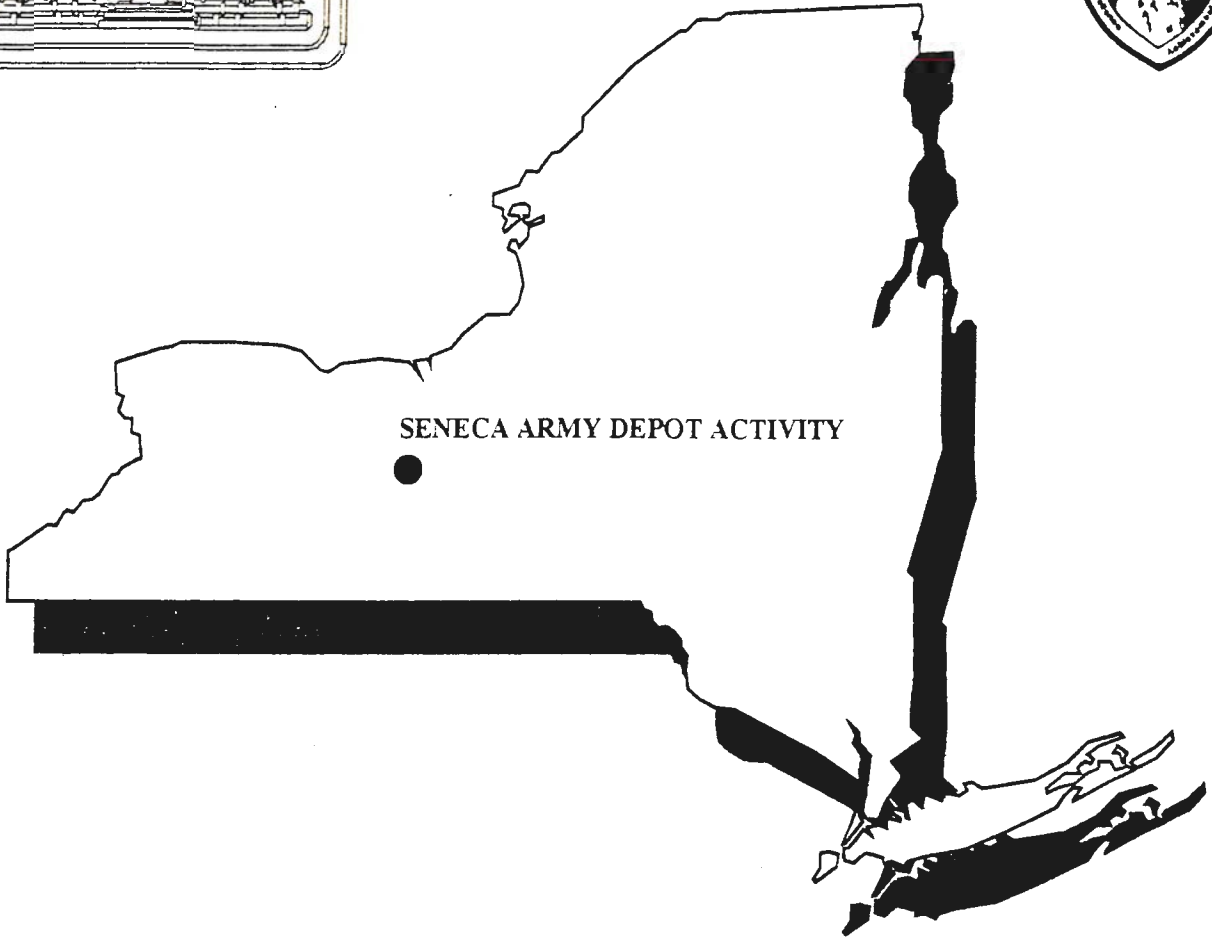
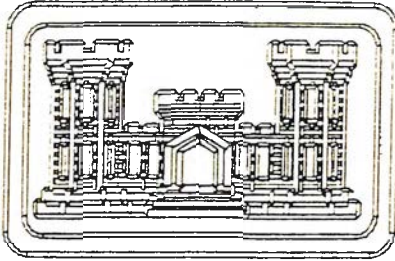


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U.S. ARMY ENGINEER DIVISION
HUNTSVILLE, ALABAMA



SENECA ARMY DEPOT ACTIVITY (SEDA)

PEER REVIEW QUESTIONNAIRE PACKAGE
SEAD-11 OLD CONSTRUCTION DEBRIS LANDFILL

APRIL/MAY 1998

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

SITE SUMMARY QUESTIONNAIRE

SEAD-11 The Old Construction Debris Landfill

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 from land disposal of construction debris. The concern was from uncertainty regarding what may have been disposed of in the landfill since accurate disposal records were not kept and the contents of the landfill are unknown. The landfill may be a location where hazardous materials may have been disposed of since it operated during a time period, i.e. from pre-1954 to 1981, when environmental regulations did not adequately address disposal of such materials.

The site was not initially identified by US Army Toxic and Hazardous Materials Agency (USATHAMA) during the initial assessment of the Seneca facility, "Installation Assessment of Seneca Army Depot, Report No. 157 January of 1980". However, the Old Construction Debris Landfill site was identified as a site in the follow-up report to the initial assessment report. The follow-up report, titled "Update of the Initial Installation Assessment of Seneca Army Depot, NY", Report 157(U), August 1988, identified the Old Construction Debris Landfill as a Solid Waste Management Unit (SWMU) and named the site SEAD-11. The report identified this as a site where "hazardous materials had been stored or disposed of and could be releasing hazardous substances to the environment". The report also recommended that SEDA "coordinate the SWMU list with EPA, Region II, and NYSDEC and implement a sampling program, including SEAD SWMUs 3, 4, 6, 8, 11, 14, 16, 17, 18, 19, 23, 24, 25 and 26". The update report reviewed aerial photographs and toured each site but did not identify any problems associated with the tour. The report notes, however, that the tour was conducted when the site was covered in snow, and suggested that the visual inspection was not adequate for evaluation of the site. No historical analytical data were discovered for this SWMU.

As a result of the identification and classification of the site as a SWMU by USATHAMA, the site was included as a SWMU during the SWMU classification process that was performed during the RCRA Part B permit submittal. The process SWMU identification and classification was mandated by the EPA Region II and by NYSDEC, and 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

Parsons 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 included landfill units, such as the Old Construction Debris Landfill area, that are known or suspected to have caused a release into the environment or whose integrity has not been verified. The 1994 Solid Waste Management Unit (SWMU) Classification Study identified the Old Construction Debris Landfill as a SWMU, designated as SEAD-11, and classified the SWMU as a moderate 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 1993 and documented in the report titled "Expanded Site Inspection (ESI) Report for Three Moderate Priority SWMUs, (May 1995).

The Old Construction Debris Landfill is located in the southwestern portion of SEDA immediately southwest of the intersection of Indian Creek Road and the SEDA railroad tracks. The site is located within the future conservation/recreational area. The landfill, which covers approximately 4 acres (590 feet by 300 feet), is currently abandoned and the surface is vegetated with grasses and weeds. The Site Location and Final Land Use Plan figure identifies the location of SEAD-11 at the depot and relative to other sites. The attached Figure 1.1-12 provides a closer view of the site. The is characterized by an area which exhibits a pronounced topographic high that defines its general kidney shape, see Figure 1.1-12. There are no developed portions of the site.

The site is bound to the east by SEDA railroad tracks beyond which is a steep upward scarp and a gently westward sloping field with grass and low brush. South of the site is dense low brush. West of the site is an open grass field that ends at the fenced SEDA boundary located approximately 700 feet west of the "toe" of the landfill. The site is bound to the north by Indian Creek Road beyond which is an open grass field which gives way to trees and low brush several hundred feet from the road.

The relief of the landfill is well defined on the generally west-sloping regional topography in the area. On the landfill surface the topography slopes mostly to the northwest. The apparent thicker fill in the southern and western portions of the landfill results in steep scarps on the south and southwestern sides of the landfill and more gently sloping hills on the north and northwestern sides. While the majority of the landfill surface is grass-covered, the southern perimeter of the landfill is vegetated with deciduous trees. The southern and southwestern scarps of the landfill are characterized by assorted construction debris including metal and wood.

Access to the site is provided via a dirt road which enters the site approximately 50 feet west of the intersection of Indian Creek Road and the SEDA railroad tracks. Within SEDA, pedestrian and vehicular

access to the site is currently restricted since the site is located within the ammunition storage area but this restriction will be eliminated as the depot is closed.

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

a) The potential sources of contamination includes residual materials deposited in the landfill. The range of components that could have been placed in the landfill could include waste materials from any of the activities that have been on-going at the depot since the 1940's.

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 11-1, presents the conceptual site model for the Old Construction Debris Landfill, (SEAD-11). Landfilling of wastes within the 4 acre landfill area is the source of the waste materials present. The wastes are expected to remain within or near the landfill area unless released to the surrounding environment due to runoff/erosion or leachate infiltration to subsurface soils or groundwater. Leachate can also breakout from the edges for the landfill and enter surface water through the drainage ditches that surround the landfill. The landfill is an elevated mound situated along the western slope of the depot and is subjected to erosion. Indian Creek, a Class C surface water body, is located to the west of the landfill along Indian Creek Road. Migration pathways and transport mechanisms have been identified as :

- Leaching of waste residues to subsurface soils due to dissolution with infiltrating rainfall;
- Leaching of waste residues to groundwater due to dissolution with infiltrating rainfall;
- Runoff to surface water and sediment due to erosion.

The site is currently fallow and landfilling is no longer a depot approved waste management technique. The site is occasionally visited by SEDA workers for mowing or security purposes. Future uses included recreational/conservation uses. Following BRAC closure, this site will be part of a large recreational/conservation area that will potentially be used for hiking, camping, etc. There is also a potential that the area could be a managed recreational area. Realistic future human exposure scenarios include: an adult site worker (ranger), an adult and child site visitor (camper) and a future construction worker. The potential for constructing a shower facility for campers and the site worker have been included, since the site may be used by the state in this manner. The actual future use of the facility has not been established with certainty, other than as a conservation recreational area, because discussions with the State of New York Fish and Wildlife Service regarding their willingness to accept this and other sites are still ongoing. Based upon the understanding that the site will be used for these purposes, the migration pathways for human health receptors, as shown in Figure 11-1, include the following:

Pathway

Receptors

Ingestion and dermal contact from subsurface soil from burrowing (ecological) and construction activities;

Future Construction Worker, Terrestrial Biota

Inhalation, ingestion and dermal contact to groundwater from drinking and showering;

Future Site Worker, Future Adult/Child Site Visitor

Ingestion and dermal contact to surface water and sediment during wading or swimming (ecological)

Future Adult/Child Site Visitor, Terrestrial Biota

The release mechanisms for these pathways include;

Pathway

Release Mechanisms

Subsurface Soil
Groundwater
Surface Water
and Sediment

Direct deposition;
Infiltration and percolation;
Runoff and erosion.

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

Pathway

Data Needs

Subsurface Soil
Groundwater
Surface Water
and Sediment

Subsurface soil samples
Monitoring wells and ground water samples
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 are the residuals that may exist within the landfill. The primary constituents of concern include:

- Volatiles,
- Semi-volatiles.
- Nitroaromatics (Explosives),
- Herbicides,
- Pesticides,
- 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 11-2 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 require 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 11-2, each decision is identified with a letter, whereas each action is identified with a number so that the status of each site can be identified. This provides an easy mechanism to understand what decisions have been made and what decisions need to be made. Each of the six phases of the process allow the site to exit the process. The effort involved in exiting the process is dependent upon the phase involved and the information required to document that conditions are within the required limits. In some cases this involves a comparison to an appropriate State and Federal Standard, Guideline and Criteria (SGC). In other instances, this will involve completion of a remedial action or an Interim Remedial Measure (IRM).

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

The second phase is the Preliminary Assessment Phase. This phase begins with collection of data as part of an Expanded Site Inspection (ESI), as shown in Action 5 of Figure 11-2. The ESI data is then evaluated to determine whether a threat exists at the AOC. This determination is based upon direct comparisons of the site data to background or an appropriate State and/or Federal Standards, Guidelines and Criteria (SGC). Exceedances of an appropriate standard, guideline, or criteria is used to indicate that a threat exists. A quantitative risk analysis is not performed to quantify the threat. Professional judgments are also used to evaluate the significance of the exceedances and are incorporated into the recommendations for either no further action or additional evaluations, as shown in Decision No. C or Figure 11-2.

Each media have unique SGCs that are used for comparison. Soil data, collected during the ESI, are compared to background concentrations, or the TAGM value for soil. In some instances, in particular for metals in soil, the TAGM value is either background or a pre-determined value. In instances where the TAGM value is background the value chosen represents the 95th percentile of the background data set that has been accumulated at the SEDA. The 95th percentile of the background database was chosen to reduce the possibility of concluding that an exceedance had occurred from a release when the exceedance was from a site sample that represents the high end of background distribution in soil. If no exceedances are determined then the recommendation is for no further action (NFA). However, if exceedances of TAGMs or other media specific SGC are noted then further evaluation of the data is required to determine if exceedances over the Preliminary Remedial Goals (PRG)s, see Decision No. D of Figure 11-2.

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

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

If exceedances of a PRG are noted then it is almost certain that the mini-risk assessment will yield unacceptable risk and therefore there is no need to perform the screening risk assessment. In this instance the decision process enters the Interim Remedial Measures (IRM) phase which begins with performing a hot spot analysis. If on the other hand, if a PRG is not exceeded then performing the mini-risk assessment is a mechanism of documenting that the site conditions are acceptable and no further action is required. The mini-risk assessment is used to provide a quantitative risk value that can be supportive of a no further action decision. The mini-risk assessment utilizes identical procedures as what would be used for a

Baseline Risk Assessment (BRA) but uses the maximum detected concentration as the Exposure Point Concentration (EPC) instead of the Upper 95th Confidence Limit of the mean due to the uncertainties associated with evaluating a site with the smaller ESI database. If the results of the mini-risk assessment indicate acceptable risk, i.e. carcinogenic risks are less than $1E-04$ or the HI is less than 1, then the site conditions meet the requirements for no further action. Otherwise the site conditions are not acceptable and the site enters the Interim Remedial Measure (IRM) phase, Decision No. E Figure 11-2.

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 rationale 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 solveable 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?

Soil samples collected indicate that a wide variety of COCs are present. To identify areas of the landfill to be sampled, a 39 point soil gas survey was conducted on the landfill. Following the soil gas survey, locations for sampling were identified. Fifteen (15) subsurface soil samples were collected from soil borings and test pits completed at SEAD-11. Lastly, four monitoring wells were installed and sampled as part of this investigation. Figure 2.3-3 shows the locations of these sampling points. The following describes the nature and extent of contamination identified at SEAD-11. A detailed comparison of the soil data and the NYSDEC TAGM criteria is presented in the attached Collapsed Data Summary and Summary Statistics tables.

Soil Gas Survey

The intent of the soil gas survey at the Old Construction Debris Landfill was to locate areas on and in the immediate vicinity of the landfill that have been impacted by volatile organic compounds. Soil gas samples were collected at 31 of 39 sample locations on the grid shown in Figure 2.3-2. At eight of the locations, collection of soil gas was precluded by the high water table which filled the soil gas sampling tube with groundwater after it was driven into the ground.

The results of the soil gas survey are summarized in Figure 4.1-1. Detector responses were expressed as TCE in parts per million by volume (ppmv). Figure 4.1-1 summarizes the range of concentrations obtained at each sampling point. The spatial distribution of the soil gas data is shown in Figure 4.1-1. The most noteworthy result is the presence of two areas on the landfill where elevated concentrations of volatiles in soil gas were detected. The highest of the two concentrations is located at point SG2-3 (14.6 ppmV as TCE). The next highest concentration is located at SG2-1 (6.6 ppmV as (TCE) which is approximately 100 feet west and hydrologically downgradient of SG2-3. Up to five individual compounds were identified in the two soil gas samples, although more peaks were present in the chromatograms. The identified

compounds, through peak matching, present in sample SG2-3 included vinyl chloride, 1,2-dichloroethene, trichloroethene, toluene, and ethylbenzene. Sample SG2-1 contained mostly 1,2-dichloroethene and trichloroethene. These two areas may be attributed to the same release, although at a sample point located midway between them no volatiles were detected. The areas impacted by elevated concentrations of volatiles in soil gas appear to be limited, as the surrounding data tend to show little or no volatile organics. To summarize, the west-central portion of the landfill appears to have been impacted by volatiles, however, the concentrations are relatively low and the extent of the impacts are limited.

Two test pits (TP11-3 and TP11-4) were excavated at soil gas sample points SG2-3 and SG2-1. The excavations uncovered mostly building materials including concrete blocks, wire, pipe, glass, and plastic in a clayey sand and gravel matrix. Neither excavation uncovered any material that could be pinpointed as a source for the volatiles detected at these locations. No volatiles were detected in the soils excavated from the pits using an OVM.

Surface Soils

Two VOCs were found in 3 of the surface soil samples collected at SEAD-11. None of these volatile organic compounds were detected at concentrations above the associated TAGM values. The compound trichloroethene, which was the most prevalent, was found in 66% of the surface soil samples, at a maximum concentration of 460 µg/kg. The compound tetrachloroethane was found at a maximum concentration of 370 µg/kg in surface soil sample TP11-3.1.

A total of 19 SVOCs were found at varying concentrations in the 5 surface soil samples analyzed. Figure 4.1-2 shows the total SVOC concentrations for the surface and test pit soil samples collected at SEAD-11.

With the exception of bis(2-ethylhexyl)phthalate, all of the semivolatile organic compounds detected were PAHs, which are likely derived from petroleum products. The PAHs were more widespread than the volatiles with most detected in 60 to 80% of the soil samples analyzed. All of the PAHs were found in the samples collected at the four test pit locations. None were detected in sample SB11-3.1 which was collected from the upgradient monitoring well location (MW11-1). Three surface soil samples exceeded the TAGM for benzo(a)anthracene, chrysene, benzo(b)fluoranthene, and benzo(k)fluoranthene. All four surface soil samples collected from within the Old Construction Debris Landfill exceeded the TAGM for benzo(a)pyrene and dibenz(a,h)anthracene.

Six pesticides were found in the surface soil samples collected from within the Old Construction Debris Landfill at SEAD-11. No pesticides were detected in the surface soil samples collected at SB11-3, the upgradient sampling location. The compound 4,4' DDT was reported in sample TP11-3.1 at a concentration of 4300J µg/kg. This was the only reported compound concentration in the surface soil samples that exceeded the TAGM value. The remaining pesticide detections were all reported at

concentrations below the associated TAGM value. No PCBs were detected in the surface soil sample analyzed. 2,4-DB was the only herbicide detected in the surface soil samples analyzed. It was found only in sample TP11-1.1 at a concentration of 75 µg/kg. There is no TAGM for 2,4-DB in soil.

A number of surface soil samples were found to contain various metals at concentrations that exceeded the associated TAGM values. Of the 22 metals reported, 17 of these were found in one or more of the surface soil samples at concentrations above the TAGM value. Several metals were identified at highly elevated concentrations and/or in a large number of samples above the TAGM value. Of particular note are the metals copper and zinc, where a large percentage of the surface soil samples exceed the TAGM value and where the concentrations of the exceedances are generally an order of magnitude or greater above the TAGM value. The maximum concentration of copper, 1090J mg/kg, was identified in the surface soil sample TP11-3.1 which was collected approximately in the center of the landfill. This sample also had an elevated concentration of zinc (1250 mg/kg). The maximum concentration of zinc, in surface soils, 3,600 mg/kg, was identified in the soil sample TP11-1.1. This test pit is located on the east side of the landfill.

No nitroaromatics were found in the surface soil samples analyzed. Nitrate/nitrite nitrogen and TPH were detected in all of the surface soil samples analyzed. Nitrate/nitrite nitrogen concentrations ranged from 0.27 to 0.81 mg/kg. The reported TPH concentrations ranged from 64 mg/kg (in sample SB11-3.1) to 2,700 mg/kg in sample TP11-1.1. Neither of these indicator compounds have associated TAGM values.

Subsurface Soils

A total of 6 VOCs were detected in the subsurface soil samples analyzed. None of these VOCs were detected at concentrations that exceeded their associated TAGM values. Trichloroethene was detected in 7 of the 10 subsurface soil samples at maximum concentration of 460 µg/kg. The compounds tetrachloroethane, 1,2 dichloroethene, ethylbenzene, and xylene were found only in one or two samples each. Toluene was found in 3 samples at a maximum concentration of 3J µg/kg.

The occurrence and distribution of PAHs which were observed in the subsurface soils of the Construction Debris landfill were similar to those observed in the surface soil samples analyzed. The 19 SVOs which were detected in the surface soils were also detected in the subsurface soil samples. One phthalate compound (bis(2ethylhexyl) phthalate) and 18 PAHs were detected in the subsurface soils in the collected form test pit excavations. No SVOs were detected in the upgradient subsurface soil boring samples.

