.9-2 that was originally presented in the ESI report. The decision process is outlined in Figure 45-2. The decisions that have been made have been based upon the data collected during the ESI. The following summarizes the data collected during the ESI and provides the basis of the decision making process:

Test Pits: A total of fifteen test pits were excavated at SEAD-45. Five test pits were excavated in the open detonation mound and one soil sample, at a 3 foot depth, was obtained from each of these test pits for chemical analysis. Ten test pits were excavated on the north and west edges of the mound and in the field on the east of the mound. These ten locations were at the site of anomalies detected during the geophysical survey and were exploratory only. Subsurface soil samples collected from the test pits were

compared to the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) values presented in TAGM HWR-94-4046, January 24, 1994 (Revised). A copy of the TAGM is attached.

Surface Soils: Nine surficial soil samples at 0 to 2 inch depths, were obtained from locations east and west of the ten open detonation test pits. Chemical analysis of these samples were used to evaluate the effect of wind-blown material from the pits on the environment in the two prominent wind directions, east and west. Surface soil samples were also compared to the values presented in TAGM HWR-94-4046, January 24, 1994.

The NYSDEC TAGM values are the lower of either a value derived from a risk-based analysis of human health exposure due to ingestion of soil or a value derived from soil-groundwater partitioning calculations that are intended to be protective of groundwater quality.

A total of 20 semivolatile organic compounds were found at varying concentrations in the surface soil samples collected at SEAD-45. In general, the concentrations of semivolatile compounds were low, with only 1 result exceeding a TAGM value. The surface soil sample SS45-2, which was collected west of the OD mound, had a benzo(a)pyrene concentration of 82 µg/kg, which slightly exceeded the TAGM value of 61 µg/kg. The distribution of total semi-volatiles detected in surface soils are shown in the attached Figure 4.7-1. This figure is reproduced from the ESI report.

A number of the soil samples collected at SEAD-45 were found to contain various metals at concentrations that exceed the associated TAGM values. Of the 24 inorganics analyzed for, 14 were found in one or more samples at concentrations above the associated TAGM values. Although several of these exceedences were observed in only 1 or 2 samples, the majority of the TAGM exceedences were more significant. Of particular note are the metals cadmium, chromium, copper, lead, mercury, silver, and zinc where a large percentage of the samples exceed the criteria value and where the concentrations of the exceedences are generally an order of magnitude or greater above the criteria value. In general, the highest metals concentrations were found in the soil samples collected from the test pits completed directly in the OD mound. Even though the highest metals concentrations were in the test pit soil samples, there were numerous TAGM exceedences in the surface soil samples as well. The highest metals concentrations in the surface soil samples were in the samples SS45-5, collected just west of the OD mound, and SS45-6 and SS45-9, collected east of the OD mound.

The occurrence and distribution of metals which were found above TAGM values in the subsurface soils were similar to those observed in the surface soil samples. In particular, copper, lead, mercury, silver, and zinc were found in concentrations above TAGM values in all of the subsurface soil samples. Of these metals, copper, mercury and silver were found at concentrations which exceeded the TAGM by an order magnitude in every subsurface soil sample. In addition, cadmium was found in three samples at concentrations which were an order of magnitude above the TAGM value.

The highest cadmium concentration was identified in sample TP45-3, where 13.1 mg/kg was reported. This test pit soil sample was collected from the center of the OD mound. This sample also had elevated concentrations of all the other metals of note, and had the highest detected concentrations of lead and nickel.

Ten different nitroaromatic compounds were detected in the surface soil samples collected at SEAD-45. The frequencies of detection ranged from 6.25% for 4-amino-2,6-dinitrotoluene to 81.25% for RDX, with several compounds being present in greater than 50% of the surface soil samples. The concentrations were all low, with the maximum concentration being 5800 µg/kg of RDX found in the surface soil sample SS45-9, which was collected at the east end of the site.

The occurrence and distribution of nitroaromatics in the subsurface soil samples were similar to those observed in the surface soil samples. The distribution of total explosives detected in surface soils are shown in the attached Figure 4.7-2. This figure is reproduced from the ESI report. The primary differences noted in the pattern of nitroaromatics in the subsurface soils were higher frequencies of occurrences (100% frequency of detection for the compounds HMX, RDX, 2,4,6 TNT, and 2-amino-4,6 DNT) and, on average, higher reported concentrations.

The following compounds were found to exceed the NYSDEC TAGM screening guidelines :

Benzo(a)pyrene
Aluminum
Barium
Cadmium
Chromium
Copper
Cyanide
Iron
Lead
Magnesium
Mercury
Nickel
Potassium
Silver
Zinc

The SEAD-45 soil data was also compared to Ecological and Recreational PRGs as shown in the attached Collapsed Data Summary and Summary Statistics tables. There were no exceedences of the Recreational PRG for soil at SEAD-45. Exceedences of the Ecological PRGs were noted for 2,4-dinitrotoluene, mercury, copper, and barium. Since the PRG exceedences 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 45-2.

Groundwater: Four wells were installed at SEAD-45. One well (MW45-4) was located upgradient of the mound to obtain background water quality data and three wells were located downgradient of the detonation mound as shown on Figure 2.9-2. The direction of groundwater flow at this AOC is northeast to east toward Reeder Creek based on data from the existing wells. Groundwater at SEAD-45 have been classified by NYSDEC as GA and therefore samples were compared to the NYSDEC Class GA Ambient Water Quality Standards presented in the NYSDEC Division of Water, Technical and Operational Guidance Series 1.1.1 (TOGS). GA quality is for protection of groundwater as a source of drinking water.

One monitoring well was constructed at each location and screened over the entire thickness of the aquifer above competent bedrock. MW45-1 was found to be a dry well. Following installation and development, one groundwater sample was collected from MW45-2, 3, & 4. Existing wells MW-1 through MW-5 were also sampled with the three new wells. The locations of the wells were shown in Figure 2.9-2.

The following sections describe the nature and extent of the groundwater contamination identified at SEAD-45 based on a comparison of the groundwater data to the NYSDEC Class GA standards and guidelines. The attached Collapsed Data Summary and Summary Statistics tables detail the comparison of the groundwater data to the NYSDEC Class GA standards only.

The nine metals antimony, beryllium, chromium, iron, lead, magnesium, manganese, sodium, and zinc were found in one or more of the groundwater samples at concentrations above the NYSDEC Class GA criteria value. Most of the exceedences occurred in only 1 sample, with the exceptions being iron, magnesium, and manganese. Iron was found in 5 of the 8 monitoring wells at concentrations above the criteria value of 300 µg/L. The maximum iron concentration, 113,000 µg/L, was found in the groundwater sample collected from monitoring well MW45-4. This high concentration may have been due to silt in the water sample, as evidenced by the very high turbidity (9860 NTU) and the high aluminum concentration. Magnesium exceeded the NYSDEC Class GA criteria in 3 of the 8 wells sampled, MW45-2, MW45-3, and MW45-4. The maximum concentration was 77,900 µg/L detected in the groundwater sample collected from monitoring well MW45-3. Manganese was found in 4 of the 8 samples at concentrations exceeding the NYSDEC Class GA groundwater standard of 300 µg/L, with the maximum concentration of 4640 µg/L found in the groundwater sample collected from monitoring well MW45-4. As described above, the high metals concentrations in MW45-4 may have been due in part to high sample turbidities.

The nitroaromatic compounds HMX and 1,3-dinitrobenzene were each found in 1 of the 8 groundwater samples collected at SEAD-45. HMX was detected in the groundwater sample collected from monitoring well MW-1 at a concentration of 0.5 µg/L. The nitroaromatic compound 1,3-dinitrobenzene was detected in the groundwater sample collected from monitoring well MW-5 at a concentration of 0.067J µg/L.

None of the 8 groundwater samples analyzed had nitrate concentrations above the criteria value of 10 mg/L. The maximum nitrate value detected was 8.7 mg/L in the groundwater sample collected from monitoring well MW-5.

The groundwater data was also compared to the Drinking Water PRGs, as detailed in the attached Collapsed Data Summary and Summary Statistics tables. One semivolatile organic compound, bis(2-ethylhexyl)phthalate, was found in four samples at levels which exceeded the drinking water PRG. Ten metals (aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, iron, manganese, and mercury) were found at levels which exceeded the drinking water PRGs. There were no exceedences of PRGs for volatile organics, herbicides, nitroaromatics, pesticides/PCBs, or nitrate/nitrate.

Surface Water and Sediment : A surface water sample and a sediment sample were collected at the same sampling point from each of four locations at SEAD-45. Three sets of samples (SW/SD 45-1, 2, and 3) were collected from three drainage channels east of the detonation mound. One set (SW/SD45-4) was collected from within the marsh area northwest of the detonation mound as shown in Figure 2.9-2. Surface water in Reeder Creek has been classified by NYSDEC as Class C and therefore surface water collected on-site were compared to the NYSDEC Class C Ambient Water Quality Standards presented in the NYSDEC Division of Water, Technical and Operational Guidance Series 1.1.1 (TOGS). Sediment in has been classified by NYSDEC as Class C and therefore surface water collected on-site were compared to the NYSDEC Class C Ambient Water Quality Standards presented in the NYSDEC Division.

Four surface water samples were collected as part of the SEAD-45 investigation. The sample locations were shown in Figure 2.9-2. Three of the surface water samples, SW45-1, SW45-2, and SW45-3, were collected from drainage ditches located downgradient of the OD mound. The last sample, SW45-4, was collected from a low-lying area northwest of the OD mound. The following sections describe the nature and extent of contamination identified in surface water at SEAD-45.

The standards for the hardness dependent values were calculated using an average hardness of 300 mg/l.

Cyanide and the nine metals aluminum, beryllium, cadmium, cobalt, copper, iron, lead, vanadium, and zinc were found at concentrations above the associated criteria value. In addition, cyanide was detected in sample SW45-4 at 47.7 µg/L, which exceeds the NYSDEC Class C, and EPA water quality criteria.

The highest concentrations of metals were found in samples SW45-1, collected from the northernmost drainage swale, and SW45-4, collected from the low-lying area northwest of the OD mound. These drainage swales are typically dry, and the water present at the time of sampling was likely due to runoff from recent precipitation. The drainage swales are similar to the drainage swales located at the adjacent Open Burning (OB) Grounds, which were studied in detail (ES, 1994) and found to contain macroinvertebrate life typical of terrestrial environments, and not aquatic environments.

The nitroaromatic compounds HMX and RDX were found in 2 of the surface water samples collected from the drainage swales. HMX was detected in samples SW45-2 and SW45-3 at concentrations of 0.45 µg/L and 0.49 µg/L, respectively. RDX was detected in samples SW45-1 and SW45-2 at concentrations of 0.24J µg/L and 2 µg/L, respectively. No other nitroaromatic compounds were detected in the four surface water samples analyzed.

Nitrate/nitrite nitrogen was detected in all four of the surface water samples collected at SEAD-45, at concentrations ranging from 0.01 mg/L to 1.06 mg/L. The maximum concentration (1.06 mg/L) was detected in the sample SW45-3.

A total of four sediment samples were collected as part of the SEAD-45 investigation. The sample locations are shown in Figure 2.9-2. Three of the sediment samples, SD45-1, SD45-2, and SD45-3, were collected from the drainage ditches located downgradient of the OD mound. The last sample, SD45-4, was collected from a low-lying area northwest of the OD mounds. The following sections describe the nature and extent of sediment contamination identified at SEAD-45.

A total of 13 semivolatile organic compounds were identified in the 4 sediment samples collected at SEAD-45. Most of the semivolatile organic compounds detected were PAHs, and all were found at low concentrations. The highest concentration detected was 110J µg/kg of pyrene found in the sediment sample SD45-2, which was collected from the middle drainage swale. While low concentrations of SVOCs were found in the samples SD45-2, SD45-3, and SD45-4, no semivolatile organic compounds were detected in the sample SD45-1, which was collected from the northernmost drainage swale. None of these compounds exceeded the NYSDEC Class C Ambient Water Quality Standards.

Six pesticides and 1 PCB compound were detected in sediment samples collected at SEAD-45. Sample SD45-4, collected in the low-lying area northwest of the OD mound, had the most compounds detected, and at the highest concentrations. The concentrations ranged from 3.2J µg/kg for the pesticide endrin aldehyde, to 580J µg/kg for the PCB Aroclor-1254. Lower levels of 2 pesticides and Aroclor-1254 were found in the sample SD45-2. Only 1 pesticide was detected in sample SD45-3, and no pesticides or PCBs were detected in sample SD45-1. There were 2 samples which exceeded the criteria for Aroclor-1254 and one sample which exceeded the criteria for 4,4,'-DDE.

A number of metals were detected in the sediment samples collected at SEAD-45. Of these, 11 metals (arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, silver, and zinc) were detected in excess of the NYSDEC sediment criteria concentrations. In general, most exceedences occurred in the two more southerly drainage swales (samples SD45-2 and SD45-3) and in the low-lying area northwest of the OD mound.

Five nitroaromatic compounds were detected in the sediment samples collected at SEAD-45. The five nitroaromatic compounds RDX, Tetryl, 2,4,6-trinitrotoluene, 2-amino-4,6-dinitrotoluene, and 2,4-dinitrotoluene were all detected in the sediment sample SD45-2 only. This sediment sample was collected from the drainage area between the OD mound and Reeder Creek.

There were no exceedences of the NYSDEC criteria for volatile organics in sediment at SEAD-45.

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-45 was based upon the uncontrolled release of metals, semivolatile compounds and explosives as part of the open detonation process. The conclusions within the ESI report for SEAD-45 recommended that a limited removal action could address the present site threat.

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-45, 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-45. 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-45 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-45. This project is waiting to perform an RI/BRA.

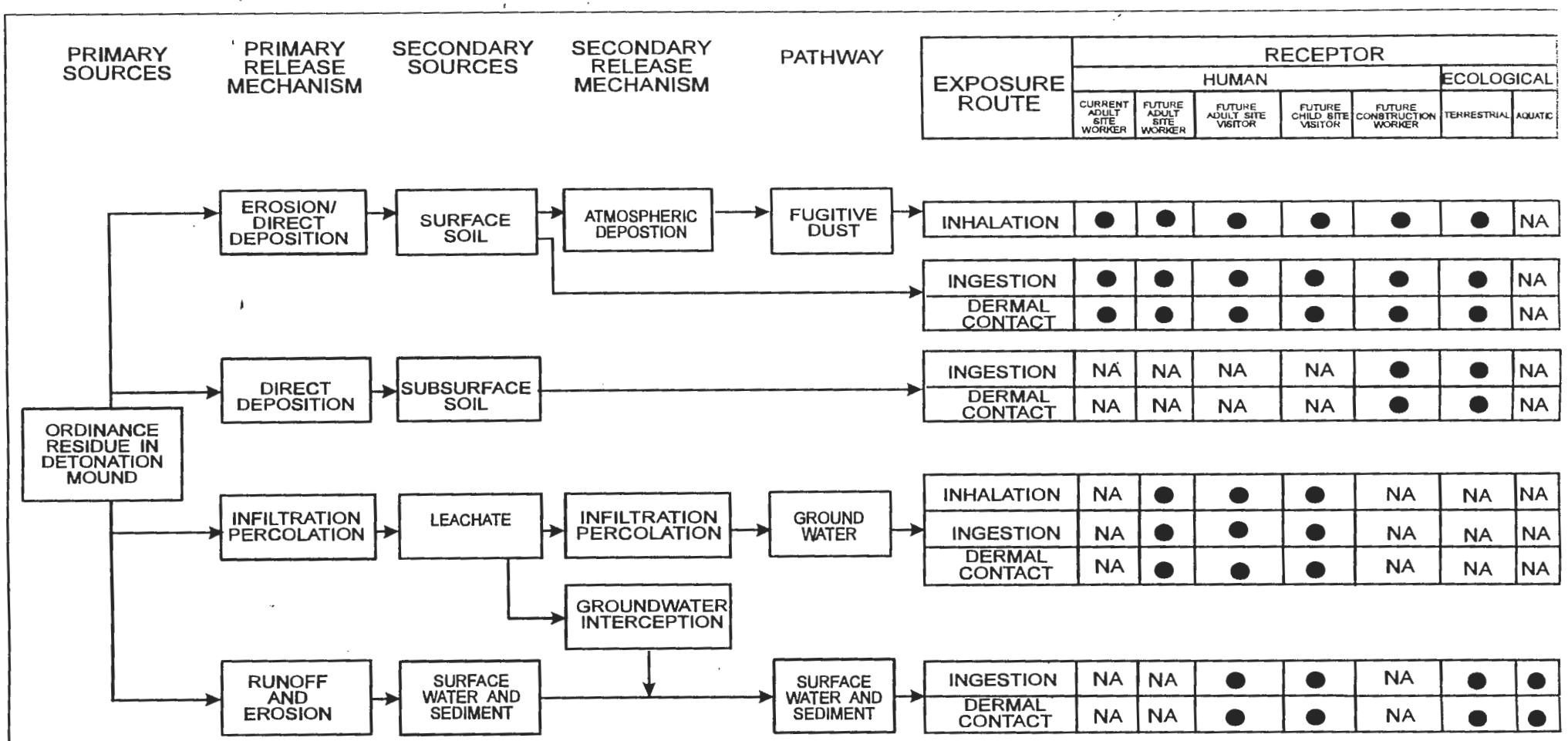
Project Funding

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.



● PATHWAY CONSIDERED TO POSE POTENTIAL RISK

NA NOT APPLICABLE RECEPTOR

FUTURE LAND USE - CONSERVATION/RECREATION

PARSONS

CLIENT/PROJECT TITLE

SENECA ARMY DEPOT ACTIVITY ENVIRONMENTAL PEER REVIEW PROGRAM

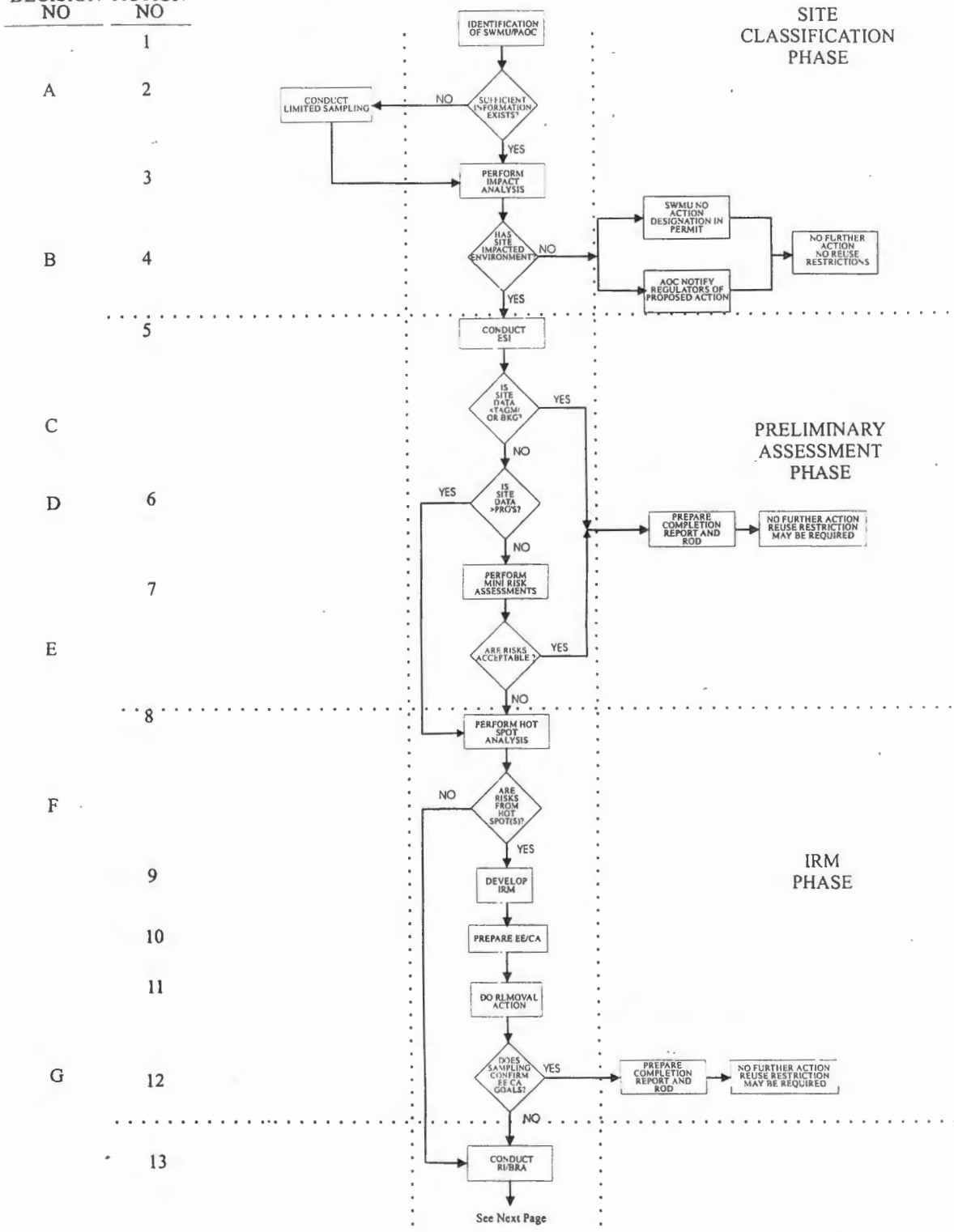
DEPT. ENVIRONMENTAL ENGINEERING | DWG NO. 729895-01002

FIGURE 45-1

EXPOSURE PATHWAY SUMMARY FOR SEAD-45

SCALE NA | DATE APRIL 1998

R:\GRAPHICS\SENECA\EXPSM\EXP45.CDR



PARSONS

PARSONS ENGINEERING SCIENCE, INC.

