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File SEAD 12

February 12, 2003

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New York, NY 10007-1866

Ms. Alicia Thorne
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
625 Broadway 11th Floor
Albany, NY 12233-7015

SUBJECT: **Management Plan for ~~Investigation Derived Waste~~ (IDW) from the SEAD-12, Seneca Army Depot – Romulus, NY**

Dear Mr. Vazquez and Ms. Thorne,

As part of the close-out of the Remedial Investigation (RI) field activities conducted at SEAD-12 (November 1997 to December 1999), Parsons, on behalf of the Army, is submitting the following plan for the management of Investigation Derived Wastes (IDW). This plan follows the revised strategies used in the management of IDWs generated during the 15 SWMU Expanded Site Investigation, and radiological data interpretation presented in the Remedial Investigation Report at the Radiological Waste Burial Sites (SEAD-12) – Final (August 2002).

This IDW plan uses all available data collected during field investigations as the basis for determining the most appropriate disposal alternative. The management plan is in accordance with the following guidance documents:

1. NYSDEC TAGM - Disposal of Drill Cuttings (HWR-89-4032 dated November 21, 1989)
2. EPA Guidance Document EPA/540/G-91/009, May 1991; Management of Investigation - Derived Wastes During Site Investigation.
3. EPA Guidance Document EPA/540/G-89/009, August 1988; CERCLA Compliance with Other Laws Manual: Interim Final.

All IDW generated during this program were placed in drums for storage at or near the source. Drum contents consist of the following items: monitoring well installation water and groundwater, drill cuttings, surface soils from well pad installation, personnel protective equipment (PPE), steam condensate, and decontamination and calibration fluids. Each drum was labeled as hazardous waste including appropriate identification numbers, start dates, and a description of contents. This information was logged in field books, activity worksheets, and recorded on a regular basis in a drum inventory logbook. Upon completion of field operations this inventory was checked to insure information on the

drums was consistent with the inventory logbook. The data recorded in the logbook were used as the basis for **Table 1** presented in this IDW management plan.

Classification of the contents of each drum were based upon the IDW strategy depicted in **Figure 1**. The initial step involves determining whether or not the contents are RCRA hazardous or non-hazardous. Since no TCLP data were generated as part of the field data, this process involves applying the "twenty times rule". According to STARS (Spill Technology and Remediation Series) Memo #1, the "twenty times rule" compares the soil concentrations obtained during the RI to twenty times the TCLP limits. The twenty times value assumes 100% extraction efficiency and represents the minimum soil concentration that could theoretically exceed the TCLP limits. Parsons made the conservative assumption that if one soil sample from a drum exceeded this limit then the entire drum would be disposed of off-site by a permitted hazardous waste disposal subcontractor.

Table 2 summarizes the criteria for determining if a soil or a water drum is a RCRA hazardous waste.

For IDW waste other than soil or water such as decontamination fluids and personal protection equipment (PPE), the disposal evaluation involved the following steps. Under RCRA, wastes are classified as hazardous if they are listed wastes or characteristic wastes. Waste specific information, such as manifests, bills of lading, storage records or records of waste sources must be used to document that a waste is a RCRA-listed waste; otherwise, in the absence of any other information, the waste in question cannot be considered a listed waste. Since none of the drummed cuttings, PPE, or purge water at the RI sites meet any of the regulatory definitions described in 40 CFR 261, (i.e. F-, K-, P- or U- listed wastes), these materials are not considered listed hazardous wastes. The only listed waste generated during the investigation program is waste that contained methanol. Methanol was used in the decontamination process (per EPA direction), which makes the decontamination fluids an F003 listed hazardous waste. An F-listed waste classification refers to non-specific hazardous waste sources that contain methanol as a component of a spent solvent mixture. In order to limit the generation of hazardous waste due to the *derived from and the mixture rules* for listed wastes, Parsons instituted procedures to assure that methanol was not mixed with soils or other liquids. Additionally, during the decontamination process, washable rubber bibs were worn to prevent contamination of disposable PPE. Therefore, the disposable PPE is not a hazardous waste based upon the *derived from or mixture rule* and will be disposed of as uncontaminated refuse.

Although the IDW waste produced at these sites are not listed hazardous wastes, IDW may be a characteristic hazardous waste. According to RCRA, a waste is a characteristic hazardous waste if it exceeds the RCRA criteria for ignitability, corrosivity, reactivity, or toxicity. Based upon the data collected during the site investigations, Parsons does not believe that any of the drummed materials exceed the RCRA required limits for ignitability, corrosivity or reactivity. The soils, water, and PPE contained concentrations of Constituents of Concern (COCs) that are below the concentrations at which ignitability or reactivity would be present. Corrosivity has also been eliminated from consideration because no unusual pH values were detected during the investigation program. Numerous measurements of the groundwater pH were taken, both as part of the well development process and as part of the sampling. Abnormal pH values, indicative of the presence of a strong acid or alkali, would have been detected by these measurements. Groundwater pH measurements, taken during field sampling, are included in the Remedial Investigation Report. Well development pH measurements are included in Parsons files, and will be made available to EPA and NYSDEC upon request. The pH values were generally between 6 and 7 and never exceeded the hazardous waste characteristic limits of less than 2 or greater than 12.5.

If the drum contents were not considered a hazardous waste according to the RCRA definition, the drums were further evaluated to determine if the drum contents were contaminated. This evaluation was required since the list of TCLP analytes comprise only a portion of the compounds that are included as part of the RI analytical data. As a result, several compounds detected in the soil and groundwater samples were not considered during the initial IDW evaluation described above. Consequently, Parsons established criteria that were used to evaluate the impacts from these previously unconsidered components. For soil, the criteria involved comparing the results of the chemical analyses to the NYSDEC TAGM criteria. If a soil result exceeded a TAGM value then the drum was classified as contaminated. If the soil data did not exceed a TAGM value then the drum was classified as uncontaminated. For groundwater or purge water, this was accomplished by comparing the well data to NYSDEC groundwater standards. It is proposed that uncontaminated material be returned to the location where it was generated.

In addition to the evaluation above, all drums were evaluated to determine if the drum contents were impacted by radionuclides in groundwater. For groundwater or purge water, radiological well data were compared to NYSDEC GA standards, where applicable. In addition, radionuclide data sets from the site were compared to the background data sets using the Wilcoxon Rank Sum (WRS) test. The WRS test is used in accordance with the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) guidance to determine if site data are distinguishable from background data. If the data set was not distinguishable, then the waste was not considered contaminated. If the data set was distinguishable, the data were evaluated further to determine if a drum's contents were considered contaminated due to the presence of radionuclides. If NYSDEC GA standards were exceeded, then the IDW was considered contaminated and would require off-site disposal.