Five subsurface samples had reported concentrations of benzo(a)anthracene, chrysene, benzo(b)fluoranthene and benzo(k)fluoroanthene that exceeded their respective TAGM values by up to 2 orders of magnitude. Six subsurface soil samples exceeded the TAGM value of 14 µg/kg for dibenz(a,h)anthracene and seven subsurface soil samples exceeded the TAGM of 61 µg/kg for benzo(a)pyrene.

The sampling results indicated that high concentrations were present in the test pits, with almost all maximum concentrations found in soil sample TP11-2.2 collected on the west side of the landfill at a depth of approximately 8 feet.

Ten pesticides were found in the subsurface soil samples collected from the test pit excavation at SEAD-11. No pesticides were detected in the subsurface soil samples collected from SB11-3, the upgradient sampling location. The compound 4,4' DDT was reported in sample TP11-3.2 at a concentration of 2,400 $\mu\text{g}/\text{kg}$. This was the only reported pesticide concentration in the subsurface soil samples that exceeded its associated TAGM value. No PCBs were detected in the surface soil samples analyzed.

Three herbicides were detected in the subsurface soil samples collected at the site. No herbicides were found at concentrations above the associated TAGM values. Dalapon was detected in sample TP11-4.2 at a concentration of 2500 $\mu\text{g}/\text{kg}$. 2,4-DB was detected in sample TP11-2.2 at a concentration 550 $\mu\text{g}/\text{kg}$. The final herbicide detected, 2,4,5-T, was found in the subsurface soil sample TP11.3-2 at a concentration of 7.6 $\mu\text{g}/\text{kg}$.

All of the subsurface soil samples were found to contain various metals at concentrations that exceeded their associated TAGM values. Of the 22 metals reported, 16 of these were found at concentrations above their respective TAGM values. In general, the distribution and concentrations of the elements found above TAGM in the subsurface soil samples were similar to those found in the surface soil sample collected from the same location. The exceptions were the subsurface soil samples collected from test pit TP11-4, only four metals were detected at concentrations which slightly exceeded their respective TAGM values where as ten metals exceeded TAGM values in the surface soil sample collected at this location. Of particular note are the metals copper and zinc, where a large percentage of the subsurface soil samples exceeded the TAGM values and where the concentrations of the exceedances were generally an order of magnitude or greater above the TAGM values. The highest concentration of copper, 642J $\mu\text{g}/\text{kg}$, was identified in the subsurface soil sample TP11-3.3. This sampling location (test pit TP11-3) also had the highest concentration of copper among all of the surface soil samples. The highest concentration of zinc, 7,980 mg/kg , was found in subsurface soil sample TP11-1.2. This sampling location (test pit TP11-1) also had the highest concentration of zinc among all of the surface soil samples.

Five nitroaromatic compounds were found at low concentrations in the subsurface soil samples collected at SEAD-11. Most were detected in only one sample, except for 2,4-dinitrotoluene which was detected in two samples. The four soil samples in which nitroaromatic compounds were found were TP11-1.3, TP11-2.2, TP11-3.2, and TP11-3.3.

Nitrate/nitrite nitrogen and TPH were detected in all of the subsurface soil samples analyzed. The reported concentrations of nitrate/nitrite nitrogen ranged from 0.02 mg/kg (in sample TP11-1.3) to 2.2 mg/kg (in

sample TP11-4.2). The reported concentrations of TPH ranged from 48 mg/kg (in sample TP11-2.3) to 6.000 mg/kg (in sample TP11-2.2) neither of these indicator compounds have associated TAGM values.

Summary of SEAD-11 Soils

The following compounds were found to exceed the NYSDEC TAGM screening guidelines for soils in SEAD-11:

Acenaphthene	4,4'-DDT
Anthracene	Aluminum
Benzo[a]anthracene	Antimony
Benzo[a]pyrene	Arsenic
Benzo[b]fluoranthene	Barium
Benzo[ghi]perylene	Beryllium
Benzo[k]fluoranthene	Cadmium
Chrysene	Calcium
Dibenz[a,h]anthracene	Chromium
Dibenzofuran	Copper
Fluoranthene	Iron
Fluorene	Lead
Ideno[1,2,3-cd]pyrene	Magnesium
Naphthalene	Manganese
Phenanthrene	Mercury
Pyrene	Nickel
	Potassium
	Silver
	Sodium
	Zinc

The soil data was also compared to Ecological and Recreational PRGs as shown in the attached Collapsed Data Summary and Summary Statistics tables. Five semivolatile compounds (benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, ideno[1,2,3-cd]pyrene, phenanthrene) and four metals (barium, copper, lead, and mercury) were found at concentrations which exceeded the Ecological PRGs. Five semivolatile compounds (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenz[a,h]anthracene, and ideno[1,2,3-cd]pyrene) were found in soil at SEAD-11 at concentrations in which exceeded the Recreational PRGs.

Groundwater

Four monitoring wells were installed and sampled as part of the SEAD-11 investigation. The summary results of the chemical analysis of these samples are presented in the attached Collapsed Data and Summary Statistics tables. The following sections describe the nature and extent of groundwater contamination identified at SEAD-11.

No VOCs were found in the four groundwater samples collected at SEAD-11.

The SVOC diethylphthalate was detected in two of the four groundwater samples analyzed. The maximum value, 0.5J $\mu\text{g/L}$, was reported in both monitoring wells MW11-1 and MW11-2. This concentration is well below the NYS AWQS criteria value of 50 $\mu\text{g/L}$ for class GA water.

No pesticides or PCBs were found in the four groundwater samples collected at SEAD-11.

No herbicides were found in the four groundwater samples collected at SEAD-11.

The three metals arsenic, barium, and manganese, exceeded NYSDEC Class GA criteria. The exceedence of arsenic occurred in one well and the exceedences of barium and manganese occurred in all four wells.

The nitroaromatic compound, 2,4,6-trinitrotoluene was found in one sample collected from monitoring well MW11-4 at a concentration of 0.43J $\mu\text{g/L}$, which is below the NYSDEC Class GA groundwater standard of 5 $\mu\text{g/L}$. None of the four groundwater samples analyzed had nitrate concentrations above the criteria value of 10 mg/L. The maximum nitrate value detected was 0.8 mg/L.

The groundwater data at SEAD-11 was also compared to the Drinking Water PRGs. The three metals, arsenic, barium, and manganese, were found at concentrations which exceeded these guidelines. A summary of these results is presented in the attached Collapsed Data Summary and Summary Statistics tables for Drinking Water PRGs.

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 results of the ESI conducted at SEAD-11 indicate that impacts to the surface and subsurface soils have occurred at this site. Based upon the results of the ESI, it appears that the site soils have been impacted

primarily by the release of SVOCs and heavy metals. A total of 17 SVO compounds and 17 metals were detected in the soils analyzed at concentrations which exceeded their respective TAGM value. All of the SVO TAGM exceedances and all of the significant concentration of metals (i.e., present at highly elevated concentrations and/or in a large number of samples at concentrations above the TAGM value) were found in the samples collected from within the boundaries of the old construction debris landfill. In particular, the SVOCs benzo(a)anthracene, chrysene, benzo(a)pyrene, benzo(b)fluorethene, benzo(k)fluoranthene and dibenz(a,h)anthracene were detected at concentrations above the associated TAGM values in at least 8 of the soil samples analyzed.

The results of the groundwater sampling program at SEAD-11 indicate that iron, lead, and sodium were present in individual downgradient wells at concentrations above criteria values.

The decision to perform a preliminary site assessment at SEAD-11 was based upon the number and variety of compounds detected in soil samples that included volatiles, semivolatile compounds, pesticides and metals. Based upon the results of the ESI conducted at SEAD-11 it appears that a threat due to SVOCs and heavy metals exists and that an RI/FS be conducted to fully define the impacts and the risks from site soils, groundwater, sediment, and surface water.

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-11, 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-11. 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-11 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-11. This project is waiting to perform an RI/BRA.

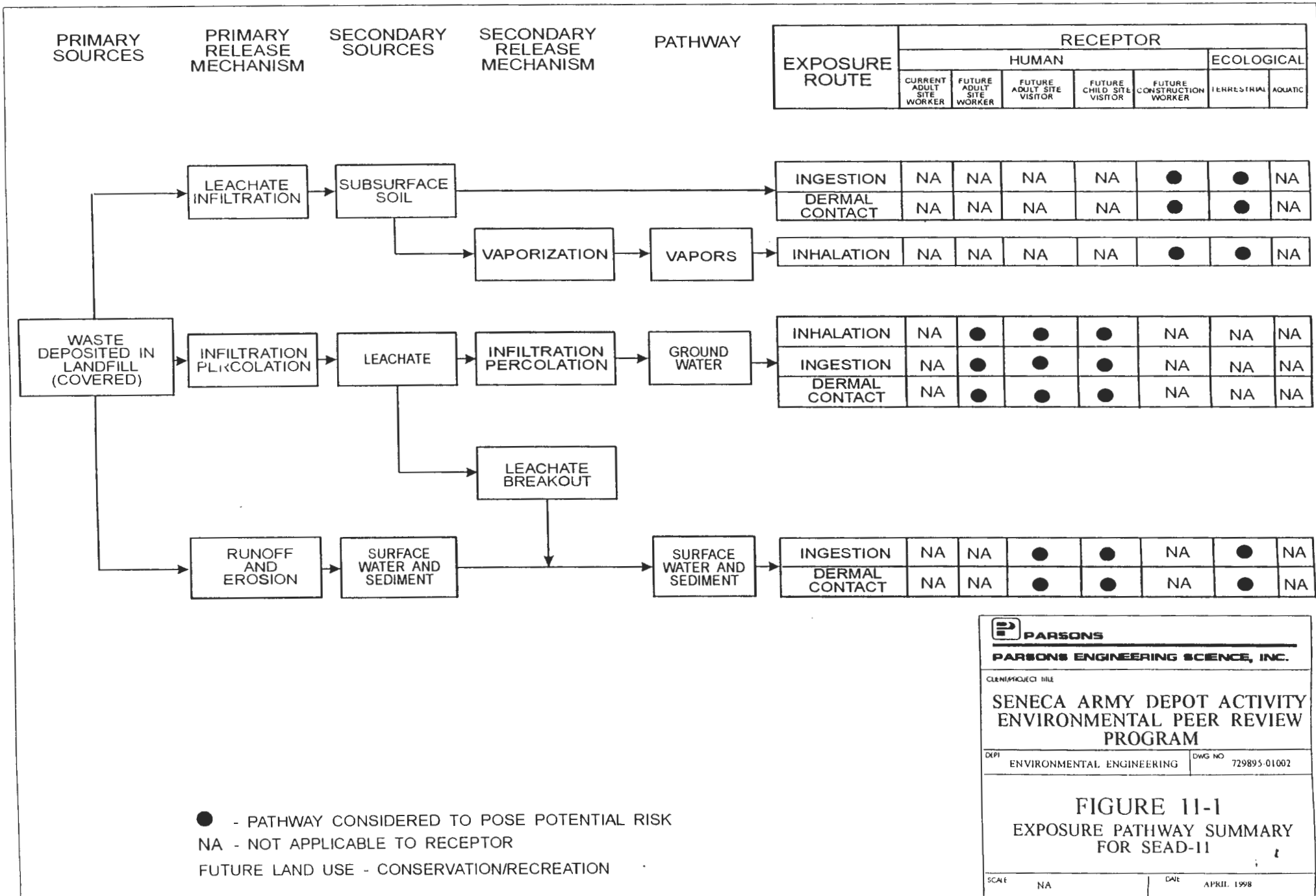
Project Funding

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.



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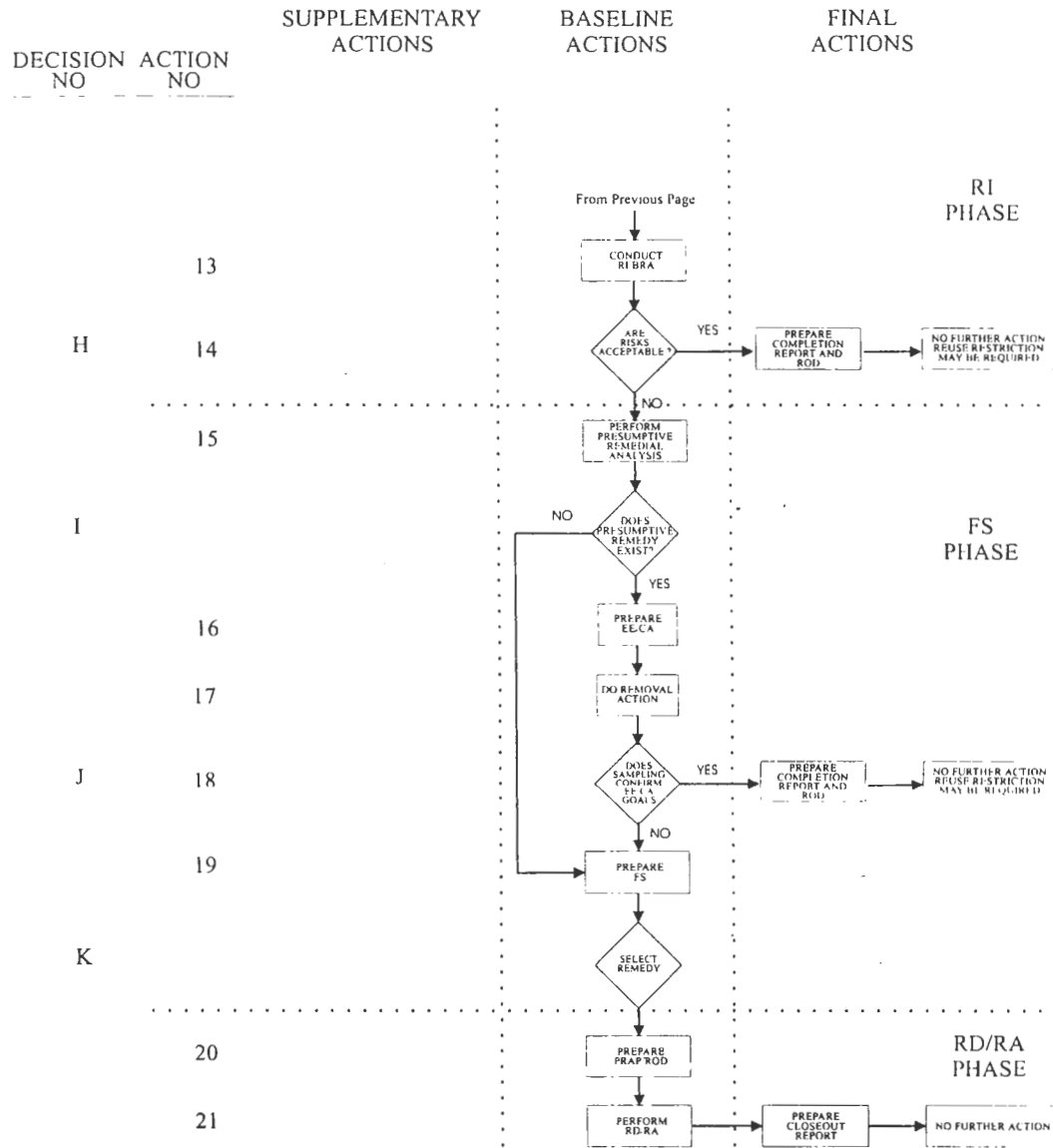
CLIENT/PROJECT TITLE
SENECA ARMY DEPOT ACTIVITY ENVIRONMENTAL PEER REVIEW PROGRAM


D/EPI ENVIRONMENTAL ENGINEERING DWG NO 729895-01002

FIGURE 11-1
 EXPOSURE PATHWAY SUMMARY FOR SEAD-11

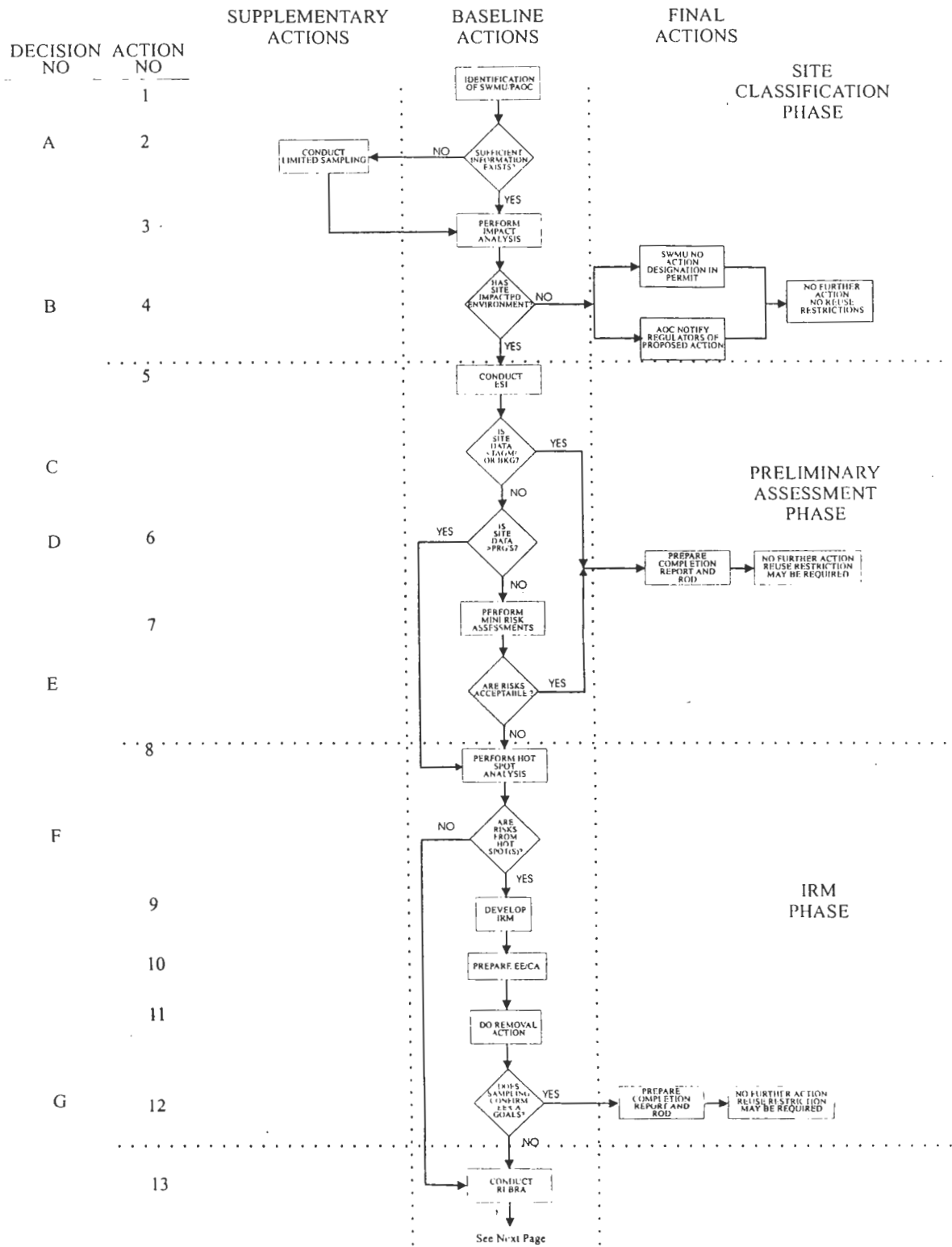
SCALE NA DATE APRIL 1998

Decision Criteria Flowchart

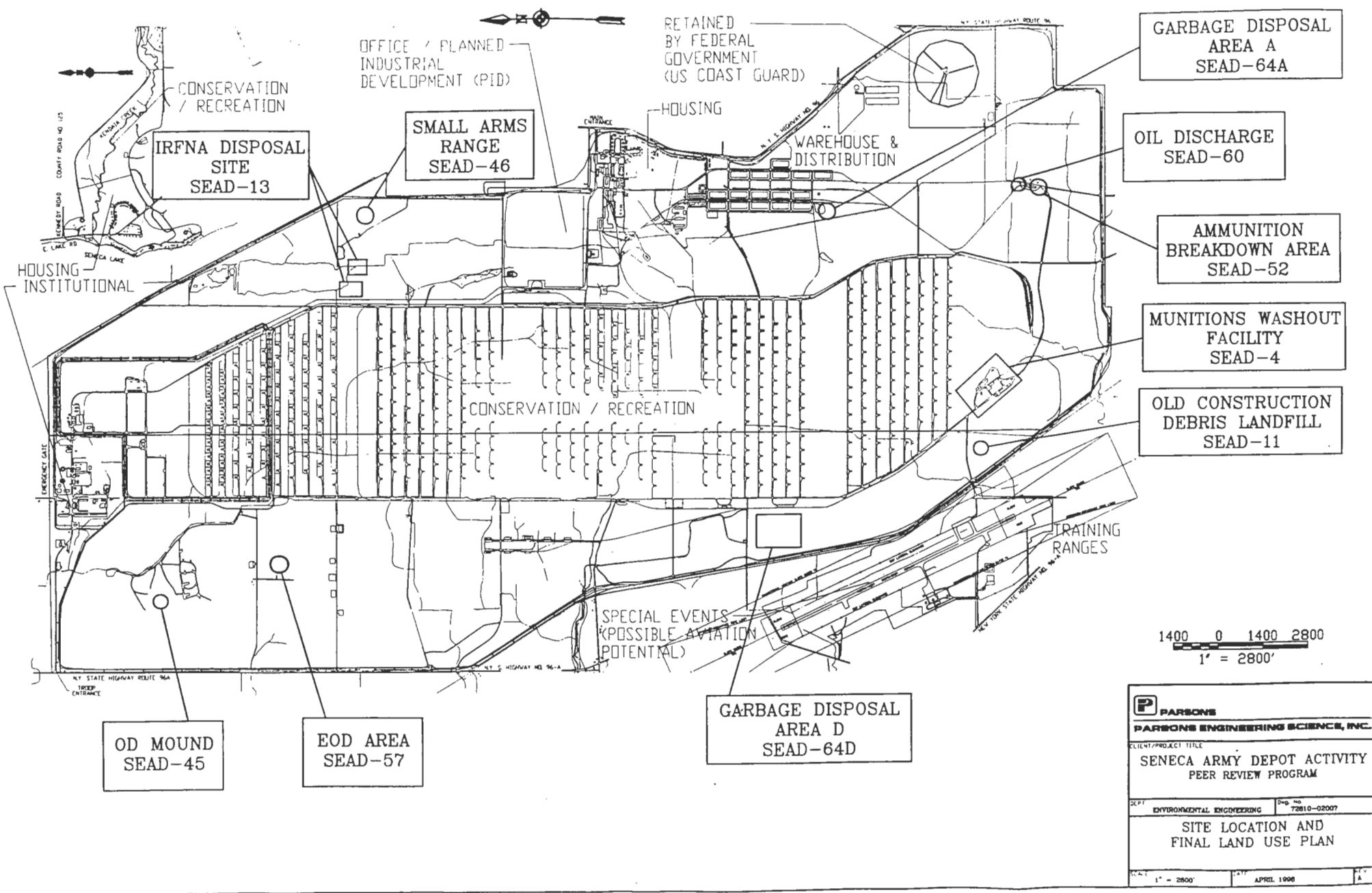


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DEPT ENVIRONMENTAL ENGINEERING	SOC 4
FIGURE 11-2 Decision Criteria Remediation Flowchart	
Page 2 of 2	
SCALE	N.A.