SENECA ARMY DEPOT ACTIVITY
ENVIRONMENTAL PEER REVIEW PROGRAM

DEPT ENVIRONMENTAL ENGINEERING

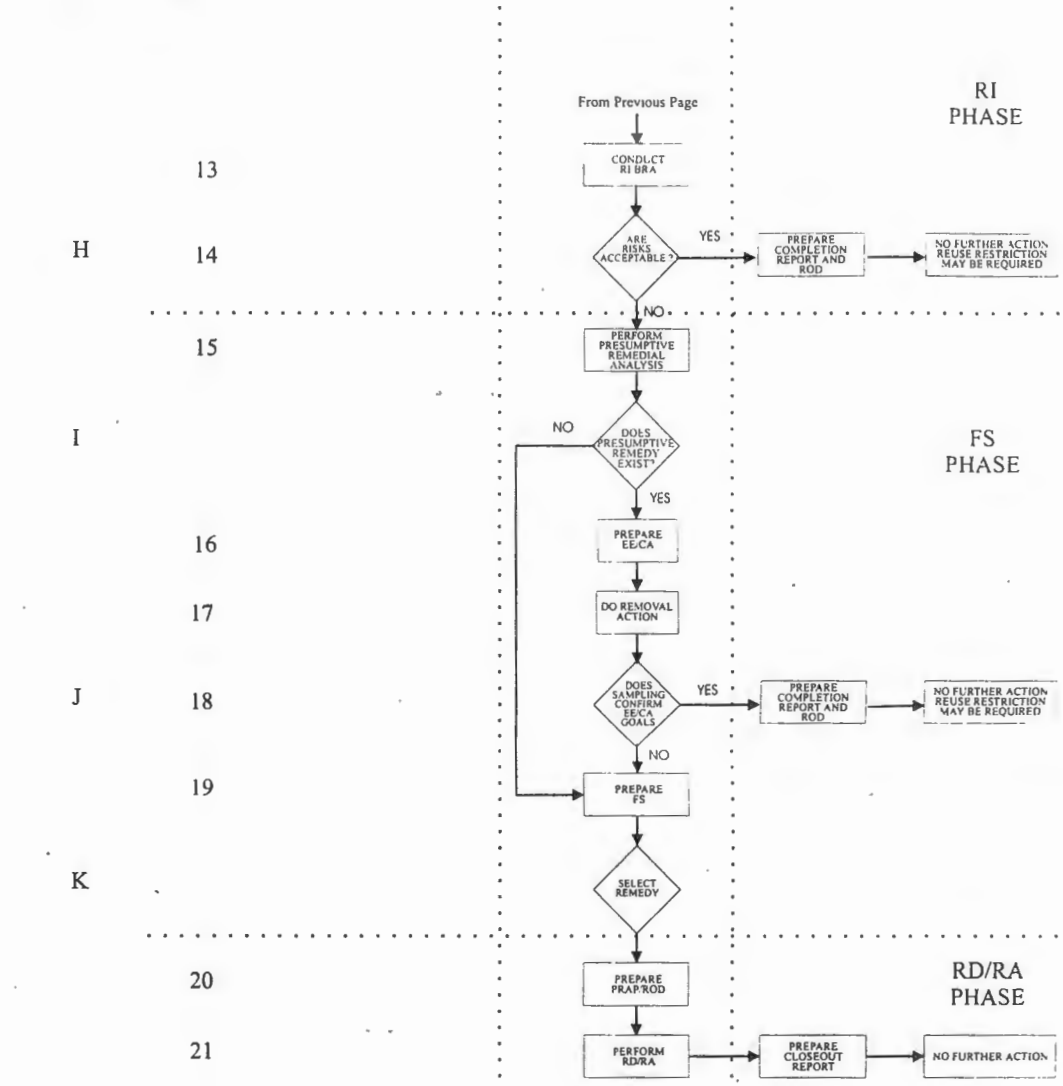
FIGURE 45-2

Decision Criteria Remediation Flowchart

Page 1 of 2

SCALE N.A. DATE MARCH 98

Decision Criteria Flowchart



PARSONS

PARSONS ENGINEERING SCIENCE, INC.

G. ENTPROJECT TITLE

SENECA ARMY DEPOT ACTIVITY
ENVIRONMENTAL PEER REVIEW PROGRAM

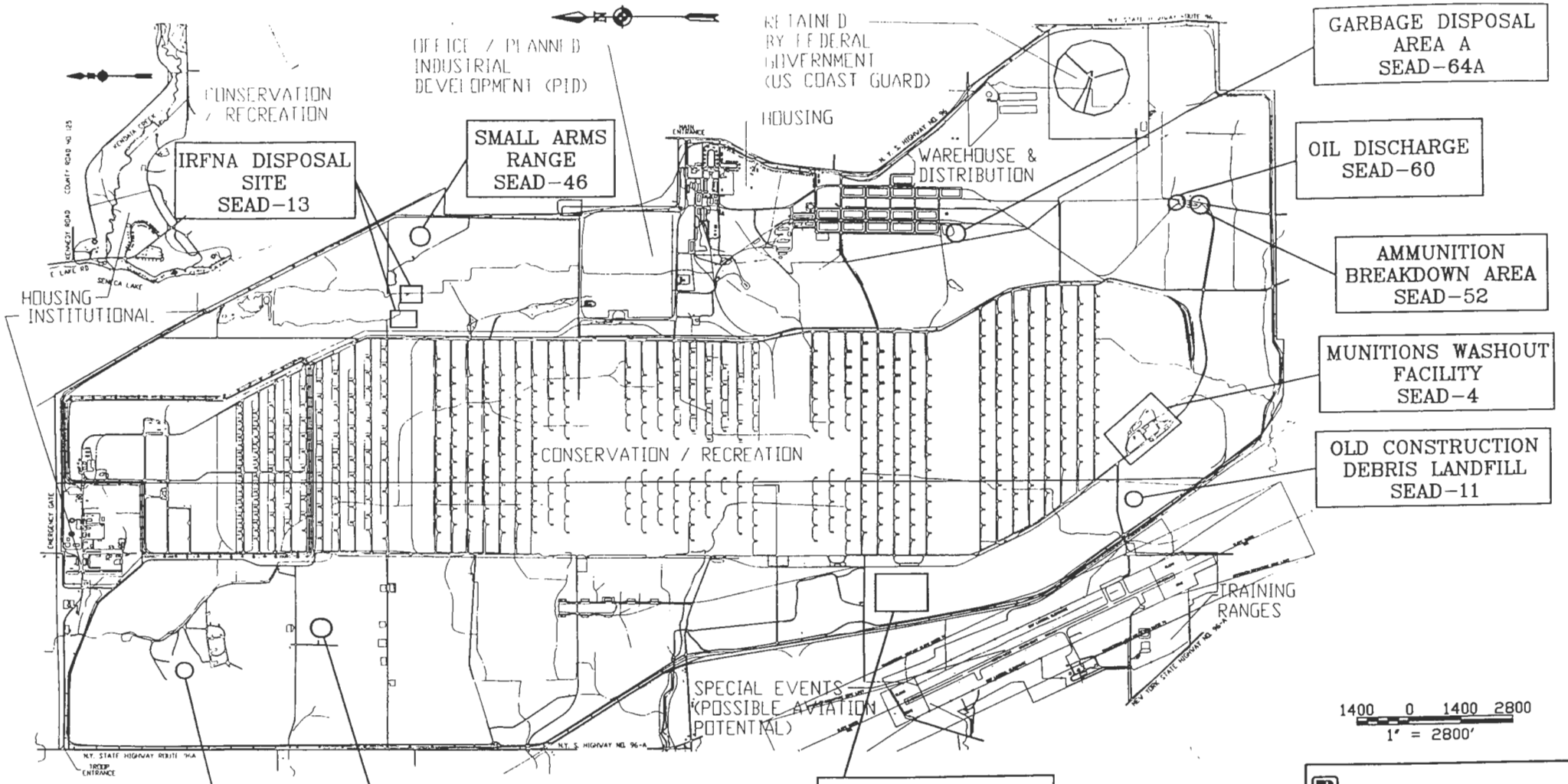
DEPT ENVIRONMENTAL ENGINEERING | DWG NO

FIGURE 45-2

Decision Criteria
Remediation Flowchart

Page 2 of 2

SCALE



PARSONS

PARSONS ENGINEERING SCIENCE, INC.

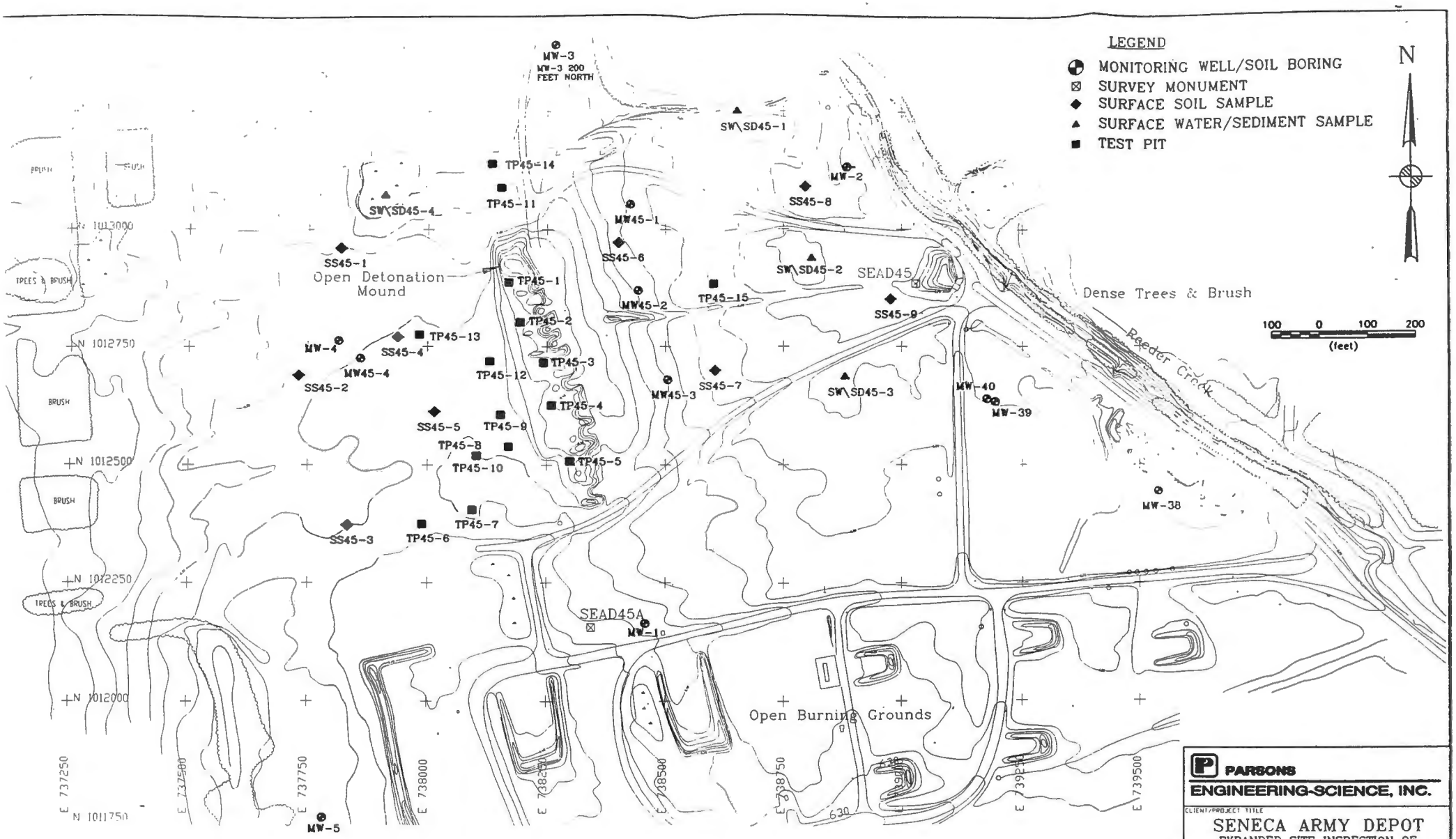
CLIENT/PROJECT TITLE

SENECA ARMY DEPOT ACTIVITY
PEER REVIEW PROGRAM

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

SITE LOCATION AND FINAL LAND USE PLAN

SCALE: 1" = 2800' | DATE: APRIL 1998 | REV: A



PARSONS
ENGINEERING-SCIENCE, INC.

CLIENT/PROJECT TITLE

SENECA ARMY DEPOT

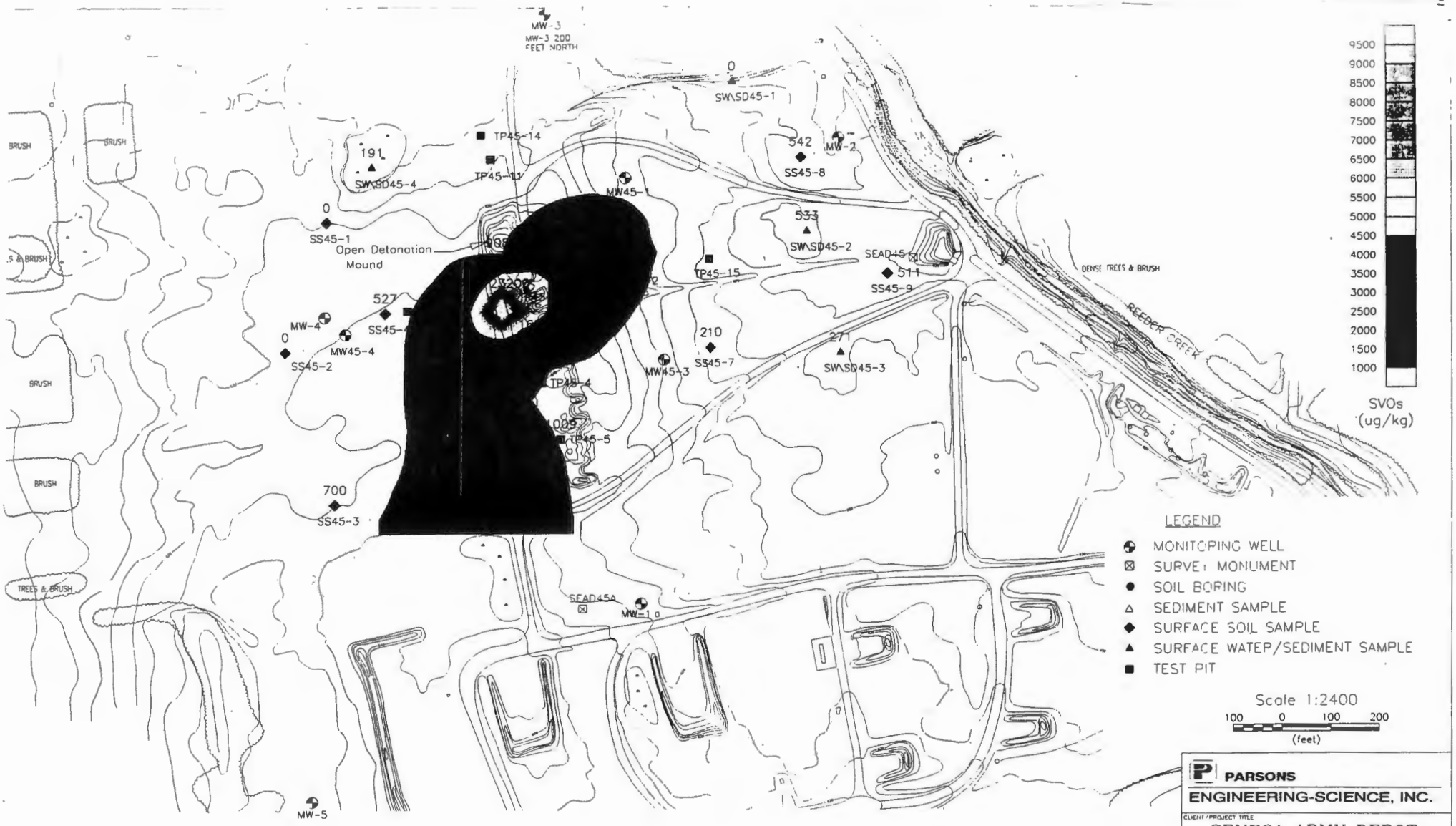
EXPANDED SITE INSPECTION OF
7 HIGH-PRIORITY SWMU'S

DEPT	Proj. No
ENVIROMENTAL ENGINEERING	7204T7-02000

FIGURE 2.9-2 SEAD-45

LOCATION OF SAMPLING POINTS

SCALE	DATE	FIG
1" = 200'	JUNE 1994	8



PARSONS
ENGINEERING-SCIENCE, INC.