The next step in the IDW evaluation process was to consider the threat or risk that the contaminated IDW may contribute to human health and the environment. IDW that poses an unacceptable risk or threat will then be disposed of off-site as hazardous waste. This determination involved comparison of each soil data point of the contaminated drums to ten times the TAGM value. Parsons used ten times the TAGM value as the criterion for determining whether or not the contents of a drum poses any threat. The factor of 10 was applied due to the conservative nature of the TAGM values and the fact that this criterion has been acceptable to NYSDEC for similar SEDA projects in the past. If any soil concentration data point exceeded ten times the TAGM value then the drum contents, if disposed of on-site, is considered an unacceptable risk to human health and the environment and the drum will be disposed of off-site. Exceptions to this criteria were made if the exceedances to the ten times the TAGM value were due to non-toxic metals such as calcium, iron, manganese, potassium and sodium. This evaluation was only applied to chemical constituents.

For soil, the results of the Remedial Investigation final status survey were used to determine if IDW from the various areas on site were impacted by radionuclides. If the contents of a drum were generated from an area shown to meet TAGM 4003, but was classified as chemically contaminated and designated for off-site disposal (hazardous or non-hazardous), a point-by-point comparison was conducted between two times the radionuclide average site background activity and the radionuclide activity for the contents of the drum. Since radionuclide data exist for the contents in these drums, the data are compared to background to determine if special consideration is required in the disposal of the drum with respect to radionuclides. If the concentration of any radionuclide in the drum exceeded two times the average concentration of that constituent in the background data set, then the IDW may require special consideration with respect to radionuclides present. Depending on the hazardous or nonhazardous waste facility designated to receive the drums, the level of radionuclides present in the drums may or may not

be acceptable. Some facilities will only accept wastes having levels below background while others may accept levels slightly above background. Disposal facilities will generally make such a decision on a case-by-case basis. Hence, hazardous and non-hazardous waste disposal facilities will evaluate drum contents requiring "special consideration" on a case-by-case basis to determine if waste is acceptable based on the radionuclide data that exist.

For IDW that posed no threat based on chemical analyses (i.e. not hazardous and below 10 times the TAGM value for all but non-toxic metals), the waste was assessed to determine whether it was from an area where compliance with NYSDEC TAGM 4003 (Cleanup Guidelines for Soils Contaminated with Radioactive Material) required further investigation. If the soil from the drum was collected from an area where NYSDEC TAGM 4003 compliance has not been demonstrated, then a point-by-point comparison was conducted between two times the radionuclide average site background activity and the radionuclide activity for the contents of the drum. If the activity of any radionuclide in the drum exceeded two times the average activity of that constituent in background data set, then the IDW would require off-site disposal at a pre-approved facility to be determined. Otherwise, radiological contamination was not a concern, and, since the IDW was not chemically contaminated, the soil would be left on site.

In situations where no soil data are available, such as is the case where only a monitoring well was installed and no soil sampling was performed, the disposal of the soils generated during the installation of the well will be the same as the disposal option for the groundwater. In other words, if the groundwater is disposed of off-site, then the soils generated, as part of the installation of that well will also be disposed of off-site. **Table 3** summarizes the classification process.

The following describes and summarizes the proposed IDW disposal alternative for each type of IDW.

Groundwater - All the groundwater generated during these site investigations has been collected in drums that have been marked to identify the source of the groundwater.

Chemical criteria:

The NYSDEC CLP TCL and TAL chemical analytical results from the groundwater samples associated with each drum have been compared directly to the TCLP limits, previously presented. If the groundwater sample results exceed the TCLP limit, a dilution concentration is calculated (**Table 4**). If the concentration remains above the TCLP limit, the contents are considered hazardous and the groundwater will be disposed of off-site as a hazardous waste. If the groundwater results are below the TCLP limit, then the groundwater results (after the dilution factor is taken into account) are compared to NYSDEC Class GA groundwater standards. If the concentration remains above the NYSDEC Class GA standard, the contents are considered to pose a threat to human health and the environment and the groundwater will be disposed of off-site as a non-hazardous waste. If the groundwater results are less than the criteria, the contents are classified as non-contaminated and pose no threat to human health and the environment. **Attachment A** summarizes the chemical exceedences in groundwater. In this instance, the contents of these drums will be discharged to the ground near the source insuring no migration to drainage ditches.

Radiological criteria:

Summary statistics for radionuclides in SEAD-12 groundwater samples in comparison to background samples are presented in **Table B-1** in **Attachment B**. The table lists the number of samples, number of detections, minimum, maximum, average, median, and standard deviation of the background and SEAD-12 data sets, and the table compares the data sets using the Wilcoxon Rank Sum (WRS) test to determine if the SEAD-12 data are statistically greater than the background data. Based on the WRS test, only one radionuclide (Thorium-228) has a population statistically different from the background data set, (Thorium-228 was not detected in the background wells). The wells concerned are MW12-10 (0.28pCi/L) located in the Test Pit A/B Area, and MW12-34 (0.095pCi/L) located in the Disposal Pit C Area. Both were reported as an estimated value (J) because the result is less than the reporting limit, but greater than one-half the detection limit. The drummed well development and purge water from these two wells have been greatly diluted with groundwater from other wells, and therefore the presence of this radionuclide does not present a threat to human health and the environment. Radon-222 was detected in ground water at 18 SEAD-12 monitoring wells at levels exceeding proposed EPA MCL level of 300 pCi/L (no NYSDEC GA Standard exists for Radon-222). However, concentrations of Radon-222 detected in background wells indicate that this radionuclide can be naturally present at this site at the detected levels. When the site data set is compared to the background data set using WRS test, the datasets are indistinguishable.

Soil Cuttings - All soil cuttings have been collected in drums that are marked to identify the source of the soil cuttings.

Chemical criteria:

Using the *twenty times rule*, the analytical results from the soil samples associated with each drum have been compared to the TCLP limits to determine if the soil cuttings are non-hazardous. If the result of the comparison exceeded the alternative TCLP limits for soil, then the drum will be disposed of off-site as a hazardous waste. If the soil cuttings are non-hazardous, then the results will be compared to the NYSDEC TAGM values for soil to determine if the soil is uncontaminated. Uncontaminated soil will be disposed of at the location of generation. If the soil results are below the TCLP limit but above the NYSDEC TAGM values, the soil will then be compared to ten times the NYSDEC TAGM value to determine if the soil poses a threat. Soils that exceed ten times the TAGM value will be disposed of off-site. Solids that do not exceed ten times the TAGM value will be disposed of at a location near the point of generation providing that location will not contribute to stream runoff or where the potential for direct contact is high. If analytical results do not exist for soil cuttings (i.e. locations where a well was installed without soil sample collection), the contents will be disposed of by applying the criteria for disposition of the groundwater. If the groundwater sampled from that well exceeds the criteria, then the soils generated as part of the monitoring well installation process will be disposed of off-site. If the groundwater results meet the requirements of the groundwater criteria, then the soils will be disposed of on-site.