SENECA ARMY DEPOT ACTIVITY Decision Criteria Flowchart



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DEPT	DWG NO
ENVIRONMENTAL ENGINEERING	
FIGURE 11-2 Decision Criteria Remediation Flowchart	
Page 1 of 2	
SCALE	DATE
N/A	MAR 01 1988



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<small>CLIENT/PROJECT TITLE</small> SENECA ARMY DEPOT ACTIVITY PEER REVIEW PROGRAM	
<small>DEPT</small> ENVIRONMENTAL ENGINEERING	<small>Proj. No.</small> 72810-02007
SITE LOCATION AND FINAL LAND USE PLAN	
<small>SCALE</small> 1" = 2800'	<small>DATE</small> APRIL 1998



LEGEND

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



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CLIENT/PROJECT TITLE
**SENECA ARMY DEPOT ACTIVITY
EXPANDED SITE INSPECTION OF
3 MODERATE-PRIORITY SWMUS**

DISCIPLINE: ENVIRONMENTAL ENGINEERING DWG. NO. 720476-02000

**FIGURE 1.1-12
SEAD-11. OLD CONSTRUCTION DEBRIS LANDFILL
SITE PLAN**

SCALE: 1" = 100' DATE: JUNE 1995

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LEGEND

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

SG 2-4 SOIL GAS POINT



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C. ENT/PROJ/CO. TITLE
SENECA ARMY DEPOT ACTIVITY
EXPANDED SITE INSPECTION OF
3 MODERATE-PRIORITY SWMUS

DEPT: ENVIRONMENTAL ENGINEERING Dwg No: 720476-02000

FIGURE 2.3-2
SEAD-11. OLD CONSTRUCTION DEBRIS LANDFILL
LOCATION OF SOIL GAS SAMPLING POINTS

1" = 100' JUNE 1995 A

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LEGEND

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



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CLIENT/PROJECT TITLE
**SENECA ARMY DEPOT ACTIVITY
 EXPANDED SITE INSPECTION OF
 3 MODERATE-PRIORITY SWMUS**

DEPT: ENVIRONMENTAL ENGINEERING Dwg No: 7220476-02000

FIGURE 2.3-3
 SEAD-11, OLD CONSTRUCTION DEBRIS LANDFILL
 LOCATION OF SAMPLING POINTS

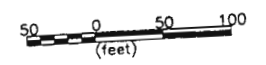
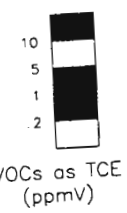
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LEGEND

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



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CLIENT/PROJECT TITLE
**SENECA ARMY DEPOT ACTIVITY
 EXPANDED SITE INSPECTION OF
 3 MODERATE-PRIORITY SWMU'S**

DEPT. ENVIRONMENTAL ENGINEERING Dwg. No. 720478-02000

FIGURE 4-1-1
 SEAD-11, OLD CONSTRUCTION DEBRIS LANDFILL
 RESULTS OF SOIL GAS SURVEY

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

LEGEND

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

670 | 0-2'
 TOTAL SVOC CONCENTRATION (ug/kg) AND DEPTH INTERVAL OF SAMPLE



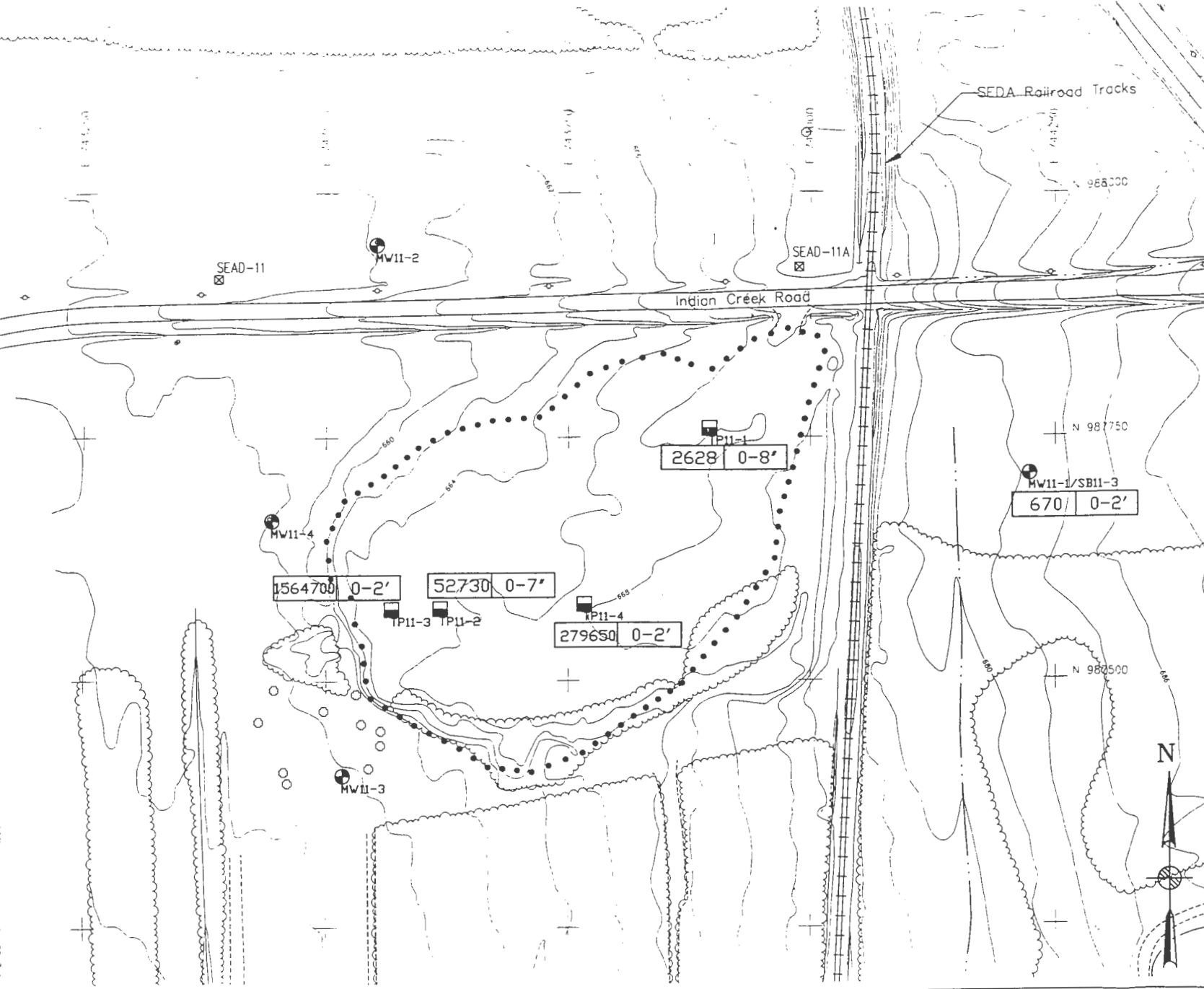
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CLIENT/PROJECT TITLE
SENECA ARMY DEPOT ACTIVITY
EXPANDED SITE INSPECTION OF
3 MODERATE-PRIORITY SWMUS

DEPT. ENVIRONMENTAL ENGINEERING Draw No. 720478-02000

FIGURE 4.1-2
SEAD-11, OLD CONSTRUCTION DEBRIS LANDFILL
TOTAL SVOC'S IN SOILS

1" = 100' JUNE 1995



SEAD-11
SOIL
COLLAPSED DATA TABLES
AND
SUMMARY STATISTICS TABLES

Seneca Army Depot Activity
SEAD-11 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	15	0	0.00%		0	36,850,961.54	957.110	800
1,1,2,2-Tetrachloroethane	UG/KG	15	0	0.00%		0	3,439,423.077		600
1,1,2-Trichloroethane	UG/KG	15	0	0.00%		0	1,206,815.115		
1,1-Dichloroethane	UG/KG	15	0	0.00%		0	105,288,461.5		200
1,1-Dichloroethene	UG/KG	15	0	0.00%		0	114,647.436		400
1,2-Dichloroethane	UG/KG	15	0	0.00%		0	755,917.16		100
1,2-Dichloroethene (total)	UG/KG	15	2	13.33%	4.	0			
1,2-Dichloropropane	UG/KG	15	0	0.00%		0	1,011,595.023		
Acetone	UG/KG	15	0	0.00%		0	105,288,461.5	34,270.	200.
Benzene	UG/KG	15	0	0.00%		0	2,372,015.915	247,370.	60.
Bromoacchloromethane	UG/KG	15	0	0.00%		0	1,109,491.315		
Bromoform	UG/KG	15	0	0.00%		0	8,707,400.195		
Carbon disulfide	UG/KG	15	0	0.00%		0	105,288,461.5	53,000.	2,700
Carbon tetrachloride	UG/KG	15	0	0.00%		0	529,142.012		600
Chlorobenzene	UG/KG	15	0	0.00%		0	21,057,692.31		1,700
Chlorodibromomethane	UG/KG	15	0	0.00%		0	818,910.256		
Chloroethane	UG/KG	15	0	0.00%		0	421,153,846.2		1,900
Chloroform	UG/KG	15	0	0.00%		0	10,528,846.15	194,610.	300
Cis-1,3-Dichloropropene	UG/KG	15	0	0.00%		0			
Ethyl benzene	UG/KG	15	1	6.67%	3.	0	105,288,461.5	1,720,290.	5,500
Methyl bromide	UG/KG	15	0	0.00%		0	1,505,625.		
Methyl butyl ketone	UG/KG	15	0	0.00%		0			
Methyl chloride	UG/KG	15	0	0.00%		0	5,291,420.118		
Methyl ethyl ketone	UG/KG	15	0	0.00%		0		421,380.	300
Methyl isobutyl ketone	UG/KG	15	0	0.00%		0	84,230,769.23		1,000
Methylene chloride	UG/KG	15	0	0.00%		0	9,171,794.872	132,030.	100
Styrene	UG/KG	15	0	0.00%		0			
Tetrachloroethene	UG/KG	15	3	20.00%	370.	0	1,322,855.03	6,454,550.	1,400
Toluene	UG/KG	15	3	20.00%	3.	0	210,576,923.1	1,552,560.	1,500
Total Xylenes	UG/KG	15	1	6.67%	4.	0	2,105,769,231.	5,642,680.	1,200
Trans-1,3-Dichloropropene	UG/KG	15	0	0.00%		0			
Trichloroethene	UG/KG	15	10	66.67%	460.	0	6,253,496.503		700
Vinyl chloride	UG/KG	15	0	0.00%		0	36,204.453		200
Herbicides									
2,4,5-T	UG/KG	15	1	6.67%	7.6	0			1,900
2,4,5-TP/Silvex	UG/KG	15	0	0.00%		0			700
2,4-D	UG/KG	15	0	0.00%		0			500
2,4-DB	UG/KG	15	2	13.33%	550.	0			
Dalapon	UG/KG	15	1	6.67%	2,500.	0			
Dicamba	UG/KG	15	0	0.00%		0		22,600.	
Dichloroprop	UG/KG	15	0	0.00%		0			
Dinoseb	UG/KG	15	0	0.00%		0			
MCPA	UG/KG	15	0	0.00%		0			
MCPP	UG/KG	15	0	0.00%		0		818,180.	
Nitroaromatics									
1,3,5-Trinitrobenzene	UG/KG	15	0	0.00%		0	52,644.231		
1,3-Dinitrobenzene	UG/KG	15	1	6.67%	770.	0	105,288.462		
2,4,6-Trinitrotoluene	UG/KG	15	1	6.67%	130.	0	526,442.308		
2,4-Dinitrotoluene	UG/KG	15	2	13.33%	440.	0	2,105,769.231	5,060.	
2,6-Dinitrotoluene	UG/KG	15	1	6.67%	400.	0	1,052,884.615		1,000
2-amino-4,6-Dinitrotoluene	UG/KG	15	1	6.67%	680.	0			
4-amino-2,6-Dinitrotoluene	UG/KG	15	0	0.00%		0			
HMX	UG/KG	15	0	0.00%		0			
RDX	UG/KG	15	0	0.00%		0			
Tetryl	UG/KG	15	0	0.00%		0			
Semivolatile Organics									
1,2,4-Trichlorobenzene	UG/KG	15	0	0.00%		0	10,528,846.15	1,132,060	3,400
1,2-Dichlorobenzene	UG/KG	15	0	0.00%		0	94,759,615.38		7,900
1,3-Dichlorobenzene	UG/KG	15	0	0.00%		0	93,706,730.77		1,600
1,4-Dichlorobenzene	UG/KG	15	0	0.00%		0	2,866,185.897		8,500
2,2'-oxybis(1-Chloropropane)	UG/KG	15	0	0.00%		0			
2,4,5-Trichlorophenol	UG/KG	15	0	0.00%		0	105,288,461.5		100
2,4,6-Trichlorophenol	UG/KG	15	0	0.00%		0	6,253,496.503		
2,4-Dichlorophenol	UG/KG	15	0	0.00%		0	3,158,653.846		400
2,4-Dimethylphenol	UG/KG	15	0	0.00%		0	21,057,692.31		
2,4-Dinitrophenol	UG/KG	15	0	0.00%		0	2,105,769.231		200
2,4-Dinitrotoluene	UG/KG	15	0	0.00%		0	2,105,769.231	5,060	

Seneca Army Depot Activity
SEAD-11 Soils
Summary Statistics
Companson 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
2,6-Dinitrotoluene	UG/KG	15	0	0.00%		0	1,052,884.615		1,000
2-Chloronaphthalene	UG/KG	15	0	0.00%		0			
2-Chlorophenol	UG/KG	15	0	0.00%		0	5,264,423.077	83,200.	800
2-Methylnaphthalene	UG/KG	15	9	60.00%	28,000	0		962,620.	36,400
2-Methylphenol	UG/KG	15	0	0.00%		0	52,644,230.77		100
2-Nitroaniline	UG/KG	15	0	0.00%		0	63,173.077		430.
2-Nitrophenol	UG/KG	15	0	0.00%		0			330.
3,3'-Dichlorobenzidine	UG/KG	15	0	0.00%		0	152,863.248		
3-Nitroaniline	UG/KG	15	0	0.00%		0	3,158,653.846		500
4,6-Dinitro-2-methylphenol	UG/KG	15	0	0.00%		0			
4-Bromophenyl phenyl ether	UG/KG	15	0	0.00%		0	61,067,307.69		240
4-Chloro-3-methylphenol	UG/KG	15	0	0.00%		0			220
4-Chloroaniline	UG/KG	15	0	0.00%		0	4,211,538.462		
4-Chlorophenyl phenyl ether	UG/KG	15	0	0.00%		0			
4-Methylphenol	UG/KG	15	0	0.00%		0			900.
4-Nitroaniline	UG/KG	15	0	0.00%		0	3,158,653.846		
4-Nitrophenol	UG/KG	15	0	0.00%		0	63,173,076.92	18,680.	100.
Acenaphthene	UG/KG	15	9	60.00%	84,000.	1		2,268,070.	50,000
Acenaphthylene	UG/KG	15	0	0.00%		0		33,460.	41,000
Anthracene	UG/KG	15	11	73.33%	150,000.	1	315,865,384.6	1,269,040.	50,000.
Benzo[a]anthracene	UG/KG	15	11	73.33%	190,000.	8	94,230,769	1,476,040.	224
Benzo[a]pyrene	UG/KG	15	11	73.33%	140,000.	11	9,423.077	562,720.	61
Benzo[b]fluoranthene	UG/KG	15	11	73.33%	110,000.	8	94,230,769	59,750.	1,100
Benzo[ghi]perylene	UG/KG	15	10	66.67%	53,000.	1		76,250.	50,000
Benzo[k]fluoranthene	UG/KG	15	11	73.33%	130,000.	8	942,307.692	72,640.	1,100.
Bis(2-Chloroethoxy)methane	UG/KG	15	0	0.00%		0			
Bis(2-Chloroethyl)ether	UG/KG	15	0	0.00%		0	62,534.965		
Bis(2-Ethylhexyl)phthalate	UG/KG	15	3	20.00%	67.	0	4,913,461.538	39,350.	50,000.
Butylbenzylphthalate	UG/KG	15	0	0.00%		0	210,576.923.1		50,000.
Carbazole	UG/KG	15	8	53.33%	81,000.	0	3,439,423.077		
Chrysene	UG/KG	15	11	73.33%	170,000.	8	9,423,076.923	93,300.	400.
Di-n-butylphthalate	UG/KG	15	0	0.00%		0		94,697,730.	8,100
Di-n-octylphthalate	UG/KG	15	0	0.00%		0	21,057,692.31		50,000
Dibenz[a,h]anthracene	UG/KG	15	10	66.67%	52,000.	10	9,423.077	53,680.	14
Dibenzofuran	UG/KG	15	10	66.67%	60,000.	4	4,211,538.462		6,200.
Diethyl phthalate	UG/KG	15	0	0.00%		0	842,307,692.3	7,665,910.	7,100.
Dimethylphthalate	UG/KG	15	0	0.00%		0	10,528,846.150.		2,000
Fluoranthene	UG/KG	15	12	80.00%	350,000.	5	42,115,384.62	7,849,900.	50,000.
Fluorene	UG/KG	15	10	66.67%	88,000.	1	42,115,384.62	1,755,510.	50,000.
Hexachlorobenzene	UG/KG	15	0	0.00%		0	42,992.788		410.
Hexachlorobutadiene	UG/KG	15	0	0.00%		0	210,576.923		
Hexachlorocyclopentadiene	UG/KG	15	0	0.00%		0	7,370,192.308		
Hexachloroethane	UG/KG	15	0	0.00%		0	1,052,884.615		
Indeno[1,2,3-cd]pyrene	UG/KG	15	11	73.33%	100,000.	6	94,230,769	47,630.	3,200.
Isophorone	UG/KG	15	0	0.00%		0			4,400
N-Nitrosodiphenylamine	UG/KG	15	0	0.00%		0	14,038,461.54		
N-Nitrosodipropylamine	UG/KG	15	0	0.00%		0	9,826.923	1,454,550.	
Naphthalene	UG/KG	15	10	66.67%	100,000.	3	42,115,384.62	149,740.	13,000.
Nitrobenzene	UG/KG	15	0	0.00%		0	526,442.308		200.
Pentachlorophenol	UG/KG	15	0	0.00%		0	573,237.18	1,415,560.	1,000
Phenanthrene	UG/KG	15	11	73.33%	350,000.	4		325,820.	50,000.
Phenol	UG/KG	15	0	0.00%		0	631,730,769.2	79,520.	30
Pyrene	UG/KG	15	11	73.33%	280,000.	4	31,586,538.46	2,420,460.	50,000
Pesticides/PCBs									
4,4'-DDD	UG/KG	15	8	53.33%	1,400	0	286,618.59	874,990.	2,900
4,4'-DDE	UG/KG	15	10	66.67%	1,800	0	202,319,005	86,590.	2,100
4,4'-DDT	UG/KG	15	11	73.33%	4,300.	2	202,319,005	8,870.	2,100
Aldrin	UG/KG	15	0	0.00%		0	4,046.38	2,750	41
Alpha-BHC	UG/KG	15	1	6.67%	24	0			110
Alpha-Chlordane	UG/KG	15	4	26.67%	190.	0		142,090	
Aroclor-1016	UG/KG	15	0	0.00%		0	73,701,923		
Aroclor-1221	UG/KG	15	0	0.00%		0			
Aroclor-1232	UG/KG	15	0	0.00%		0			
Aroclor-1242	UG/KG	15	0	0.00%		0		12,879,550.	
Aroclor-1248	UG/KG	15	0	0.00%		0			
Aroclor-1254	UG/KG	15	0	0.00%		0	21,057,692	3,925,000.	10,000
Aroclor-1260	UG/KG	15	0	0.00%		0		2,272,730.	10,000
Beta-BHC	UG/KG	15	0	0.00%		0		11,060.	200