CLIENT/PROJECT TITLE
SENECA ARMY DEPOT
EXPANDED SITE INSPECTION OF
7 HIGH-PRIORITY SWMU'S

DEPT ENVIRONMENTAL ENGINEERING | NO 720477-02000

FIGURE 4.7-1
Total SVOs in Surface Soils (ug/kg)
SEAD-45

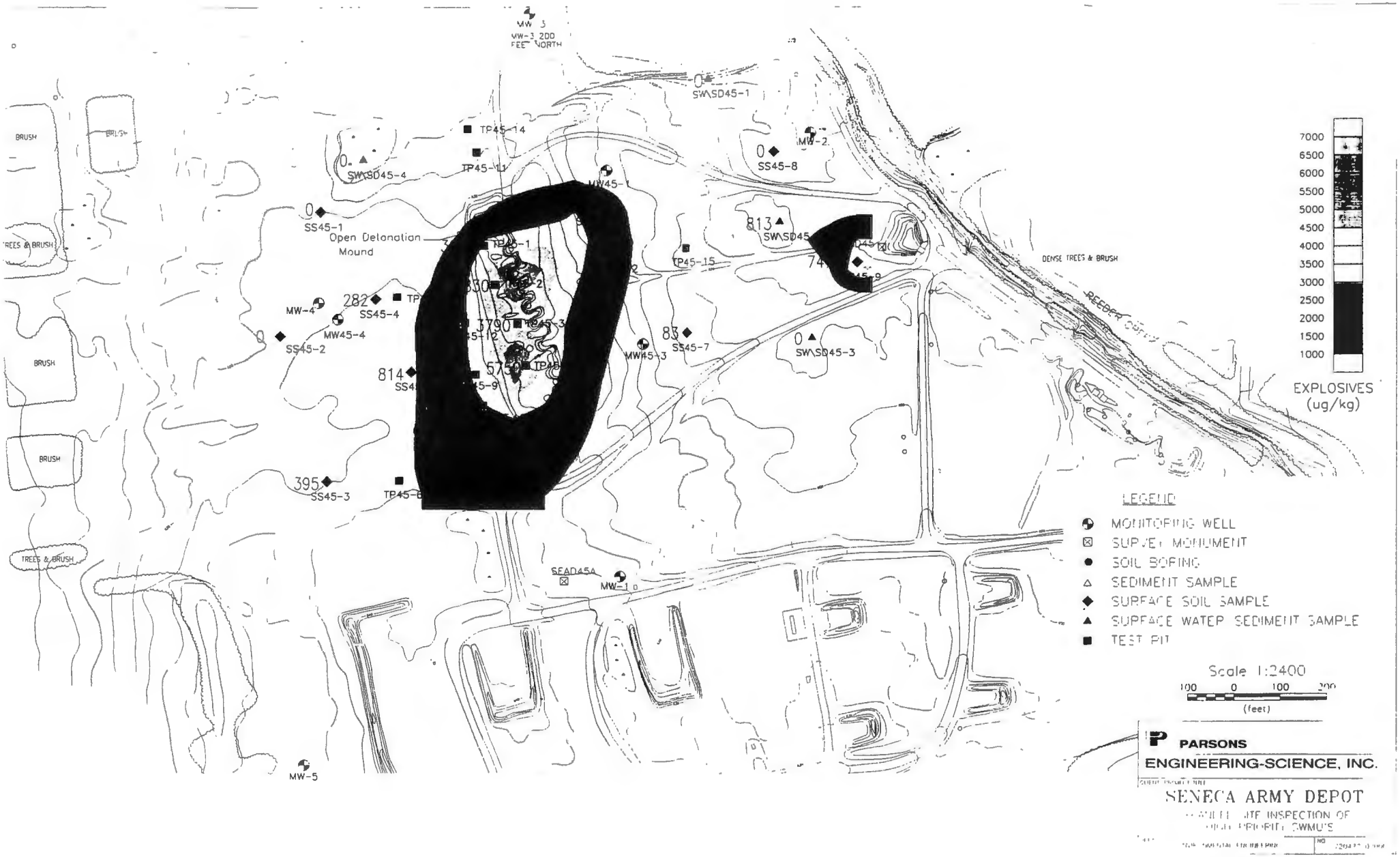


FIGURE 4.7-2
Total Explosives in Surface Soils
SEAD-45

SEAD-45

SOIL

COLLAPSED DATA TABLES

AND

SUMMARY STATISTICS TABLES

Seneca Army Depot Activity
SEAD-45 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	16	0	0.00%		0	36,850,961.54	957.110	800
1,1,2,2-Tetrachloroethane	UG/KG	16	0	0.00%		0	3,439,423.077		600
1,1,2-Trichloroethane	UG/KG	16	0	0.00%		0	1,206,815.115		
1,1-Dichloroethane	UG/KG	16	0	0.00%		0	105,288,461.5		200
1,1-Dichloroethene	UG/KG	16	0	0.00%		0	114,647.436		400
1,2-Dichloroethane	UG/KG	16	0	0.00%		0	755,917.16		100
1,2-Dichloroethene (total)	UG/KG	16	0	0.00%		0			
1,2-Dichloropropane	UG/KG	16	0	0.00%		0	1,011,595.023		
Acetone	UG/KG	16	0	0.00%		0	105,288,461.5	34,270	200
Benzene	UG/KG	16	0	0.00%		0	2,372,015.915	247,370	60
Bromodichloromethane	UG/KG	16	0	0.00%		0	1,109,491.315		
Bromoform	UG/KG	16	0	0.00%		0	8,707,400.195		
Carbon disulfide	UG/KG	16	0	0.00%		0	105,288,461.5	53,000	2,700
Carbon tetrachloride	UG/KG	16	0	0.00%		0	529,142.012		600
Chlorobenzene	UG/KG	16	0	0.00%		0	21,057,692.31		1,700
Chlorodibromomethane	UG/KG	16	0	0.00%		0	818,910.256		
Chloroethane	UG/KG	16	0	0.00%		0	421,153,846.2		1,900
Chloroform	UG/KG	16	0	0.00%		0	10,528,846.15	194,610	300
Cis-1,3-Dichloropropene	UG/KG	16	0	0.00%		0			
Ethyl benzene	UG/KG	16	0	0.00%		0	105,288,461.5	1,720,290	5,500
Methyl bromide	UG/KG	16	0	0.00%		0	1,505,625		
Methyl butyl ketone	UG/KG	16	0	0.00%		0			
Methyl chloride	UG/KG	16	0	0.00%		0	5,291,420.118		
Methyl ethyl ketone	UG/KG	16	0	0.00%		0		421,380	300
Methyl isobutyl ketone	UG/KG	16	0	0.00%		0	84,230,769.23		1,000
Methylene chloride	UG/KG	16	0	0.00%		0	9,171,794.872	132,030	100
Styrene	UG/KG	16	0	0.00%		0			
Tetrachloroethene	UG/KG	16	6	37.50%	19	0	1,322,855.03	6,454,550	1,400
Toluene	UG/KG	16	0	0.00%		0	210,576,923.1	1,552,560	1,500
Total Xylenes	UG/KG	16	0	0.00%		0	2,105,769,231	5,642,680	1,200
Trans-1,3-Dichloropropene	UG/KG	16	0	0.00%		0			
Trichloroethene	UG/KG	16	0	0.00%		0	6,253,496.503		700
Vinyl chloride	UG/KG	16	0	0.00%		0	36,204.453		200
Herbicides									
2,4,5-T	UG/KG	16	0	0.00%		0			1,900
2,4,5-TP/Silvex	UG/KG	16	0	0.00%		0			700
2,4-D	UG/KG	16	0	0.00%		0			500
2,4-DB	UG/KG	16	0	0.00%		0			
Dalapon	UG/KG	16	0	0.00%		0			
Dicamba	UG/KG	16	0	0.00%		0		22,600	
Dichloroprop	UG/KG	16	0	0.00%		0			
Dinoseb	UG/KG	16	0	0.00%		0			
MCPA	UG/KG	16	2	12.50%	9,400	0			
MCPP	UG/KG	16	0	0.00%		0		818,180	
Nitroaromatics									
1,3,5-Trinitrobenzene	UG/KG	16	7	43.75%	190	0	52,644.231		
1,3-Dinitrobenzene	UG/KG	16	0	0.00%		0	105,288.462		
2,4,6-Trinitrotoluene	UG/KG	16	11	68.75%	1,400	0	526,442.308		
2,4-Dinitrotoluene	UG/KG	16	9	56.25%	190	0	2,105,769.231	5,060	
2,6-Dinitrotoluene	UG/KG	16	0	0.00%		0	1,052,884.615		1,000
2-amino-4,6-Dinitrotoluene	UG/KG	16	10	62.50%	680	0			
4-amino-2,6-Dinitrotoluene	UG/KG	16	1	6.25%	270	0			
HMX	UG/KG	16	8	50.00%	470	0			
RDX	UG/KG	16	13	81.25%	5,800	0			
Tetryl	UG/KG	16	4	25.00%	330	0			
Semivolatile Organics									
1,2,4-Trichlorobenzene	UG/KG	16	0	0.00%		0	10,528,846.15	1,132,060	3,400
1,2-Dichlorobenzene	UG/KG	16	0	0.00%		0	94,759,615.38		7,900
1,3-Dichlorobenzene	UG/KG	16	0	0.00%		0	93,706,730.77		1,600
1,4-Dichlorobenzene	UG/KG	16	0	0.00%		0	2,866,185.897		8,500
2,4,5-Trichlorophenol	UG/KG	16	0	0.00%		0	105,288,461.5		100
2,4,6-Trichlorophenol	UG/KG	16	0	0.00%		0	6,253,496.503		
2,4-Dichlorophenol	UG/KG	16	0	0.00%		0	3,158,653.846		400
2,4-Dimethylphenol	UG/KG	16	0	0.00%		0	21,057,692.31		
2,4-Dinitrophenol	UG/KG	16	0	0.00%		0	2,105,769.231		200
2,4-Dinitrotoluene	UG/KG	16	9	56.25%	14,000	0	2,105,769.231	5,060	
2,6-Dinitrotoluene	UG/KG	16	2	12.50%	700	0	1,052,884.615		1,000
2-Chloronaphthalene	UG/KG	16	0	0.00%		0			
2-Chlorophenol	UG/KG	16	0	0.00%		0	5,264,423.077	83,200	800
2-Methylnaphthalene	UG/KG	16	0	0.00%		0		962,620	36,400
2-Methylphenol	UG/KG	16	0	0.00%		0	52,644,230.77		100
2-Nitroaniline	UG/KG	16	0	0.00%		0	63,173.077		430
2-Nitrophenol	UG/KG	16	0	0.00%		0			330
3,3'-Dichlorobenzidine	UG/KG	16	0	0.00%		0	152,863.248		
3-Nitroaniline	UG/KG	16	0	0.00%		0	3,158,653.846		500
4,6-Dinitro-2-methylphenol	UG/KG	16	0	0.00%		0			
4-Bromophenyl phenyl ether	UG/KG	16	0	0.00%		0	61,067,307.69		
4-Chloro-3-methylphenol	UG/KG	16	0	0.00%		0			240
4-Chloroaniline	UG/KG	16	0	0.00%		0	4,211,538.462		220

Seneca Army Depot Activity
SEAD-45 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
4-Chlorophenyl phenyl ether	UG/KG	16	0	0.00%		0			
4-Methylphenol	UG/KG	16	0	0.00%		0			900
4-Nitroaniline	UG/KG	16	0	0.00%		0	3,158,653.846		
4-Nitrophenol	UG/KG	16	0	0.00%		0	63,173,076.92	18,680.	100
Acenaphthene	UG/KG	16	0	0.00%		0		2,268,070	50,000
Acenaphthylene	UG/KG	16	3	18.75%	30.	0	-	33,460.	41,000
Anthracene	UG/KG	16	2	12.50%	18	0	315,865,384.6	1,269,040	50,000
Benzo[a]anthracene	UG/KG	16	8	50.00%	50	0	94,230.769	1,476,040	224
Benzo[a]pyrene	UG/KG	16	8	50.00%	82.	1	9,423.077	562,720	61
Benzo[b]fluoranthene	UG/KG	16	9	56.25%	55.	0	94,230.769	59,750.	1,100
Benzo[ghi]perylene	UG/KG	16	7	43.75%	66.	0		76,250	50,000
Benzo[k]fluoranthene	UG/KG	16	7	43.75%	58.	0	942,307.692	72,640	1,100
Bis(2-Chloroethoxy)methan	UG/KG	16	0	0.00%		0			
Bis(2-Chloroethyl)ether	UG/KG	16	0	0.00%		0	62,534.965		
Bis(2-Ethylhexyl)phthalate	UG/KG	16	9	56.25%	740	0	4,913,461.538	39,350	50,000
Butylbenzylphthalate	UG/KG	16	0	0.00%		0	210,576,923.1		50,000
Carbazole	UG/KG	16	0	0.00%		0	3,439,423.077		
Chrysene	UG/KG	16	11	68.75%	68.	0	9,423,076.923	93,300	400
Di-n-butylphthalate	UG/KG	16	9	56.25%	6,800.	0		94,697,730	8,100
Di-n-octylphthalate	UG/KG	16	0	0.00%		0	21,057,692.31		50,000
Dibenz[a,h]anthracene	UG/KG	16	0	0.00%		0	9,423.077	53,680.	14
Dibenzofuran	UG/KG	16	0	0.00%		0	4,211,538.462		6,200
Diethyl phthalate	UG/KG	16	1	6.25%	35.	0	842,307,692.3	7,665,910	7,100
Dimethylphthalate	UG/KG	16	0	0.00%		0	10,528,846,150.		2,000
Fluoranthene	UG/KG	16	11	68.75%	68.	0	42,115,384.62	7,849,900.	50,000
Fluorene	UG/KG	16	0	0.00%		0	42,115,384.62	1,755,510	50,000
Hexachlorobenzene	UG/KG	16	10	62.50%	62.	0	42,992.788		410
Hexachlorobutadiene	UG/KG	16	0	0.00%		0	210,576.923		
Hexachlorocyclopentadiene	UG/KG	16	0	0.00%		0	7,370,192.308		
Hexachloroethane	UG/KG	16	6	37.50%	1,100.	0	1,052,884.615		
Indeno[1,2,3-cd]pyrene	UG/KG	16	4	25.00%	52	0	94,230.769	47,630	3,200
Isophorone	UG/KG	16	0	0.00%		0			4,400
N-Nitrosodiphenylamine	UG/KG	16	5	31.25%	1,600.	0	14,038,461.54		
N-Nitrosodipropylamine	UG/KG	16	0	0.00%		0	9,826.923	1,454,550	
Naphthalene	UG/KG	16	5	31.25%	30.	0	42,115,384.62	149,740	13,000
Nitrobenzene	UG/KG	16	0	0.00%		0	526,442.308		200
Pentachlorophenol	UG/KG	16	0	0.00%		0	573,237.18	1,415,560	1,000
Phenanthrene	UG/KG	16	9	56.25%	46	0		325,820	50,000
Phenol	UG/KG	16	0	0.00%		0	631,730,769.2	79,520	30
Pyrene	UG/KG	16	12	75.00%	110	0	31,586,538.46	2,420,460	50,000
Pesticides/PCBs									
4,4'-DDD	UG/KG	16	0	0.00%		0	286,618.59	874,990.	2,900
4,4'-DDE	UG/KG	16	6	37.50%	4.2	0	202,319.005	86,590.	2,100
4,4'-DDT	UG/KG	16	4	25.00%	3.4	0	202,319.005	8,870	2,100
Aldrin	UG/KG	16	0	0.00%		0	4,046.38	2,750	41
Alpha-BHC	UG/KG	16	0	0.00%		0			110
Alpha-Chlordane	UG/KG	16	3	18.75%	2	0		142,090	
Aroclor-1016	UG/KG	16	0	0.00%		0	73,701.923		
Aroclor-1221	UG/KG	16	0	0.00%		0			
Aroclor-1232	UG/KG	16	0	0.00%		0			
Aroclor-1242	UG/KG	16	0	0.00%		0		12,879,550	
Aroclor-1248	UG/KG	16	0	0.00%		0			
Aroclor-1254	UG/KG	16	1	6.25%	110	0	21,057.692	3,925,000	10,000
Aroclor-1260	UG/KG	16	0	0.00%		0		2,272,730	10,000
Beta-BHC	UG/KG	16	0	0.00%		0		11,060	200
Delta-BHC	UG/KG	16	0	0.00%		0			300
Dieldrin	UG/KG	16	3	18.75%	3.2	0	4,299.279		44
Endosulfan I	UG/KG	16	6	37.50%	2.2	0	6,317,307.692	131,820	900
Endosulfan II	UG/KG	16	0	0.00%		0	6,317,307.692		900
Endosulfan sulfate	UG/KG	16	0	0.00%		0		15,820	1,000
Endrin	UG/KG	16	0	0.00%		0	315,865.385	240,910	100
Endrin aldehyde	UG/KG	16	0	0.00%		0	315,865.385	6,350	
Endrin ketone	UG/KG	16	0	0.00%		0	315,865.385	6,350	
Gamma-BHC/Lindane	UG/KG	16	0	0.00%		0	52,914.201		60
Gamma-Chlordane	UG/KG	16	0	0.00%		0		47,360	540
Heptachlor	UG/KG	16	0	0.00%		0	15,286.325	28,620	100
Heptachlor epoxide	UG/KG	16	0	0.00%		0	7,559.172	10	20
Methoxychlor	UG/KG	16	0	0.00%		0	5,264,423.077		
Toxaphene	UG/KG	16	0	0.00%		0			
Metals									
Aluminum	UG/KG	16	16	100.00%	21,900,000	4	1,052,884,615		19,620,000
Antimony	UG/KG	16	0	0.00%		0	421,153.846	18,437.230	6,000
Arsenic	UG/KG	16	16	100.00%	8.200	0	45,858.974	223,670	8,900
Barium	UG/KG	16	16	100.00%	365,000	1	73,701,923.08	91,840	300,000
Beryllium	UG/KG	16	16	100.00%	1.100	0	15,997.317	6,570	1,130
Cadmium	UG/KG	16	14	87.50%	13.100	11	526,442.308	737.770	2,460
Calcium	UG/KG	16	16	100.00%	47,000,000	0			125,000,000
Chromium	UG/KG	16	16	100.00%	39.300	5	1,052,884.615	850.430	30,000
Cobalt	UG/KG	16	16	100.00%	24.300	0	63,173,076.92		30,000
Copper	UG/KG	16	16	100.00%	1,240.000	16	42,115,384.62	827.810	33,000

Seneca Army Depot Activity
SEAD-45 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
Cyanide	UG/KG	16	2	12.50%	700	2		13,636,360.	350
Iron	UG/KG	16	16	100.00%	75,700,000.	3	315,865,384.6		37,410,000
Lead	UG/KG	16	16	100.00%	87,800.	12		181,460.	24,400
Magnesium	UG/KG	16	16	100.00%	9,270,000	0			21,700,000
Manganese	UG/KG	16	16	100.00%	1,380,000	2	24,216,346.15	8,821,860.	1,100,000
Mercury	UG/KG	16	16	100.00%	4,300.	16	315,865.385	1,710	100
Nickel	UG/KG	16	11	68.75%	51,000.	1	21,057,692.31	2,833,820.	50,000
Potassium	UG/KG	16	16	100.00%	3,280,000.	5			2,623,000
Selenium	UG/KG	16	0	0.00%		0	5,264,423.077	193,140	2,000
Silver	UG/KG	16	12	75.00%	26,200.	12	5,264,423.077		800
Sodium	UG/KG	16	16	100.00%	142,000	0			188,000
Thallium	UG/KG	16	0	0.00%		0	84,230.769		855
Vanadium	UG/KG	16	16	100.00%	38,000.	0	7,370,192.308		150,000
Zinc	UG/KG	16	11	68.75%	557,000.	11	315,865,384.6		115,000
Other Analyses									
Nitrate/Nitrite	UG/KG	16	16	100.00%	28,000	0			

Seneca Army Depot Activity
SEAD-45 Soil
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

	STUDY ID			ESI		ESI		ESI		ESI	
	SITE			SEAD-45		SEAD-45		SEAD-45		SEAD-45	
	LOC ID			SS45-1		SS45-2		SS45-3		SS45-4	
	LOC TYPE			SITE		SITE		SITE		SITE	
	SAMP_ID:			SS45-1		SS45-2		SS45-3		SS45-4	
	QC CODE.			SA		SA		SA		SA	
	SAMP DETH TOP			0		0		0		0	
	SAMP DEPTH BOT			0 2		0 2		0.2		0 2	
	MATRIX			SOIL		SOIL		SOIL		SOIL	
	SAMP DATE			25-Oct-93		25-Oct-93		25-Oct-93		25-Oct-93	
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Benzo[a]pyrene	UG/KG	1	9,423 077	562,720	61.	410.	U	380.	U	400	U	360	U
Aluminum	UG/KG	4	1,052,884,615.		19,520,000.	17,300,000.		19,400,000.		18,900,000.		14,900,000.	
Barium	UG/KG	1	73,701,923.08	91,840	300,000.	122,000.		194,000.		115,000.		143,000	
Cadmium	UG/KG	11	526,442.308	737,770.	2,460	2,100.		2,400.		1,100.		3,900.	
Chromium	UG/KG	5	1,052,884,615.	850,430.	30,000.	24,100.		39,300.		27,400.		22,900.	
Copper	UG/KG	16	42,115,384.62	827,810.	33,000.	79,400.		12,000.		55,800.		155,000.	
Cyanide	UG/KG	2		13,636,360.	350.	560.	U	570.	U	580.	U	540.	U
Iron	UG/KG	3	315,865,384.6		37,410,000.	25,800,000.		73,700,000.		30,500,000.		26,700,000.	
Lead	UG/KG	12		181,460.	24,400.	20,400.		15,700.		12,000.		34,900.	
Manganese	UG/KG	2	24,216,346.15	8,821,860	1,100,000	562,000.		1,150,000.		627,000.		530,000.	
Mercury	UG/KG	16	315,865 385	1,710.	100.	230.		630.		170.		430.	
Nickel	UG/KG	1	21,057,692 31	2,833,820	50,000.	29,400.	R	41,300.	R	40,500.	R	35,200	R
Potassium	UG/KG	5			2,623,000.	2,310,000.		3,140,000.		2,710,000.		2,100,000.	
Silver	UG/KG	12	5,264,423 077		800	1,300.	UJ	1,500	UJ	2,100.		1,000.	UJ
Zinc	UG/KG	11	315,865,384 6		115,000	148,000	R	122,000.	R	115,000.	R	208,000.	R

Seneca Army Depot Activity
SEAD-45 Soil
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

					STUDY ID:	ESI	ESI	ESI	ESI
					SITE:	SEAD-45	SEAD-45	SEAD-45	SEAD-45
					LOC ID:	SS45-5	SS45-5	SS45-6	SS45-7
					LOC TYPE:	SITE	SITE	SITE	SITE
					SAMP_ID	SS45-10	SS45-5	SS45-6	SS45-7
					QC CODE:	DU	SA	SA	SA
					SAMP DETH TOP:	0	0	0	0
					SAMP DEPTH BOT	0 2	0 2	0.2	0 2
					MATRIX:	SOIL	SOIL	SOIL	SOIL
					SAMP DATE:	25-Oct-93	25-Oct-93	25-Oct-93	25-Oct-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Benzo[a]pyrene	UG/KG	1	9,423 077	562,720	61.	44. J	62. J	45. J	380. U
Aluminum	UG/KG	4	1,052,884,615.		19,520,000.	15,600,000.	17,600,000.	16,300,000.	18,000,000.
Barium	UG/KG	1	73,701,923.08	91,840.	300,000.	151,000.	161,000.	160,000.	163,000.
Cadmium	UG/KG	11	526,442 308	737,770.	2,460.	1,300. J	2,500. J	1,800.	1,600. J
Chromium	UG/KG	5	1,052,884,615	850,430	30,000.	23,800.	26,900.	24,200.	24,800.
Copper	UG/KG	16	42,115,384 62	827,810	33,000.	405,000.	538,000.	491,000.	69,800.
Cyanide	UG/KG	2		13,636,360	350	670 U	720. U	520. U	660. U
Iron	UG/KG	3	315,865,384 6		37,410,000	30,400,000.	31,400,000.	28,100,000.	29,900,000.
Lead	UG/KG	12		181,460.	24,400	54,900.	63,600.	63,200.	21,900.
Manganese	UG/KG	2	24,216,346 15	8,821,860	1,100,000	599,000.	575,000.	555,000.	1,050,000.
Mercury	UG/KG	16	315,865 385	1,710.	100.	2,100 J	1,500 J	2,700	410 J
Nickel	UG/KG	1	21,057,692 31	2,833,820	50,000.	36,400.	40,500.	34,200. R	35,100.
Potassium	UG/KG	5			2,623,000.	1,980,000.	2,140,000.	2,060,000.	2,080,000.
Silver	UG/KG	12	5,264,423 077		800	2,700. J	3,500. J	1,300	1,200. UJ
Zinc	UG/KG	11	315,865,384 6		115,000.	161,000.	127,000.	347,000. R	126,000.