Radiological criteria:

For soil, the results of the Remedial Investigation final status survey were used to determine if IDW from the various areas on site were impacted by radionuclides. If a drum was generated from an area shown to meet TAGM 4003, but was classified as chemically contaminated and designated for off-site disposal (hazardous or non-hazardous), a point-by-point comparison was conducted between two times the

radionuclide average site background activity and the radionuclide activity for the contents of the drum. Since radionuclide data exist for these drums, the data are compared to background to determine if special consideration is required in the disposal of the drum with respect to radionuclides. If the activity of any radionuclide in the drum exceeded two times the average activity of that constituent in the background data set, then the IDW may require special consideration with respect to radionuclides present. Hazardous and non-hazardous waste disposal facilities will evaluate drum contents on a case-by-case basis to determine if waste is acceptable based on the radionuclide data that exist.

For IDW that posed no threat based on chemical analyses (i.e. not hazardous and below 10 times the TAGM value for all but non-toxic metals), the waste was assessed to determine whether it was from an area where compliance with NYSDEC TAGM 4003 (Cleanup Guidelines for Soils Contaminated with Radioactive Material) required further investigation. The Remedial Investigation indicated that all potential areas of concern, except EM-5, met the DCGLs that were derived using TAGM 4003 (10 mrem/yr above background). EM-5 is being investigated further due to elevated levels of Lead-210. Although it may be demonstrated that EM-5 is within TAGM limits upon collection of additional information from this area, it is recommended at this time that soils associated with EM-5 be given special consideration with respect to radionuclides upon their disposal. If the soil from the drum was collected from an area where NYSDEC TAGM 4003 compliance has not been demonstrated, then a point-by-point comparison was conducted between two times the radionuclide average site background activity and the radionuclide activity for the contents of the drum. If the activity of any radionuclide in the drum exceeded two times the average activity of that constituent in background data set, then IDW would require off-site disposal at a pre-approved facility to be determined. Otherwise, radiological contamination was not a concern, and, since the IDW was not chemically contaminated, the soil would be left on site.

Chemical and radiological analysis summaries of soil sampled at test boring/well locations are presented by individual disposal sites within SEAD-12. (See Attachments C and D, respectively). Additionally, the radiological background data for soil is presented in **Table D-3** in **Attachment D**.

Decontamination Fluids - Two types of decontamination fluids have been stored in drums at the site. The first type is water from the steam cleaning of equipment. Drums identified in the attached tables as steam condensate were classified as non-hazardous waste. These drums only contain the water collected from steam cleaning operations. Steam was used to clean drilling equipment prior to reuse at another location. Soil was removed from the drilling equipment using brushes and placed in soil drums at the boring location prior to steam cleaning, therefore, little soil would have been present on the drilling equipment prior to the steam cleaning process. The contaminants of concern that potentially could be present in the residual soils are non-leachable. These drums have been classified as non-hazardous and will be discharged to the ground in the immediate vicinity of the drum. The second type of decontamination fluid is the equipment decontamination fluids including principally rinse water with small amounts of other decontamination fluids including methanol and nitric acid. These drums are classified as hazardous waste and will be disposed of off-site as hazardous waste.

Personnel Protection Equipment - All the disposable personnel protection equipment is classified as non-hazardous because of minimal exposure to low levels of contamination and will be bagged and disposed of at the local municipal landfill.

Parsons will be responsible for the disposition, including cleaning, of non-hazardous IDW drums on-site. Arrangements for the disposal of the emptied clean drums will be made by SEDA.

All hazardous wastes will be transported and disposed of in a licensed, commercial, hazardous waste TSD facility, operating in full compliance with RCRA. These arrangements will be by SEDA.

In summary, Parsons believes that the management plan is conservative, reasonable and in full compliance with all regulations. If you have any questions regarding the classification of any drum, please do not hesitate to call me at (617) 457-7905. If necessary, I can arrange a phone conference call to discuss the issue at your convenience.

Sincerely,

Todd Heino, P.E.
Project Manager

TH/jt/jjm

Enclosure

cc: Mr. Kevin Healy, USACOE
Mr. Stephen Absolom, SEDA
Mr. Randall Battaglia, CENAN
Mr. Marshall Greene, USACOE
Mr. Keith Hoddinott, CHPPM
Mr. Tim Matthews, USAEC
Mr. Tom Enroth, USACOE

Table 1
SEAD-12 Remedial Investigation
IDW Inventory/Disposal Rational
Seneca Army Depot Activity

Drum Number	Source Location	Drum Location	MATRIX				Source/Start Date i.e.(MW, Boring, Decon. water, Condensate[1], PPE)	RCRA Hazardous/ Non-Hazardous	Contaminated[2]/ Noncontaminated	Threat/ No Threat	Chemical Of Concern[3] (Exceeds TAGM Levels or Worker BGD+DCGL)	Chemical Rationale	Radiological Rational	Disposal Option (Offsite Hazardous) (Offsite Non-Hazardous) (Onsite) (Special Consid. for Rad)
			Soil	Water	PPE	Other								
12-17S		Building 803	X				Soil Cuttings MW12-21 10/3/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	<TAGM Limits		Onsite Non-Hazardous
12-18S		Building 803	X				Soil Cuttings MW12-27 10/4/1998	RCRA Non-Hazardous	Contaminated	No Threat	Lead	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-19S	EM-5	Building 803	X				Soil Cuttings MW12-22 10/2/1998	RCRA Non-Hazardous	Contaminated - chemical and radiological	No Threat	Lead & Copper Cs-137, Co-60, Pb-210, Pb-211 Th-230, Tritium	< RCRA 20x Criteria < 10x TAGM	>2x avg rad background	Offsite Non-Hazardous With Special Considerations for Rad
12-20W		Building 803		X			Decon Water Steam Condensate 10/4/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat.		Onsite Non-Hazardous
12-21W		Building 803		X			Decon Water Steam Condensate 10/4/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-22S		Building 803	X				Soil - Well Completion MW12-10 (0.0'-0.8') 10/5/1998	RCRA Non-Hazardous	Contaminated	No Threat	Mercury	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-23S	EM-5	Building 803	X				Soil Cuttings MW12-23 10/2/1998	RCRA Non-Hazardous	Contaminated - Chemical and radiological	No Threat	Copper & Nickel Co-60, Pb-211, Th-230	< RCRA 20x Criteria < 10x TAGM	>2x avg rad background	Offsite Non-Hazardous With Special Considerations for Rad
12-24W		Building 803		X			Decon Water Steam Condensate 10/5/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-25S		Building 803	X				Soil - Well Completion MW12-11 (0.0'-0.8') 10/6/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	<TAGM Limits		Onsite Non-Hazardous
12-26S		Building 803	X				Soil - Well Completion MW12-12 (0.0'-0.8') 10/6/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	<TAGM Limits		Onsite Non-Hazardous
12-27S		Building 803	X				Soil - Well Completion MW12-13 (0.0'-0.8') 10/6/1998	RCRA Non-Hazardous	Contaminated	No Threat	Cyanide	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-28S		Building 803	X				Soil Cuttings MW12-18 10/7/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-29S		Building 803	X				Soil Cuttings MW12-27 10/7/1998	RCRA Non-Hazardous	Contaminated	No Threat	Copper & Zinc	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-30S		Building 803	X				Soil Cuttings MW12-20 10/7/1998	RCRA Non-Hazardous	Contaminated	No Threat	SVOCs Copper & Nickel	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-31S	Building 819	Building 803	X				Soil Cuttings MW12-19 10/2/1998	RCRA Non-Hazardous	Contaminated - chemical and radiological	Threat	SVOCs Co-60, Pb-210, Ra-223 Th-230, U-235/234	< RCRA 20x Criteria > 10 TAGM Limits	>2x avg background	Offsite Non-Hazardous With Special Considerations for Rad
12-32S	EM-5	Building 803	X				Soil Cuttings MW12-22 10/2/1998	RCRA Non-Hazardous	Contaminated - chemical and radiological	No Threat	Lead & Copper Cs-137, Co-60, Pb-210, Pb-211 Th-230, Tritium	< RCRA 20x Criteria < 10x TAGM	>2x avg background	Offsite Non-Hazardous With Special Considerations for Rad