Seneca Army Depot Activity
SEAD-11 Soils
Summary Statistics
Companion 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
Delta-BHC	UG/KG	15	3	20.00%	15.	0			300
Dieldrin	UG/KG	15	3	20.00%	29.	0	4,299,279		44
Endosulfan I	UG/KG	15	0	0.00%		0	6,317,307.692	131,820.	900
Endosulfan II	UG/KG	15	6	40.00%	66	0	6,317,307.692		900
Endosulfan sulfate	UG/KG	15	1	6.67%	2.5	0		15,820.	1,000
Endrin	UG/KG	15	4	26.67%	49.	0	315,865.385	240,910.	100
Endrin aldehyde	UG/KG	15	0	0.00%		0	315,865.385	6,350.	
Endrin ketone	UG/KG	15	0	0.00%		0	315,865.385	6,350.	
Gamma-BHC/Lindane	UG/KG	15	0	0.00%		0	52,914.201	47,360.	540
Gamma-Chlordane	UG/KG	15	0	0.00%		0	15,286.325	28,620.	100
Heptachlor	UG/KG	15	0	0.00%		0	7,559.172	10	20
Heptachlor epoxide	UG/KG	15	0	0.00%		0	5,264,423.077		
Methoxychlor	UG/KG	15	0	0.00%		0			
Toxaphene	UG/KG	15	0	0.00%		0			
Metals									
Aluminum	UG/KG	15	15	100.00%	21,700,000.	4	1,052,884,615.		14,592,840
Antimony	UG/KG	15	6	40.00%	285,000.	6	421,153,846	18,437,230.	3,590.
Arsenic	UG/KG	15	12	80.00%	23,200.	5	45,858,974	223,670.	7,500
Barium	UG/KG	15	15	100.00%	1,090,000.	4	73,701,923.08	91,840.	300,000.
Beryllium	UG/KG	15	15	100.00%	930.	3	15,997,317	6,570.	730
Cadmium	UG/KG	15	6	40.00%	16,000.	6	526,442,308	737,770.	1,000
Calcium	UG/KG	15	15	100.00%	103,000,000.	1			101,903,800.
Chromium	UG/KG	15	15	100.00%	242,000.	9	1,052,884,615.	850,430.	22,130.
Cobalt	UG/KG	15	15	100.00%	27,500.	0	63,173,076.92		30,000.
Copper	UG/KG	15	15	100.00%	1,090,000.	10	42,115,384.62	827,810.	25,000
Cyanide	UG/KG	15	0	0.00%		0		13,636,360.	300
Iron	UG/KG	15	15	100.00%	118,000,000.	11	315,865,384.6		26,626,650.
Lead	UG/KG	15	9	60.00%	4,050,000.	7		181,460.	21,860.
Magnesium	UG/KG	15	15	100.00%	44,600,000.	5			12,221,770.
Manganese	UG/KG	15	14	93.33%	946,000.	4	24,216,346.15	8,821,860.	669,380.
Mercury	UG/KG	15	13	86.67%	2,900.	7	315,865,385	1,710.	100
Nickel	UG/KG	15	15	100.00%	117,000.	5	21,057,692.31	2,833,820.	33,620
Potassium	UG/KG	15	15	100.00%	2,980,000.	5			1,761,480.
Selenium	UG/KG	15	9	60.00%	740.	0	5,264,423.077	193,140.	2,000.
Silver	UG/KG	15	6	40.00%	11,300.	6	5,264,423.077		400.
Sodium	UG/KG	15	14	93.33%	1,660,000.	11		84,230,769	103,740.
Thallium	UG/KG	15	0	0.00%		0	84,230,769		280.
Vanadium	UG/KG	15	15	100.00%	31,800.	0	7,370,192,308		150,000
Zinc	UG/KG	15	12	80.00%	7,980,000.	12	315,865,384.6		82,500.
Other Analyses									
Nitrate/Nitrite	UG/KG	15	15	100.00%	2,200.	0			
Total Petroleum Hydrocarbons	UG/KG	15	15	100.00%	6,000,000.	0			

Seneca Army Depot Activity
SEAD-11
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

5/1/98

STUDY ID	ESI	ESI	ESI	ESI
SITE	SEAD-11	SEAD-11	SEAD-11	SEAD-11
LOC ID	MW11-1	MW11-1	MW11-1	IP11-1
LOC TYPE	BACKGROUND	BACKGROUND	BACKGROUND	SITE
SAMP_ID	SB11-3-1	SB11-3-2	SB11-3-6	IP11-1-1
QC CODE	SA	SA	SA	SA
SAMP DETH TOP	0	2	10	0
SAMP DEPTH BOT	2	4	12	0-8
MATRIX	SOIL	SOIL	SOIL	SOIL
SAMP DATE	02-Nov-93	02-Nov-93	03-Nov-93	20-Nov-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE
Acenaphthene	UG/KG	1		2,268,070	50,000	410 U	370 UR	350 UR	
Anthracene	UG/KG	1	315,865,384.6	1,269,040	50,000	410 U	370 UR	350 UR	380
Benzo[a]anthracene	UG/KG	8	94,230,769	1,476,040	224	410 U	370 UR	350 UR	53
Benzo[a]pyrene	UG/KG	11	9,423,077	562,720	61	410 U	370 UR	350 UR	150
Benzo[b]fluoranthene	UG/KG	8	94,230,769	59,750	1,100	410 U	370 UR	350 UR	210
Benzo[ghi]perylene	UG/KG	1		76,250	50,000	410 U	370 UR	350 UR	230
Benzo[k]fluoranthene	UG/KG	8	942,307,692	72,640	1,100	410 U	370 UR	350 UR	81
Chrysene	UG/KG	8	9,423,076,923	93,300	400	410 U	370 UR	350 UR	190
Dibenz[a,h]anthracene	UG/KG	10	9,423,077	53,680	14	410 U	370 UR	350 UR	320
Dibenzofuran	UG/KG	4	4,211,538,462		6,200	410 U	370 UR	350 UR	60
Fluoranthene	UG/KG	5	42,115,384,62	7,849,900	50,000	410 U	370 UR	350 UR	23
Fluorene	UG/KG	1	42,115,384,62	1,755,510	50,000	410 U	370 UR	350 UR	450
Indeno[1,2,3-cd]pyrene	UG/KG	6	94,230,769	47,630	3,200	410 U	370 UR	350 UR	21
Naphthalene	UG/KG	3	42,115,384,62	149,740	13,000	410 U	370 UR	350 UR	140
Phenanthrene	UG/KG	4		325,820	50,000	410 U	370 UR	350 UR	23
Pyrene	UG/KG	4	31,586,538,46	2,420,460	50,000	410 U	370 UR	350 UR	230
4,4 DDT	UG/KG	2	202,319,005	8,870	2,100	41 U	35 U	350 UR	420
Aluminum	UG/KG	4	1,052,884,615		14,592,840	17,600,000	6,330,000	30 U	12
Antimony	UG/KG	6	421,153,846	18,437,230	3,590	10,800 UJ	8,000 UJ	10,900,000	13,300,000
Arsenic	UG/KG	5	45,858,974	223,670	7,500	5,600 R	3,400 R	7,600 UJ	285,000
Barium	UG/KG	4	73,701,923,08	91,840	300,000	113,000	57,400	6,000 R	15,500
Beryllium	UG/KG	3	15,997,317	6,570	730	850 J	340 J	62,700	1,090,000
Cadmium	UG/KG	6	526,442,308	737,770	1,000	670 U	500 U	470 J	630
Calcium	UG/KG	1			101,903,800	4,950,000	91,300,000	480 U	2,300
Chromium	UG/KG	9	1,052,884,615	850,430	22,130	24,000	11,100	48,600,000	30,300,000
Copper	UG/KG	10	42,115,384,62	827,810	25,000	20,000	18,600	18,600	67,200
Iron	UG/KG	11	315,865,384,6		26,626,650	27,200,000	13,200,000	21,700	492,000
Lead	UG/KG	7		181,460	21,860	27,900	11,400	28,300,000	83,600,000
Magnesium	UG/KG	5			12,221,770	4,160,000	12,900,000	10,100	4,050,000
Manganese	UG/KG	4	24,216,346,15	8,821,860	669,380	674,000	356,000	10,100,000	6,760,000
Mercury	UG/KG	7	315,865,385	1,710	100	50 J	434,000	434,000	801,000
Nickel	UG/KG	5	21,057,692,31	2,833,820	33,620	28,300	40 U	30 U	70
Potassium	UG/KG	5			1,761,480	2,110,000	16,700	29,500	70,100
Silver	UG/KG	6	5,264,423,077		400	1,400 UJ	1,110,000	1,230,000	1,810,000
Sodium	UG/KG	11			103,740	66,300 J	1,000 UJ	970 UJ	2,400
Zinc	UG/KG	12	315,865,384,6		82,500	83,200 R	65,000 R	146,000 J	288,000
								77,300 R	3,600,000

Seneca Army Depot Activity
SEAD-11
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

5/1/98

STUDY ID	ESI	ESI	ESI
SITE	SEAD-11	SEAD-11	SEAD 11
LOC ID	TP11-1	TP11-1	TP11 2
LOC TYPE	SITE	SITE	SITE
SAMP_ID	TP11-1 2	TP11 1-3	TP11 2 1
QC CODE	SA	SA	SA
SAMP DEPTH TOP	3 3	4 2	0
SAMP DEPTH BOT	3 3	4 2	0 7
MATRIX	SOIL	SOIL	SOIL
SAMP DATE	20-Nov-93	20-Nov-93	19 Nov-93

PARAMETER	UNIT	Number of Exceedances	Recreational		NYSDEC TAGM		VALUE Q	VALUE Q	VALUE Q
			PRG	Ecological PRG	4046	Q			
Acenaphthene	UG/KG	1		2,268,070	50,000 U	400 U			
Anthracene	UG/KG	1	315,865,384 6	1,269,040	50,000 J	42 J	400 U		630 J
Benzo[a]anthracene	UG/KG	8	94,230 769	1,476,040	224 J	160 J	400 U		1,100 J
Benzo[a]pyrene	UG/KG	11	9,423 077	562,720	61 J	130 J	400 U		4,200 J
Benzo[b]fluoranthene	UG/KG	8	94,230 769	59,750	1,100 J	200 J	400 U		3,800 J
Benzo[ghi]perylene	UG/KG	1		76,250	50,000 J	400 U			4,700 J
Benzo[k]fluoranthene	UG/KG	8	942,307 692	72,640	1,100 J	400 U			1,000 J
Chrysene	UG/KG	8	9,423,076 923	93,300	400 J	230 J	400 U		3,000 J
Dibenz[a,h]anthracene	UG/KG	10	9,423 077	53,680	14 J	37 J	400 U		4,500 J
Dibenzofuran	UG/KG	4	4,211,538 462		6,200 J	25 J	400 U		1,100 J
Fluoranthene	UG/KG	5	42,115,384 62	7,849,900	50,000 J	340 J	400 U		250 J
Fluorene	UG/KG	1	42,115,384 62	1,755,510	50,000 J	21 J	400 U		9,800 J
Indeno[1,2,3-cd]pyrene	UG/KG	6	94,230 769	47,630	3,200 J	20 J	400 U		510 J
Naphthalene	UG/KG	3	42,115,384 62	149,740	13,000 J	66 J	400 U		2,800 J
Phenanthrene	UG/KG	4		325,820	50,000 J	39 J	400 U		220 J
Pyrene	UG/KG	4	31,586,538 46	2,420,460	50,000 J	260 J	400 U		5,800 J
4,4 DDT	UG/KG	2	202,319 005	8,870	2,100	260 J	400 U		8,500 J
Aluminum	UG/KG	4	1,052,884,615		14,592,840	3.5 J	290 J		140 J
Antimony	UG/KG	6	421,153 846	18,437,230	3,590 J	12,200,000	11,100,000		15,300,000 J
Arsenic	UG/KG	5	45,858 974	223,670	7,500	118,000 J	8,100 UJ		9,400 UJ
Barium	UG/KG	4	73,701,923 08	91,840	300,000	11,800 J	4,700		23,200 J
Beryllium	UG/KG	3	15,997 317	6,570	730 J	953,000 J	106,000		96,900
Cadmium	UG/KG	6	526,442 308	737,770	1,000	590 J	540 J		760 J
Calcium	UG/KG	1			101,903,800	3,900 J	510 U		590 U
Chromium	UG/KG	9	1,052,884,615	850,430	22,130	41,700,000	54,100,000		18,600,000
Copper	UG/KG	10	42,115,384 62	827,810	25,000	53,900 J	18,700		23,900 J
Iron	UG/KG	11	315,865,384 6		26,626,650	374,000 J	32,400 J		35,500 J
Lead	UG/KG	7		181,460	21,860	42,000,000 J	22,700,000		29,200,000 J
Magnesium	UG/KG	5			12,221,770	2,090,000 J	193,000 J		84,100 J
Manganese	UG/KG	4	24,216,346 15	8,821,860	669,380	10,800,000	10,100,000		11,300,000
Mercury	UG/KG	7	315,865 385	1,710	100 J	611,000	637,000		446,000 R
Nickel	UG/KG	5	21,057,692 31	2,833,820	33,620	2,900 J	700 J		500 J
Potassium	UG/KG	5			1,761,480	56,500 J	25,200		30,600
Silver	UG/KG	6	5,264,423 077		400	1,620,000	1,280,000		1,430,000
Sodium	UG/KG	11			103,740 J	1,500 J	1,000 U		1,200 U
Zinc	UG/KG	12	315,865,384 6		82,500	296,000 J	111,000 J		75,100 J
						7,980,000 J	377,000 J		139,000 J

Seneca Army Depot Activity
SEAD-11
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

5/1/98

STUDY ID:	ESI	ESI	ESI	ESI
SITE	SEAD-11	SEAD-11	SEAD-11	SEAD-11
LOC ID:	TP11-2	TP11-2	TP11-3	TP11-3
LOC TYPE	SITE	SITE	SITE	SITE
SAMP_ID:	TP11-2-2	TP11-2-3	TP11-3-1	TP11-3-2
QC CODE:	SA	SA	SA	SA
SAMP. DETH TOP:	5	5	0	2
SAMP. DEPTH BOT:	5	5	2	4
MATRIX:	SOIL	SOIL	SOIL	SOIL
SAMP DATE:	20-Nov-93	20-Nov-93	14-Dec 93	14-Dec-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE
Acenaphthene	UG/KG	1		2,268,070.	50,000	84,000.	1,400	28,000 J	14,000
Anthracene	UG/KG	1	315,865,384.6	1,269,040.	50,000	150,000.	2,800	49,000 J	27,000
Benzo[a]anthracene	UG/KG	8	94,230,769	1,476,040	224	190,000.	4,600	110,000. J	67,000.
Benzo[a]pyrene	UG/KG	11	9,423,077	562,720.	61.	140,000.	3,400	110,000. J	60,000.
Benzo[b]fluoranthene	UG/KG	8	94,230,769	59,750	1,100	99,000.	2,900	110,000. J	67,000.
Benzo[ghi]perylene	UG/KG	1		76,250	50,000.	32,000 J	630 J	53,000. J	11,000
Benzo[k]fluoranthene	UG/KG	8	942,307,692	72,640	1,100	130,000.	3,700	94,000. J	48,000.
Chrysene	UG/KG	8	9,423,076,923	93,300	400	170,000.	4,300	110,000. J	64,000.
Dibenz[a,h]anthracene	UG/KG	10	9,423,077	53,680	14	52,000.	1,200 J	16,000. J	9,300.
Dibenzofuran	UG/KG	4	4,211,538,462		6,200	60,000.	1,000 J	16,000. J	9,300.
Fluoranthene	UG/KG	5	42,115,384,62	7,849,900	50,000.	150,000.	11,000	18,000. J	7,900.
Fluorene	UG/KG	1	42,115,384,62	1,755,510.	50,000.	88,000.	1,600	320,000. J	150,000.
Indeno[1,2,3-cd]pyrene	UG/KG	6	94,230,769	47,630	3,200	100,000.	2,300	27,000 J	14,000
Naphthalene	UG/KG	3	42,115,384,62	149,740.	13,000	100,000.	1,700	60,000. J	37,000.
Phenanthrene	UG/KG	4		325,820	50,000	350,000.	9,200	19,000. J	8,600
Pyrene	UG/KG	4	31,586,538,46	2,420,460	50,000.	380,000.	7,800	210,000. J	110,000.
4,4'-DDT	UG/KG	2	202,319,005	8,870	2,100	39 U	11 J	190,000. J	120,000.
Aluminum	UG/KG	4	1,052,884,615		14,592,840	8,720,000.		4,300. J	2,400.
Antimony	UG/KG	6	421,153,846	18,437,230.	3,590	12,300 UJ	14,000,000	21,700,000	12,100,000
Arsenic	UG/KG	5	45,858,974	223,670.	7,500	6,400	10,600 UJ	8,600. J	4,000.
Barium	UG/KG	4	73,701,923,08	91,840.	300,000	68,600	6,400	8,200.	6,900
Beryllium	UG/KG	3	15,997,317	6,570	730	450 J	119,000	415,000.	133,000
Cadmium	UG/KG	6	526,442,308	737,770.	1,000	770 U	710 J	600 J	550
Calcium	UG/KG	1			101,903,800	83,700,000	660 U	9,200.	3,000.
Chromium	UG/KG	9	1,052,884,615	850,430.	22,130.	15,500	9,090,000.	73,600,000	85,300,000
Copper	UG/KG	10	42,115,384,62	827,810	25,000	21,000.	19,500	78,200. J	41,400.
Iron	UG/KG	11	315,865,384,6		26,626,650	19,100,000.	27,400,000.	1,090,000. J	225,000.
Lead	UG/KG	7		181,460	21,860	82,500.	27,400,000.	34,800,000.	30,200,000.
Magnesium	UG/KG	5			12,221,770.	21,100,000.	84,900.	1,170,000 R	474,000
Manganese	UG/KG	4	24,216,346,15	8,821,860	669,380.	480,000.	6,010,000.	6,860,000	12,700,000.
Mercury	UG/KG	7	315,865,385	1,710	100.	70 J	80 J	648,000.	512,000.
Nickel	UG/KG	5	21,057,692,31	2,833,820	33,620.	20,400	30,100	400.	400.
Potassium	UG/KG	5			1,761,480.	1,080,000 J	1,220,000.	45,200.	41,300.
Silver	UG/KG	6	5,264,423,077		400	1,600 U	2,980,000.	2,980,000.	2,380,000.
Sodium	UG/KG	11			103,740	226,000. J	1,300 U	10,800.	5,200.
Zinc	UG/KG	12	315,865,384,6		82,500.	153,000.	102,000 J	1,660,000.	315,000.
								1,250,000.	777,000.