Seneca Army Depot Activity
SEAD-45 Soil
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

	STUDY ID:	ESI	ESI	ESI	ESI
	SITE:	SEAD-45	SEAD-45	SEAD-45	SEAD-45
	LOC ID:	SS45-8	SS45-9	TP45-1	TP45-1
	LOC TYPE:	SITE	SITE	SITE	SITE
	SAMP_ID:	SS45-8	SS45-9	TP45-11	TP45-1
	QC CODE:	SA	SA	DU	SA
	SAMP DETH TOP:	0	0	3	3
	SAMP DEPTH BOT:	0 2	0.2	3	3
	MATRIX:	SOIL	SOIL	SOIL	SOIL
	SAMP DATE:	25-Oct-93	25-Oct-93	11-Nov-93	11-Nov-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Benzo[a]pyrene	UG/KG	1	9,423.077	562,720.	61.	420. U	390. U	41. J	46. J
Aluminum	UG/KG	4	1,052,884,615.		19,520,000.	18,600,000.	17,800,000	16,500,000.	20,100,000.
Barium	UG/KG	1	73,701,923.08	91,840.	300,000.	365,000.	202,000.	177,000.	208,000.
Cadmium	UG/KG	11	526,442.308	737,770.	2,460.	4,800. J	5,500. J	9,600. J	10,400. J
Chromium	UG/KG	5	1,052,884,615.	850,430	30,000.	27,200.	27,400.	25,700.	31,300.
Copper	UG/KG	16	42,115,384 62	827,810.	33,000.	293,000.	267,000.	555,000.	722,000
Cyanide	UG/KG	2		13,636,360.	350.	720. U	700. U	540. U	700.
Iron	UG/KG	3	315,865,384 6		37,410,000.	29,400,000.	32,500,000.	31,900,000.	35,700,000
Lead	UG/KG	12		181,460.	24,400.	66,900.	77,700.	73,300.	54,100.
Manganese	UG/KG	2	24,216,346 15	8,821,860	1,100,000	489,000.	912,000.	613,000.	1,380,000.
Mercury	UG/KG	16	315,865 385	1,710.	100.	1,900. J	1,900. J	1,400. J	3,100. J
Nickel	UG/KG	1	21,057,692.31	2,833,820	50,000.	39,400.	42,500.	39,100.	41,800
Potassium	UG/KG	5			2,623,000.	2,530,000.	2,260,000.	1,960,000.	3,040,000.
Silver	UG/KG	12	5,264,423 077		800.	2,300. J	1,300. J	4,700. J	3,200. J
Zinc	UG/KG	11	315,865,384 6		115,000	306,000.	383,000.	360,000.	345,000.

Seneca Army Depot Activity
SEAD-45 Soil
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

STUDY ID					ESI	ESI	ESI	ESI
SITE.					SEAD-45	SEAD-45	SEAD-45	SEAD-45
LOC ID:					TP45-2	TP45-3	TP45-4	TP45-5
LOC TYPE:					SITE	SITE	SITE	SITE
SAMP_ID:					TP45-2	TP45-3	TP45-4	TP45-5
QC CODE:					SA	SA	SA	SA
SAMP. DETH TOP:					3	3	3	3
SAMP DEPTH BOT.					3	3	3	3
MATRIX:					SOIL	SOIL	SOIL	SOIL
SAMP DATE:					11-Nov-93	11-Nov-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
Benzo[a]pyrene	UG/KG	1	9,423.077	562,720.	61.	1,900. U	28. J	45. J	42. J
Aluminum	UG/KG	4	1,052,884,615.		19,520,000.	20,800,000.	22,800,000.	20,600,000.	17,300,000.
Barium	UG/KG	1	73,701,923.08	91,840	300,000.	201,000.	248,000.	216,000.	174,000.
Cadmium	UG/KG	11	526,442.308	737,770.	2,460.	9,500. J	13,100. J	10,900. R	7,400. R
Chromium	UG/KG	5	1,052,884,615.	850,430.	30,000.	30,100.	35,500.	32,100.	27,600.
Copper	UG/KG	16	42,115,384 62	827,810.	33,000.	561,000.	791,000.	1,240,000. J	749,000. J
Cyanide	UG/KG	2		13,636,360.	350.	550. U	550. U	620.	510. U
Iron	UG/KG	3	315,865,384 6		37,410,000.	31,500,000.	41,300,000.	37,600,000.	31,600,000.
Lead	UG/KG	12		181,460.	24,400.	69,400.	87,800.	74,700.	61,900.
Manganese	UG/KG	2	24,216,346.15	8,821,860.	1,100,000.	605,000.	827,000.	726,000.	600,000.
Mercury	UG/KG	16	315,865 385	1,710.	100	3,100. J	4,000. J	3,600.	4,300.
Nickel	UG/KG	1	21,057,692 31	2,833,820	50,000.	40,500.	51,000.	48,300	39,200.
Potassium	UG/KG	5			2,623,000	3,280,000.	3,010,000.	2,400,000.	1,960,000.
Silver	UG/KG	12	5,264 423 077		800	5,000. J	6,600. J	26,200. J	3,900. J
Zinc	UG/KG	11	315 865 384 6		115,000	390,000.	538,000.	557,000. J	333,000. J

Seneca Army Depot Activity
SEAD-45 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	16	0	0 00%		0	36,850,961 54	957,110	800
1 1,2,2-Tetrachloroethane	UG/KG	16	0	0 00%		0	3,439,423 077		600
1,1,2-Trichloroethane	UG/KG	16	0	0 00%		0	1,206,815.115		
1,1-Dichlorcethane	UG/KG	16	0	0 00%		0	105,288,461 5		200
1,1-Dichloroethene	UG/KG	16	0	0 00%		0	114,647 436		400
1,2-Dichloroethane	UG/KG	16	0	0.00%		0	755,917 16		100
1,2-Dichloroethene (total)	UG/KG	16	0	0 00%		0			
1,2-Dichlorooropane	UG/KG	16	0	0 00%		0	1,011,595.023		
Acetone	UG/KG	16	0	0.00%		0	105,288,461 5	34,270	200
Benzene	UG/KG	16	0	0 00%		0	2,372,015.915	247,370	60
Bromodichloromethane	UG/KG	16	0	0 00%		0	1,109,491.315		
Bromoform	UG/KG	16	0	0 00%		0	8,707,400 195		
Carbon disulfide	UG/KG	16	0	0 00%		0	105,288,461 5	53,000	2,700
Carbon tetrachloride	UG/KG	16	0	0 00%		0	529,142,012		600
Chlorobenzene	UG/KG	16	0	0.00%		0	21,057,692.31		1,700
Chlorodibromomethane	UG/KG	16	0	0 00%		0	818,910 256		
Chloroethane	UG/KG	16	0	0 00%		0	421,153,846.2		1 900
Chloroform	UG/KG	16	0	0 00%		0	10,528,846 15	194,610	300
Cis-1,3-Dichloropropene	UG/KG	16	0	0.00%		0			
Ethyl benzene	UG/KG	16	0	0.00%		0	105,288,461.5	1,720,290	5 500
Methyl bromide	UG/KG	16	0	0 00%		0	1,505,625		
Methyl butyl ketone	UG/KG	16	0	0.00%		0			
Methyl chloride	UG/KG	16	0	0.00%		0	5.291,420 118		
Methyl ethyl ketone	UG/KG	16	0	0 00%		0		421,380	300
Methyl isobutyl ketone	UG/KG	16	0	0 00%		0	84,230,769 23		1 000
Methylene chloride	UG/KG	16	0	0 00%		0	9,171,794 872	132,030	100
Styrene	UG/KG	16	0	0 00%		0			
Tetrachloroethene	UG/KG	16	6	37 50%	19	0	1,322,855 03	6 454,550	1 400
Toluene	UG/KG	16	0	0.00%		0	210,576,923 1	1,552,560	1 500
Total Xylenes	UG/KG	16	0	0 00%		0	2,105,769.231	5,642,680	1 200
Trans-1,3-Dichloropropene	UG/KG	16	0	0.00%		0			
Trichloroethene	UG/KG	16	0	0 00%		0	6,253,496 503		700
Vinyl chloride	UG/KG	16	0	0 00%		0	36,204 453		200
Herbicides									
2,4 5-T	UG/KG	16	0	0 00%		0			1 900
2 4,5-TP/Silvex	UG/KG	16	0	0.00%		0			700
2,4-D	UG/KG	16	0	0 00%		0			500
2,4-DB	UG/KG	16	0	0 00%		0			
Dalapon	UG/KG	16	0	0 00%		0			
Dicamba	UG/KG	16	0	0 00%		0		22,600	
Dichloroprop	UG/KG	16	0	0.00%		0			
Dinoseb	UG/KG	16	0	0 00%		0			
MCPA	UG/KG	16	2	12.50%	9 400	0			
MCPP	UG/KG	16	0	0 00%		0		818,180	
Nitroaromatics									
1 3,5-Trinitrobenzene	UG/KG	16	7	43 75%	190	0	52,644 231		
1 3-Dinitrobenzene	UG/KG	16	0	0 00%		0	105,288 462		
2,4 6-Trinitrotoluene	UG/KG	16	11	68 75%	1 400	0	526,442 308		
2,4-Dinitrotoluene	UG/KG	16	9	56 25%	190	0	2,105,769 231	5 060	
2,6-Dinitrotoluene	UG/KG	16	0	0 00%		0	1 052,884 615		[illegible]
2-amino-4 6-Dinitrotoluene	UG/KG	16	10	62 50%	680	0			
4-amino-2 6-Dinitrotoluene	UG/KG	16	1	6 25%	270	0			
HMX	UG/KG	16	8	50 00%	470	0			
RDX	UG/KG	16	13	81 25%	5 800	0			
Tetryl	UG/KG	16	4	25 00%	330	0			
Semivolatile Organics									
1,2,4-Trichlorobenzene	UG/KG	16	0	0 00%		0	10,528,846 15	1,132 060	3 400
1 2-Dichlorobenzene	UG/KG	16	0	0 00%		0	94,759,615 38		[illegible]
1 3-Dichlorobenzene	UG/KG	16	0	0 00%		0	93,706,730 77		[illegible]
1,4-Dichlorobenzene	UG/KG	16	0	0 00%		0	2,866,185 897		8 500
2 4,5-Trichlorophenol	UG/KG	16	0	0 00%		0	105,288,461 5		[illegible]
2 4 6-Trichlorophenol	UG/KG	16	0	0 00%		0	6,253,496 503		
2 4-Dichlorophenol	UG/KG	16	0	0 00%		0	3,158,653 846		400
2,4-Dimethylphenol	UG/KG	16	0	0 00%		0	21,057,692.31		
2,4-Dinitrophenol	UG/KG	16	0	0 00%		0	2,105,769 231		[illegible]
2,4-Dinitrotoluene	UG/KG	16	9	56 25%	14 000	1	2,105,769 231	5 060	
2 6-Dinitrotoluene	UG/KG	16	2	12 50%	700	0	1,052,884 615		[illegible]
2-Chloronaphthalene	UG/KG	16	0	0 00%		0			
2-Chlorophenol	UG/KG	16	0	0 00%		0	5,264,423 077	83 200	[illegible]
2-Methylnaphthalene	UG/KG	16	0	0 00%		0		962 620	[illegible]
2-Methylphenol	UG/KG	16	0	0 00%		0	52,644,230 77		[illegible]
2-Nitroaniline	UG/KG	16	0	0 00%		0	63,173 077		430
2-Nitrophenol	UG/KG	16	0	0 00%		0			[illegible]
3 3'-Dichlorobenzidine	UG/KG	16	0	0 00%		0	152,863 248		
3-Nitroaniline	UG/KG	16	0	0 00%		0	3,158,653 846		500
4 6-Dinitro-2-methylphenol	UG/KG	16	0	0 00%		0			
4-Bromophenyl phenyl ether	UG/KG	16	0	0 00%		0	61,067 307 69		
4-Chloro-3-methylphenol	UG/KG	16	0	0 00%		0			240
4-Chloroaniline	UG/KG	16	0	0 00%		0	4,211,538 462		[illegible]

Seneca Army Depot Activity
SEAD-45 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
4-Chlorophenyl phenyl ether	UG/KG	16	0	0.00%		0			
4-Methylphenol	UG/KG	16	0	0.00%		0			900
4-Nitroaniline	UG/KG	16	0	0.00%		0	3,158,653.846		
4-Nitrophenol	UG/KG	16	0	0.00%		0	63,173,076.92	18,680	100
Acenaphthene	UG/KG	16	0	0.00%		0		2,268,070	50,000
Acenaphthylene	UG/KG	16	3	18.75%	30.	0		33,460	41,000
Anthracene	UG/KG	16	2	12.50%	18.	0	315,865,384.6	1,269,040	50,000
Benzo[a]anthracene	UG/KG	16	8	50.00%	50.	0	94,230.769	1,476,040	224
Benzo[a]pyrene	UG/KG	16	8	50.00%	82.	0	9,423.077	562,720.	61
Benzo[b]fluoranthene	UG/KG	16	9	56.25%	55.	0	94,230.769	59,750	1,100
Benzo[ghi]perylene	UG/KG	16	7	43.75%	66.	0		76,250	50,000
Benzo[k]fluoranthene	UG/KG	16	7	43.75%	58.	0	942,307.692	72,640	1,100
Bis(2-Chloroethoxy)methan	UG/KG	16	0	0.00%		0			
Bis(2-Chloroethyl)ether	UG/KG	16	0	0.00%		0	62,534.965		
Bis(2-Ethylhexyl)phthalate	UG/KG	16	9	56.25%	740.	0	4,913,461.538	39,350	50,000
Butylbenzylphthalate	UG/KG	16	0	0.00%		0	210,576,923.1		50,000
Carbazole	UG/KG	16	0	0.00%		0	3,439,423.077		
Chrysene	UG/KG	16	11	68.75%	68.	0	9,423,076.923	93,300	400
Di-n-butylphthalate	UG/KG	16	9	56.25%	6,800.	0		94,697,730	8,100
Di-n-octylphthalate	UG/KG	16	0	0.00%		0	21,057,692.31		50,000
Dibenz[a,h]anthracene	UG/KG	16	0	0.00%		0	9,423.077	53,680	14
Dibenzofuran	UG/KG	16	0	0.00%		0	4,211,538.462		6,200
Diethyl phthalate	UG/KG	16	1	6.25%	35.	0	842,307,692.3	7,665,910.	7,100
Dimethylphthalate	UG/KG	16	0	0.00%		0	10,528,846,150.		2,000
Fluoranthene	UG/KG	16	11	68.75%	68.	0	42,115,384.62	7,849,900	50,000
Fluorene	UG/KG	16	0	0.00%		0	42,115,384.62	1,755,510	50,000
Hexachlorobenzene	UG/KG	16	10	62.50%	62.	0	42,992.788		410
Hexachlorobutadiene	UG/KG	16	0	0.00%		0	210,576.923		
Hexachlorocyclopentadiene	UG/KG	16	0	0.00%		0	7,370,192.308		
Hexachloroethane	UG/KG	16	6	37.50%	1,100	0	1,052,884.615		
Indeno[1,2,3-cd]pyrene	UG/KG	16	4	25.00%	52.	0	94,230.769	47,630	3,200
Isophorone	UG/KG	16	0	0.00%		0			4,400
N-Nitrosodiphenylamine	UG/KG	16	5	31.25%	1,600.	0	14,038,461.54		
N-Nitrosodipropylamine	UG/KG	16	0	0.00%		0	9,826.923	1,454,550	
Naphthalene	UG/KG	16	5	31.25%	30.	0	42,115,384.62	149,740	13,000
Nitrobenzene	UG/KG	16	0	0.00%		0	526,442.308		200
Pentachlorophenol	UG/KG	16	0	0.00%		0	573,237.18	1,415,560	1,000
Phenanthrene	UG/KG	16	9	56.25%	46.	0		325,820	50,000
Phenol	UG/KG	16	0	0.00%		0	631,730,769.2	79,520	30
Pyrene	UG/KG	16	12	75.00%	110	0	31,586,538.46	2,420,460	50,000
Pesticides/PCBs									
4,4'-DDD	UG/KG	16	0	0.00%		0	286,618.59	874.990	2,900
4,4'-DDE	UG/KG	16	6	37.50%	4.2	0	202,319.005	86,590	2,100
4,4'-DDT	UG/KG	16	4	25.00%	3.4	0	202,319.005	8,870	2,100
Aldrin	UG/KG	16	0	0.00%		0	4,046.38	2,750	41
Alpha-BHC	UG/KG	16	0	0.00%		0			110
Alpha-Chlordane	UG/KG	16	3	18.75%	2	0		142,090	
Aroclor-1016	UG/KG	16	0	0.00%		0	73,701.923		
Aroclor-1221	UG/KG	16	0	0.00%		0			
Aroclor-1232	UG/KG	16	0	0.00%		0			
Aroclor-1242	UG/KG	16	0	0.00%		0		12,879.550	
Aroclor-1248	UG/KG	16	0	0.00%		0			
Aroclor-1254	UG/KG	16	1	6.25%	110	0	21,057.692	3,925.000	10,000
Aroclor-1260	UG/KG	16	0	0.00%		0		2,272,730.	10,000
Beta-BHC	UG/KG	16	0	0.00%		0		11,060	200
Delta-BHC	UG/KG	16	0	0.00%		0			300
Dieldrin	UG/KG	16	3	18.75%	3.2	0	4,299.279		44
Endosulfan I	UG/KG	16	6	37.50%	2.2	0	6,317,307.692	131,820	900
Endosulfan II	UG/KG	16	0	0.00%		0	6,317,307.692		900
Endosulfan sulfate	UG/KG	16	0	0.00%		0		15,820	1,000
Endrin	UG/KG	16	0	0.00%		0	315,865.385	240,910	100
Endrin aldehyde	UG/KG	16	0	0.00%		0	315,865.385	6,350	
Endrin ketone	UG/KG	16	0	0.00%		0	315,865.385	6,350	
Gamma-BHC/Lindane	UG/KG	16	0	0.00%		0	52,914.201		60
Gamma-Chlordane	UG/KG	16	0	0.00%		0		47.360	540
Heptachlor	UG/KG	16	0	0.00%		0	15,286.325	28,620	100
Heptachlor epoxide	UG/KG	16	0	0.00%		0	7,559.172	10	20
Methoxychlor	UG/KG	16	0	0.00%		0	5,264,423.077		
Toxaphene	UG/KG	16	0	0.00%		0			
Metals									
Aluminum	UG/KG	16	16	100.00%	22,800.000	0	1,052,884.615		19,520.000
Antimony	UG/KG	16	0	0.00%		0	421,153.846	18,437.230	6,000
Arsenic	UG/KG	16	16	100.00%	8.200	0	45,858.974	223,670	8,900
Barium	UG/KG	16	16	100.00%	365.000	16	73,701,923.08	91,840	300,000
Beryllium	UG/KG	16	16	100.00%	1.100	0	15,997.317	6,570	1,130
Cadmium	UG/KG	16	14	87.50%	13.100	0	526,442.308	737,770	2,460
Calcium	UG/KG	16	16	100.00%	47,000.000	0			125,300,000
Chromium	UG/KG	16	16	100.00%	39.300	0	1,052,884.615	850.430	30,000
Cobalt	UG/KG	16	16	100.00%	24.300	0	63,173,076.92		30,000
Copper	UG/KG	16	16	100.00%	1,240.000	1	42,115,384.62	827.810	33,000