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Drum Number	Source Location	Drum Location	MATRIX				Source/Start Date i.e.(MW, Boring, Decon. water, Condensate[1], PPE)	RCRA Hazardous/ Non-Hazardous	Contaminated[2]/ Noncontaminated	Threat/ No Threat	Chemical Of Concern[3] (Exceeds TAGM Levels or Worker BGD+DCGL)	Chemical Rationale	Radiological Rational	Disposal Option (Offsite Hazardous) (Offsite Non-Hazardous) (Onsite) (Special Consid. for Rad)
			Soil	Water	PPE	Other								
12-33W		Building 803		X			Decon Water Steam Condensate 10/12/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil-No Threat		Onsite Non-Hazardous
12-33S	EM-5	Building 803	X				Soil Cuttings MW12-23 10/12/1998	RCRA Non-Hazardous	Contaminated - chemical and radiological	No Threat	Copper & Nickel Co-60, Pb-211, Th-230	< RCRA 20x Criteria < 10x TAGM	>2x avg rad background	Offsite Non-Hazardous With Special Considerations for Rad
12-34S		Building 803	X				Soil Cuttings MW12-5 A&B 10/13/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	<TAGM Limits		Onsite Non-Hazardous
12-35S		Building 803	X				Soil Cuttings SB12-2 10/14/1998	RCRA Non-Hazardous	Contaminated	No Threat	Cd, Cr, Pb, & Tl	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-36S		Building 803	X				Soil Cuttings MW12-14 10/14/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-37S		Building 803	X				Soil Cuttings MW12-40 & SB12-36 10/14/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-38S		Building 803	X				Soil Cuttings MW12-29 10/15/1998	RCRA Non-Hazardous	Contaminated	No Threat	Cadmium & Lead	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-39W		Building 803		X			Decon Water Steam Condensate 10/13/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-40W		Building 803		X			Decon Water Steam Condensate 10/14/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-41S		Building 803	X				Soil Cuttings MW12-30 10/16/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-42W		Building 803		X			Decon Water Includes Decon Chem./Cal. Stds.	RCRA Hazardous	Contaminated	Threat	Diluted Isoprop.Alcohol & HNO_3 Calibration Surface Quinhydrone	Disposal Pre-determined by IDW Plan		Offsite Hazardous
12-43S		Building 803	X				Soil Cuttings MW12-17 10/16/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	<TAGM Limits		Onsite Non-Hazardous
12-44S		Building 803	X				Soil Cuttings MW12-16 10/17/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-45S		Building 803	X				Soil Cuttings MW12-9 10/17/1998	RCRA Non-Hazardous	Contaminated	No Threat	Nickel & Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-46S		Building 803	X				Soil Cuttings MW12-28 10/18/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-47W		Building 803		X			Decon Water Steam Condensate 10/18/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous

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			Soil	Water	PPE	Other								
12-48W		Building 803		X			Decon Water Steam Condensate 10/8/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-49S		Building 803	X				Soil Cuttings MW12-25 10/18/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-50W		Building 816 ? Pit A?		X			Decon Water From Soil Gas Steam Condensate 10/21/1997	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-50S		Building 803	X				Soil Cuttings MW12-24 10/19/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< TAGM		Onsite Non-Hazardous
12-51W		Building 815/816		X			Decon Water From Soil Gas Steam Condensate 10/7/1997	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-51S		Building 803	X				Soil Cuttings MW12-25 10/19/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-52W		Building 815/816		X			Decon Water From Soil Gas Steam Condensate 10/8/1997	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-52S		Building 803	X				Soil Cuttings MW12-26 10/19/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-53W		Building 815/816		X			Decon Water From Soil Gas Steam Condensate 10/9/1997	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-53S		Building 803	X				Soil Cuttings MW12-29 10/20/1998	RCRA Non-Hazardous	Contaminated	No Threat	Cadmium & Lead	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-54S		Building 803	X				Soil Cuttings MW12-40 10/20/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium & Nickel	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-55S		Building 803	X				Soil Cuttings MW12-40 10/20/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium & Nickel	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-56W		Building 803		X			Decon Water Steam Condensate 10/20/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-56S		Building 803	X				Soil Cuttings MW12-16 10/20/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-58S		Building 803	X				Soil Cuttings MW12-31 10/26/1998	RCRA Non-Hazardous	Contaminated	No Threat	Zinc	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-59S		Building 803	X				Soil Cuttings MW12-32 10/26/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous

Table 1
SEAD-12 Remedial Investigation
IDW Inventory/Disposal Rational
Seneca Army Depot Activity

Drum Number	Source Location	Drum Location	MATRIX				Source/Start Date i.e.(MW, Boring, Decon. water, Condensate[1], PPE)	RCRA Hazardous/ Non-Hazardous	Contaminated[2]/ Noncontaminated	Threat/ No Threat	Chemical Of Concern[3] (Exceeds TAGM Levels or Worker BGD+DCGL)	Chemical Rationale	Radiological Rational	Disposal Option (Offsite Hazardous) (Offsite Non-Hazardous) (Onsite) (Special Consid. for Rad)
			Soil	Water	PPE	Other								
12-60S		Building 803	X				Soil Cuttings MW12-12 10/26/1998	RCRA Non-Hazardous	Contaminated	No Threat	Cadmium & Lead	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-61S		Building 803	X				Soil Cuttings MW12-11 10/27/1998	RCRA Non-Hazardous	Contaminated	No Threat	Copper	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-62S		Building 803	X				Soil Cuttings MW12-8 10/28/1998	RCRA Non-Hazardous	Contaminated	No Threat	Cyanide & Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-63S		Building 803	X				Soil Cuttings MW12-7 10/28/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-64S		[illegible] 803	X				[illegible] TP12-2 [illegible]	RCRA Hazardous	Contaminated	Threat	VOCs / SVOCs	Field Screening Detected High VOCs		Offsite Hazardous
12-66S		Building 803	X				Soil Cuttings SB12-10,11,&12 10/29/1998	RCRA Non-Hazardous	Contaminated	No Threat	Copper, Mercury, & Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-67S		Building 803	X				Soil Cuttings MW12-35 10/29/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-68S		Building 803	X				Soil Cuttings MW12-36 10/29/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-69S		Near Bldg. 340	X				Soil: Well Surface Completions MW12-6 10/29/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	<TAGM Limits		Onsite Non-Hazardous
12-70S		Building 803	X				Soil Cuttings MW12-33 10/31/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-71S		Building 803	X				Soil Cuttings MW12-34 10/29/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-72S	Class III	[illegible] Building [illegible]	X				[illegible] MW12-37 [illegible]	RCRA Non-Hazardous	Contaminated	Threat	SVOCs [illegible]	<RCRA 20x Criteria > 10x TAGM		Offsite Non-Hazardous
12-73S		Building 803	X				Soil Cuttings MW12-38 11/1/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-74S		Building 803	X				Soil Cuttings MW12-39 11/1/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	<TAGM Limits		Onsite Non-Hazardous
12-75S		Building 803	X				Soil: Well Surface Completions MW12-7,8,33,34,&37 11/2/1998	RCRA Non-Hazardous	Contaminated	No Threat	Thallium	< RCRA 20x Criteria < 10x TAGM		Onsite Non-Hazardous
12-76W		[illegible] Pit A		X			[illegible] [illegible]	RCRA Hazardous	Contaminated	Threat	Trichloroethene	>GA Standards		Offsite Non-Hazardous