Seneca Army Depot Activity
SEAD-11
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

5/1/98

STUDY ID.	ESI	ESI	ESI
SITE.	SEAD-11	SEAD-11	SEAD 11
LOC ID.	TP11-3	TP11-4	TP11-4
LOC TYPE.	SITE	SITE	SITE
SAMP_ID.	TP11-3-3	TP11-4-1	TP11 4-2
QC CODE	SA	SA	SA
SAMP DETH TOP	4	0	2
SAMP DEPTH BOT	6	2	4
MATRIX	SOIL	SOIL	SOIL
SAMP DATE	14-Dec-93	14-Dec-93	16-Dec-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	Q	VALUE Q	VALUE Q	VALUE Q
Acenaphthene	UG/KG	1		2,268,070.	50,000	J	25,000. J	4,100 J	1,100 J
Anthracene	UG/KG	1	315,865,384 6	1,269,040.	50,000	J	44,000 J	7,700	2,200
Benzo[a]anthracene	UG/KG	8	94,230 769	1,476,040.	224		79,000.	20,000.	6,600.
Benzo[a]pyrene	UG/KG	11	9,423 077	562,720	61		73,000.	19,000.	6,100.
Benzo[b]fluoranthene	UG/KG	8	94,230 769	59,750	1,100		68,000.	26,000.	8,400.
Benzo[ghi]perylene	UG/KG	1		76,250	50,000	J	39,000 J	9,100	2,900
Benzo[k]fluoranthene	UG/KG	8	942,307 692	72,640.	1,100		66,000.	10,000.	3,000.
Chrysene	UG/KG	8	9,423,076 923	93,300	400		74,000.	22,000.	6,900.
Dibenz[a,h]anthracene	UG/KG	10	9,423 077	53,680	14	J	12,000 J	3,500 J	1,000 J
Dibenzofuran	UG/KG	4	4,211,538 462		6,200	J	16,000 J	2,200 J	520 J
Fluoranthene	UG/KG	5	42,115,384 62	7,849,900	50,000		230,000.	54,000.	14,000
Fluorene	UG/KG	1	42,115,384 62	1,755,510	50,000	J	24,000 J	3,300 J	1,000 J
Indeno[1,2,3-cd]pyrene	UG/KG	6	94,230 769	47,630	3,200.		45,000 J	11,000.	3,700.
Naphthalene	UG/KG	3	42,115,384 62	149,740	13,000	J	21,000 J	2,500 J	400 J
Phenanthrene	UG/KG	4		325,820	50,000		180,000.	40,000	9,700
Pyrene	UG/KG	4	31,586,538 46	2,420,460	50,000		140,000.	38,000	12,000
4 4 DDT	UG/KG	2	202,319 005	8,870	2,100		1,500	72	17
Aluminum	UG/KG	4	1,052,884,615		14,592,840		12,300,000	9,660,000	15,000,000.
Antimony	UG/KG	6	421,153 846	18,437,230	3,590	J	11,300 J	25,300 J	5,200 UJ
Arsenic	UG/KG	5	45,858 974	223,670	7,500		6,900	12,400.	5,700
Barium	UG/KG	4	73,701,923 08	91,840	300,000		477,000.	244,000	131,000
Beryllium	UG/KG	3	15,997 317	6,570	730	J	380 J	480 J	930 J
Cadmium	UG/KG	6	526,442 308	737,770	1,000		16,000.	5,600.	510 U
Calcium	UG/KG	1			101,903,800		41,300,000	95,300,000	4,340,000
Chromium	UG/KG	9	1,052,884,615	850,430	22,130	J	172,000 J	242,000 J	21,300 J
Copper	UG/KG	10	42,115,384 62	827,810	25,000	J	642,000 J	154,000 J	22,900 J
Iron	UG/KG	11	315,865,384 6		26,626,650		118,000,000.	27,100,000.	28,300,000.
Lead	UG/KG	7		181,460	21,860	R	1,330,000 R	1,890,000 R	27,300 R
Magnesium	UG/KG	5			12,221,770		9,190,000	44,600,000.	3,710,000
Manganese	UG/KG	4	24,216,346 15	8,821,860	669,380		946,000.	440,000	602,000
Mercury	UG/KG	7	315,865 385	1,710	100		410.	370.	40 J
Nickel	UG/KG	5	21,057,692 31	2,833,820	33,620		117,000.	33,000	25,000
Potassium	UG/KG	5			1,761,480		2,040,000.	1,450,000	1,530,000
Silver	UG/KG	6	5,264,423 077		400		11,300.	1,300 J	1,000 U
Sodium	UG/KG	11			103,740	J	508,000 J	236,000 J	48,000 U
Zinc	UG/KG	12	315,865,384 6		82,500		1,720,000.	632,000.	99,700.

Seneca Army Depot Activity
SEAD-11
Collapsed Data Summary
Comparison to NYSDEC TAGM 4046

5/1/98

STUDY ID ESI
SITE SEAD-11
LOC ID TP11-4
LOC TYPE SITE
SAMP_ID TP11-4-3
QC CODE SA
SAMP DEPTH TOP 4
SAMP DEPTH BOT 6
MATRIX SOIL
SAMP DATE 16-Dec-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q
Acenaphthene	UG/KG	1		2,268,070	50,000	27 J
Anthracene	UG/KG	1	315,865,384.6	1,269,040	50,000	49 J
Benzo[a]anthracene	UG/KG	8	94,230,769	1,476,040	224	160 J
Benzo[a]pyrene	UG/KG	11	9,423,077	562,720	61	160 J
Benzo[b]fluoranthene	UG/KG	8	94,230,769	59,750	1,100	220 J
Benzo[ghi]perylene	UG/KG	1		76,250	50,000	160 J
Benzo[k]fluoranthene	UG/KG	8	942,307,692	72,640	1,100	94 J
Chrysene	UG/KG	8	9,423,076,923	93,300	400	180 J
Dibenz[a,h]anthracene	UG/KG	10	9,423,077	53,680	14	370 U
Dibenzofuran	UG/KG	4	4,211,538,462		6,200	370 U
Fluoranthene	UG/KG	5	42,115,384.62	7,849,900	50,000	400
Fluorene	UG/KG	1	42,115,384.62	1,755,510	50,000	370 U
Indeno[1,2,3-cd]pyrene	UG/KG	6	94,230,769	47,630	3,200	120 J
Naphthalene	UG/KG	3	42,115,384.62	149,740	13,000	370 U
Phenanthrene	UG/KG	4		325,820	50,000	240 J
Pyrene	UG/KG	4	31,586,538.46	2,420,460	50,000	340 J
4,4'-DDT	UG/KG	2	202,319,005	8,870	2,100	16 J
Aluminum	UG/KG	4	1,052,884,615		14,592,840	7,170,000
Antimony	UG/KG	6	421,153,846	18,437,230	3,590	4,100 UJ
Arsenic	UG/KG	5	45,858,974	223,670	7,500	5,700
Barium	UG/KG	4	73,701,923.08	91,840	300,000	44,100
Beryllium	UG/KG	3	15,997,317	6,570	730	390 J
Cadmium	UG/KG	6	526,442,308	737,770	1,000	400 U
Calcium	UG/KG	1			101,903,800	103,000,000
Chromium	UG/KG	9	1,052,884,615	850,430	22,130	25,900 J
Copper	UG/KG	10	42,115,384.62	827,810	25,000	19,400 J
Iron	UG/KG	11	315,865,384.6		26,626,650	15,100,000
Lead	UG/KG	7		181,460	21,860	161,000 R
Magnesium	UG/KG	5			12,221,770	26,300,000
Manganese	UG/KG	4	24,216,346.15	8,821,860	669,380	420,000
Mercury	UG/KG	7	315,865,385	1,710	100	20 J
Nickel	UG/KG	5	21,057,692.31	2,833,820	33,620	20,200
Potassium	UG/KG	5			1,761,480	1,200,000
Silver	UG/KG	6	5,264,423,077		400	810 U
Sodium	UG/KG	11			103,740	156,000 J
Zinc	UG/KG	12	315,865,384.6		82,500	92,400

Seneca Army Depot Activity
SEAD-11 Soils
Summary Statistics
Companion to Ecological PRG

NYSDEC TAGM
4046

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	
Volatile Organics									
1,1,1-Trichloroethane	UG/KG	15	0	0.00%		0	36,950,961.54	957,110.	800
1,1,2,2-Tetrachloroethane	UG/KG	15	0	0.00%		0	3,439,423.077		500
1,1,2-Trichloroethane	UG/KG	15	0	0.00%		0	1,206,815.115		
1,1-Dichloroethane	UG/KG	15	0	0.00%		0	105,288,461.5		200
1,1-Dichloroethene	UG/KG	15	0	0.00%		0	114,647,436		400
1,2-Dichloroethane	UG/KG	15	0	0.00%		0	755,917.16		100
1,2-Dichloroethene (total)	UG/KG	15	2	13.33%		4			
1,2-Dichloropropane	UG/KG	15	0	0.00%		0	1,011,595.023		
Acetone	UG/KG	15	0	0.00%		0	105,288,461.5	34,270.	200
Benzene	UG/KG	15	0	0.00%		0	2,372,015,915	247,370	60
Bromodichloromethane	UG/KG	15	0	0.00%		0	1,109,491,315		
Bromoform	UG/KG	15	0	0.00%		0	8,707,400.195		
Carbon disulfide	UG/KG	15	0	0.00%		0	105,288,461.5	53,000	2,700
Carbon tetrachloride	UG/KG	15	0	0.00%		0	529,142,012		600
Chlorobenzene	UG/KG	15	0	0.00%		0	21,057,692.31		1,700.
Chlorodibromomethane	UG/KG	15	0	0.00%		0	818,910,256		1,900
Chloroethane	UG/KG	15	0	0.00%		0	421,153,846.2		
Chloroform	UG/KG	15	0	0.00%		0	10,528,846.15	194,610.	300
Cis-1,3-Dichloropropene	UG/KG	15	0	0.00%		0			
Ethyl benzene	UG/KG	15	1	6.67%		3	105,288,461.5	1,720,290.	5,500
Methyl bromide	UG/KG	15	0	0.00%		0	1,505,625.		
Methyl butyl ketone	UG/KG	15	0	0.00%		0			
Methyl chloride	UG/KG	15	0	0.00%		0	5,291,420.118		
Methyl ethyl ketone	UG/KG	15	0	0.00%		0		421,380.	300
Methyl isobutyl ketone	UG/KG	15	0	0.00%		0	84,230,769.23		1,000
Methylene chloride	UG/KG	15	0	0.00%		0	9,171,794.872	132,030	100
Styrene	UG/KG	15	0	0.00%		0			
Tetrachloroethene	UG/KG	15	3	20.00%	370.	0	1,322,855.03	6,454,550.	1,400
Toluene	UG/KG	15	3	20.00%		3	210,576,923.1	1,552,560.	1,500
Total Xylenes	UG/KG	15	1	6.67%		4	2,105,769,231.	5,642,680.	1,200
Trans-1,3-Dichloropropene	UG/KG	15	0	0.00%		0			
Trichloroethene	UG/KG	15	10	66.67%	460.	0	6,253,496,503		700
Vinyl chloride	UG/KG	15	0	0.00%		0	36,204,453		200
Herbicides									
2,4,5-T	UG/KG	15	1	6.67%		7	6		1,900
2,4,5-TP/Silvex	UG/KG	15	0	0.00%		0			700.
2,4-D	UG/KG	15	0	0.00%		0			500.
2,4-DB	UG/KG	15	2	13.33%		550.	0		
Dalapon	UG/KG	15	1	6.67%		2,500.	0		
Dicamba	UG/KG	15	0	0.00%		0		22,600.	
Dichloroprop	UG/KG	15	0	0.00%		0			
Dinoseb	UG/KG	15	0	0.00%		0			
MCPA	UG/KG	15	0	0.00%		0			
MCPP	UG/KG	15	0	0.00%		0		818,180.	
Nitroaromatics									
1,3,5-Trinitrobenzene	UG/KG	15	0	0.00%		0	52,644,231		
1,3-Dinitrobenzene	UG/KG	15	1	6.67%		770.	0	105,288,462	
2,4,6-Trinitrotoluene	UG/KG	15	1	6.67%		130	0	526,442,308	
2,4-Dinitrotoluene	UG/KG	15	2	13.33%		440	0	2,105,769,231	5,060.
2,6-Dinitrotoluene	UG/KG	15	1	6.67%		400.	0	1,052,884,615	1,000
2-amino-4,6-Dinitrotoluene	UG/KG	15	1	6.67%		680	0		
4-amino-2,6-Dinitrotoluene	UG/KG	15	0	0.00%		0			
HMX	UG/KG	15	0	0.00%		0			
RDX	UG/KG	15	0	0.00%		0			
Tetryl	UG/KG	15	0	0.00%		0			
Semivolatile Organics									
1,2,4-Trichlorobenzene	UG/KG	15	0	0.00%		0	10,528,846.15	1,132,060.	3,400
1,2-Dichlorobenzene	UG/KG	15	0	0.00%		0	94,759,615.38		7,900
1,3-Dichlorobenzene	UG/KG	15	0	0.00%		0	93,706,730.77		1,600
1,4-Dichlorobenzene	UG/KG	15	0	0.00%		0	2,866,185,897		8,500
2,2'-oxybis(1-Chloropropane)	UG/KG	15	0	0.00%		0			
2,4,5-Trichlorophenol	UG/KG	15	0	0.00%		0	105,288,461.5		100
2,4,6-Trichlorophenol	UG/KG	15	0	0.00%		0	6,253,496,503		
2,4-Dichlorophenol	UG/KG	15	0	0.00%		0	3,158,653,846		400
2,4-Dimethylphenol	UG/KG	15	0	0.00%		0	21,057,692.31		
2,4-Dinitrophenol	UG/KG	15	0	0.00%		0	2,105,769,231		200
2,4-Dinitrotoluene	UG/KG	15	0	0.00%		0	2,105,769,231	5,060.	
2,6-Dinitrotoluene	UG/KG	15	0	0.00%		0	1,052,884,615		1,000
2-Chloronaphthalene	UG/KG	15	0	0.00%		0			
2-Chlorophenol	UG/KG	15	0	0.00%		0	5,264,423,077	83,200.	800
2-Methylnaphthalene	UG/KG	15	9	60.00%	28,000	0		962,620.	36,400

Seneca Army Depot Activity
SEAD-11 Soils
Summary Statistics
Companion to Ecological PRG

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046
2-Methylnonol	UG/KG	15	0	0.00%		0	52,644,230.77		100
2-Nitroaniline	UG/KG	15	0	0.00%		0	63,173.077		430
2-Nitrophenol	UG/KG	15	0	0.00%		0			330
3,3'-Dichlorobenzidine	UG/KG	15	0	0.00%		0	152,863.248		
3-Nitroaniline	UG/KG	15	0	0.00%		0	3,158,653.846		500
4,6-Dinitro-2-methylphenol	UG/KG	15	0	0.00%		0			
4-Bromophenyl phenyl ether	UG/KG	15	0	0.00%		0	61,067,307.69		
4-Chloro-3-methylphenol	UG/KG	15	0	0.00%		0			240
4-Chloroaniline	UG/KG	15	0	0.00%		0	4,211,538.462		220
4-Chlorophenyl phenyl ether	UG/KG	15	0	0.00%		0			
4-Methylphenol	UG/KG	15	0	0.00%		0			900
4-Nitroaniline	UG/KG	15	0	0.00%		0	3,158,653.846		
4-Nitrophenol	UG/KG	15	0	0.00%		0	63,173,076.92	18,680.	100
Acenaphthene	UG/KG	15	9	60.00%	84,000.	0		2,268,070	50,000
Acenaphthylene	UG/KG	15	0	0.00%		0		33,460.	41,000
Anthracene	UG/KG	15	11	73.33%	150,000.	0	315,865,384.6	1,269,040.	50,000
Benzo[a]anthracene	UG/KG	15	11	73.33%	190,000.	0	94,230,769	1,476,040.	224
Benzo[a]pyrene	UG/KG	15	11	73.33%	140,000.	0	9,423,077	562,720.	61
Benzo[b]fluoranthene	UG/KG	15	11	73.33%	110,000.	4	94,230,769	59,750.	1,100
Benzo[ghi]perylene	UG/KG	15	10	66.67%	53,000.	0		76,250.	50,000
Benzo[k]fluoranthene	UG/KG	15	11	73.33%	130,000.	2	942,307,692	72,640.	1,100
Bis(2-Chloroethoxy)methane	UG/KG	15	0	0.00%		0			
Bis(2-Chloroethyl)ether	UG/KG	15	0	0.00%		0	62,534,965		
Bis(2-Ethylhexyl)phthalate	UG/KG	15	3	20.00%	67.	0	4,913,461,538	39,350.	50,000
Butylbenzylphthalate	UG/KG	15	0	0.00%		0	210,576,923.1		50,000
Carbazole	UG/KG	15	8	53.33%	81,000.	0	3,439,423,077		
Chrysene	UG/KG	15	11	73.33%	170,000.	2	9,423,076,923	93,300.	400
Di-n-butylphthalate	UG/KG	15	0	0.00%		0		94,697,730.	8,100
Di-n-octylphthalate	UG/KG	15	0	0.00%		0	21,057,692.31		50,000
Dibenz[a,h]anthracene	UG/KG	15	10	66.67%	52,000.	0	9,423,077	53,680.	14
Dibenzofuran	UG/KG	15	10	66.67%	60,000.	0	4,211,538,462		6,200
Diethyl phthalate	UG/KG	15	0	0.00%		0	842,307,692.3	7,665,910.	7,100
Dimethylphthalate	UG/KG	15	0	0.00%		0	10,528,846,150.		2,000
Fluoranthene	UG/KG	15	12	80.00%	350,000.	0	42,115,384.62	7,849,900.	50,000
Fluorene	UG/KG	15	10	66.67%	88,000.	0	42,115,384.62	1,755,510	50,000
Hexachlorobenzene	UG/KG	15	0	0.00%		0	42,992,788		410
Hexachlorobutadiene	UG/KG	15	0	0.00%		0	210,576,923		
Hexachlorocyclopentadiene	UG/KG	15	0	0.00%		0	7,370,192,308		
Hexachloroethane	UG/KG	15	0	0.00%		0	1,052,884,615		
Indeno[1,2,3-cd]pyrene	UG/KG	15	11	73.33%	100,000.	2	94,230,769	47,630.	3,200
Isophorone	UG/KG	15	0	0.00%		0			4,400
N-Nitrosodiphenylamine	UG/KG	15	0	0.00%		0	14,038,461.54		
N-Nitrosodipropylamine	UG/KG	15	0	0.00%		0	9,826,923	1,454,550.	
Naphthalene	UG/KG	15	10	66.67%	100,000.	0	42,115,384.62	149,740.	13,000
Nitrobenzene	UG/KG	15	0	0.00%		0	526,442,308		200
Pentachlorophenol	UG/KG	15	0	0.00%		0	573,237.18	1,415,560.	1,000
Phenanthrene	UG/KG	15	11	73.33%	350,000.	1		325,820.	50,000
Phenol	UG/KG	15	0	0.00%		0	631,730,769.2	79,520.	30
Pyrene	UG/KG	15	11	73.33%	280,000.	0	31,586,538.46	2,420,460.	50,000
Pesticides/PCBs									
4,4'-DDD	UG/KG	15	8	53.33%	1,400.	0	286,618.59	874,990.	2,900
4,4'-DDE	UG/KG	15	10	66.67%	1,800.	0	202,319,005	86,590.	2,100
4,4'-DDT	UG/KG	15	11	73.33%	4,300.	0	202,319,005	8,870.	2,100
Aldnn	UG/KG	15	0	0.00%		0	4,046.38	2,750.	41
Alpha-BHC	UG/KG	15	1	6.67%	24.	0			110
Alpha-Chlordane	UG/KG	15	4	26.67%	190.	0		142,090.	
Aroclor-1016	UG/KG	15	0	0.00%		0	73,701,923		
Aroclor-1221	UG/KG	15	0	0.00%		0			
Aroclor-1232	UG/KG	15	0	0.00%		0			
Aroclor-1242	UG/KG	15	0	0.00%		0		12,879,550.	
Aroclor-1248	UG/KG	15	0	0.00%		0			
Aroclor-1254	UG/KG	15	0	0.00%		0	21,057,692	3,925,000	10,000
Aroclor-1260	UG/KG	15	0	0.00%		0		2,272,730	10,000
Beta-BHC	UG/KG	15	0	0.00%		0		11,060.	200
Delta-BHC	UG/KG	15	0	0.00%		0			300
Dieldnn	UG/KG	15	3	20.00%	15.	0	4,299,279		44
Endosulfan I	UG/KG	15	0	0.00%	29.	0	6,317,307,692	131,820.	900
Endosulfan II	UG/KG	15	6	40.00%	66	0	6,317,307,692		900
Endosulfan sulfate	UG/KG	15	1	6.67%	2.5	0		15,820	1,000
Endnn	UG/KG	15	4	26.67%	49.	0	315,865,385	240,910.	100
Endnn aldehyde	UG/KG	15	0	0.00%		0	315,865,385	6,350	
Endnn ketone	UG/KG	15	0	0.00%		0	315,865,385	6,350	