Seneca Army Depot Activity
SEAD-45 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
Cyanide	UG/KG	16	2	12.50%	700	0		13,636,360.	350
Iron	UG/KG	16	16	100.00%	75,700,000	0	315,865,384.6		37,410,000
Lead	UG/KG	16	16	100.00%	87,800	0		181,460	24,400
Magnesium	UG/KG	16	16	100.00%	9,270,000	0			21,700,000
Manganese	UG/KG	16	16	100.00%	1,380,000	0	24,216,346.15	8,821,860.	1,100,000
Mercury	UG/KG	16	16	100.00%	4,300	9	315,865.385	1,710	100
Nickel	UG/KG	16	11	68.75%	51,000.	0	21,057,692.31	2,833,820.	50,000
Potassium	UG/KG	16	16	100.00%	3,280,000	0			2,623,000
Selenium	UG/KG	16	0	0.00%		0	5,264,423.077	193,140	2,000
Silver	UG/KG	16	12	75.00%	26,200	0	5,264,423.077		800
Sodium	UG/KG	16	16	100.00%	142,000	0			188,000
Thallium	UG/KG	16	0	0.00%		0	84,230.769		855
Vanadium	UG/KG	16	16	100.00%	38,000.	0	7,370,192.308		150,000
Zinc	UG/KG	16	11	68.75%	557,000	0	315,865,384.6		115,000
Other Analyses									
Nitrate/Nitrite	UG/KG	16	16	100.00%	28,000	0			
		0	0	100.00%		0			

Seneca Army Depot Activity
SEAD-45 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID.	ESI	ESI	ESI	ESI
					SITE:	SEAD-45	SEAD-45	SEAD-45	SEAD-45
					LOC ID:	SS45-1	SS45-2	SS45-3	SS45-4
					LOC TYPE:	SITE	SITE	SITE	SITE
					SAMP_ID:	SS45-1	SS45-2	SS45-3	SS45-4
					QC CODE:	SA	SA	SA	SA
					SAMP. DETH TOP:	0	0	0	0
					SAMP DEPTH BOT:	0.2	0.2	0.2	0.2
					MATRIX:	SOIL	SOIL	SOIL	SOIL
					SAMP. DATE:	25-Oct-93	25-Oct-93	25-Oct-93	25-Oct-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
2,4-Dinitrotoluene	UG/KG	1	2,105,769.231	5,060.		410. U	380. U	400. U	360. U
Barium	UG/KG	16	73,701,923.08	91,840	300,000.	122,000.	194,000.	115,000.	143,000.
Copper	UG/KG	1	42,115,384.62	827,810.	33,000.	79,400.	192,000.	55,800.	155,000.
Mercury	UG/KG	9	315,865.385	1,710.	100.	430	630.	170.	430

Seneca Army Depot Activity
SEAD-45 Soils
Collapsed Data Summary
Comparison to Ecological PRG

STUDY ID.					ESI	ESI	ESI	ESI
SITE:					SEAD-45	SEAD-45	SEAD-45	SEAD-45
LOC ID					SS45-5	SS45-5	SS45-6	SS45-7
LOC TYPE.					SITE	SITE	SITE	SITE
SAMP_ID:					SS45-10	SS45-5	SS45-6	SS45-7
QC CODE:					DU	SA	SA	SA
SAMP DETH TOP:					0	0	0	0
SAMP. DEPTH BOT:					0.2	0.2	0.2	0.2
MATRIX:					SOIL	SOIL	SOIL	SOIL
SAMP DATE.					25-Oct-93	25-Oct-93	25-Oct-93	25-Oct-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
2,4-Dinitrotoluene	UG/KG	1	2,105,769 231	5,060.		75. J	160. J	830	380 U
Barium	UG/KG	16	73,701,923.08	91,840.	300,000.	151,000.	161,000.	160,000.	163,000.
Copper	UG/KG	1	42,115,384 62	827,810.	33,000.	405,000.	538,000.	491,000.	69,800.
Mercury	UG/KG	9	315,865 385	1,710	100.	2,100. J	1,500. J	2,400.	410. J
		0							

Seneca Army Depot Activity
SEAD-45 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID	ESI	ESI	ESI	ESI
					SITE	SEAD-45	SEAD-45	SEAD-45	SEAD-45
					LOC ID	SS45-8	SS45-9	TP45-1	TP45-1
					LOC TYPE	SITE	SITE	SITE	SITE
					SAMP_ID	SS45-8	SS45-9	TP45-11	TP45-1
					QC CODE	SA	SA	DU	SA
					SAMP DETH TOP	0	0	3	3
					SAMP DEPTH BOT	0 2	0 2	3	3
					MATRIX	SOIL	SOIL	SOIL	SOIL
					SAMP DATE	25-Oct-93	25-Oct-93	11-Nov-93	11-Nov-93
PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
2,4-Dinitrotoluene	UG/KG	1	2,105,769 231	5,060		420 U	390 U	190 J	100 J
Barium	UG/KG	16	73,701,923 08	91,840	300,000	**365,000.**	**202,000.**	**177,000.**	**208,000.**
Copper	UG/KG	1	42,115,384 62	827,810	33,000	293,000	267,000	555,000	722,000
Mercury	UG/KG	9	315,865 385	1,710	100	**1,900.** J	**1,900.** J	1,400 J	**3,100.** J
		0							

Seneca Army Depot Activity
SEAD-45 Soils
Collapsed Data Summary
Comparison to Ecological PRG

					STUDY ID	ESI	ESI	ESI	ESI
					SITE	SEAD-45	SEAD-45	SEAD-45	SEAD-45
					LOC ID.	TP45-2	TP45-3	TP45-4	TP45-5
					LOC TYPE:	SITE	SITE	SITE	SITE
					SAMP_ID:	TP45-2	TP45-3	TP45-4	TP45-5
					QC CODE:	SA	SA	SA	SA
					SAMP DETH TOP:	3	3	3	3
					SAMP. DEPTH BOT:	3	3	3	3
					MATRIX:	SOIL	SOIL	SOIL	SOIL
					SAMP DATE	11-Nov-93	11-Nov-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
2,4-Dinitrotoluene	UG/KG	1	2,105,769.231	5,060.		14,000.	84. J	59. J	230. J
Barium	UG/KG	16	73,701,923.08	91,840.	300,000	201,000.	248,000.	216,000.	174,000.
Copper	UG/KG	1	42,115,384.62	827,810.	33,000.	561,000.	791,000.	1,240,000. J	449,000. J
Mercury	UG/KG	9	315,865.385	1,710.	100.	3,100. J	4,000. J	3,600.	4,300.
		0							

Seneca Army Depot Activity
SEAD-45 Soil
Summary Statistics
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	16	0	0.00%		0	36,850,961.54	957,110	800
1,1,2,2-Tetrachloroeth	UG/KG	16	0	0.00%		0	3,439,423.077		600
1,1,2-Trichloroethane	UG/KG	16	0	0.00%		0	1,206,815.115		
1,1-Dichloroethane	UG/KG	16	0	0.00%		0	105,288,461.5		200
1,1-Dichloroethene	UG/KG	16	0	0.00%		0	114,647.436		400
1,2-Dichloroethane	UG/KG	16	0	0.00%		0	755,917.16		100
1,2-Dichloroethene (to	UG/KG	16	0	0.00%		0			
1,2-Dichloropropane	UG/KG	16	0	0.00%		0	1,011,595.023		
Acetone	UG/KG	16	0	0.00%		0	105,288,461.5	34,270	200
Benzene	UG/KG	16	0	0.00%		0	2,372,015.915	247,370	60
Bromodichloromethan	UG/KG	16	0	0.00%		0	1,109,491.315		
Bromoform	UG/KG	16	0	0.00%		0	8,707,400.195		
Carbon disulfide	UG/KG	16	0	0.00%		0	105,288,461.5	53,000	2,700
Carbon tetrachloride	UG/KG	16	0	0.00%		0	529,142.012		600
Chlorobenzene	UG/KG	16	0	0.00%		0	21,057,692.31		1,700
Chlorodibromomethan	UG/KG	16	0	0.00%		0	818,910.256		
Chloroethane	UG/KG	16	0	0.00%		0	421,153,846.2		1,900
Chloroform	UG/KG	16	0	0.00%		0	10,528,846.15	194,610	300
Cis-1 3-Dichloroprope	UG/KG	16	0	0.00%		0			
Ethyl benzene	UG/KG	16	0	0.00%		0	105,288,461.5	1,720,290	5,500
Methyl bromide	UG/KG	16	0	0.00%		0	1,505,625.		
Methyl butyl ketone	UG/KG	16	0	0.00%		0			
Methyl chloride	UG/KG	16	0	0.00%		0	5,291,420.118		
Methyl ethyl ketone	UG/KG	16	0	0.00%		0		421,380	300
Methyl isobutyl ketone	UG/KG	16	0	0.00%		0	84,230,769.23		1,000
Methylene chloride	UG/KG	16	0	0.00%		0	9,171,794.872	132,030	100
Styrene	UG/KG	16	0	0.00%		0			
Tetrachloroethene	UG/KG	16	6	37.50%	19.	0	1,322,855.03	6,454,550.	1,400
Toluene	UG/KG	16	0	0.00%		0	210,576,923.1	1,552,560.	1,500
Total Xylenes	UG/KG	16	0	0.00%		0	2,105,769,231.	5,642,680.	1,200
Trans-1,3-Dichloropro	UG/KG	16	0	0.00%		0			
Trichloroethene	UG/KG	16	0	0.00%		0	6,253,496.503		700
Vinyl chloride	UG/KG	16	0	0.00%		0	36,204.453		200
Herbicides									
2,4,5-T	UG/KG	16	0	0.00%		0			1,900
2,4,5-TP/Silvex	UG/KG	16	0	0.00%		0			700
2,4-D	UG/KG	16	0	0.00%		0			500
2,4-DB	UG/KG	16	0	0.00%		0			
Dalapon	UG/KG	16	0	0.00%		0			
Dicamba	UG/KG	16	0	0.00%		0		22,600.	
Dichloroprop	UG/KG	16	0	0.00%		0			
Dinoseb	UG/KG	16	0	0.00%		0			
MCPA	UG/KG	16	2	12.50%	9,400	0			
MCPP	UG/KG	16	0	0.00%		0		818,180	
Nitroaromatics									
1,3,5-Trinitrobenzene	UG/KG	16	7	43.75%	190.	0	52,644.231		
1,3-Dinitrobenzene	UG/KG	16	0	0.00%		0	105,288.462		
2,4,6-Trinitrotoluene	UG/KG	16	11	68.75%	1,400.	0	526,442.308		
2,4-Dinitrotoluene	UG/KG	16	9	56.25%	190.	0	2,105,769.231	5,060	
2,6-Dinitrotoluene	UG/KG	16	0	0.00%		0	1,052,884.615		1,000
2-amino-4,6-Dinitrotol	UG/KG	16	10	62.50%	680	0			
4-amino-2,6-Dinitrotol	UG/KG	16	1	6.25%	270	0			
HMX	UG/KG	16	8	50.00%	470	0			
RDX	UG/KG	16	13	81.25%	5,800.	0			
Tetryl	UG/KG	16	4	25.00%	330.	0			
Semivolatile Organics									
1,2,4-Trichlorobenzen	UG/KG	16	0	0.00%		0	10,528,846.15	1,132,060	3,400
1,2-Dichlorobenzene	UG/KG	16	0	0.00%		0	94,759,615.38		7,900
1,3-Dichlorobenzene	UG/KG	16	0	0.00%		0	93,706,730.77		1,600
1,4-Dichlorobenzene	UG/KG	16	0	0.00%		0	2,866,185.897		8,500
2,4,5-Trichlorophenol	UG/KG	16	0	0.00%		0	105,288,461.5		100
2,4,6-Trichlorophenol	UG/KG	16	0	0.00%		0	6,253,496.503		
2,4-Dichlorophenol	UG/KG	16	0	0.00%		0	3,158,653.846		400
2,4-Dimethylphenol	UG/KG	16	0	0.00%		0	21,057,692.31		
2,4-Dinitrophenol	UG/KG	16	0	0.00%		0	2,105,769.231		200
2,4-Dinitrotoluene	UG/KG	16	9	56.25%	14,000.	0	2,105,769.231	5,060	
2,6-Dinitrotoluene	UG/KG	16	2	12.50%	700	0	1,052,884.615		1,000
2-Chloronaphthalene	UG/KG	16	0	0.00%		0			
2-Chlorophenol	UG/KG	16	0	0.00%		0	5,264,423.077	83,200	800
2-Methylnaphthalene	UG/KG	16	0	0.00%		0		962,620	36,400
2-Methylphenol	UG/KG	16	0	0.00%		0	52,644,230.77		100
2-Nitroaniline	UG/KG	16	0	0.00%		0	63,173.077		430
2-Nitrophenol	UG/KG	16	0	0.00%		0			330
3,3'-Dichlorobenzidin	UG/KG	16	0	0.00%		0	152,863.248		
3-Nitroaniline	UG/KG	16	0	0.00%		0	3,158,653.846		500
4,6-Dinitro-2-methylph	UG/KG	16	0	0.00%		0			

Seneca Army Depot Activity
SEAD-45 Soil
Summary Statistics
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
4-Bromophenyl pheny	UG/KG	16	0	0 00%		0	61,067,307 69		
4-Chloro-3-methylphe	UG/KG	16	0	0 00%		0			240
4-Chloroaniline	UG/KG	16	0	0 00%		0	4,211,538 462		220
4-Chlorophenyl pheny	UG/KG	16	0	0 00%		0			
4-Methylphenol	UG/KG	16	0	0 00%		0			900
4-Nitroaniline	UG/KG	16	0	0 00%		0	3,158,653 846		
4-Nitrophenol	UG/KG	16	0	0 00%		0	63,173,076 92	18,680	100
Acenaphthene	UG/KG	16	0	0 00%		0		2,268,070	50,000
Acenaphthylene	UG/KG	16	3	18 75%	30	0		33,460	41,000
Anthracene	UG/KG	16	2	12 50%	18	0	315,865,384 6	1,269,040	50,000
Benzo[a]anthracene	UG/KG	16	8	50 00%	50	0	94,230 769	1,476,040	224
Benzo[a]pyrene	UG/KG	16	8	50 00%	82	0	9,423 077	562,720	61
Benzo[b]fluoranthene	UG/KG	16	9	56 25%	55	0	94,230 769	59,750	1,100
Benzo[ghi]perylene	UG/KG	16	7	43 75%	66	0		76,250	50,000
Benzo[k]fluoranthene	UG/KG	16	7	43 75%	58	0	942,307 692	72,640	1,100
Bis(2-Chloroethoxy)m	UG/KG	16	0	0 00%		0			
Bis(2-Chloroethyl)ethe	UG/KG	16	0	0 00%		0	62,534 965		
Bis(2-Ethylhexyl)phtha	UG/KG	16	9	56 25%	740	0	4,913,461 538	39,350	50,000
Butylbenzylphthalate	UG/KG	16	0	0 00%		0	210,576,923 1		50,000
Carbazole	UG/KG	16	0	0 00%		0	3,439,423 077		
Chrysene	UG/KG	16	11	68 75%	68	0	9,423,076 923	93,300	400
Di-n-butylphthalate	UG/KG	16	9	56 25%	6,800	0		94,697,730	8,100
Di-n-octylphthalate	UG/KG	16	0	0 00%		0	21,057,692 31		50,000
Dibenz[a,h]anthracen	UG/KG	16	0	0 00%		0	9,423 077	53,680	14
Dibenzofuran	UG/KG	16	0	0 00%		0	4,211 538 462		6,200
Diethyl phthalate	UG/KG	16	1	6 25%	35	0	842,307,692 3	7,665,910	7,100
Dimethylphthalate	UG/KG	16	0	0 00%		0	10,528,846,150		2,000
Fluoranthene	UG/KG	16	11	68 75%	68	0	42,115,384 62	7,849,900	50 000
Fluorene	UG/KG	16	0	0 00%		0	42,115,384 62	1,755,510	50,000
Hexachlorobenzene	UG/KG	16	10	62 50%	62	0	42,992 788		410
Hexachlorobutadiene	UG/KG	16	0	0 00%		0	210,576 923		
Hexachlorocyclopenta	UG/KG	16	0	0 00%		0	7,370,192 308		
Hexachloroethane	UG/KG	16	6	37 50%	1,100	0	1,052,884 615		
Indeno[1,2,3-cd]pyren	UG/KG	16	4	25 00%	52	0	94,230 769	47,630	3 200
Isophorone	UG/KG	16	0	0 00%		0			4,400
N-Nitrosodiphenylami	UG/KG	16	5	31 25%	1,600	0	14,038,461 54		
N-Nitrosodipropylamin	UG/KG	16	0	0 00%		0	9,826 923	1,454 550	
Naphthalene	UG/KG	16	5	31 25%	30	0	42,115,384 62	149,740	13,000
Nitrobenzene	UG/KG	16	0	0 00%		0	526,442 308		200
Pentachlorophenol	UG/KG	16	0	0 00%		0	573,237 18	1,415,560	1,000
Phenanthrene	UG/KG	16	9	56 25%	46	0		325,820	50,000
Phenol	UG/KG	16	0	0 00%		0	631,730,769 2	79 520	30
Pyrene	UG/KG	16	12	75 00%	110	0	31,586,538 46	2,420,460	50 000
Pesticides/PCBs									
4,4'-DDD	UG/KG	16	0	0 00%		0	286,618 59	874,990	2,900
4,4'-DDE	UG/KG	16	6	37 50%	4 2	0	202,319 005	86,590	2,100
4,4'-DDT	UG/KG	16	4	25 00%	3 4	0	202,319 005	8,870	2,100
Aldrin	UG/KG	16	0	0 00%		0	4,046 38	2,750	41
Alpha-BHC	UG/KG	16	0	0 00%		0			110
Alpha-Chlordane	UG/KG	16	3	18 75%	2	0		142 090	
Aroclor-1016	UG/KG	16	0	0 00%		0	73,701 923		
Aroclor-1221	UG/KG	16	0	0 00%		0			
Aroclor-1232	UG/KG	16	0	0 00%		0			
Aroclor-1242	UG/KG	16	0	0 00%		0		12,879,550	
Aroclor-1248	UG/KG	16	0	0 00%		0			
Aroclor-1254	UG/KG	16	1	6 25%	110	0	21,057 692	3,925 000	10 000
Aroclor-1260	UG/KG	16	0	0 00%		0		2,272,730	10 000
Beta-BHC	UG/KG	16	0	0 00%		0		11 060	200
Delta-BHC	UG/KG	16	0	0 00%		0			300
Dieldrin	UG/KG	16	3	18 75%	3 2	0	4,299 279		44
Endosulfan I	UG/KG	16	6	37 50%	2 2	0	6,317,307 692	131 820	900
Endosulfan II	UG/KG	16	0	0 00%		0	6,317,307 692		900
Endosulfan sulfate	UG/KG	16	0	0 00%		0		15,820	1 000
Endrin	UG/KG	16	0	0 00%		0	315,865 385	240,910	100
Endrin aldehyde	UG/KG	16	0	0 00%		0	315,865 385	6 350	
Endrin ketone	UG/KG	16	0	0 00%		0	315,865 385	6 350	
Gamma-BHC/Lindane	UG/KG	16	0	0 00%		0	52,914 201		50
Gamma-Chlordane	UG/KG	16	0	0 00%		0		47 360	540
Heptachlor	UG/KG	16	0	0 00%		0	15,286 325	28,620	100
Heptachlor epoxide	UG/KG	16	0	0 00%		0	7,559 172	10	20
Methoxychlor	UG/KG	16	0	0 00%		0	5,264 423 077		
Toxaphene	UG/KG	16	0	0 00%		0			
Metals									
Aluminum	UG/KG	16	16	100 00%	22 800 000	0	1,052,884 615		19,520 000
Antimony	UG/KG	16	0	0 00%		0	421 153 846	18,437 230	6 000
Arsenic	UG/KG	16	16	100 00%	8 200	0	45 858 974	223 670	8 900
Barium	UG/KG	16	16	100 00%	365 000	0	73,701 923 08	91 840	300 000

Seneca Army Depot Activity
SEAD-45 Soil
Summary Statistics
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
Beryllium	UG/KG	16	16	100.00%	1,100	0	15,997.317	6,570	1.130
Cadmium	UG/KG	16	14	87.50%	13,100	0	526,442.308	737,770	2,460
Calcium	UG/KG	16	16	100.00%	47,000,000.	0			125,300,000
Chromium	UG/KG	16	16	100.00%	39,300.	0	1,052,884,615	850,430	30.000
Cobalt	UG/KG	16	16	100.00%	24,300	0	63,173,076.92		30,000
Copper	UG/KG	16	16	100.00%	1,240,000.	0	42,115,384.62	827.810	33,000
Cyanide	UG/KG	16	2	12.50%	700	0		13,636.360	350
Iron	UG/KG	16	16	100.00%	75,700,000.	0	315,865,384.6		37,410.000
Lead	UG/KG	16	16	100.00%	87,800.	0		181,460	24.400
Magnesium	UG/KG	16	16	100.00%	9,270,000	0			21,700,000
Manganese	UG/KG	16	16	100.00%	1,380,000.	0	24,216,346.15	8,821,860	1,100,000
Mercury	UG/KG	16	16	100.00%	4,300.	0	315,865.385	1,710	100
Nickel	UG/KG	16	11	68.75%	51,000	0	21,057,692.31	2,833,820	50,000
Potassium	UG/KG	16	16	100.00%	3,280,000.	0			2,623,000
Selenium	UG/KG	16	0	0.00%		0	5,264,423.077	193,140	2,000
Silver	UG/KG	16	12	75.00%	26,200	0	5,264,423.077		800
Sodium	UG/KG	16	16	100.00%	142,000	0			188,000
Thallium	UG/KG	16	0	0.00%		0	84,230.769		855
Vanadium	UG/KG	16	16	100.00%	38,000.	0	7,370,192.308		150,000
Zinc	UG/KG	16	11	68.75%	557,000	0	315,865,384.6		115,000
Other Analyses									
Nitrate/Nitrite	UG/KG	16	16	100.00%	28,000	0			