Table 1
SEAD-12 Remedial Investigation
IDW Inventory/Disposal Rational
Seneca Army Depot Activity

Drum Number	Source Location	Drum Location	MATRIX				Source/Start Date i.e.(MW, Boring, Decon. water, Condensate[1], PPE)	RCRA Hazardous/ Non-Hazardous	Contaminated[2]/ Noncontaminated	Threat/ No Threat	Chemical Of Concern[3] (Exceeds TAGM Levels or Worker BGD+DCGL)	Chemical Rationale	Radiological Rational	Disposal Option (Offsite Hazardous) (Offsite Non-Hazardous) (Onsite) (Special Consid. for Rad)
			Soil	Water	PPE	Other								
12-77W		Building 803		X			Purge Water All Wells-Except Disposal Pits/B815 11/12/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	<TAGM Limits		Onsite Non-Hazardous
12-78W		Building 803		X			Decon Water Steam Condensate 11/12/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-79S		Building 803				X	Decon Pad & Plastic 11/2/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Soils were cleaned from plastic sheeting rior to disassembly of decon pad Minimum Soil-No Threat		Offsite Non-Hazardous
12-80W		Building 803		X			Decon Water Steam Condensate 11/2/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-81W		Building 803		X			Decon Water Steam Condensate 11/2/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-82W		Building 803		X			Decon Water Steam Condensate 10/18/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-83S		Building 803				X	Decon Pad & Plastic [illegible]	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Soils were cleaned from plastic sheeting for to disassembly of decon pad Minimum Soil-No Threat		Offsite Non-Hazardous
12-84W		Building 803		X			Decon Water Steam Condensate 11/12/1998	RCRA Non-Hazardous	Noncontaminated	No Threat	None	Steam Cleaning Condensate Minimum Soil -No Threat		Onsite Non-Hazardous
12-85W		Building 803		X			Development Water MW12-22,23,24,&25 3/24/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-86W		Building 803		X			Development Water MW12-19,20,22,&23 3/25/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-87W		Building 803		X			Development Water MW12-21,26,29,30,&31 3/26/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-88W	Class III	Building 803		X			Development Water [illegible]	RCRA Non-Hazardous	Contaminated	Threat	Trichloroethene	>GA Standards		Offsite Non-Hazardous
12-89W	Class III FDWDP	Building 803		X			MW12-27,31,32,35,37,36,39,40	RCRA Non-Hazardous	Contaminated	Threat	Trichloroethene	>GA Standards		Offsite Non-Hazardous
12-90W		Building 803		X			Development Water MW12-39 & 17 4/1/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-91W		Building 803		X			Development Water MW12-9,15,17,27,33,31,& 32 4/1/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-92W	Class III	Building 803		X			Development Water MW12-37 & 38 [illegible]	RCRA Non-Hazardous	Contaminated	Threat	Trichloroethene	>GA Standards		Offsite Non-Hazardous

Table 1
SEAD-12 Remedial Investigation
IDW Inventory/Disposal Rational
Seneca Army Depot Activity

Drum Number	Source Location	Drum Location	MATRIX				Source/Start Date i.e.(MW, Boring, Decon. water, Condensate[1], PPE)	RCRA Hazardous/ Non-Hazardous	Contaminated[2]/ Noncontaminated	Threat/ No Threat	Chemical Of Concern[3] (Exceeds TAGM Levels or Worker BGD+DCGL)	Chemical Rationale	Radiological Rational	Disposal Option (Offsite Hazardous) (Offsite Non-Hazardous) (Onsite) (Special Consid. for Rad)
			Soil	Water	PPE	Other								
12-93W		Building 803		X			Includes Decon.Chem./Cal. Stds.	Hazardous	Contaminated	Threat	Dilute Isoprop.Alcohol & HNO3, Calibration Buffers, Quinhydrone	Disposal To Be Determined By IDW Plan		Offsite Hazardous
12-94W		Building 803		X			Development Water MW12-10,11,12,13,34,38,&40 4/5/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-95W		Building 803		X			Development Water MW12-8,9,11,13,14,34,35,&38 4/6/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-96W		Building 803		X			Development Water MW12-2,8,9,13,14,&34 4/7/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-97W		Building 803		X			Development Water MW12-1,3,4,5,&6 4/8/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-98W		Building 803		X			Development Water MW12-1,5,8,32,33,&34 4/9/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-99W		Building 803		X			Development Water MW12-1,8,19,20,21,24,26,&34 4/13/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-100W		Building 803		X			Development Water MW12-16,17.18,& DW-615 4/19/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-101W		Building 803		X			All Sead-12 Wells Apr-99	RCRA Non-Hazardous	Contaminated	Threat	Trichloroethene	>GA Standards		Offsite Non-Hazardous
12-102W		Building 803		X			All Sead-12 Wells Apr-99	RCRA Non-Hazardous	Contaminated	Threat	Trichloroethene	>GA Standards		Offsite Non-Hazardous
12-103W		Building 803		X			Purge Water MW12-1,2,3,4,5,11,22,23,&31 Apr-99	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-104W		Building 803		X			Purge Water MW12-27, 32 12/3/1999	RCRA Non-Hazardous	Contaminated	No Threat	Bis(2-Ethylhexl)phthalate	<GA Standards after dilution		Onsite Non-Hazardous
12-105W		Building 803			X		PPE Building Radiation Scan 12/5/1999							
12-106W		Building 803		X			Purge Water Historic Clean Wells 12/7/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-107W		Disposal Pit A		X			Purge Water MW12-A,7, 14, 15 12/17/1999	RCRA Non-Hazardous	Noncontaminated	No Threat	None	< GA Standards		Onsite Non-Hazardous
12-108S		Disposal Pit A				X	Debris: TP12-3(Confidential) Trace Radium Paint 12/19/1999	RCRA Non-Hazardous	Contaminated - radiological	Threat	Radium		elevated field measurements	TBD
12-109S		Disposal Pit A				X	Debris: TP12-3(Confidential) Trace Radium Paint 12/19/1999	RCRA Non-Hazardous	Contaminated - radiological	Threat	Radium		elevated field measurements	TBD
12-110S		Disposal Pit A				X	Debris: TP12-3(Confidential) Trace Radium Paint 12/19/1999	RCRA Non-Hazardous	Contaminated - radiological	threat	Radium		elevated field measurements	TBD