Seneca Army Depot Activity
SEAD-11 Soils
Summary Statistics
Companion 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
Gamma-BHC/Lindane	UG/KG	15	0	0.00%		0	52,914.201		50
Gamma-Chlordane	UG/KG	15	0	0.00%		0		47,360	540
Heptachlor	UG/KG	15	0	0.00%		0	15,286.325	28,620	100
Heptachlor epoxide	UG/KG	15	0	0.00%		0	7,559.172	10	20
Methoxychlor	UG/KG	15	0	0.00%		0	5,264.423.077		
Toxapnene	UG/KG	15	0	0.00%		0			
Metals									
Aluminum	UG/KG	15	15	100.00%	21,700,000	0	1,052,884.615		14,592.840
Antimony	UG/KG	15	6	40.00%	285,000	0	421,153.846	18,437.230	3,590
Arsenic	UG/KG	15	12	80.00%	23,200	0	45,858.974	223,670	7,500
Barium	UG/KG	15	15	100.00%	1,090,000	11	73,701.923.08	91,840	300,000
Beryllium	UG/KG	15	15	100.00%	930	0	15,997.317	6,570	730
Cadmium	UG/KG	15	6	40.00%	16,000	0	526,442.308	737,770	1,000
Calcium	UG/KG	15	15	100.00%	103,000,000	0			101,903,800
Chromium	UG/KG	15	15	100.00%	242,000	0	1,052,884.615	850,430	22,130
Cobalt	UG/KG	15	15	100.00%	27,500	0	63,173,076.92		30,000
Copper	UG/KG	15	15	100.00%	1,090,000	1	42,115,384.62	827,810	25,000
Cyanide	UG/KG	15	0	0.00%		0		13,636,360	300
Iron	UG/KG	15	15	100.00%	118,000,000	0	315,865,384.6		26,626,650
Lead	UG/KG	15	9	60.00%	4,050,000	3		181,460	21,860
Magnesium	UG/KG	15	15	100.00%	44,600,000	0			12,221,770
Manganese	UG/KG	15	14	93.33%	946,000	0	24,216,346.15	8,821,860	669,380
Mercury	UG/KG	15	13	86.67%	2,900	1	315,865.385	1,710	100
Nickel	UG/KG	15	15	100.00%	117,000	0	21,057,692.31	2,833,820	33,620
Potassium	UG/KG	15	15	100.00%	2,980,000	0			1,761,480
Selenium	UG/KG	15	9	60.00%	740	0	5,264.423.077	193,140	2,000
Silver	UG/KG	15	6	40.00%	11,300	0	5,264.423.077		400
Sodium	UG/KG	15	14	93.33%	1,660,000	0			103,740
Thallium	UG/KG	15	0	0.00%		0	84,230.769		280
Vanadium	UG/KG	15	15	100.00%	31,800	0	7,370,192.308		150,000
Zinc	UG/KG	15	12	80.00%	7,980,000	0	315,865,384.6		82,500
Other Analyses									
Nitrate/Nitrite	UG/KG	15	15	100.00%	2,200	0			
Total Petroleum Hydrocarbons	UG/KG	15	15	100.00%	6,000,000	0			

Seneca Army Depot Activity
SEAD 11 Soils
Collapsed Data Summary
Comparison to Ecological PRG

STUDY ID	ESI	ESI	ESI	ESI
SITE	SEAD-11	SEAD 11	SEAD 11	SEAD 11
LOC ID	MW11-1	MW11 1	MW11 1	1P11 1
LOC TYPE	BACKGROUND	BACKGROUND	BACKGROUND	SITE
SAMP_ID	SB11-3-1	SB11 3 2	SB11 3 6	1P11 1 1
QC CODE	SA	SA	SA	SA
SAMP DEPTH TOP	0	2	10	0
SAMP DEPTH BOT	2	4	12	0 8
MATRIX	SOIL	SOIL	SOIL	SOIL
SAMP DATE	02-Nov-93	02-Nov 93	03-Nov 93	20 Nov 93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Benzo[b]fluoranthene	UG/KG	4	94,230 769	59,750	1,100	410 U	370 UR	350 UR	230 J
Benzo[k]fluoranthene	UG/KG	2	942,307 692	72,640	1,100	410 U	370 UR	350 UR	190 J
Chrysene	UG/KG	2	9,423,076 923	93,300	400	410 U	370 UR	350 UR	320 J
Indeno[1,2,3-cd]pyrene	UG/KG	2	94,230 769	47,630	3,200	410 U	370 UR	350 UR	140 J
Phenanthrene	UG/KG	1		325,820	50,000	410 U	370 UR	350 UR	230 J
Barium	UG/KG	11	73,701,923 08	91,840	300,000	113,000	57,400	62,700	1,090,000
Copper	UG/KG	1	42,115,384 62	827,810	25,000	20,000	12,200	21,700	492,000
Lead	UG/KG	3		181,460	21,860	27,900	11,400	10,100	4,050,000
Mercury	UG/KG	1	315,665 385	1,710	100	50 J	40 U	30 U	70 J

Seneca Army Depot Activity
SEAD-11 Soils
Collapsed Data Summary
Comparison to Ecological PRG

STUDY ID	ESI	ESI	ESI	ESI
SITE	SEAD-11	SEAD-11	SEAD 11	SEAD 11
LOC ID	TP11-1	TP11-1	TP11 2	TP11 2
LOC TYPE	SITE	SITE	SITE	SITE
SAMP_ID	TP11-1-2	TP11 1 3	TP11 2 1	TP11 2 2
QC CODE	SA	SA	SA	SA
SAMP DEPTH TOP	3 3	4 2	0	5
SAMP DEPTH BOT	3 3	4 2	0 7	5
MATRIX	SOIL	SOIL	SOIL	SOIL
SAMP DATE	20-Nov-93	20-Nov 93	19-Nov-93	20 Nov 93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Benzo[b]fluoranthene	UG/KG	4	94,230 769	59,750	1,100	200 J	400 U	4,700	99,000.
Benzo[k]fluoranthene	UG/KG	2	942,307 692	72,640	1,100	140 J	400 U	3,000	130,000.
Chrysene	UG/KG	2	9,423,076 923	93,300	400	230 J	400 U	4,500	170,000.
Indeno[1,2,3-cd]pyrene	UG/KG	2	94,230 769	47,630	3,200	66 J	400 U	2,800	100,000.
Phenanthrene	UG/KG	1		325,820	50,000	260 J	400 U	5,800	350,000.
Barium	UG/KG	11	73,701,923 08	91,840	300,000	953,000.	106,000.	96,900.	68,600
Copper	UG/KG	1	42,115,384 62	827,810	25,000	374,000	32,400	35,500	121,000
Lead	UG/KG	3		181,460	21,860	2,090,000.	193,000.	84,100	82,500
Mercury	UG/KG	1	315,865 385	1,710	100	2,900.	700	500 J	70 J

Seneca Army Depot Activity
SEAD-11 Soils
Collapsed Data Summary
Comparison to Ecological PRG

STUDY ID	ESI	ESI	ESI	ESI
SITE	SEAD 11	SEAD 11	SEAD 11	SEAD 11
LOC ID	TP11 2	TP11 3	TP11 3	TP11 3
LOC TYPE	SITE	SITE	SITE	SITE
SAMP_ID	TP11 2-3	TP11 3 1	TP11 3 2	TP11 3 3
QC CODE	SA	SA	SA	SA
SAMP DEPTH TOP	5	0	2	4
SAMP DEPTH BOT	5	2	4	6
MATRIX	SOIL	SOIL	SOIL	SOIL
SAMP DATE	20 Nov-93	14-Dec-93	14-Dec-93	14-Dec-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Benzo[b]fluoranthene	UG/KG	4	94,230,769	59,750	1,100	2,900	110,000 J	67,000	68,000
Benzo[k]fluoranthene	UG/KG	2	942,307,692	72,640	1,100	3,700	94,000 J	48,000	66,000
Chrysene	UG/KG	2	9,423,076,923	93,300	400	4,300	110,000 J	64,000	74,000
Indeno[1,2,3-cd]pyrene	UG/KG	2	94,230,769	47,630	3,200	2,300	60,000 J	37,000	45,000 J
Phenanthrene	UG/KG	1		325,820	50,000	9,200	210,000 J	110,000	180,000
Barium	UG/KG	11	73,701,923,08	91,840	300,000	119,000	415,000	133,000	477,000
Copper	UG/KG	1	42,115,384,62	827,810	25,000	25,700	1,090,000 J	225,000 J	642,000 J
Lead	UG/KG	3		181,460	21,860	84,900	1,170,000 R	474,000 R	1,330,000 R
Mercury	UG/KG	1	315,865,385	1,710	100	80 J	400	400	410

Seneca Army Depot Activity
SEAD 11 Soils
Collapsed Data Summary
Comparison to Ecological PRG

5/1/98

STUDY ID	ESI	ESI	ESI
SITE	SEAD 11	SEAD 11	SEAD 11
LOC ID	TP11-4	TP11-4	TP11-4
LOC TYPE	SITE	SITE	SITE
SAMP ID	TP11-4-1	TP11-4-2	TP11-4-3
QC CODE	SA	SA	SA
SAMP DEPTH TOP	0	2	4
SAMP DEPTH BOT	2	4	6
MATRIX	SOIL	SOIL	SOIL
SAMP DATE	14-Dec-93	16-Dec-93	16-Dec-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q
Benzo[b]fluoranthene	UG/KG	4	94,230.769	59,750	1,100	26,000	8,400	220 J
Benzo[k]fluoranthene	UG/KG	2	942,307.692	72,640	1,100	10,000	3,000	94 J
Chrysene	UG/KG	2	9,423,076.923	93,300	400	22,000	6,900	180 J
Indeno[1,2,3-cd]pyrene	UG/KG	2	94,230.769	47,630	3,200	11,000	3,700	120 J
Phenanthrene	UG/KG	1		325,820	50,000	40,000	9,700	240 J
Barium	UG/KG	11	73,701,923.08	91,840	300,000	244,000	131,000	44,100
Copper	UG/KG	1	42,115,384.62	827,810	25,000	154,000 J	22,900 J	19,400 J
Lead	UG/KG	3		181,460	21,860	1,890,000 R	27,300 R	161,000 R
Mercury	UG/KG	1	315,865.385	1,710	100	370	40 J	20 J

Seneca Army Depot Activity
SEAD-11 Soils
Summary Statistics
Companion to Recreational PRG

NYSDEC TAGM
4046

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	
Volatile Organics									
1,1,1-Trichloroethane	UG:KG	15	0	0.00%		0	36,850,961.54	957.110	800
1,1,2,2-Tetrachloroethane	UG:KG	15	0	0.00%		0	3,439,423.077		500
1,1,2-Trichloroethane	UG:KG	15	0	0.00%		0	1,206,815.115		
1,1-Dichloroethane	UG:KG	15	0	0.00%		0	105,288,461.5		200
1,1-Dichloroethene	UG:KG	15	0	0.00%		0	114,647,436		400
1,2-Dichloroethane	UG:KG	15	0	0.00%		0	755,917.16		100
1,2-Dichloroethene (total)	UG:KG	15	2	13.33%		4			
1,2-Dichloropropane	UG:KG	15	0	0.00%		0	1,011,595.023		
Acetone	UG:KG	15	0	0.00%		0	105,288,461.5	34,270.	200
Benzene	UG:KG	15	0	0.00%		0	2,372,015.915	247.370	50
Bromodichloromethane	UG:KG	15	0	0.00%		0	1,109,491.315		
Bromoform	UG:KG	15	0	0.00%		0	8,707,400.195		
Carbon disulfide	UG:KG	15	0	0.00%		0	105,288,461.5	53,000	2,700
Carbon tetrachloride	UG:KG	15	0	0.00%		0	529,142.012		500
Chlorobenzene	UG:KG	15	0	0.00%		0	21,057,692.31		1,700
Chlorodibromomethane	UG:KG	15	0	0.00%		0	818,910.256		
Chloroethane	UG:KG	15	0	0.00%		0	421,153,846.2		1,900
Chloroform	UG:KG	15	0	0.00%		0	10,528,846.15	194.610	300
Cis-1,3-Dichloropropene	UG:KG	15	0	0.00%		0			
Ethyl benzene	UG:KG	15	1	6.67%		3	105,288,461.5	1,720,290.	5,500
Methyl bromide	UG:KG	15	0	0.00%		0	1,505,625.		
Methyl butyl ketone	UG:KG	15	0	0.00%		0			
Methyl chloride	UG:KG	15	0	0.00%		0	5,291,420.118		
Methyl ethyl ketone	UG:KG	15	0	0.00%		0		421,380.	300
Methyl isobutyl ketone	UG:KG	15	0	0.00%		0	84,230,769.23		1,000
Methylene chloride	UG:KG	15	0	0.00%		0	9,171,794,872	132,030.	100
Styrene	UG:KG	15	0	0.00%		0			
Tetrachloroethene	UG:KG	15	3	20.00%	370.	0	1,322,855.03	6,454,550.	1,400
Toluene	UG:KG	15	3	20.00%	3.	0	210,576,923.1	1,552,560.	1,500
Total Xylenes	UG:KG	15	1	6.67%		4	2,105,769,231.	5,642,680.	1,200
Trans-1,3-Dichloropropene	UG:KG	15	0	0.00%		0			
Trichloroethene	UG:KG	15	10	66.67%	460.	0	6,253,496,503		700
Vinyl chloride	UG:KG	15	0	0.00%		0	36,204,453		200
Herbicides									
2,4,5-T	UG:KG	15	1	6.67%	7.6	0			1,900
2,4,5-TP/Silvex	UG:KG	15	0	0.00%		0			700
2,4-D	UG:KG	15	0	0.00%		0			500
2,4-DB	UG:KG	15	2	13.33%	550.	0			
Dalapon	UG:KG	15	1	6.67%	2,500.	0			
Dicamba	UG:KG	15	0	0.00%		0		22,600.	
Dichloroprop	UG:KG	15	0	0.00%		0			
Dinoseb	UG:KG	15	0	0.00%		0			
MCPA	UG:KG	15	0	0.00%		0			
MCPP	UG:KG	15	0	0.00%		0		818,180.	
Nitroaromatics									
1,3,5-Trinitrobenzene	UG:KG	15	0	0.00%		0	52,644,231		
1,3-Dinitrobenzene	UG:KG	15	1	6.67%	770.	0	105,288,462		
2,4,6-Trinitrotoluene	UG:KG	15	1	6.67%	130.	0	526,442,308		
2,4-Dinitrotoluene	UG:KG	15	2	13.33%	440	0	2,105,769,231	5,060.	
2,6-Dinitrotoluene	UG:KG	15	1	6.67%	400	0	1,052,884,615		1,000
2-amino-4,6-Dinitrotoluene	UG:KG	15	1	6.67%	680.	0			
4-amino-2,5-Dinitrotoluene	UG:KG	15	0	0.00%		0			
HMX	UG:KG	15	0	0.00%		0			
RDX	UG:KG	15	0	0.00%		0			
Tetryl	UG:KG	15	0	0.00%		0			
Semivolatile Organics									
1,2,4-Trichlorobenzene	UG:KG	15	0	0.00%		0	10,528,846.15	1,132,060	3,400
1,2-Dichlorobenzene	UG:KG	15	0	0.00%		0	94,759,615.38		7,900
1,3-Dichlorobenzene	UG:KG	15	0	0.00%		0	93,706,730.77		1,600
1,4-Dichlorobenzene	UG:KG	15	0	0.00%		0	2,866,185,897		8,500
2,2'-oxybis(1-Chloropropane)	UG:KG	15	0	0.00%		0			
2,4,5-Trichlorophenol	UG:KG	15	0	0.00%		0	105,288,461.5		100
2,4,6-Trichlorophenol	UG:KG	15	0	0.00%		0	6,253,496,503		
2,4-Dichlorophenol	UG:KG	15	0	0.00%		0	3,158,653,846		400
2,4-Dimethylphenol	UG:KG	15	0	0.00%		0	21,057,692.31		
2,4-Dinitrophenol	UG:KG	15	0	0.00%		0	2,105,769,231		200
2,4-Dinitrotoluene	UG:KG	15	0	0.00%		0	2,105,769,231	5,060.	
2,6-Dinitrotoluene	UG:KG	15	0	0.00%		0	1,052,884,615		1,000
2-Chloronaphthalene	UG:KG	15	0	0.00%		0			
2-Chlorophenol	UG:KG	15	0	0.00%		0	5,264,423,077	83,200	900

Seneca Army Depot Activity
SEAD-11 Soils
Summary Statistics
Comparison to Recreational PRG

NYSDEC TAGM
4046

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Recreational PRG	Ecological PRG	
2-Methylnontraleine	UG/KG	15	9	60.00%	28.000	0		962.520	36.400
2-Methylphenol	UG/KG	15	0	0.00%		0	52,644.230.77		100
2-Nitroaniline	UG/KG	15	0	0.00%		0	63.173.077		430
2-Nitrophenol	UG/KG	15	0	0.00%		0			330
3,3'-Dichlorobenzidine	UG/KG	15	0	0.00%		0	152.963.248		
3-Nitroaniline	UG/KG	15	0	0.00%		0	3.158.653.846		500
4,6-Dinitro-2-methylphenol	UG/KG	15	0	0.00%		0			
4-Bromophenyl phenyl ether	UG/KG	15	0	0.00%		0	61.067.307.69		
4-Chloro-3-methylphenol	UG/KG	15	0	0.00%		0			240
4-Chloroaniline	UG/KG	15	0	0.00%		0	4.211.538.462		220
4-Chlorophenyl phenyl ether	UG/KG	15	0	0.00%		0			900
4-Methylphenol	UG/KG	15	0	0.00%		0	3.158.653.846		
4-Nitroaniline	UG/KG	15	0	0.00%		0	63.173.076.92	18.680.	100
4-Nitrophenol	UG/KG	15	0	0.00%		0		2.268.070	50.000
Acenaphthene	UG/KG	15	9	60.00%	84.000.	0		33.460.	41.000
Acenaphthylene	UG/KG	15	0	0.00%		0			50.000
Anthracene	UG/KG	15	11	73.33%	150.000.	0	315.865.384.6	1.269.040	224
Benzo[a]anthracene	UG/KG	15	11	73.33%	190.000.	2	94.230.769	1.476.040	61
Benzo[a]pyrene	UG/KG	15	11	73.33%	140.000.	5	9.423.077	562.720.	1.100
Benzo[b]fluoranthene	UG/KG	15	11	73.33%	110.000.	2	94.230.769	59.750.	50.000
Benzo[ghi]perylene	UG/KG	15	10	66.67%	53.000.	0		76.250.	1.100
Benzo[k]fluoranthene	UG/KG	15	11	73.33%	130.000.	0	942.307.692	72.640.	
Bis(2-Chloroethoxy)methane	UG/KG	15	0	0.00%		0			
Bis(2-Chloroethyl)ether	UG/KG	15	0	0.00%		0	62.534.965		
Bis(2-Ethylhexyl)phthalate	UG/KG	15	3	20.00%	67.	0	4.913.461.538	39.350	50.000
Butylbenzylphthalate	UG/KG	15	0	0.00%		0	210.576.923.1		50.000
Carbazole	UG/KG	15	8	53.33%	81.000.	0	3.439.423.077		
Chrysene	UG/KG	15	11	73.33%	170.000.	0	9.423.076.923	93.300.	400
Di-n-butylphthalate	UG/KG	15	0	0.00%		0		94.697.730.	8.100
Di-n-octylphthalate	UG/KG	15	0	0.00%		0	21.057.692.31		50.000
Dibenz[a,h]anthracene	UG/KG	15	10	66.67%	52.000.	3	9.423.077	53.680.	14
Dibenzofuran	UG/KG	15	10	66.67%	60.000.	0	4.211.538.462		6.200
Diethyl phthalate	UG/KG	15	0	0.00%		0	842.307.692.3	7.665.910.	7.100
Dimethylphthalate	UG/KG	15	0	0.00%		0	10.528.846.150.		2.000
Fluoranthene	UG/KG	15	12	80.00%	350.000.	0	42.115.384.62	7.849.900.	50.000
Fluorene	UG/KG	15	10	66.67%	88.000.	0	42.115.384.62	1.755.510.	50.000
Hexachlorobenzene	UG/KG	15	0	0.00%		0	42.992.788		410
Hexachlorobutadiene	UG/KG	15	0	0.00%		0	210.576.923		
Hexachlorocyclopentadiene	UG/KG	15	0	0.00%		0	7.370.192.308		
Hexachloroethane	UG/KG	15	0	0.00%		0	1.052.884.615		
Indeno[1,2,3-cd]pyrene	UG/KG	15	11	73.33%	100.000.	1	94.230.769	47.630	3.200
Isophorone	UG/KG	15	0	0.00%		0			4.400
N-Nitrosodiphenylamine	UG/KG	15	0	0.00%		0	14.038.461.54		
N-Nitrosodipropylamine	UG/KG	15	0	0.00%		0	9.826.923	1.454.550.	
Naphthalene	UG/KG	15	10	66.67%	100.000.	0	42.115.384.62	149.740.	13.000
Nitrobenzene	UG/KG	15	0	0.00%		0	526.442.308		200
Pentachlorophenol	UG/KG	15	0	0.00%		0	573.237.18	1.415.560.	1.000
Phenanthrene	UG/KG	15	11	73.33%	350.000.	0		325.820.	50.000
Phenol	UG/KG	15	0	0.00%		0	631.730.769.2	79.520.	30
Pyrene	UG/KG	15	11	73.33%	280.000.	0	31.586.538.46	2.420.460.	50.000
Pesticides/PCBs									
4,4'-DDD	UG/KG	15	8	53.33%	1.400	0	286.618.59	874.990.	2.900
4,4'-DDE	UG/KG	15	10	66.67%	1.800	0	202.319.005	86.590.	2.100
4,4'-DDT	UG/KG	15	11	73.33%	4.300	0	202.319.005	8.870	2.100
Aldrin	UG/KG	15	0	0.00%		0	4.046.38	2.750	4.1
Alpha-BHC	UG/KG	15	1	6.67%	24	0			1.0
Alpha-Chlordane	UG/KG	15	4	26.67%	190	0		142.090	
Aroclor-1016	UG/KG	15	0	0.00%		0	73.701.923		
Aroclor-1221	UG/KG	15	0	0.00%		0			
Aroclor-1232	UG/KG	15	0	0.00%		0			
Aroclor-1242	UG/KG	15	0	0.00%		0		12.879.550	
Aroclor-1248	UG/KG	15	0	0.00%		0			
Aroclor-1254	UG/KG	15	0	0.00%		0	21.057.692	3.925.000	10.000
Aroclor-1260	UG/KG	15	0	0.00%		0		2.272.730	10.000
Beta-BHC	UG/KG	15	0	0.00%		0		11.060.	200
Delta-BHC	UG/KG	15	3	20.00%	15	0			300
Dieldrin	UG/KG	15	3	20.00%	29	0	4.299.279		14
Endosulfan I	UG/KG	15	0	0.00%		0	6.317.307.692	131.820.	900
Endosulfan II	UG/KG	15	6	40.00%	66	0	6.317.307.692		900
Endosulfan sulfate	UG/KG	15	1	6.67%	2.5	0		15.820.	1.000
Endrin	UG/KG	15	4	26.67%	49	0	315.865.385	240.910.	100