SEAD-45

GROUNDWATER

COLLAPSED DATA TABLES

AND

SUMMARY STATISTICS TABLES

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	8	0	0 00%		0	792.549	5
1,1,2,2-Tetrachloroethane	UG/L	8	0	0.00%		0	521	5
1,1 2-Trichloroethane	UG/L	8	0	0 00%		0	188	
1,1-Dichloroethane	UG/L	8	0	0 00%		0	811 742	5
1,1-Dichloroethene	UG/L	8	0	0 00%		0	044	5
1,2-Dichloroethane	UG/L	8	0	0 00%		0	.116	5
1,2-Dichloroethene (total)	UG/L	8	0	0 00%		0		5
1,2-Dichloropropane	UG/L	8	0	0 00%		0	.989	5
Acetone	UG/L	8	0	0 00%		0	3,650	
Benzene	UG/L	8	0	0 00%		0	364	7
Bromodichloromethane	UG/L	8	0	0.00%		0	1 084	
Bromoform	UG/L	8	0	0.00%		0	2.354	
Carbon disulfide	UG/L	8	0	0 00%		0	1,042.857	
Carbon tetrachlonde	UG/L	8	0	0 00%		0	.163	5
Chlorobenzene	UG/L	8	0	0.00%		0	39 431	5
Chlorodibromomethane	UG/L	8	0	0 00%		0	8	
Chloroethane	UG/L	8	0	0 00%		0	8,591 77	5
Chloroform	UG/L	8	0	0 00%		0	153	7
Cis-1,3-Dichloropropene	UG/L	8	0	0 00%		0		5
Ethyl benzene	UG/L	8	0	0 00%		0	1,328 117	5
Methyl bromide	UG/L	8	0	0 00%		0	8 699	
Methyl butyl ketone	UG/L	8	0	0 00%		0		
Methyl chlonde	UG/L	8	0	0 00%		0	1 436	5
Methyl ethyl ketone	UG/L	8	0	0 00%		0		50
Methyl isobutyl ketone	UG/L	8	0	0 00%		0	158 118	
Methylene chlonde	UG/L	8	0	0 00%		0	4 124	5
Styrene	UG/L	8	0	0 00%		0		
Tetrachloroethene	UG/L	8	1	12.50%	1.	0	1 069	5
Toluene	UG/L	8	0	0 00%		0	747 038	5
Total Xylenes	UG/L	8	0	0 00%		0	73,000.	5
Trans-1,3-Dichloropropene	UG/L	8	0	0 00%		0		5
Trichloroethene	UG/L	8	0	0 00%		0	1 556	5
Vinyl chlonde	UG/L	8	0	0 00%		0	019	2
Herbicides								
2,4,5-T	UG/L	8	0	0 00%		0		35
2,4,5-TP/Silvex	UG/L	8	0	0 00%		0		26
2,4-D	UG/L	8	0	0 00%		0		4 4
2,4-DB	UG/L	8	0	0.00%		0		
Dalapon	UG/L	8	0	0 00%		0		50
Dicamba	UG/L	8	0	0 00%		0		44
Dichloroprop	UG/L	8	0	0 00%		0		
Dinoseb	UG/L	8	0	0 00%		0		1
MCPA	UG/L	8	0	0 00%		0		44
MCPP	UG/L	8	0	0 00%		0		
Nitroaromatics								
1,3,5-Trinitrobenzene	UG/L	8	0	0 00%		0	1.825	5
1,3-Dinitrobenzene	UG/L	8	1	12.50%	067	0	3.65	5
2,4,6-Trinitrotoluene	UG/L	8	0	0 00%		0	2 241	5
2,4-Dinitrotoluene	UG/L	8	0	0 00%		0	73	5
2 6-Dinitrotoluene	UG/L	8	0	0 00%		0	36 5	5
2-amino-4 6-Dinitrotoluene	UG/L	8	0	0 00%		0		5
4-amino-2,6-Dinitrotoluene	UG/L	8	0	0 00%		0		5
HMX	UG/L	8	1	12 50%	5	0		
RDX	UG/L	8	0	0 00%		0		
Tetryl	UG/L	8	0	0 00%		0		5
Semivolatile Organics								
1 2,4-Trichlorobenzene	UG/L	8	0	0 00%		0	194 599	5
1 2-Dichlorobenzene	UG/L	8	0	0 00%		0	268 163	4 7
1 3-Dichlorobenzene	UG/L	8	0	0 00%		0	3,248.5	5
1 4-Dichlorobenzene	UG/L	8	0	0 00%		0	2 802	4 7
2,2'-oxybis(1-Chloropropane)	UG/L	8	0	0 00%		0		
2,4,5-Trichlorophenol	UG/L	8	0	0 00%		0	3,650	
2,4,6-Trichlorophenol	UG/L	8	0	0 00%		0	967	
2,4-Dichlorophenol	UG/L	8	0	0 00%		0	109 5	
2 4-Dimethylphenol	UG/L	8	0	0 00%		0	730	5
2,4-Dinitrophenol	UG/L	8	0	0 00%		0	73	
2,4-Dinitrotoluene	UG/L	8	0	0 00%		0	73	5
2,6-Dinitrotoluene	UG/L	8	0	0 00%		0	36 5	5
2-Chloronaphthalene	UG/L	8	0	0 00%		0		
2-Chlorophenol	UG/L	8	0	0 00%		0	182 5	
2-Methylnaphthalene	UG/L	8	0	0 00%		0		
2-Methylphenol	UG/L	8	0	0 00%		0	1,825.	5
2-Nitroaniline	UG/L	8	0	0 00%		0	35	
2-Nitrophenol	UG/L	8	0	0 00%		0		
3,3 -Dichlorobenzidine	UG/L	8	0	0 00%		0	149	
3-Nitroaniline	UG/L	8	0	0 00%		0	109 5	
4 6-Dinitro-2-methylphenol	UG/L	8	0	0 00%		0		5
4-Bromophenyl phenyl ether	UG/L	8	0	0 00%		0	2,117	
4-Chloro-3-methylphenol	UG/L	8	0	0 00%		0		
4-Chloroaniline	UG/L	8	0	0 00%		0	146	5
4-Chlorophenyl phenyl ether	UG/L	8	0	0 00%		0		
4-Methylphenol	UG/L	8	0	0 00%		0		5
4-Nitroaniline	UG/L	8	0	0 00%		0	109 5	5
4-Nitrophenol	UG/L	8	0	0 00%		0	2,190	
Acenaphthene	UG/L	8	0	0 00%		0		
Acenaphthylene	UG/L	8	0	0 00%		0		
Anthracene	UG/L	8	0	0 00%		0	10,950	

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard
Benzo[a]anthracene	UG/L	8	0	0.00%		0	017	
Benzo[a]pyrene	UG/L	8	0	0.00%		0	002	10
Benzo[b]fluoranthene	UG/L	8	0	0.00%		0	.017	
Benzo[ghi]perylene	UG/L	8	0	0.00%		0		
Benzo[k]fluoranthene	UG/L	8	0	0.00%		0	.168	
Bis(2-Chloroethoxy)methane	UG/L	8	0	0.00%		0		
Bis(2-Chloroethyl)ether	UG/L	8	0	0.00%		0	.009	
Bis(2-Ethylhexyl)phthalate	UG/L	8	4	50.00%	33.	0	4.803	50.
Butylbenzylphthalate	UG/L	8	0	0.00%		0	7,300	
Carbazole	UG/L	8	0	0.00%		0	3.362	
Chrysene	UG/L	8	0	0.00%		0	1.679	
Di-n-butylphthalate	UG/L	8	0	0.00%		0		50
Di-n-octylphthalate	UG/L	8	0	0.00%		0	730.	
Dibenz[a,h]anthracene	UG/L	8	0	0.00%		0	002	
Dibenzofuran	UG/L	8	0	0.00%		0	146.	
Diethyl phthalate	UG/L	8	0	0.00%		0	29,200	
Dimethylphthalate	UG/L	8	0	0.00%		0	365,000.	
Fluoranthene	UG/L	8	0	0.00%		0	1,460	
Fluorene	UG/L	8	0	0.00%		0	1,460.	
Hexachlorobenzene	UG/L	8	0	0.00%		0	.007	35
Hexachlorobutadiene	UG/L	8	0	0.00%		0	137	
Hexachlorocyclopentadiene	UG/L	8	0	0.00%		0	.146	
Hexachloroethane	UG/L	8	0	0.00%		0	.754	
Indeno[1,2,3-cd]pyrene	UG/L	8	0	0.00%		0	017	
Isophorone	UG/L	8	0	0.00%		0		
N-Nitrosodiphenylamine	UG/L	8	0	0.00%		0	13.722	
N-Nitrosodipropylamine	UG/L	8	0	0.00%		0	01	
Naphthalene	UG/L	8	0	0.00%		0	1,460.	
Nitrobenzene	UG/L	8	0	0.00%		0	3.393	
Pentachlorophenol	UG/L	8	0	0.00%		0	56	1
Phenanthrene	UG/L	8	0	0.00%		0		
Phenol	UG/L	8	0	0.00%		0	21,900.	1
Pyrene	UG/L	8	0	0.00%		0	1,095	
Pesticides/PCBs								
4,4'-DDD	UG/L	8	0	0.00%		0	28	1
4,4'-DDE	UG/L	8	0	0.00%		0	198	1
4,4'-DDT	UG/L	8	0	0.00%		0	031	1
Aldrin	UG/L	8	0	0.00%		0	001	055
Alpha-BHC	UG/L	8	0	0.00%		0		
Alpha-Chlordane	UG/L	8	0	0.00%		0		5
Aroclor-1016	UG/L	8	0	0.00%		0	2.555	
Aroclor-1221	UG/L	8	0	0.00%		0		
Aroclor-1232	UG/L	8	0	0.00%		0		
Aroclor-1242	UG/L	8	0	0.00%		0		
Aroclor-1248	UG/L	8	0	0.00%		0		
Aroclor-1254	UG/L	8	0	0.00%		0	73	1
Aroclor-1260	UG/L	8	0	0.00%		0		1
Beta-BHC	UG/L	8	0	0.00%		0		5
Delta-BHC	UG/L	8	0	0.00%		0		
Dieldrin	UG/L	8	0	0.00%		0	001	1
Endosulfan I	UG/L	8	0	0.00%		0	219	
Endosulfan II	UG/L	8	0	0.00%		0	219	
Endosulfan sulfate	UG/L	8	0	0.00%		0		
Endrin	UG/L	8	0	0.00%		0	10.95	1
Endrin aldehyde	UG/L	8	0	0.00%		0	10.95	5
Endrin ketone	UG/L	8	0	0.00%		0	10.95	5
Gamma-BHC/Lindane	UG/L	8	0	0.00%		0	052	5
Gamma-Chlordane	UG/L	8	0	0.00%		0		
Heptachlor	UG/L	8	0	0.00%		0	002	05
Heptachlor epoxide	UG/L	8	0	0.00%		0	001	05
Methoxychlor	UG/L	8	0	0.00%		0	182.5	35
Toxaphene	UG/L	8	0	0.00%		0		
Metals								
Aluminum	UG/L	8	7	87.50%	63,300.	0	36,500	
Antimony	UG/L	8	7	87.50%	52.1	0	14.6	
Arsenic	UG/L	8	3	37.50%	9.5	0	007	25
Barium	UG/L	8	8	100.00%	751.	0	1.043	1,000
Beryllium	UG/L	8	3	37.50%	5.	0	001	
Cadmium	UG/L	8	4	50.00%	3.8	0	002	10
Calcium	UG/L	8	8	100.00%	660,000	0		
Chromium	UG/L	8	5	62.50%	106.	1	004	50
Cobalt	UG/L	8	4	50.00%	94.4	0	2,190.	
Copper	UG/L	8	5	62.50%	123.	0	1,460	200
Cyanide	UG/L	8	0	0.00%		0		100
Iron	UG/L	8	8	100.00%	113,000.	5	10,950	300
Lead	UG/L	8	8	100.00%	75.6	1		25
Magnesium	UG/L	8	8	100.00%	77,900.	0		
Manganese	UG/L	8	8	100.00%	4,640.	4	104	300
Mercury	UG/L	8	3	37.50%	1.8	0	592	2
Nickel	UG/L	8	4	50.00%	209	0	730	
Potassium	UG/L	8	5	62.50%	18,700.	0		
Selenium	UG/L	8	5	62.50%	2.5	0	182.5	10
Silver	UG/L	8	1	12.50%	4.6	0	182.5	50
Sodium	UG/L	8	8	100.00%	40,000	1		20,000
Thallium	UG/L	8	0	0.00%		0	2.92	
Vanadium	UG/L	8	3	37.50%	93.1	0	255.5	
Zinc	UG/L	8	8	100.00%	321	1	10,950	300
Other Analyses								

Seneca Army Depot Activity
SEAD-45
Summary Statistics
NYS Class GA Standard

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard	
Nitrate/Nitrite	UG/L	8	8	100.00%	8,700	0			10,000

Seneca Army Depot Activity
SEAD-45
Collapsed Data Summary
Comparison to NYS Class GA Standard

	STUDY ID		ESI	ESI	ESI	ESI	ESI
	SITE		SEAD 45	SEAD-45	SEAD-45	SEAD-45	SEAD-45
	LOC ID		MW1	MW2	MW3	MW4	MW45-2
	LOC TYPE		SITE	SITE	SITE	SITE	SITE
	SAMP_ID		MW1	MW2	MW3	MW4	MW45-2
	QC CODE		SA	SA	SA	SA	SA
	SAMP_DETH TOP		7	1	4 5	4 5	5 33
	SAMP_DEPTH BOT.		12	6	9 5	9 5	9 33
	MATRIX		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
	SAMP_DATE		01-Feb-94	02-Feb-94	01-Feb-94	02-Feb-94	03-Feb-94
		Drinking Water					
PARAMETER	Number o	PRG	NYS Class GA Standard	VALUE Q	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Volatiles	Exceedances							
Chromium	1	004	50	2 6 U	4 1 J	2 6 U	28 9	2 6 U
Iron	5	10,950	300	207	930	109	27,500	48 5 J
Lead	1		25.	71 J	66 J	.73 J	15 7	71 J
Manganese	4	104	300	4 4 J	23 7	2 9 J	384	1,400
Sodium	1		20,000	10,000	13,100	3,400. J	15,800	40,000
Zinc	1	10,950	300	15 3 J	23	14 J	164	31 6

Seneca Army Depot Activity
SEAD-45
Collapsed Data Summary
Comparison to NYS Class GA Standard

STUDY ID	ESI	ESI	ESI
SITE.	SEAD-45	SEAD-45	SEAD-45
LOC ID .	MW45-3	MW45-4	MW5
LOC TYPE	SITE	BACKGROUND	SITE
SAMP_ID.	MW45-3	MW45-4	MW5
QC CODE:	SA	SA	SA
SAMP. DETH TOP:	6 6	4.25	4
SAMP. DEPTH BOT:	10.6	6 25	9
MATRIX:	GROUNDWATER	GROUNDWATER	GROUNDWATER
SAMP. DATE:	03-Feb-94	26-Jan-94	02-Feb-94

PARAMETER	Number o	Drinking Water PRG	NYS Class GA Standard	VALUE Q	VALUE Q	VALUE Q
Volatiles	Exceedances					
Chromium	1	004	50.	16.1	106	2 6 J
Iron	5	10,950.	300.	14,100	113,000	1,220
Lead	1		25.	9.5	75.6	1.1 J
Manganese	4	.104	300.	615	4,640	55
Sodium	1		20,000.	18,600.	17,300.	16,100.
Zinc	1	10,950.	300.	81.1	321	24 5

Seneca Army Depot Activity
SEAD-45
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	8	0	0.00%		0	792.549	5
1,1,2,2-Tetrachloroethane	UG/L	8	0	0.00%		0	521	5
1,1,2-Trichloroethane	UG/L	8	0	0.00%		0	.188	
1,1-Dichloroethane	UG/L	8	0	0.00%		0	811.742	5
1,1-Dichloroethene	UG/L	8	0	0.00%		0	044	5
1,2-Dichloroethane	UG/L	8	0	0.00%		0	116	5
1,2-Dichloroethene (total)	UG/L	8	0	0.00%		0		5
1,2-Dichloropropane	UG/L	8	0	0.00%		0	.989	5
Acetone	UG/L	8	0	0.00%		0	3,650	
Benzene	UG/L	8	0	0.00%		0	.364	7
Bromodichloromethane	UG/L	8	0	0.00%		0	1.084	
Bromoform	UG/L	8	0	0.00%		0	2.354	
Carbon disulfide	UG/L	8	0	0.00%		0	1,042.857	
Carbon tetrachloride	UG/L	8	0	0.00%		0	163	5
Chlorobenzene	UG/L	8	0	0.00%		0	39.431	5
Chlorodibromomethane	UG/L	8	0	0.00%		0	8	
Chloroethane	UG/L	8	0	0.00%		0	8,591.77	5
Chloroform	UG/L	8	0	0.00%		0	.153	7
Cis-1,3-Dichloropropene	UG/L	8	0	0.00%		0		5
Ethyl benzene	UG/L	8	0	0.00%		0	1,328.117	5
Methyl bromide	UG/L	8	0	0.00%		0	8.699	
Methyl butyl ketone	UG/L	8	0	0.00%		0		
Methyl chloride	UG/L	8	0	0.00%		0	1.436	5
Methyl ethyl ketone	UG/L	8	0	0.00%		0		50
Methyl isobutyl ketone	UG/L	8	0	0.00%		0	158.118	
Methylene chloride	UG/L	8	0	0.00%		0	4.124	5
Styrene	UG/L	8	0	0.00%		0		
Tetrachloroethene	UG/L	8	1	12.50%	1	0	1.069	5
Toluene	UG/L	8	0	0.00%		0	747.038	5
Total Xylenes	UG/L	8	0	0.00%		0	73,000	5
Trans-1,3-Dichloropropene	UG/L	8	0	0.00%		0		5
Trichloroethene	UG/L	8	0	0.00%		0	1.556	5
Vinyl chloride	UG/L	8	0	0.00%		0	.019	2
Herbicides								
2,4,5-T	UG/L	8	0	0.00%		0		35
2,4,5-TP/Silvex	UG/L	8	0	0.00%		0		26
2,4-D	UG/L	8	0	0.00%		0		44
2,4-DB	UG/L	8	0	0.00%		0		
Dalapon	UG/L	8	0	0.00%		0		50
Dicamba	UG/L	8	0	0.00%		0		44
Dichloroprop	UG/L	8	0	0.00%		0		
Dinoseb	UG/L	8	0	0.00%		0		1
MCPA	UG/L	8	0	0.00%		0		44
MCPP	UG/L	8	0	0.00%		0		
Nitroaromatics								
1,3,5-Trinitrobenzene	UG/L	8	0	0.00%		0	1.825	5
1,3-Dinitrobenzene	UG/L	8	1	12.50%	067	0	3.65	5
2,4,6-Trinitrotoluene	UG/L	8	0	0.00%		0	2.241	5
2,4-Dinitrotoluene	UG/L	8	0	0.00%		0	73	5
2,6-Dinitrotoluene	UG/L	8	0	0.00%		0	36.5	5
2-amino-4,6-Dinitrotoluene	UG/L	8	0	0.00%		0		5
4-amino-2,6-Dinitrotoluene	UG/L	8	0	0.00%		0		5
HMX	UG/L	8	1	12.50%	5	0		
RDX	UG/L	8	0	0.00%		0		
Tetryl	UG/L	8	0	0.00%		0		5
Semivolatile Organics								
1,2,4-Trichlorobenzene	UG/L	8	0	0.00%		0	194.599	5
1,2-Dichlorobenzene	UG/L	8	0	0.00%		0	268.163	4.7
1,3-Dichlorobenzene	UG/L	8	0	0.00%		0	3,248.5	5
1,4-Dichlorobenzene	UG/L	8	0	0.00%		0	2.802	4.7
2,2'-oxybis(1-Chloropropane	UG/L	8	0	0.00%		0		
2,4,5-Trichlorophenol	UG/L	8	0	0.00%		0	3,650	
2,4,6-Trichlorophenol	UG/L	8	0	0.00%		0	.967	
2,4-Dichlorophenol	UG/L	8	0	0.00%		0	109.5	
2,4-Dimethylphenol	UG/L	8	0	0.00%		0	730	5
2,4-Dinitrophenol	UG/L	8	0	0.00%		0	73	
2,4-Dinitrotoluene	UG/L	8	0	0.00%		0	73	5
2,6-Dinitrotoluene	UG/L	8	0	0.00%		0	36.5	5
2-Chloronaphthalene	UG/L	8	0	0.00%		0		
2-Chlorophenol	UG/L	8	0	0.00%		0	182.5	
2-Methylnaphthalene	UG/L	8	0	0.00%		0		
2-Methylphenol	UG/L	8	0	0.00%		0	1,825	5
2-Nitroaniline	UG/L	8	0	0.00%		0	35	
2-Nitrophenol	UG/L	8	0	0.00%		0		
3,3'-Dichlorobenzidine	UG/L	8	0	0.00%		0	149	
3-Nitroaniline	UG/L	8	0	0.00%		0	109.5	
4,6-Dinitro-2-methylphenol	UG/L	8	0	0.00%		0		5
4-Bromophenyl phenyl ether	UG/L	8	0	0.00%		0	2.117	
4-Chloro-3-methylphenol	UG/L	8	0	0.00%		0		
4-Chloroaniline	UG/L	8	0	0.00%		0	146	5