1. Based on calculated concentrations after dilution.
2. Assumes chemical contamination unless otherwise noted.
3. Excludes Non-toxic Metals,(Calcium,Potassium,Iron, Manganese,and Sodium) with a Naturally Occurring High Background Concentration.
TBD - To Be Determined

Table 2
RCRA Hazardous Waste Determination Criteria
SEAD-12 Remedial Investigation
Seneca Army Depot Activity

Constituent	TCLP Regulatory Level (mg/L)	Equivalent Soil Level (mg/kg)
Arsenic	5.0	100
Barium	100	2000
Benzene	0.5	10
Cadmium	1.0	20
Chloroform	6.0	120
Chromium	5.0	100
1,2-Dichloroethane	0.5	10
1,1-Dichloroethene	0.7	14
2,4-Dinitrotoluene	0.13	2.6
Lead	5.0	100
Mercury	0.2	4
Methyl Ethyl Ketone	200	4000
Selenium	1.0	20
Silver	5.0	100
Tetrachloroethane	0.7	14
Trichloroethane	0.5	10
Vinyl chloride	0.2	4

Table 3
Disposal Classification
SEAD-12 Remedial Investigation
Seneca Army Depot Activity

RCRA Hazardous/ Non-Hazardous	**Contaminated/ Non-contaminated**	**Threat/ No Threat**	**Disposal Option**	**Criteria for Disposal**
Hazardous	Contaminated - Chem	Threat	Off-site	>TCLP
Non-hazardous	Non-contaminated	No threat	On-site	<TCLP, <TAGM
Non-hazardous	Contaminated - Chem	Threat	Off-site	<TCLP, >10XTAGM
Non-hazardous	Contaminated - Chem	No threat	On-site	<TCLP, >TAGM, <10X TAGM
Non-hazardous	Contaminated - Rad	Threat	Off-site: Rad	Uncertain compliance TAGM 4003
Non-hazardous	Contaminated - Chem & Rad	Threat	Off-site: Special Considerations for Radionuclides	> 2X avgerage background

Table 4
Monitoring Well Purge Water Drum Dilution Calculations
SEAD-12 Remedial Investigation IDW Plan
Seneca Army Depot Activity

Drum#	Total Drum Volume (gallons)	Well ID#	Estimated Volume from Well (gallons)	Chemical of Concern (COC)	Concentration of COC in Well (ppb)	TCLP Regulatory Level (ppb)	GA Standard (ppb)	Concentration in the Drum After Dilution[1] (ppb)
12-76W	55	MW12-37	3.0	Trichloroethene	1600	500	5.0	87
12-88W	55	MW12-37	8.0	Trichloroethene	1600	500	5.0	233
12-89W	55	MW12-37	8.0	Trichloroethene	1600	500	5.0	233
12-92W	55	MW12-37	2.5	Trichloroethene	1600	500	5.0	73
12-101W	55	MW12-37	0.6	Trichloroethene	1600	500	5.0	17
12-102W	55	MW12-37	0.6	Trichloroethene	1600	500	5.0	18

1. Formula to determine diluted COC concentration in drum =

$$\text{Concentration}_{drum} = \frac{\text{Volume}_A \times \text{Concentration}_A + \text{Volume}_B \times \text{Concentration}_{B\ldots}}{\text{Volume}_A + \text{Volume}_{B\ldots}}$$

Attachment A

Groundwater Analysis Summary Tables (Chemical)

TABLE A-1
GROUNDWATER CHEMICAL ANALYSIS (ABOVE TAGMS ONLY)
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY			SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID			MW12-19		MW12-22		MW12-37		MW12-37		MW12-39	
MATRIX			GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER		GROUND WATER	
SAMPLE ID			122235		122228		122025		122257		122250	
DEPTH TO TOP OF SAMPLE			11		12		11		11		8.5	
DEPTH TO BOTTOM OF SAMPLE			11		12		11		11		8.5	
SAMPLE DATE			5-Dec-99		3-Dec-99		22-Apr-99		14-Dec-99		13-Dec-99	
QC CODE		**NYS**	SA		SA		SA		SA		SA	
STUDY ID		**CLASS**	RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1	
SAMPLE ROUND		**GA STD.**	2		2		1		2		2	
PARAMETER	UNIT	**STD.**										
VOLATILE ORGANICS												
1,2-Dichloroethene (total)	UG/L	**5**							30	J		
Trichloroethene	UG/L	**5**	0.5	U	0.5	UJ	1600		1600		0.5	U
SEMI VOLATILE ORGANICS												
Bis(2-Ethylhexyl)phthalate	UG/L	**50**	230		210		4.2	U		U	1.2	U
METALS(1)												
Zinc	UG/L	**300**	4.4	J	3	J	3.3	J	7.6	J	2640	
(1) Metals with high background levels are not included, ie. Iron, Calcium, Manganese, Potassium, & Sodium												

Attachment B

Groundwater Analysis Summary Statistics Tables (Radiological)

TABLE B-1
Comparison of Summary Statistics in
Background Groundwater to SEAD-12 Groundwater
SEAD-12 Remedial Investigation
Seneca Army Depot Activity