Seneca Army Depot Activity
SEAD-11 Soils
Summary Statistics
Companion 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
Endrin aldehyde	UG/KG	15	0	0.00%		0	315,865,385	6,350	
Endrin ketone	UG/KG	15	0	0.00%		0	315,865,385	6,350	
Gamma-BHC/Lindane	UG/KG	15	0	0.00%		0	52,914,201		50
Gamma-Chlordane	UG/KG	15	0	0.00%		0		47,360	540
Heptachlor	UG/KG	15	0	0.00%		0	15,286,325	28,620	100
Heptachlor epoxide	UG/KG	15	0	0.00%		0	7,559,172	10	20
Methoxychlor	UG/KG	15	0	0.00%		0	5,264,423,077		
Toxaphene	UG/KG	15	0	0.00%		0			
Metals									
Aluminum	UG/KG	15	15	100.00%	21,700,000	0	1,052,884,615		14,592,340
Antimony	UG/KG	15	6	40.00%	285,000	0	421,153,846	18,437,230	3,590
Arsenic	UG/KG	15	12	80.00%	23,200	0	45,858,974	223,670	7,500
Barium	UG/KG	15	15	100.00%	1,090,000	0	73,701,923.08	91,840	300,000
Beryllium	UG/KG	15	15	100.00%	930	0	15,997,317	6,570	730
Cadmium	UG/KG	15	6	40.00%	16,000	0	526,442,308	737,770	1,000
Calcium	UG/KG	15	15	100.00%	103,000,000	0			101,903,800
Chromium	UG/KG	15	15	100.00%	242,000	0	1,052,884,615	850,430	22,130
Cobalt	UG/KG	15	15	100.00%	27,500	0	63,173,076.92		30,000
Copper	UG/KG	15	15	100.00%	1,090,000	0	42,115,384.62	827,810	25,000
Cyanide	UG/KG	15	0	0.00%		0		13,636,360	300
Iron	UG/KG	15	15	100.00%	118,000,000	0	315,865,384.6		26,626,650
Lead	UG/KG	15	9	60.00%	4,050,000	0		181,460	21,860
Magnesium	UG/KG	15	15	100.00%	44,600,000	0			12,221,770
Manganese	UG/KG	15	14	93.33%	946,000	0	24,216,346.15	8,821,860	669,380
Mercury	UG/KG	15	13	86.67%	2,900	0	315,865,385	1,710	100
Nickel	UG/KG	15	15	100.00%	117,000	0	21,057,692.31	2,833,820	33,620
Potassium	UG/KG	15	15	100.00%	2,980,000	0			1,761,480
Selenium	UG/KG	15	9	60.00%	740	0	5,264,423,077	193,140	2,000
Silver	UG/KG	15	6	40.00%	11,300	0	5,264,423,077		400
Sodium	UG/KG	15	14	93.33%	1,660,000	0			103,740
Thallium	UG/KG	15	0	0.00%		0	84,230,769		280
Vanadium	UG/KG	15	15	100.00%	31,800	0	7,370,192,308		150,000
Zinc	UG/KG	15	12	80.00%	7,980,000	0	315,865,384.6		82,500
Other Analyses									
Nitrate/Nitrite	UG/KG	15	15	100.00%	2,200	0			
Total Petroleum Hydrocarbons	UG/KG	15	15	100.00%	6,000,000	0			

Seneca Army Depot Activity
 SEAD-11 Soils
 Collapsed Data Summary
 Comparison to Recreational PRG

STUDY ID	ESI	ESI	ESI	ESI
SITE	SEAD-11	SEAD-11	SEAD-11	SEAD-11
LOC ID	MW11-1	MW11-1	MW11-1	TP11-1
LOC TYPE	BACKGROUND	BACKGROUND	BACKGROUND	SITE
SAMP_ID	SB11-3-1	SB11-3-2	SB11-3-6	TP11-1-1
QC CODE	SA	SA	SA	SA
SAMP DEPTH TOP	0	2	10	0
SAMP DEPTH BOT	2	4	12	0.8
MATRIX	SOIL	SOIL	SOIL	SOIL
SAMP DATE	02-Nov-93	02-Nov-93	03-Nov-93	20-Nov-93

PARAMETER	UNIT	Number of Exceedances	Recreational PRG	Ecological PRG	NYSDEC TAGM	VALUE Q	VALUE Q	VALUE Q	VALUE Q
					4046				
Benzo[a]anthracene	UG/KG	2	94,230,769	1,476,040	224	410 U	370 UR	350 UR	150 J
Benzo[a]pyrene	UG/KG	5	9,423,077	562,720	61	410 U	370 UR	350 UR	210 J
Benzo[b]fluoranthene	UG/KG	2	94,230,769	59,750	1,100	410 U	370 UR	350 UR	230 J
Dibenz[a,h]anthracene	UG/KG	3	9,423,077	53,680	14	410 U	370 UR	350 UR	60 J
Indeno[1,2,3-cd]pyrene	UG/KG	1	94,230,769	47,630	3,200	410 U	370 UR	350 UR	140 J

Seneca Army Depot Activity
 SEAD-11 Soils
 Collapsed Data Summary
 Comparison to Recreational PRG

5/1/98

STUDY ID	ESI	ESI	ESI	ESI
SITE	SEAD-11	SEAD-11	SEAD-11	SEAD-11
LOC ID	TP11-1	TP11-1	TP11-2	TP11-2
LOC TYPE	SITE	SITE	SITE	SITE
SAMP_ID	TP11-1-2	TP11-1-3	TP11-2-1	TP11-2-2
QC CODE	SA	SA	SA	SA
SAMP DEPTH TOP	3.3	4.2	0.7	5
SAMP DEPTH BOT	3.3	4.2	0.7	5
MATRIX	SOIL	SOIL	SOIL	SOIL
SAMP DATE	20-Nov-93	20-Nov-93	19-Nov-93	20-Nov-93

PARAMETER	UNIT	Number of		NYSDEC TAGM 4046	VALUE Q	VALUE Q	VALUE Q	VALUE Q	
		Exceedances	Recreational PRG						
Benzo[a]anthracene	UG/KG	2	94,230,769	1,476,040	224	160 J	400 U	4,200	190,000.
Benzo[a]pyrene	UG/KG	5	9,423,077	562,720	61	130 J	400 U	3,800	140,000.
Benzo[b]fluoranthene	UG/KG	2	94,230,769	59,750	1,100	200 J	400 U	4,700	99,000.
Dibenz[a,h]anthracene	UG/KG	3	9,423,077	53,680	14	37 J	400 U	1,100 J	52,000.
Indeno[1,2,3-cd]pyrene	UG/KG	1	94,230,769	47,630	3,200	66 J	400 U	2,800	100,000.

Seneca Army Depot Activity
SEAD-11 Soils
Collapsed Data Summary
Comparison to Recreational PRG

5/1/98

STUDY ID	ESI	ESI	ESI	ESI
SITE	SEAD-11	SEAD 11	SEAD 11	SEAD 11
LOC ID	TP11-2	TP11-3	TP11-3	TP11-3
LOC TYPE	SITE	SITE	SITE	SITE
SAMP_ID	TP11-2-3	TP11-3-1	TP11-3-2	TP11-3-3
QC CODE	SA	SA	SA	SA
SAMP DEPTH TOP	5	0	2	4
SAMP DEPTH BOT	5	2	4	6
MATRIX	SOIL	SOIL	SOIL	SOIL
SAMP DATE	20-Nov-93	14-Dec-93	14-Dec-93	14-Dec-93

PARAMETER	UNIT	Number of		NYSDEC TAGM		VALUE Q	VALUE Q	VALUE Q	VALUE Q
		Exceedances	Recreational PRG	Ecological PRG	4046				
Benzo[a]anthracene	UG/KG	2	94,230,769	1,476,040	224	4,600	110,000, J	67,000	79,000
Benzo[a]pyrene	UG/KG	5	9,423,077	562,720	61	3,400	110,000, J	60,000, J	73,000
Benzo[b]fluoranthene	UG/KG	2	94,230,769	59,750	1,100	2,900	110,000, J	67,000	68,000
Dibenz[a,h]anthracene	UG/KG	3	9,423,077	53,680	14	1,200 J	16,000, J	9,300 J	12,000, J
Indeno[1,2,3-cd]pyrene	UG/KG	1	94,230,769	47,630	3,200	2,300	60,000 J	37,000	45,000 J

Seneca Army Depot Activity
 SEAD-11 Soils
 Collapsed Data Summary
 Comparison to Recreational PRG

STUDY ID	ESI	ESI	ESI
SITE	SEAD-11	SEAD 11	SEAD 11
LOC ID	TP11-4	TP11-4	TP11 4
LOC TYPE	SITE	SITE	SITE
SAMP_ID	TP11-4-1	TP11-4-2	TP11-4-3
QC CODE	SA	SA	SA
SAMP DETH TOP	0	2	4
SAMP DEPTH BOT	2	4	6
MATRIX	SOIL	SOIL	SOIL
SAMP DATE	14-Dec-93	16-Dec-93	16-Dec-93

PARAMETER	UNIT	Number of Exceedances	NYSDEC TAGM			VALUE Q	VALUE Q	VALUE Q
			Recreational PRG	Ecological PRG	4046			
Benzo[a]anthracene	UG/KG	2	94,230 769	1,476,040	224	20,000	6,600	160 J
Benzo[a]pyrene	UG/KG	5	9,423 077	562,720	61	19,000	6,100	160 J
Benzo[b]fluoranthene	UG/KG	2	94,230 769	59,750	1,100	26,000	8,400	220 J
Dibenz[a,h]anthracene	UG/KG	3	9,423 077	53,680	14	3,500 J	1,000 J	370 U
Indeno[1,2,3-cd]pyrene	UG/KG	1	94,230 769	47,630	3,200	11,000	3,700	120 J

SEAD-11
GROUNDWATER
COLLAPSED DATA TABLES
AND
SUMMARY STATISTICS TABLES

Seneca Army Depot Activity
SEAD-11
Summary Statistics - Groundwater
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
Volatiles								
1,1,1-Trichloroethane	UG/L	5	0	0.00%		0	792,549	5
1,1,2,2-Tetrachloroethane	UG/L	5	0	0.00%		0	521	5
1,1,2-Trichloroethane	UG/L	5	0	0.00%		0	188	
1,1-Dichloroethane	UG/L	5	0	0.00%		0	811,742	5
1,1-Dichloroethene	UG/L	5	0	0.00%		0	044	5
1,2-Dichloroethane	UG/L	5	0	0.00%		0	116	5
1,2-Dichloroethene (total)	UG/L	5	0	0.00%		0		5
1,2-Dichloropropane	UG/L	5	0	0.00%		0	989	5
Acetone	UG/L	5	0	0.00%		0	3,650	
Benzene	UG/L	5	0	0.00%		0	364	7
Bromodichloromethane	UG/L	5	0	0.00%		0	1,084	
Bromofom	UG/L	5	0	0.00%		0	2,354	
Carbon disulfide	UG/L	5	0	0.00%		0	1,042,857	
Carbon tetrachloride	UG/L	5	0	0.00%		0	163	5
Chlorobenzene	UG/L	5	0	0.00%		0	39,431	5
Chlorodibromomethane	UG/L	5	0	0.00%		0	8	
Chloroethane	UG/L	5	0	0.00%		0	8,591.77	5
Chloroform	UG/L	5	0	0.00%		0	153	7
Cis-1,3-Dichloropropene	UG/L	5	0	0.00%		0		5
Ethyl benzene	UG/L	5	0	0.00%		0	1,328,117	5
Methyl bromide	UG/L	5	0	0.00%		0	8,699	
Methyl butyl ketone	UG/L	5	0	0.00%		0		
Methyl chloride	UG/L	5	0	0.00%		0	1,436	5
Methyl ethyl ketone	UG/L	5	0	0.00%		0		50
Methyl isobutyl ketone	UG/L	5	0	0.00%		0	158,118	
Methylene chloride	UG/L	5	0	0.00%		0	4,124	5
Styrene	UG/L	5	0	0.00%		0		
Tetrachloroethene	UG/L	5	0	0.00%		0	1,069	5
Toluene	UG/L	5	0	0.00%		0	747,038	5
Total Xylenes	UG/L	5	0	0.00%		0	73,000	5
Trans-1,3-Dichloropropene	UG/L	5	0	0.00%		0		5
Trichloroethene	UG/L	5	0	0.00%		0	1,556	5
Vinyl chloride	UG/L	5	0	0.00%		0	019	2
Herbicides								
2,4,5-T	UG/L	5	0	0.00%		0		35
2,4,5-TP/Silvex	UG/L	5	0	0.00%		0		26
2,4-D	UG/L	5	0	0.00%		0		4.4
2,4-DB	UG/L	5	0	0.00%		0		
Dalapon	UG/L	5	0	0.00%		0		50
Dicamba	UG/L	5	0	0.00%		0		44
Dichloroprop	UG/L	5	0	0.00%		0		
Dinoseb	UG/L	5	0	0.00%		0		1
MCPA	UG/L	5	0	0.00%		0		44
MCPPP	UG/L	5	0	0.00%		0		
Nitroaromatics								
1,3,5-Trinitrobenzene	UG/L	5	0	0.00%		0	1,825	5
1,3-Dinitrobenzene	UG/L	5	0	0.00%		0	3.65	5
2,4,6-Trinitrotoluene	UG/L	5	1	20.00%	43	0	2,241	5
2,4-Dinitrotoluene	UG/L	5	0	0.00%		0	73	5
2,6-Dinitrotoluene	UG/L	5	0	0.00%		0	36.5	5
2-amino-4,6-Dinitrotoluene	UG/L	5	0	0.00%		0		5
4-amino-2,6-Dinitrotoluene	UG/L	5	0	0.00%		0		5
HMX	UG/L	5	0	0.00%		0		
RDX	UG/L	5	0	0.00%		0		
Tetryl	UG/L	5	0	0.00%		0		5
Semivolatile Organics								
1,2,4-Trichlorobenzene	UG/L	5	0	0.00%		0	194,599	5
1,2-Dichlorobenzene	UG/L	5	0	0.00%		0	268,163	4.7
1,3-Dichlorobenzene	UG/L	5	0	0.00%		0	3,248.5	5
1,4-Dichlorobenzene	UG/L	5	0	0.00%		0	2,802	4.7
2,2'-oxybis(1-Chloropropane)	UG/L	5	0	0.00%		0		
2,4,5-Trichlorophenol	UG/L	5	0	0.00%		0	3,650	
2,4,6-Trichlorophenol	UG/L	5	0	0.00%		0	967	
2,4-Dichlorophenol	UG/L	5	0	0.00%		0	109.5	
2,4-Dimethylphenol	UG/L	5	0	0.00%		0	730	5
2,4-Dinitrophenol	UG/L	5	0	0.00%		0	73	
2,4-Dinitrotoluene	UG/L	5	0	0.00%		0	73	5
2,6-Dinitrotoluene	UG/L	5	0	0.00%		0	36.5	5
2-Chloronaphthalene	UG/L	5	0	0.00%		0		
2-Chlorophenol	UG/L	5	0	0.00%		0	182.5	
2-Methylnaphthalene	UG/L	5	0	0.00%		0		
2-Methylphenol	UG/L	5	0	0.00%		0	1,825	5

Seneca Army Depot Activity
SEAD-11
Summary Statistics - Groundwater
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
2-Nitroaniline	UG/L	5	0	0.00%		0	35	
2-Nitrophenol	UG/L	5	0	0.00%		0		
3,3'-Dichlorobenzidine	UG/L	5	0	0.00%		0	149	
3-Nitroaniline	UG/L	5	0	0.00%		0	109.5	
4,6-Dinitro-2-methylphenol	UG/L	5	0	0.00%		0		5
4-Bromophenyl phenyl ether	UG/L	5	0	0.00%		0	2,117.	
4-Chloro-3-methylphenol	UG/L	5	0	0.00%		0		
4-Chloroaniline	UG/L	5	0	0.00%		0	146	5.
4-Chlorophenyl phenyl ether	UG/L	5	0	0.00%		0		
4-Methylphenol	UG/L	5	0	0.00%		0		5.
4-Nitroaniline	UG/L	5	0	0.00%		0	109.5	5.
4-Nitrophenol	UG/L	5	0	0.00%		0	2,190.	
Acenaphthene	UG/L	5	0	0.00%		0		
Acenaphthylene	UG/L	5	0	0.00%		0		
Anthracene	UG/L	5	0	0.00%		0	10,950.	
Benzo[a]anthracene	UG/L	5	0	0.00%		0	017	
Benzo[a]pyrene	UG/L	5	0	0.00%		0	002	10.
Benzo[b]fluoranthene	UG/L	5	0	0.00%		0	017	
Benzo[ghi]perylene	UG/L	5	0	0.00%		0		
Benzo[k]fluoranthene	UG/L	5	0	0.00%		0	.168	
Bis(2-Chloroethoxy)methane	UG/L	5	0	0.00%		0		
Bis(2-Chloroethyl)ether	UG/L	5	0	0.00%		0	.009	
Bis(2-Ethylhexyl)phthalate	UG/L	5	0	0.00%		0	4,803	50.
Butylbenzylphthalate	UG/L	5	0	0.00%		0	7,300.	
Carbazole	UG/L	5	0	0.00%		0	3,362	
Chrysene	UG/L	5	0	0.00%		0	1,679	
Di-n-butylphthalate	UG/L	5	0	0.00%		0		50.
Di-n-octylphthalate	UG/L	5	0	0.00%		0	730	
Dibenz[a,h]anthracene	UG/L	5	0	0.00%		0	002	
Dibenzofuran	UG/L	5	0	0.00%		0	146	
Diethyl phthalate	UG/L	5	2	40.00%	.5	0	29,200.	
Dimethylphthalate	UG/L	5	0	0.00%		0	365,000.	
Fluoranthene	UG/L	5	0	0.00%		0	1,460.	
Fluorene	UG/L	5	0	0.00%		0	1,460.	
Hexachlorobenzene	UG/L	5	0	0.00%		0	.007	.35
Hexachlorobutadiene	UG/L	5	0	0.00%		0	137	
Hexachlorocyclopentadiene	UG/L	5	0	0.00%		0	.146	
Hexachloroethane	UG/L	5	0	0.00%		0	.754	
Indeno[1,2,3-cd]pyrene	UG/L	5	0	0.00%		0	.017	
Isophorone	UG/L	5	0	0.00%		0		
N-Nitrosodiphenylamine	UG/L	5	0	0.00%		0	13,722	
N-Nitrosodipropylamine	UG/L	5	0	0.00%		0	.01	
Naphthalene	UG/L	5	0	0.00%		0	1,460.	
Nitrobenzene	UG/L	5	0	0.00%		0	3,393	
Pentachlorophenol	UG/L	5	0	0.00%		0	.56	1
Phenanthrene	UG/L	5	0	0.00%		0		
Phenol	UG/L	5	0	0.00%		0	21,900.	1.
Pyrene	UG/L	5	0	0.00%		0	1,095.	
Pesticides/PCBs								
4,4'-DDD	UG/L	5	0	0.00%		0	.28	.1
4,4'-DDE	UG/L	5	0	0.00%		0	.198	.1
4,4'-DDT	UG/L	5	0	0.00%		0	.031	.1
Aldrin	UG/L	5	0	0.00%		0	.001	055
Alpha-BHC	UG/L	5	0	0.00%		0		
Alpha-Chlordane	UG/L	5	0	0.00%		0		5.
Aroclor-1016	UG/L	5	0	0.00%		0	2,555	
Aroclor-1221	UG/L	5	0	0.00%		0		
Aroclor-1232	UG/L	5	0	0.00%		0		
Aroclor-1242	UG/L	5	0	0.00%		0		
Aroclor-1248	UG/L	5	0	0.00%		0		
Aroclor-1254	UG/L	5	0	0.00%		0	.73	1
Aroclor-1260	UG/L	5	0	0.00%		0		1
Beta-BHC	UG/L	5	0	0.00%		0		5.
Delta-BHC	UG/L	5	0	0.00%		0		
Dieldrin	UG/L	5	0	0.00%		0	.001	.1
Endosulfan I	UG/L	5	0	0.00%		0	219	
Endosulfan II	UG/L	5	0	0.00%		0	219.	
Endosulfan sulfate	UG/L	5	0	0.00%		0		
Endrin	UG/L	5	0	0.00%		0	10.95	1
Endrin aldehyde	UG/L	5	0	0.00%		0	10.95	5.
Endrin ketone	UG/L	5	0	0.00%		0	10.95	5.
Gamma-BHC/Lindane	UG/L	5	0	0.00%		0	.052	5.
Gamma-Chlordane	UG/L	5	0	0.00%		0		