Seneca Army Depot Activity
SEAD-45
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
4-Chlorophenyl phenyl ether	UG/L	8	0	0.00%		0		
4-Methylphenol	UG/L	8	0	0.00%		0		5
4-Nitroaniline	UG/L	8	0	0.00%		0	109.5	5
4-Nitrophenol	UG/L	8	0	0.00%		0	2,190	
Acenaphthene	UG/L	8	0	0.00%		0		
Acenaphthylene	UG/L	8	0	0.00%		0		
Anthracene	UG/L	8	0	0.00%		0	10,950.	
Benzo[a]anthracene	UG/L	8	0	0.00%		0	017	
Benzo[a]pyrene	UG/L	8	0	0.00%		0	002	10
Benzo[b]fluoranthene	UG/L	8	0	0.00%		0	017	
Benzo[ghi]perylene	UG/L	8	0	0.00%		0		
Benzo[k]fluoranthene	UG/L	8	0	0.00%		0	168	
Bis(2-Chloroethoxy)methan	UG/L	8	0	0.00%		0		
Bis(2-Chloroethyl)ether	UG/L	8	0	0.00%		0	.009	
Bis(2-Ethylhexyl)phthalate	UG/L	8	4	50.00%	33.	4	4 803	50
Butylbenzylphthalate	UG/L	8	0	0.00%		0	7,300.	
Carbazole	UG/L	8	0	0.00%		0	3.362	
Chrysene	UG/L	8	0	0.00%		0	1.679	
Di-n-butylphthalate	UG/L	8	0	0.00%		0		50
Di-n-octylphthalate	UG/L	8	0	0.00%		0	730.	
Dibenz[a,h]anthracene	UG/L	8	0	0.00%		0	002	
Dibenzofuran	UG/L	8	0	0.00%		0	146.	
Diethyl phthalate	UG/L	8	0	0.00%		0	29,200.	
Dimethylphthalate	UG/L	8	0	0.00%		0	365,000.	
Fluoranthene	UG/L	8	0	0.00%		0	1,460.	
Fluorene	UG/L	8	0	0.00%		0	1,460.	
Hexachlorobenzene	UG/L	8	0	0.00%		0	007	35
Hexachlorobutadiene	UG/L	8	0	0.00%		0	.137	
Hexachlorocyclopentadiene	UG/L	8	0	0.00%		0	.146	
Hexachloroethane	UG/L	8	0	0.00%		0	.754	
Indeno[1,2,3-cd]pyrene	UG/L	8	0	0.00%		0	.017	
Isophorone	UG/L	8	0	0.00%		0		
N-Nitrosodiphenylamine	UG/L	8	0	0.00%		0	13.722	
N-Nitrosodipropylamine	UG/L	8	0	0.00%		0	.01	
Naphthalene	UG/L	8	0	0.00%		0	1,460.	
Nitrobenzene	UG/L	8	0	0.00%		0	3.393	
Pentachlorophenol	UG/L	8	0	0.00%		0	56	1
Phenanthrene	UG/L	8	0	0.00%		0		
Phenol	UG/L	8	0	0.00%		0	21,900.	1
Pyrene	UG/L	8	0	0.00%		0	1,095.	
Pesticides/PCBs								
4,4`-DDD	UG/L	8	0	0.00%		0	28	1
4,4`-DDE	UG/L	8	0	0.00%		0	198	1
4,4`-DDT	UG/L	8	0	0.00%		0	031	1
Aldrin	UG/L	8	0	0.00%		0	001	055
Alpha-BHC	UG/L	8	0	0.00%		0		
Alpha-Chlordane	UG/L	8	0	0.00%		0		5
Aroclor-1016	UG/L	8	0	0.00%		0	2.555	
Aroclor-1221	UG/L	8	0	0.00%		0		
Aroclor-1232	UG/L	8	0	0.00%		0		
Aroclor-1242	UG/L	8	0	0.00%		0		
Aroclor-1248	UG/L	8	0	0.00%		0		
Aroclor-1254	UG/L	8	0	0.00%		0	73	1
Aroclor-1260	UG/L	8	0	0.00%		0		1
Beta-BHC	UG/L	8	0	0.00%		0		5
Delta-BHC	UG/L	8	0	0.00%		0		
Dieldrin	UG/L	8	0	0.00%		0	001	1
Endosulfan I	UG/L	8	0	0.00%		0	219.	
Endosulfan II	UG/L	8	0	0.00%		0	219	
Endosulfan sulfate	UG/L	8	0	0.00%		0		
Endrin	UG/L	8	0	0.00%		0	10.95	1
Endrin aldehyde	UG/L	8	0	0.00%		0	10.95	5
Endrin ketone	UG/L	8	0	0.00%		0	10.95	5
Gamma-BHC/Lindane	UG/L	8	0	0.00%		0	052	5
Gamma-Chlordane	UG/L	8	0	0.00%		0		
Heptachlor	UG/L	8	0	0.00%		0	002	05
Heptachlor epoxide	UG/L	8	0	0.00%		0	001	05
Methoxychlor	UG/L	8	0	0.00%		0	182.5	35
Toxaphene	UG/L	8	0	0.00%		0		
Metals								
Aluminum	UG/L	8	7	87.50%	63,300.	1	36.500	
Antimony	UG/L	8	7	87.50%	52.1	7	14.6	
Arsenic	UG/L	8	3	37.50%	9.5	3	007	25
Barium	UG/L	8	8	100.00%	751	8	1.043	1.000
Beryllium	UG/L	8	3	37.50%	5	3	001	
Cadmium	UG/L	8	4	50.00%	3.8	4	002	10
Calcium	UG/L	8	8	100.00%	660,000	0		
Chromium	UG/L	8	5	62.50%	106	5	004	50
Cobalt	UG/L	8	4	50.00%	94.4	0	2,190	
Copper	UG/L	8	5	62.50%	123	0	1.460	200
Cyanide	UG/L	8	0	0.00%		0		100
Iron	UG/L	8	8	100.00%	113,000	3	10.950	300
Lead	UG/L	8	8	100.00%	75.6	0		25

Seneca Army Depot Activity
SEAD-45
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
Magnesium	UG/L	8	8	100.00%	77,900.	0		
Manganese	UG/L	8	8	100.00%	4,640	8	104	300
Mercury	UG/L	8	3	37.50%	1.8	1	592	2
Nickel	UG/L	8	4	50.00%	209	0	730	
Potassium	UG/L	8	5	62.50%	18,700.	0		
Selenium	UG/L	8	5	62.50%	2.5	0	182.5	10
Silver	UG/L	8	1	12.50%	4.6	0	182.5	50
Sodium	UG/L	8	8	100.00%	40,000.	0		20,000
Thallium	UG/L	8	0	0.00%		0	2.92	
Vanadium	UG/L	8	3	37.50%	93.1	0	255.5	
Zinc	UG/L	8	8	100.00%	321	0	10,950	300
Other Analyses								
Nitrate/Nitrite	UG/L	8	8	100.00%	8,700	0		10,000

Seneca Army Depot Activity
SEAD-45
Collapsed Data Summary
Comparison to Drinking Water PRG

4/30/98

STUDY ID		ESI	ESI	ESI	ESI	ESI	ESI
SITE		SEAD-45	SEAD-45	SEAD-45	SEAD-45	SEAD-45	SEAD-45
LOC ID		MW1	MW2	MW3	MW4	MW45-2	MW45-3
LOC TYPE		SITE	SITE	SITE	SITE	SITE	SITE
SAMP_ID:		MW1	MW2	MW3	MW4	MW45-2	MW45-3
QC CODE.		SA	SA	SA	SA	SA	SA
SAMP DETH TOP:		7	1	4 5	4 5	5 33	6 6
SAMP. DEPTH BOT		12	6	9.5	9.5	9 33	10.6
MATRIX:		GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
SAMP DATE.		01-Feb-94	02-Feb-94	01-Feb-94	02-Feb-94	03-Feb-94	03-Feb-94

PARAMETER	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard	VALUE Q	VALUE Q	VALUE Q	VALUE Q	VALUE Q	VALUE
Bis(2-Ethylhexyl)phthalate	4	4.803	50.	33.	11. U	12.	11.	23.	11.
Aluminum	1	36,500		124. J	828.	83.5 J	17,700.	42. U	7,510.
Antimony	7	14.6		24.3 J	23.1 J	52.1 J	49.6 J	26.8 J	36.7
Arsenic	3	.007	25.	1.4 U	1.4 U	1.4 U	1.7 J	1 4 U	1.
Barium	8	1.043	1,000.	56.5 J	50. J	25.5 J	195. J	27.2 J	52.
Beryllium	3	001		.4 U	.4 U	.4 U	.87 J	.4 U	.5
Cadmium	4	.002	10.	2.2 J	2.1 U	2.1 U	3.8 J	2.9 J	3.2
Chromium	5	004	50.	2.6 U	J	2.6 U	28.9	2.6 U	15.
Iron	3	10,950	300.	207.	940.	109.	27,500.	48 5 J	14,100.
Manganese	8	.104	300.	4.4 J	J	J	384.	1,400.	525.
Mercury	1	.592	2.	.04 U	.04 U	.04 U	1.8	.04 U	.08

Seneca Army Depot Activity
SEAD-45
Collapsed Data Summary
Comparison to Drinking Water PRG

STUDY ID	ESI	ESI
SITE	SEAD-45	SEAD-45
LOC ID	MW45-4	MW5
LOC TYPE	BACKGROUND	SITE
SAMP_ID	MW45-4	MW5
QC CODE.	SA	SA
SAMP DETH TOP.	4 25	4
SAMP. DEPTH BOT.	6 25	9
MATRIX:	GROUNDWATER	GROUNDWATER
SAMP DATE:	26-Jan-94	02-Feb-94

PARAMETER	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard	Q	VALUE	Q	VALUE	Q
Bis(2-Ethylhexyl)phthalate	4	4.803	50.	U	11.	U	10.	U
Aluminum	1	36,500			[illegible]		821.	
Antimony	7	14.6		J	21.6	UJ	[illegible]	J
Arsenic	3	.007	25	J	9.5	J	1.4	U
Barium	8	1.043	1,000	J	[illegible]		[illegible]	J
Beryllium	3	.001		J	[illegible]		.4	U
Cadmium	4	.002	10	J	2.1	U	2.1	U
Chromium	5	.004	50.		[illegible]		[illegible]	J
Iron	3	10,950.	300		[illegible]		1,220.	
Manganese	8	.104	300.		[illegible]		[illegible]	
Mercury	1	.592	2.	J	.29		.04	U

SEAD-45

SURFACE WATER

COLLAPSED DATA TABLES

AND

SUMMARY STATISTICS TABLES

Seneca Army Depot Activity
SEAD-45
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	4	0	0.00%	0	0	
1,1,2,2-Tetrachloroethane	UG/L	4	0	0.00%	0	0	
1,1,2-Trichloroethane	UG/L	4	0	0.00%	0	0	
1,1-Dichloroethane	UG/L	4	0	0.00%	0	0	
1,1-Dichloroethene	UG/L	4	0	0.00%	0	0	
1,2-Dichloroethane	UG/L	4	0	0.00%	0	0	
1,2-Dichloroethene (total)	UG/L	4	0	0.00%	0	0	
1,2-Dichloropropane	UG/L	4	0	0.00%	0	0	
Acetone	UG/L	4	0	0.00%	0	0	
Benzene	UG/L	4	0	0.00%	0	0	
Bromodichloromethane	UG/L	4	0	0.00%	0	0	
Bromoform	UG/L	4	0	0.00%	0	0	
Carbon disulfide	UG/L	4	0	0.00%	0	0	
Carbon tetrachloride	UG/L	4	0	0.00%	0	0	
Chlorobenzene	UG/L	4	0	0.00%	0	0	5.
Chlorodibromomethane	UG/L	4	0	0.00%	0	0	
Chloroethane	UG/L	4	0	0.00%	0	0	
Chloroform	UG/L	4	0	0.00%	0	0	
Cis-1,3-Dichloropropene	UG/L	4	0	0.00%	0	0	
Ethyl benzene	UG/L	4	0	0.00%	0	0	
Methyl bromide	UG/L	4	0	0.00%	0	0	
Methyl butyl ketone	UG/L	4	0	0.00%	0	0	
Methyl chloride	UG/L	4	0	0.00%	0	0	
Methyl ethyl ketone	UG/L	4	0	0.00%	0	0	
Methyl isobutyl ketone	UG/L	4	0	0.00%	0	0	
Methylene chloride	UG/L	4	0	0.00%	0	0	
Styrene	UG/L	4	0	0.00%	0	0	
Tetrachloroethene	UG/L	4	0	0.00%	0	0	
Toluene	UG/L	4	0	0.00%	0	0	
Total Xylenes	UG/L	4	0	0.00%	0	0	
Trans-1,3-Dichloropropene	UG/L	4	0	0.00%	0	0	
Trichloroethene	UG/L	4	0	0.00%	0	0	
Vinyl chloride	UG/L	4	0	0.00%	0	0	
Herbicides							
2,4,5-T	UG/L	4	0	0.00%	0	0	
2,4,5-TP/Silvex	UG/L	4	0	0.00%	0	0	
2,4-D	UG/L	4	0	0.00%	0	0	
2,4-DB	UG/L	4	0	0.00%	0	0	
Dalapon	UG/L	4	0	0.00%	0	0	
Dicamba	UG/L	4	0	0.00%	0	0	
Dichloroprop	UG/L	4	0	0.00%	0	0	
Dinoseb	UG/L	4	0	0.00%	0	0	
MCPA	UG/L	4	0	0.00%	0	0	
MCPP	UG/L	4	0	0.00%	0	0	
Nitroaromatics							
1,3,5-Trinitrobenzene	UG/L	4	0	0.00%	0	0	
1,3-Dinitrobenzene	UG/L	4	0	0.00%	0	0	
2,4,6-Trinitrotoluene	UG/L	4	0	0.00%	0	0	
2,4-Dinitrotoluene	UG/L	4	0	0.00%	0	0	
2,6-Dinitrotoluene	UG/L	4	0	0.00%	0	0	
2-amino-4,6-Dinitrotoluene	UG/L	4	0	0.00%	0	0	
4-amino-2,6-Dinitrotoluene	UG/L	4	0	0.00%	0	0	
HMX	UG/L	4	2	50.00%	0.49	0	
RDX	UG/L	4	2	50.00%	2	0	
Tetryl	UG/L	4	0	0.00%	0	0	
Semivolatile Organics							
1,2,4-Trichlorobenzene	UG/L	4	0	0.00%	0	0	5.
1,2-Dichlorobenzene	UG/L	4	0	0.00%	0	0	5.
1,3-Dichlorobenzene	UG/L	4	0	0.00%	0	0	5.
1,4-Dichlorobenzene	UG/L	4	0	0.00%	0	0	5.
2,2'-oxybis(1-Chloropropane)	UG/L	4	0	0.00%	0	0	
2,4,5-Trichlorophenol	UG/L	4	0	0.00%	0	0	
2,4,6-Trichlorophenol	UG/L	4	0	0.00%	0	0	
2,4-Dichlorophenol	UG/L	4	0	0.00%	0	0	
2,4-Dimethylphenol	UG/L	4	0	0.00%	0	0	
2,4-Dinitrophenol	UG/L	4	0	0.00%	0	0	

Seneca Army Depot Activity
SEAD-45
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
2,4-Dinitrotoluene	UG/L	4	0	0.00%	0	0	
2,6-Dinitrotoluene	UG/L	4	0	0.00%	0	0	
2-Chloronaphthalene	UG/L	4	0	0.00%	0	0	
2-Chlorophenol	UG/L	4	0	0.00%	0	0	
2-Methylnaphthalene	UG/L	4	0	0.00%	0	0	
2-Methylphenol	UG/L	4	0	0.00%	0	0	
2-Nitroaniline	UG/L	4	0	0.00%	0	0	
2-Nitrophenol	UG/L	4	0	0.00%	0	0	
3,3`-Dichlorobenzidine	UG/L	4	0	0.00%	0	0	
3-Nitroaniline	UG/L	4	0	0.00%	0	0	
4,6-Dinitro-2-methylphenol	UG/L	4	0	0.00%	0	0	
4-Bromophenyl phenyl ether	UG/L	4	0	0.00%	0	0	
4-Chloro-3-methylphenol	UG/L	4	0	0.00%	0	0	
4-Chloroaniline	UG/L	4	0	0.00%	0	0	
4-Chlorophenyl phenyl ether	UG/L	4	0	0.00%	0	0	
4-Methylphenol	UG/L	4	0	0.00%	0	0	
4-Nitroaniline	UG/L	4	0	0.00%	0	0	
4-Nitrophenol	UG/L	4	0	0.00%	0	0	
Acenaphthene	UG/L	4	0	0.00%	0	0	
Acenaphthylene	UG/L	4	0	0.00%	0	0	
Anthracene	UG/L	4	0	0.00%	0	0	
Benzo[a]anthracene	UG/L	4	0	0.00%	0	0	
Benzo[a]pyrene	UG/L	4	0	0.00%	0	0	
Benzo[b]fluoranthene	UG/L	4	0	0.00%	0	0	
Benzo[ghi]perylene	UG/L	4	0	0.00%	0	0	
Benzo[k]fluoranthene	UG/L	4	0	0.00%	0	0	
Bis(2-Chloroethoxy)methane	UG/L	4	0	0.00%	0	0	
Bis(2-Chloroethyl)ether	UG/L	4	0	0.00%	0	0	
Bis(2-Ethylhexyl)phthalate	UG/L	4	0	0.00%	0	0	.6
Butylbenzylphthalate	UG/L	4	0	0.00%	0	0	
Carbazole	UG/L	4	0	0.00%	0	0	
Chrysene	UG/L	4	0	0.00%	0	0	
Di-n-butylphthalate	UG/L	4	0	0.00%	0	0	
Di-n-octylphthalate	UG/L	4	0	0.00%	0	0	
Dibenz[a,h]anthracene	UG/L	4	0	0.00%	0	0	
Dibenzofuran	UG/L	4	0	0.00%	0	0	
Diethyl phthalate	UG/L	4	0	0.00%	0	0	
Dimethylphthalate	UG/L	4	0	0.00%	0	0	
Fluoranthene	UG/L	4	0	0.00%	0	0	
Fluorene	UG/L	4	0	0.00%	0	0	
Hexachlorobenzene	UG/L	4	0	0.00%	0	0	
Hexachlorobutadiene	UG/L	4	0	0.00%	0	0	
Hexachlorocyclopentadiene	UG/L	4	0	0.00%	0	0	
Hexachloroethane	UG/L	4	0	0.00%	0	0	
Indeno[1,2,3-cd]pyrene	UG/L	4	0	0.00%	0	0	
Isophorone	UG/L	4	0	0.00%	0	0	
N-Nitrosodiphenylamine	UG/L	4	0	0.00%	0	0	
N-Nitrosodipropylamine	UG/L	4	0	0.00%	0	0	
Naphthalene	UG/L	4	0	0.00%	0	0	
Nitrobenzene	UG/L	4	0	0.00%	0	0	
Pentachlorophenol	UG/L	4	0	0.00%	0	0	.4
Phenanthrene	UG/L	4	0	0.00%	0	0	
Phenol	UG/L	4	0	0.00%	0	0	5.
Pyrene	UG/L	4	0	0.00%	0	0	
Pesticides/PCBs							
4,4`-DDD	UG/L	4	0	0.00%	0	0	.001
4,4`-DDE	UG/L	4	0	0.00%	0	0	.001
4,4`-DDT	UG/L	4	0	0.00%	0	0	001
Aldrin	UG/L	4	0	0.00%	0	0	
Alpha-BHC	UG/L	4	0	0.00%	0	0	
Alpha-Chlordane	UG/L	4	0	0.00%	0	0	
Aroclor-1016	UG/L	4	0	0.00%	0	0	
Aroclor-1221	UG/L	4	0	0.00%	0	0	
Aroclor-1232	UG/L	4	0	0.00%	0	0	
Aroclor-1242	UG/L	4	0	0.00%	0	0	
Aroclor-1248	UG/L	4	0	0.00%	0	0	
Aroclor-1254	UG/L	4	0	0.00%	0	0	001