Parameter	Units	No. of Samples		No. of Detections		Frequency of Detection		Minimum		Maximum		Average		Median		Std Dev		Wilcoxon Mean Rank		Above Background using WRS?
		BKGD	SEAD-12	BKGD	SEAD-12	BKGD	SEAD-12	BKGD	SEAD-12	BKGD	SEAD-12	BKGD	SEAD-12	BKGD	SEAD-12	BKGD	SEAD-12	BKGD	SEAD-12	
Bismuth -214	pCi/L	18	80	9	24	50%	30%	3.07	1.00	37.80	120.00	15.00	11.60	16.05	4.19	11.67	16.53	58.78	46.44	NO
Cesium-137	pCi/L	18	80	0	4	0%	5%	0.25	0.25	2.53	9.40	1.29	1.49	1.29	1.40	0.63	1.27	47.69	48.66	NO
Cobalt-57	pCi/L	18	80	3	4	17%	5%	0.25	0.15	2.62	2.60	1.05	0.96	1.20	1.16	0.67	0.65	53.69	47.46	NO
Cobalt-60	pCi/L	18	80	0	7	0%	9%	0.20	0.20	2.26	11.40	1.17	1.87	1.13	1.65	0.76	2.05	39.94	50.21	NO
Gross Alpha	pCi/L	18	82	8	49	44%	60%	0.30	0.20	5.70	12.50	2.14	2.52	1.57	2.12	1.57	1.85	42.72	49.66	NO
Gross Beta	pCi/L	18	82	16	65	89%	79%	1.00	0.40	12.60	129.00	3.84	5.89	2.92	3.39	2.92	14.45	44.78	49.24	NO
Lead-210	pCi/L	9	40	0	5	0%	13%	1.02	0.86	1.73	4.67	1.41	1.98	1.40	1.42	0.20	0.90	21.63	25.08	NO
Lead-211	pCi/L	18	80	0	3	0%	4%	1.90	7.00	49.70	774.00	27.18	46.44	25.70	39.38	18.28	98.24	43.75	49.45	NO
Lead-214	pCi/L	18	80	9	24	50%	30%	3.08	1.10	27.30	33.30	12.00	9.10	12.40	3.98	8.34	9.50	59.09	45.75	NO
Plutonium-239/240	pCi/L	18	80	0	0	0%	0%	0.001	0.001	0.15	0.20	0.07	0.06	0.05	0.03	0.07	0.06	55.22	47.16	NO
Radium-223	pCi/L	18	80	6	31	33%	39%	0.10	0.05	0.35	1.06	0.22	0.27	0.20	0.22	0.09	0.16	40.82	47.52	NO
Radium-226	pCi/L	18	80	8	41	44%	51%	0.1	0.10	0.79	1.80	0.27	0.36	0.21	0.34	0.19	0.26	39	50.4	NO
Radon-222	pCi/L	18	80	14	50	78%	63%	33.85	3.90	341.00	746.00	145.93	159.94	125.15	84.60	86.69	172.40	55.38	46.51	NO
Thorium-227	pCi/L	9	40	1	0	11%	0%	0.18	0.16	0.35	1.06	0.27	0.30	0.30	0.25	0.06	0.16	26.25	24.15	NO
Thorium-228	pCi/L	9	40	0	2	0%	5%	0.02	0.02	0.06	0.28	0.04	0.07	0.04	0.05	0.02	0.05	15.25	26.35	YES
Thorium-230	pCi/L	18	80	3	13	17%	16%	0.004	0.004	0.60	0.40	0.11	0.09	0.10	0.09	0.15	0.07	47.41	48.72	NO
Thorium-232	pCi/L	18	80	4	11	22%	14%	0.004	0.004	0.17	0.20	0.07	0.06	0.10	0.07	0.05	0.05	49.06	48.39	NO
Tritium	pCi/L	17	78	3	7	18%	9%	23.40	24.90	231.50	261.00	177.29	173.84	212.00	177.50	62.16	49.23	53.23	45.8	NO
Uranium-233/234	pCi/L	18	80	16	70	89%	88%	0.10	0.10	1.80	3.50	0.82	1.08	0.75	0.93	0.46	0.84	42.72	49.66	NO
Uranium-235	pCi/L	18	80	4	27	22%	34%	0.05	0.02	0.15	0.40	0.10	0.10	0.10	0.10	0.03	0.06	56.69	46.86	NO
Uranium-238	pCi/L	18	80	14	74	78%	93%	0.10	0.10	1.30	3.30	0.55	0.84	0.40	0.70	0.40	0.66	38.44	50.51	NO

For the minimum, maximum, average, median, standard deviation, and the duplicates and samples were averaged together, the detects (no qualifier or J qualifier) were taken at full value, and all non-detects (U or UJ qualifier) were taken at half value.

Attachment C

Soil Analysis Summary Tables (Chemical)

TABLE C-1
BUILDING 819/EM-27
SUMMARY OF SURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		
		LOCATION ID						MW12-19		MW12-20		MW12-21		
		MATRIX						SOIL		SOIL		SOIL		
		SAMPLE ID						123040		123046		123049		
		SAMPLE DEPTH TO TOP OF SAMPLE						0		0		0		
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						0.2		0.2		0.8		
		SAMPLE DATE						10/2/1998		10/3/1998		10/3/1998		
		QC CODE						SA		SA		SA		
		STUDY ID						RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER							
			OF	TAGM	ABOVE	OF	OF							
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	
VOLATILE ORGANICS														
Acetone	UG/KG	64	40%	200	0	2	5	11	J	12	UJ	12	UJ	
Toluene	UG/KG	4	40%	1500	0	2	5	12	U	4	J	12	U	
SEMI VOLATILE ORGANICS														
Acenaphthene	UG/KG	1600	100%	50000	0	5	5	82	J	11	J	4.3	J	
Acenaphthylene	UG/KG	240	40%	41000	0	2	5	240	J	14	J	84	U	
Anthracene	UG/KG	1800	80%	50000	0	4	5	480	J	23	J	84	U	
Benzo(a)anthracene	UG/KG	6200	100%	224	4	5	5	3800		260		24	J	
Benzo(a)pyrene	UG/KG	5400	100%	61	4	5	5	3800		270		25	J	
Benzo(b)fluoranthene	UG/KG	4800	100%	1100	2	5	5	2800		300		29	J	
Benzo(ghi)perylene	UG/KG	3100	100%	50000	0	5	5	2200		190		23	J	
Benzo(k)fluoranthene	UG/KG	6100	100%	1100	2	5	5	4100		310		30	J	
Bis(2-Ethylhexyl)phthalate	UG/KG	17	40%	50000	0	2	5	1100	U	15	J	17	J	
Carbazole	UG/KG	2600	100%		0	5	5	230	J	29	J	7	J	
Chrysene	UG/KG	6800	100%	400	3	5	5	3600		310		32	J	
Di-n-octylphthalate	UG/KG	6.2	20%	50000	0	1	5	1100	U	81	U	6.2	J	
Dibenz(a,h)anthracene	UG/KG	1500	80%	14	4	4	5	920	J	75	J	84	U	
Dibenzofuran	UG/KG	650	60%	6200	0	3	5	1100	U	5	J	84	U	
Fluoranthene	UG/KG	14000	100%	50000	0	5	5	6400		440		50	J	
Fluorene	UG/KG	1200	80%	50000	0	4	5	180	J	10	J	84	U	
Indeno(1,2,3-cd)pyrene	UG/KG	3000	100%	3200	0	5	5	2400		170		17	J	
Phenanthrene	UG/KG	11000	100%	50000	0	5	5	2200		160		38	J	
Pyrene	UG/KG	13000	100%	50000	0	5	5	4400		440		56	J	
PESTICIDES/ PCBS														
4,4'-DDD	UG/KG	37	60%	2900	0	3	5	6.4	J	4.1	U	4.2	U	
4,4'-DDE	UG/KG	490	40%	2100	0	2	5	3.9	U	4.1	U	4.2	U	
4,4'-DDT	UG/KG	110	60%	2100	0	3	5	4.8	J	4.1	U	4.2	U	