Seneca Army Depot Activity
SEAD-11
Summary Statistics - Groundwater
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
Heptachlor	UG/L	5	0	0.00%		0	002	05
Heptachlor epoxide	UG/L	5	0	0.00%		0	001	05
Methoxychlor	UG/L	5	0	0.00%		0	182.5	35
Toxaphene	UG/L	5	0	0.00%		0		
Metals								
Aluminum	UG/L	5	5	100.00%	254	0	36,500.	
Antimony	UG/L	5	0	0.00%		0	14.6	
Arsenic	UG/L	5	1	20.00%	1.1	1	007	25
Barium	UG/L	5	5	100.00%	53.4	5	1,043	1,000
Beryllium	UG/L	5	0	0.00%		0	001	
Cadmium	UG/L	5	0	0.00%		0	002	10
Calcium	UG/L	5	5	100.00%	223,000	0		
Chromium	UG/L	5	0	0.00%		0	004	50
Cobalt	UG/L	5	2	40.00%	7.2	0	2,190.	
Copper	UG/L	5	0	0.00%		0	1,460.	200.
Cyanide	UG/L	5	0	0.00%		0		100.
Iron	UG/L	5	5	100.00%	653.	0	10,950.	300
Lead	UG/L	5	3	60.00%	33.7	0		25.
Magnesium	UG/L	5	5	100.00%	41,900	0		
Manganese	UG/L	5	5	100.00%	281	5	.104	300.
Mercury	UG/L	5	3	60.00%	.04	0	592	2.
Nickel	UG/L	5	0	0.00%		0	730.	
Potassium	UG/L	5	5	100.00%	13,600.	0		
Selenium	UG/L	5	3	60.00%	2.	0	182.5	10.
Silver	UG/L	5	0	0.00%		0	182.5	50.
Sodium	UG/L	5	5	100.00%	36,700.	0		20,000.
Thallium	UG/L	5	0	0.00%		0	2.92	
Vanadium	UG/L	5	0	0.00%		0	255.5	
Zinc	UG/L	5	5	100.00%	34.3	0	10,950.	300.
Other Analyses								
Nitrate/Nitrite	UG/L	5	5	100.00%	800.	0		10,000.
Total Petroleum Hydrocarbons	UG/L	5	4	80.00%	1,810.	0		

Seneca Army Depot Activity
 SEAD-11
 Collapsed Data Summary - Groundwater
 Comparison to NYS Class GA Standard

4/30/98

STUDY ID	ESI	ESI	ESI	ESI	ESI
SITE	SEAD-11	SEAD-11	SEAD-11	SEAD-11	SEAD-11
LOC ID	MW11-1	MW11-2	MW11-3	MW11-3	MW11-4
LOC TYPE:	BACKGROUND	SITE	SITE	SITE	SITE
SAMP_ID	MW11-1	MW11-2	MW11-5	MW11-3	MW11-4
QC CODE	SA	SA	DU	SA	SA
SAMP DEPTH TO	6.1	3.4	3.9	3.9	5.4
SAMP DEPTH BO	13.5	7.4	7.9	7.9	9.4
MATRIX:	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
SAMP DATE:	18-Jan-94	18-Jan-94	24-Jan-94	24-Jan-94	16-Nov-93

PARAMETER	UNIT	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard	VALUE Q	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Arsenic	UG/L	1	007	25.	8 U	79 U	1.1 J	8 U	1 U
Banum	UG/L	5	1 043	1,000	25.2 J	39.2 J	37.1 J	38.6 J	53.4 J
Manganese	UG/L	5	.104	300.	278	218	204	233	281

Seneca Army Depot Activity
SEAD-11
Summary Statistics - Groundwater
Companson to Drinking Water PRG

4/30/98

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard
Volatiles								
1,1 1-Trichloroethane	UG/L	5	0	0.00%	.	0	792.549	5.
1,1,2,2-Tetrachloroethane	UG/L	5	0	0.00%	.	0	.521	5.
1,1,2-Trichloroethane	UG/L	5	0	0.00%	.	0	188	
1,1-Dichloroethane	UG/L	5	0	0.00%	.	0	811.742	5.
1,1-Dichloroethene	UG/L	5	0	0.00%	.	0	.044	5.
1,2-Dichloroethane	UG/L	5	0	0.00%	.	0	.116	5.
1,2-Dichloroethene (total)	UG/L	5	0	0.00%	.	0		5.
1,2-Dichloropropane	UG/L	5	0	0.00%	.	0	.989	5.
Acetone	UG/L	5	0	0.00%	.	0	3,650.	
Benzene	UG/L	5	0	0.00%	.	0	.364	.7
Bromodichloromethane	UG/L	5	0	0.00%	.	0	1.084	
Bromoform	UG/L	5	0	0.00%	.	0	2,354	
Carbon disulfide	UG/L	5	0	0.00%	.	0	1,042.857	
Carbon tetrachloride	UG/L	5	0	0.00%	.	0	.163	5.
Chlorobenzene	UG/L	5	0	0.00%	.	0	39,431	5.
Chlorodibromomethane	UG/L	5	0	0.00%	.	0	.8	
Chloroethane	UG/L	5	0	0.00%	.	0	8,591.77	5.
Chloroform	UG/L	5	0	0.00%	.	0	.153	7.
Cis-1,3-Dichloropropene	UG/L	5	0	0.00%	.	0		5.
Ethyl benzene	UG/L	5	0	0.00%	.	0	1,328.117	5.
Methyl bromide	UG/L	5	0	0.00%	.	0	8.699	
Methyl butyl ketone	UG/L	5	0	0.00%	.	0		
Methyl chloride	UG/L	5	0	0.00%	.	0	1.436	5.
Methyl ethyl ketone	UG/L	5	0	0.00%	.	0		50.
Methyl isobutyl ketone	UG/L	5	0	0.00%	.	0	158.118	
Methylene chloride	UG/L	5	0	0.00%	.	0	4.124	5.
Styrene	UG/L	5	0	0.00%	.	0		
Tetrachloroethene	UG/L	5	0	0.00%	.	0	1,069	5.
Toluene	UG/L	5	0	0.00%	.	0	747,038	5.
Total Xylenes	UG/L	5	0	0.00%	.	0	73,000.	5.
Trans-1,3-Dichloropropene	UG/L	5	0	0.00%	.	0		5.
Trichloroethene	UG/L	5	0	0.00%	.	0	1,556	5.
Vinyl chloride	UG/L	5	0	0.00%	.	0	.019	2.
Herbicides								
2,4,5-T	UG/L	5	0	0.00%	.	0		35.
2,4,5-TP/Silvex	UG/L	5	0	0.00%	.	0		.26
2,4-D	UG/L	5	0	0.00%	.	0		4.4
2,4-DB	UG/L	5	0	0.00%	.	0		
Dalapon	UG/L	5	0	0.00%	.	0		50.
Dicamba	UG/L	5	0	0.00%	.	0		.44
Dichloroprop	UG/L	5	0	0.00%	.	0		
Dinoseb	UG/L	5	0	0.00%	.	0		1.
MCPA	UG/L	5	0	0.00%	.	0		.44
MCPP	UG/L	5	0	0.00%	.	0		
Nitroaromatics								
1,3,5-Trinitrobenzene	UG/L	5	0	0.00%	.	0	1,825	5.
1,3-Dinitrobenzene	UG/L	5	0	0.00%	.	0	3.65	5.
2,4,6-Trinitrotoluene	UG/L	5	1	20.00%	43	0	2,241	5.
2,4-Dinitrotoluene	UG/L	5	0	0.00%	.	0	73.	5.
2,6-Dinitrotoluene	UG/L	5	0	0.00%	.	0	36.5	5.
2-amino-4,6-Dinitrotoluene	UG/L	5	0	0.00%	.	0		5.
4-amino-2,6-Dinitrotoluene	UG/L	5	0	0.00%	.	0		5.
HMX	UG/L	5	0	0.00%	.	0		
RDX	UG/L	5	0	0.00%	.	0		
Tetryl	UG/L	5	0	0.00%	.	0		5.
Semivolatile Organics								
1,2,4-Trichlorobenzene	UG/L	5	0	0.00%	.	0	194.599	5.
1,2-Dichlorobenzene	UG/L	5	0	0.00%	.	0	268.163	4.7
1,3-Dichlorobenzene	UG/L	5	0	0.00%	.	0	3,248.5	5.
1,4-Dichlorobenzene	UG/L	5	0	0.00%	.	0	2,802	4.7
2,2'-oxybis(1-Chloropropane)	UG/L	5	0	0.00%	.	0		
2,4,5-Trichlorophenol	UG/L	5	0	0.00%	.	0	3,650.	
2,4,6-Trichlorophenol	UG/L	5	0	0.00%	.	0	.967	
2,4-Dichlorophenol	UG/L	5	0	0.00%	.	0	109.5	
2,4-Dimethylphenol	UG/L	5	0	0.00%	.	0	730.	5.
2,4-Dinitrophenol	UG/L	5	0	0.00%	.	0	73.	

Seneca Army Depot Activity
SEAD-11
Summary Statistics - Groundwater
Companion to Drinking Water PRG

4/30/98

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency	Maximum Value	Number of Exceedances	Dnning Water PRG	NYS Class GA Standard
				of Detection				
2,4-Dinitrotoluene	UG/L	5	0	0.00%		0	73.	5.
2,6-Dinitrotoluene	UG/L	5	0	0.00%		0	36.5	5.
2-Chloronaphthalene	UG/L	5	0	0.00%		0		
2-Chlorophenol	UG/L	5	0	0.00%		0	182.5	
2-Methylnaphthalene	UG/L	5	0	0.00%		0		
2-Methylphenol	UG/L	5	0	0.00%		0	1,825.	5.
2-Nitroaniline	UG/L	5	0	0.00%		0	.35	
2-Nitrophenol	UG/L	5	0	0.00%		0		
3,3'-Dichlorobenzidine	UG/L	5	0	0.00%		0	.149	
3-Nitroaniline	UG/L	5	0	0.00%		0	109.5	
4,6-Dinitro-2-methylphenol	UG/L	5	0	0.00%		0		5.
4-Bromophenyl phenyl ether	UG/L	5	0	0.00%		0	2,117.	
4-Chloro-3-methylphenol	UG/L	5	0	0.00%		0		
4-Chloroaniline	UG/L	5	0	0.00%		0	146.	5.
4-Chlorophenyl phenyl ether	UG/L	5	0	0.00%		0		
4-Methylphenol	UG/L	5	0	0.00%		0		
4-Nitroaniline	UG/L	5	0	0.00%		0	109.5	5.
4-Nitrophenol	UG/L	5	0	0.00%		0	2,190.	
Acenaphthene	UG/L	5	0	0.00%		0		
Acenaphthylene	UG/L	5	0	0.00%		0		
Anthracene	UG/L	5	0	0.00%		0	10,950.	
Benzo[a]anthracene	UG/L	5	0	0.00%		0	.017	
Benzo[a]pyrene	UG/L	5	0	0.00%		0	.002	10.
Benzo[b]fluoranthene	UG/L	5	0	0.00%		0	.017	
Benzo[ghi]perylene	UG/L	5	0	0.00%		0		
Benzo[k]fluoranthene	UG/L	5	0	0.00%		0	.168	
Bis(2-Chloroethoxy)methane	UG/L	5	0	0.00%		0		
Bis(2-Chloroethyl)ether	UG/L	5	0	0.00%		0	.009	
Bis(2-Ethylhexyl)phthalate	UG/L	5	0	0.00%		0	4,803	50.
Butylbenzylphthalate	UG/L	5	0	0.00%		0	7,300.	
Carbazole	UG/L	5	0	0.00%		0	3,362	
Chrysene	UG/L	5	0	0.00%		0	1,679	
Di-n-butylphthalate	UG/L	5	0	0.00%		0		50.
Di-n-octylphthalate	UG/L	5	0	0.00%		0	730.	
Dibenz[a,h]anthracene	UG/L	5	0	0.00%		0	.002	
Dibenzofuran	UG/L	5	0	0.00%		0	146.	
Diethyl phthalate	UG/L	5	2	40.00%	.5	0	29,200.	
Dimethylphthalate	UG/L	5	0	0.00%		0	365,000.	
Fluoranthene	UG/L	5	0	0.00%		0	1,460.	
Fluorene	UG/L	5	0	0.00%		0	1,460.	
Hexachlorobenzene	UG/L	5	0	0.00%		0	.007	.35
Hexachlorobutadiene	UG/L	5	0	0.00%		0	.137	
Hexachlorocyclopentadiene	UG/L	5	0	0.00%		0	.146	
Hexachloroethane	UG/L	5	0	0.00%		0	.754	
Indeno[1,2,3-cd]pyrene	UG/L	5	0	0.00%		0	.017	
Isophorone	UG/L	5	0	0.00%		0		
N-Nitrosodiphenylamine	UG/L	5	0	0.00%		0	13,722	
N-Nitrosodipropylamine	UG/L	5	0	0.00%		0	.01	
Naphthalene	UG/L	5	0	0.00%		0	1,460.	
Nitrobenzene	UG/L	5	0	0.00%		0	3,393	
Pentachlorophenol	UG/L	5	0	0.00%		0	.56	1.
Phenanthrene	UG/L	5	0	0.00%		0		
Phenol	UG/L	5	0	0.00%		0	21,900.	1.
Pyrene	UG/L	5	0	0.00%		0	1,095.	
Pesticides/PCBs								
4,4'-DDD	UG/L	5	0	0.00%		0	.28	.1
4,4'-DDE	UG/L	5	0	0.00%		0	.198	.1
4,4'-DDT	UG/L	5	0	0.00%		0	.031	.1
Aldrin	UG/L	5	0	0.00%		0	.001	.055
Alpha-BHC	UG/L	5	0	0.00%		0		
Alpha-Chlordane	UG/L	5	0	0.00%		0		5.
Aroclor-1016	UG/L	5	0	0.00%		0		
Aroclor-1221	UG/L	5	0	0.00%		0		
Aroclor-1232	UG/L	5	0	0.00%		0		
Aroclor-1242	UG/L	5	0	0.00%		0		
Aroclor-1248	UG/L	5	0	0.00%		0		
Aroclor-1254	UG/L	5	0	0.00%		0	.73	1

Seneca Army Depot Activity
SEAD-11
Summary Statistics - Groundwater
Comparison to Drinking Water PRG

4/30/98

PARAMETER	UNIT	Number of Analyses	Number of Detections	Frequency of Detection	Maximum Value	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard
Aroclor-1260	UG/L	5	0	0.00%		0		.1
Beta-BHC	UG/L	5	0	0.00%		0		5.
Delta-BHC	UG/L	5	0	0.00%		0		
Dieldrin	UG/L	5	0	0.00%		0	.001	.1
Endosulfan I	UG/L	5	0	0.00%		0	219.	
Endosulfan II	UG/L	5	0	0.00%		0	219.	
Endosulfan sulfate	UG/L	5	0	0.00%		0		
Endrin	UG/L	5	0	0.00%		0	10.95	1
Endrin aldehyde	UG/L	5	0	0.00%		0	10.95	5.
Endrin ketone	UG/L	5	0	0.00%		0	10.95	5.
Gamma-BHC/Lindane	UG/L	5	0	0.00%		0	.052	5.
Gamma-Chlordane	UG/L	5	0	0.00%		0		
Heptachlor	UG/L	5	0	0.00%		0	.002	05
Heptachlor epoxide	UG/L	5	0	0.00%		0	.001	.05
Methoxychlor	UG/L	5	0	0.00%		0	182.5	35.
Toxaphene	UG/L	5	0	0.00%		0		
Metals								
Aluminum	UG/L	5	5	100.00%	254.	0	36,500.	
Antimony	UG/L	5	0	0.00%		0	14.6	
Arsenic	UG/L	5	1	20.00%	1.1	1	.007	25.
Barium	UG/L	5	5	100.00%	53.4	5	1,043	1,000.
Beryllium	UG/L	5	0	0.00%		0	.001	
Cadmium	UG/L	5	0	0.00%		0	.002	10.
Calcium	UG/L	5	5	100.00%	223,000.	0		
Chromium	UG/L	5	0	0.00%		0	.004	50.
Cobalt	UG/L	5	2	40.00%	7.2	0	2,190.	
Copper	UG/L	5	0	0.00%		0	1,460.	200.
Cyanide	UG/L	5	0	0.00%		0		100.
Iron	UG/L	5	5	100.00%	653.	0	10,950.	300.
Lead	UG/L	5	3	60.00%	33.7	0		25.
Magnesium	UG/L	5	5	100.00%	41,900.	0		
Manganese	UG/L	5	5	100.00%	281.	5	.104	300.
Mercury	UG/L	5	3	60.00%	.04	0	.592	2.
Nickel	UG/L	5	0	0.00%		0	730.	
Potassium	UG/L	5	5	100.00%	13,600.	0		
Selenium	UG/L	5	3	60.00%	2.	0	182.5	10.
Silver	UG/L	5	0	0.00%		0	182.5	50.
Sodium	UG/L	5	5	100.00%	36,700.	0		20,000.
Thallium	UG/L	5	0	0.00%		0	2.92	
Vanadium	UG/L	5	0	0.00%		0	255.5	
Zinc	UG/L	5	5	100.00%	34.3	0	10,950.	300.
Other Analyses								
Nitrate/Nitrite	UG/L	5	5	100.00%	800.	0		10,000.
Total Petroleum Hydrocarbons	UG/L	5	4	80.00%	1,810.	0		

Seneca Army Depot Activity
 SEAD-11
 Collapsed Data Summary - Groundwater
 Comparison to Drinking Water PRG

STUDY ID	ESI	ESI	ESI	ESI	ESI
SITE	SEAD-11	SEAD-11	SEAD-11	SEAD-11	SEAD-11
LOC ID:	MW11-1	MW11-2	MW11-3	MW11-3	MW11-4
LOC TYPE:	BACKGROUND	SITE	SITE	SITE	SITE
SAMP_ID	MW11-1	MW11-2	MW11-5	MW11-3	MW11-4
QC CODE:	SA	SA	DU	SA	SA
SAMP. DEPTH TO	6.1	3.4	3.9	3.9	5.4
SAMP. DEPTH B	13.5	7.4	7.9	7.9	9.4
MATRIX:	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER
SAMP. DATE:	18-Jan-94	18-Jan-94	24-Jan-94	24-Jan-94	16-Nov-93

PARAMETER	UNIT	Number of Exceedances	Drinking Water PRG	NYS Class GA Standard	VALUE Q	VALUE Q	VALUE Q	VALUE Q	VALUE Q
Arsenic	UG/L	1	007	25	8 U	79 U	1.1 J	8 U	1 U
Barium	UG/L	5	1 043	1,000.	25.2 J	34.2 J	31.1 J	38.6 J	53.4 J
Manganese	UG/L	5	.104	300	77.7 J	218 J	23.4 J	23.3 J	28.1 J