Seneca Army Depot Activity
SEAD-45
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
Aroclor-1260	UG/L	4	0	0.00%	0	0	.001
Beta-BHC	UG/L	4	0	0.00%	0	0	
Delta-BHC	UG/L	4	0	0.00%	0	0	
Dieldrin	UG/L	4	0	0.00%	0	0	
Endosulfan I	UG/L	4	0	0.00%	0	0	
Endosulfan II	UG/L	4	0	0.00%	0	0	
Endosulfan sulfate	UG/L	4	0	0.00%	0	0	
Endrin	UG/L	4	0	0.00%	0	0	.002
Endrin aldehyde	UG/L	4	0	0.00%	0	0	
Endrin ketone	UG/L	4	0	0.00%	0	0	
Gamma-BHC/Lindane	UG/L	4	0	0.00%	0	0	
Gamma-Chlordane	UG/L	4	0	0.00%	0	0	
Heptachlor	UG/L	4	0	0.00%	0	0	.001
Heptachlor epoxide	UG/L	4	0	0.00%	0	0	.001
Methoxychlor	UG/L	4	0	0.00%	0	0	.03
Toxaphene	UG/L	4	0	0.00%	0	0	
Metals							
Aluminum	UG/L	4	4	100.00%	37500	4	100.
Antimony	UG/L	4	0	0.00%	0	0	
Arsenic	UG/L	4	1	25.00%	2.3	0	190.
Barium	UG/L	4	4	100.00%	439	0	
Beryllium	UG/L	4	2	50.00%	1.5	2	1.111
Cadmium	UG/L	4	1	25.00%	11.2	1	1.863
Calcium	UG/L	4	4	100.00%	194000	0	
Chromium	UG/L	4	3	75.00%	50.8	0	347.27
Cobalt	UG/L	4	2	50.00%	18.2	2	5.
Copper	UG/L	4	4	100.00%	612	4	20.288
Cyanide	UG/L	4	1	25.00%	47.7	1	5.2
Iron	UG/L	4	4	100.00%	60400	4	300.
Lead	UG/L	4	4	100.00%	68.7	3	7.164
Magnesium	UG/L	4	4	100.00%	24300	0	
Manganese	UG/L	4	4	100.00%	1250	0	
Mercury	UG/L	4	4	100.00%	3	0	
Nickel	UG/L	4	4	100.00%	74.2	0	154.489
Potassium	UG/L	4	4	100.00%	9670	0	
Selenium	UG/L	4	0	0.00%	0	0	1.
Silver	UG/L	4	0	0.00%	0	0	.1
Sodium	UG/L	4	4	100.00%	4340	0	
Thallium	UG/L	4	0	0.00%	0	0	8.
Vanadium	UG/L	4	3	75.00%	54.9	2	14.
Zinc	UG/L	4	4	100.00%	883	2	141.38
Other Analyses							
Nitrate/Nitrite	UG/L	4	4	100.00%	1060	0	

Seneca Army Depot Activity
SEAD-45
Collapsed Data Summary - Surface Water
Comparison to NYS Class C

STUDY ID:	ESI	ESI	ESI	ESI
SITE:	SEAD-45	SEAD-45	SEAD-45	SEAD-45
LOC ID:	SWSD45-1	SWSD45-2	SWSD45-3	SWSD45-4
LOC TYPE:	SITE	SITE	SITE	SITE
SAMP_ID:	SW45-1	SW45-2	SW45-3	SW45-4
QC CODE:	SA	SA	SA	SA
SAMP. DETH TOP:	0	0	0	0
AMP. DEPTH BOT:	0.1	0.1	0.1	0.1
MATRIX:	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER
SAMP. DATE:	01-Nov-93	01-Nov-93	01-Nov-93	01-Nov-93

PARAMETER	UNIT	Number of Exceedances	NYS Class C	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Aluminum	UG/L	4	100.	29,000.	4,370.	968.	37,500.
Beryllium	UG/L	2	1.111	1.3 J	.3 U	.3 U	1.5 J
Cadmium	UG/L	1	1.863	3.3 U	3.3 U	3.3 U	11.2
Cobalt	UG/L	2	5.	15.2 J	4.9 U	4.9 U	18.2 J
Copper	UG/L	4	20.288	203.	119.	24.8 J	612.
Cyanide	UG/L	1	5.2	8.3 U	8.3 U	8.3 U	47.7
Iron	UG/L	4	300.	47,700. J	5,920. J	1,270. J	60,400. J
Lead	UG/L	3	7.164	27.2	10.9	1.9 J	68.7
Vanadium	UG/L	2	14.	45.9 J	6.1 J	3.3 U	54.9
Zinc	UG/L	2	141.38	226.	98.9	23.3	883.

SEAD-45

SEDIMENT

COLLAPSED DATA TABLES

AND

SUMMARY STATISTICS TABLES

Volatiles								
1,1,1-Trichloroethane	UG/KG	4	0	0.00%	0	0		
1,1,2,2-Tetrachloroethane	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	300.
1,1,2-Trichloroethane	UG/KG	4	0	0.00%	0	0		
1,1-Dichloroethane	UG/KG	4	0	0.00%	0	0		
1,1-Dichloroethene	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	20.
1,2-Dichloroethane	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	700.
1,2-Dichloroethene (total)	UG/KG	4	0	0.00%	0	0		
1,2-Dichloropropane	UG/KG	4	0	0.00%	0	0		
Acetone	UG/KG	4	0	0.00%	0	0		
Benzene	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	600.
Bromodichloromethane	UG/KG	4	0	0.00%	0	0		
Bromoform	UG/KG	4	0	0.00%	0	0		
Carbon disulfide	UG/KG	4	0	0.00%	0	0		
Carbon tetrachloride	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	600.
Chlorobenzene	UG/KG	4	0	0.00%	0	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	3,500.
Chlorodibromomethane	UG/KG	4	0	0.00%	0	0		
Chloroethane	UG/KG	4	0	0.00%	0	0		
Chloroform	UG/KG	4	0	0.00%	0	0		
Cis-1,3-Dichloropropene	UG/KG	4	0	0.00%	0	0		
Ethyl benzene	UG/KG	4	0	0.00%	0	0		
Methyl bromide	UG/KG	4	0	0.00%	0	0		
Methyl butyl ketone	UG/KG	4	0	0.00%	0	0		
Methyl chloride	UG/KG	4	0	0.00%	0	0		
Methyl ethyl ketone	UG/KG	4	0	0.00%	0	0		
Methyl isobutyl ketone	UG/KG	4	0	0.00%	0	0		
Methylene chloride	UG/KG	4	0	0.00%	0	0		
Styrene	UG/KG	4	0	0.00%	0	0		
Tetrachloroethene	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	800.
Toluene	UG/KG	4	0	0.00%	0	0		
Total Xylenes	UG/KG	4	0	0.00%	0	0		
Trans-1,3-Dichloropropene	UG/KG	4	0	0.00%	0	0		
Trichloroethene	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	2,000.
Vinyl chloride	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	70
Herbicides								
2,4,5-T	UG/KG	4	0	0.00%	0	0		
2,4,5-TP/Silvex	UG/KG	4	0	0.00%	0	0		
2,4-D	UG/KG	4	0	0.00%	0	0		
2,4-DB	UG/KG	4	0	0.00%	0	0		
Dalapon	UG/KG	4	0	0.00%	0	0		
Dicamba	UG/KG	4	0	0.00%	0	0		
Dichloroprop	UG/KG	4	0	0.00%	0	0		
Dinoseb	UG/KG	4	0	0.00%	0	0		
MCPA	UG/KG	4	0	0.00%	0	0		
MCPP	UG/KG	4	0	0.00%	0	0		
Nitroaromatics								
1,3,5-Trinitrobenzene	UG/KG	4	0	0.00%	0	0		
1,3-Dinitrobenzene	UG/KG	4	0	0.00%	0	0		
2,4,6-Trinitrotoluene	UG/KG	4	1	25.00%	120	0		
2,4-Dinitrotoluene	UG/KG	4	1	25.00%	83	0		
2,6-Dinitrotoluene	UG/KG	4	0	0.00%	0	0		
2-amino-4,6-Dinitrotoluene	UG/KG	4	1	25.00%	260	0		
4-amino-2,6-Dinitrotoluene	UG/KG	4	0	0.00%	0	0		
HMX	UG/KG	4	0	0.00%	0	0		
RDX	UG/KG	4	1	25.00%	210	0		
Tetryl	UG/KG	4	1	25.00%	140	0		
Semivolatile Organics								
1,2,4-Trichlorobenzene	UG/KG	4	0	0.00%	0	0		
1,2-Dichlorobenzene	UG/KG	4	0	0.00%	0	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	12,000.
1,3-Dichlorobenzene	UG/KG	4	0	0.00%	0	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	12,000.
1,4-Dichlorobenzene	UG/KG	4	0	0.00%	0	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	12,000
2,2'-oxybis(1-Chloropropane)	UG/KG	4	0	0.00%	0	0		
2,4,5-Trichlorophenol	UG/KG	4	0	0.00%	0	0		
2,4,6-Trichlorophenol	UG/KG	4	0	0.00%	0	0		
2,4-Dichlorophenol	UG/KG	4	0	0.00%	0	0		
2,4-Dimethylphenol	UG/KG	4	0	0.00%	0	0		
2,4-Dinitrophenol	UG/KG	4	0	0.00%	0	0		
2,4-Dinitrotoluene	UG/KG	4	0	0.00%	0	0		
2,6-Dinitrotoluene	UG/KG	4	0	0.00%	0	0		
2-Chloronaphthalene	UG/KG	4	0	0.00%	0	0		
2-Chlorophenol	UG/KG	4	0	0.00%	0	0		
2-Methylnaphthalene	UG/KG	4	0	0.00%	0	0		
2-Methylphenol	UG/KG	4	0	0.00%	0	0		
2-Nitroaniline	UG/KG	4	0	0.00%	0	0		
2-Nitrophenol	UG/KG	4	0	0.00%	0	0		
3,3'-Dichlorobenzidine	UG/KG	4	0	0.00%	0	0		
3-Nitroaniline	UG/KG	4	0	0.00%	0	0		
4,6-Dinitro-2-methylphenol	UG/KG	4	0	0.00%	0	0		
4-Bromophenyl phenyl ether	UG/KG	4	0	0.00%	0	0		
4-Chloro-3-methylphenol	UG/KG	4	0	0.00%	0	0		
4-Chloroaniline	UG/KG	4	0	0.00%	0	0		
4-Chlorophenyl phenyl ether	UG/KG	4	0	0.00%	0	0		
4-Methylphenol	UG/KG	4	0	0.00%	0	0		
4-Nitroaniline	UG/KG	4	0	0.00%	0	0		
4-Nitrophenol	UG/KG	4	0	0.00%	0	0		
Acenaphthene	UG/KG	4	0	0.00%	0	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	140,000
Acenaphthylene	UG/KG	4	0	0.00%	0	0		
Anthracene	UG/KG	4	0	0.00%	0	0		
Benzo[a]anthracene	UG/KG	4	2	50.00%	32	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.
Benzo[a]pyrene	UG/KG	4	2	50.00%	37	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300
Benzo[b]fluoranthene	UG/KG	4	2	50.00%	37	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300
Benzo[ghi]perylene	UG/KG	4	1	25.00%	48	0		

Benzo[k]fluoranthene	UG/KG	4	2	50.00%	28	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.
Bis(2-Chloroethoxy)methane	UG/KG	4	0	0.00%	0	0		
Bis(2-Chloroethyl)ether	UG/KG	4	0	0.00%	0	0		
Bis(2-Ethylhexyl)phthalate	UG/KG	4	0	0.00%	0	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	200,000
Butylbenzylphthalate	UG/KG	4	0	0.00%	0	0		
Carbazole	UG/KG	4	0	0.00%	0	0		
Chrysene	UG/KG	4	3	75.00%	50	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.
Di-n-butylphthalate	UG/KG	4	1	25.00%	25	0		
Di-n-octylphthalate	UG/KG	4	0	0.00%	0	0		
Dibenz[a,h]anthracene	UG/KG	4	0	0.00%	0	0		
Dibenzofuran	UG/KG	4	0	0.00%	0	0		
Diethyl phthalate	UG/KG	4	0	0.00%	0	0		
Dimethylphthalate	UG/KG	4	0	0.00%	0	0		
Fluoranthene	UG/KG	4	3	75.00%	60	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	1,020,000
Fluorene	UG/KG	4	0	0.00%	0	0		
Hexachlorobenzene	UG/KG	4	2	50.00%	40	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	150
Hexachlorobutadiene	UG/KG	4	0	0.00%	0	0		
Hexachlorocyclopentadiene	UG/KG	4	0	0.00%	0	0		
Hexachloroethane	UG/KG	4	0	0.00%	0	0		
Indeno[1,2,3-cd]pyrene	UG/KG	4	1	25.00%	32	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	1,300.
Isophorone	UG/KG	4	0	0.00%	0	0		
N-Nitrosodiphenylamine	UG/KG	4	0	0.00%	0	0		
N-Nitrosodipropylamine	UG/KG	4	0	0.00%	0	0		
Naphthalene	UG/KG	4	1	25.00%	24	0		
Nitrobenzene	UG/KG	4	0	0.00%	0	0		
Pentachlorophenol	UG/KG	4	0	0.00%	0	0		
Phenanthrene	UG/KG	4	3	75.00%	34	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	120,000
Phenol	UG/KG	4	0	0.00%	0	0		
Pyrene	UG/KG	4	3	75.00%	110	0		
Pesticides/PCBs								
4,4'-DDD	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	10.
4,4'-DDE	UG/KG	4	2	50.00%	12	1	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	10.
4,4'-DDT	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	10.
Aldrin	UG/KG	4	1	25.00%	2.2	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	100
Alpha-BHC	UG/KG	4	0	0.00%	0	0		
Alpha-Chlordane	UG/KG	4	1	25.00%	5.7	0		
Aroclor-1016	UG/KG	4	0	0.00%	0	0		
Aroclor-1221	UG/KG	4	0	0.00%	0	0		
Aroclor-1232	UG/KG	4	0	0.00%	0	0		
Aroclor-1242	UG/KG	4	0	0.00%	0	0		
Aroclor-1248	UG/KG	4	0	0.00%	0	0		
Aroclor-1254	UG/KG	4	2	50.00%	580	2	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	8
Aroclor-1260	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	8
Beta-BHC	UG/KG	4	0	0.00%	0	0		
Delta-BHC	UG/KG	4	0	0.00%	0	0		
Dieldrin	UG/KG	4	1	25.00%	7.4	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	100
Endosulfan I	UG/KG	4	2	50.00%	2.7	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	30
Endosulfan II	UG/KG	4	0	0.00%	0	0	ENTHIC AQUATIC LIFE CHRONIC TOXICITY CRITERIA	30
Endosulfan sulfate	UG/KG	4	0	0.00%	0	0		
Endrin	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	800
Endrin aldehyde	UG/KG	4	1	25.00%	3.2	0		
Endrin ketone	UG/KG	4	0	0.00%	0	0		
Gamma-BHC/Lindane	UG/KG	4	0	0.00%	0	0		
Gamma-Chlordane	UG/KG	4	0	0.00%	0	0		
Heptachlor	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	8
Heptachlor epoxide	UG/KG	4	0	0.00%	0	0	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	8
Methoxychlor	UG/KG	4	0	0.00%	0	0		
Toxaphene	UG/KG	4	0	0.00%	0	0		
Metals								
Aluminum	UG/KG	4	4	100.00%	35000000	0		
Antimony	UG/KG	4	0	0.00%	0	0	NYS LOWEST EFFECT LEVEL	2,000
Arsenic	UG/KG	4	4	100.00%	16100	3	NYS LOWEST EFFECT LEVEL	6,000
Barium	UG/KG	4	4	100.00%	308000	0		
Beryllium	UG/KG	4	4	100.00%	1400	0		
Cadmium	UG/KG	4	4	100.00%	25600	4	NYS LOWEST EFFECT LEVEL	600
Calcium	UG/KG	4	4	100.00%	84400000	0		
Chromium	UG/KG	4	4	100.00%	48400	3	NYS LOWEST EFFECT LEVEL	26,000
Cobalt	UG/KG	4	4	100.00%	19700	0		
Copper	UG/KG	4	4	100.00%	814000	4	NYS LOWEST EFFECT LEVEL	16,000.
Cyanide	UG/KG	4	0	0.00%	0	0		
Iron	UG/KG	4	4	100.00%	50500000	4	NYS LOWEST EFFECT LEVEL	20,000,000
Lead	UG/KG	4	4	100.00%	101000	3	NYS LOWEST EFFECT LEVEL	31,000
Magnesium	UG/KG	4	4	100.00%	10200000	0		
Manganese	UG/KG	4	4	100.00%	935000	3	NYS LOWEST EFFECT LEVEL	460,000
Mercury	UG/KG	4	4	100.00%	5300	4	NYS LOWEST EFFECT LEVEL	150
Nickel	UG/KG	4	4	100.00%	67700	4	NYS LOWEST EFFECT LEVEL	16,000
Potassium	UG/KG	4	4	100.00%	4680000	0		
Selenium	UG/KG	4	0	0.00%	0	0		
Silver	UG/KG	4	3	75.00%	5800	3	NYS LOWEST EFFECT LEVEL	1,000
Sodium	UG/KG	4	4	100.00%	377000	0		
Thallium	UG/KG	4	0	0.00%	0	0		
Vanadium	UG/KG	4	4	100.00%	53700	0		
Zinc	UG/KG	4	4	100.00%	755000	3	NYS LOWEST EFFECT LEVEL	120,000
Other Analyses								
Nitrate/Nitrite	UG/KG							

Seneca Army Depot Activity
SEAD-45
Collapsed Data Summary - Sediment
Comparison to Minimum Sediment Criteria

STUDY ID:	ESI	ESI	ESI	ESI
SITE:	SEAD-45	SEAD-45	SEAD-45	SEAD-45
LOC ID:	SWSD45-1	SWSD45-2	SWSD45-3	SWSD45-4
LOC TYPE:	SITE	SITE	SITE	SITE
SAMP_ID:	SD45-1	SD45-2	SD45-3	SD45-4
QC CODE:	SA	SA	SA	SA
SAMP. DETH TOP:	0	0	0	0
SAMP. DEPTH BOT:	0.5	0.5	0.5	0.5
MATRIX:	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
SAMP. DATE:	01-Nov-93	01-Nov-93	01-Nov-93	01-Nov-93

PARAMETER	UNIT	Number of Exceedances	Source of Criteria	Minimum Sediment Criteria	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Volatiles								
4,4'-DDE	UG/KG	1	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	10.	4.2 U	4.3 J	5. U	12 J
Aroclor-1254	UG/KG	2	NYS HUMAN HEALTH BIOACCUMULATION CRITERIA	.8	42 U	74	50. U	J
Arsenic	UG/KG	3	NYS LOWEST EFFECT LEVEL	6,000.	6,900	4,200.	7,700	
Cadmium	UG/KG	4	NYS LOWEST EFFECT LEVEL	600.	7.1 J		5,600.	J
Chromium	UG/KG	3	NYS LOWEST EFFECT LEVEL	26,000.	22,500.			
Copper	UG/KG	4	NYS LOWEST EFFECT LEVEL	16,000.	63,900			
Iron	UG/KG	4	NYS LOWEST EFFECT LEVEL	20,000,000.				
Lead	UG/KG	3	NYS LOWEST EFFECT LEVEL	31,000.	19,800.			
Manganese	UG/KG	3	NYS LOWEST EFFECT LEVEL	460,000.	458,000.			
Mercury	UG/KG	4	NYS LOWEST EFFECT LEVEL	150.				J
Nickel	UG/KG	4	NYS LOWEST EFFECT LEVEL	16,000.				
Silver	UG/KG	3	NYS LOWEST EFFECT LEVEL	1,000.	1,300. U			J
Zinc	UG/KG	3	NYS LOWEST EFFECT LEVEL	120,000.	104,000.			