TABLE C-1
BUILDING 819/EM-27.
SUMMARY OF SURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		
		LOCATION ID						MW12-19		MW12-20		MW12-21		
		MATRIX						SOIL		SOIL		SOIL		
		SAMPLE ID						123040		123046		123049		
		SAMPLE DEPTH TO TOP OF SAMPLE						0		0		0		
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						0.2		0.2		0.8		
		SAMPLE DATE						10/2/1998		10/3/1998		10/3/1998		
		QC CODE						SA		SA		SA		
		STUDY ID						RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER							
			OF	TAGM	ABOVE	OF	OF							
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	
Endosulfan II	UG/KG	18	20%	900	0	1	5	3.9	U	4.1	U	4.2	U	
Endrin	UG/KG	2.7	40%	100	0	2	5	2.7	J	4.1	U	4.2	U	
Endrin aldehyde	UG/KG	8.9	40%		0	2	5	7.8		4.1	U	4.2	U	
Endrin ketone	UG/KG	18	40%		0	2	5	18		4.1	U	4.2	U	
Gamma-Chlordane	UG/KG	3.1	40%	540	0	2	5	1.2	J	2.1	U	2.2	U	
Methoxychlor	UG/KG	26	20%		0	1	5	26	J	21	U	22	U	
METALS [1]														
Aluminum	MG/KG	20800	100%	19520	1	5	5	16000		20800		15500		
Arsenic	MG/KG	5.4	100%	8.9	0	5	5	5.4		3.5		3.8		
Barium	MG/KG	116	100%	300	0	5	5	74.5		102		116		
Beryllium	MG/KG	0.78	100%	1.13	0	5	5	0.62	J	0.78	J	0.62	J	
Cadmium	MG/KG	1.6	20%	2.46	0	1	5	0.06	U	0.06	U	0.07	U	
Calcium	MG/KG	202000	100%	125300	1	5	5	13600	J	7950	J	4020	J	
Chromium	MG/KG	25.1	100%	30	0	5	5	24.9		25.1	J	18.3	J	
Cobalt	MG/KG	13.6	100%	30	0	5	5	12.7		13.6		11.5	J	
Copper	MG/KG	23.1	100%	33	0	5	5	18.1		21.4		23.1		
Iron	MG/KG	34000	100%	37410	0	5	5	30000		34000		24900		
Lead	MG/KG	33.1	100%	24.4	1	5	5	9	J	17.1	J	23	J	
Magnesium	MG/KG	34800	100%	21700	1	5	5	5460		6020		4280		
Manganese	MG/KG	629	100%	1100	0	5	5	534		629	J	554	J	
Mercury	MG/KG	0.09	20%	0.1	0	1	5	0.06	U	0.06	UJ	0.06	U	
Nickel	MG/KG	35.3	100%	50	0	5	5	33.4		35.3	J	25.5	J	
Potassium	MG/KG	2660	100%	2623	1	5	5	1990		2600		2560		
Sodium	MG/KG	128	80%	188	0	4	5	55.3	J	71.9	J	59.7	U	
Thallium	MG/KG	3	20%	0.855	1	1	5	3		1.1	UJ	1.2	U	
Vanadium	MG/KG	32.2	100%	150	0	5	5	25.1		32.2		25.1		
Zinc	MG/KG	109	100%	115	0	5	5	108		98.2	J	83.4	J	

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

Box represents sample location that contained levels greater than 10 times the TAGM value. Consequently, the drum containing samples from this location will be disposed off-site.

TABLE C-2
BUILDING 819/EM-27
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSIS
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
		LOCATION ID						MW12-19		MW12-19		MW12-20		MW12-20		MW12-21		MW12-21	
		MATRIX						SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		SAMPLE ID						123041		123042		123047		123048		123050		123051	
		SAMPLE DEPTH TO TOP OF SAMPLE						6		8		4		6		4		6	
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						8		10		6		8		6		8	
		SAMPLE DATE						10/2/1998		10/2/1998		10/3/1998		10/3/1998		10/3/1998		10/3/1998	
		QC CODE						SA		SA		SA		SA		SA		SA	
		STUDY ID						RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1	
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
VOLATILE ORGANICS																			
Acetone	UG/KG	8	22%	200	0	2	9	6	J	8	J	12	UJ	12	UJ	11	UJ	11	UJ
Methylene chloride	UG/KG	100	33%	100	0	3	9	13	U	11	UJ	12	U	12	U	11	U	11	U
Toluene	UG/KG	13	44%	1500	0	4	9	3	J	13	J	4	J	7	J	11	U	11	U
SEMI VOLATLE ORGANICS																			
Acenaphthene	UG/KG	10	11%	50000	0	1	9	78	U	75	U	80	U	75	U	72	U	72	U
Anthracene	UG/KG	18	33%	50000	0	3	9	11	J	75	U	80	U	4.1	J	72	U	72	U
Benzo(a)anthracene	UG/KG	41	67%	224	0	6	9	34	J	11	J	80	U	22	J	72	U	72	U
Benzo(a)pyrene	UG/KG	34	67%	61	0	6	9	31	J	9.9	J	80	U	20	J	72	U	72	U
Benzo(b)fluoranthene	UG/KG	36	67%	1100	0	6	9	27	J	11	J	80	U	18	J	72	U	72	U
Benzo(ghi)perylene	UG/KG	27	78%	50000	0	7	9	23	J	11	J	80	U	17	J	11	J	72	U
Benzo(k)fluoranthene	UG/KG	41	67%	1100	0	6	9	34	J	15	J	80	U	22	J	72	U	72	U
Bis(2-Ethylhexyl)phthalate	UG/KG	16	44%	50000	0	4	9	9	J	75	U	80	UJ	14	J	16	J	12	J
Carbazole	UG/KG	22	33%		0	3	9	4.4	J	4.7	J	80	UJ	75	UJ	72	UJ	72	UJ
Chrysene	UG/KG	46	89%	400	0	8	9	36	J	18	J	80	U	24	J	4.4	J	4.3	J
Di-n-butylphthalate	UG/KG	4.5	11%	8100	0	1	9	4.5	J	75	UJ	80	U	75	U	72	U	72	U
Di-n-octylphthalate	UG/KG	21	44%	50000	0	4	9	6.5	J	75	U	80	UJ	11	J	9.5	J	21	J
Dibenz(a,h)anthracene	UG/KG	12	33%	14	0	3	9	12	J	4.2	J	80	U	75	U	72	U	72	U
Dibenzofuran	UG/KG	6.2	11%	6200	0	1	9	78	U	75	U	80	U	75	U	72	U	72	U
Fluoranthene	UG/KG	97	78%	50000	0	7	9	70	J	28	J	80	U	52	J	72	U	3.7	J
Fluorene	UG/KG	11	22%	50000	0	2	9	7.9	J	75	U	80	U	75	U	72	U	72	U
Indeno(1,2,3-cd)pyrene	UG/KG	23	67%	3200	0	6	9	21	J	7.3	J	80	U	13	J	72	U	72	U
Phenanthrene	UG/KG	94	78%	50000	0	7	9	53	J	19	J	80	U	25	J	72	U	5.4	J
Pyrene	UG/KG	80	78%	50000	0	7	9	63	J	27	J	80	U	43	J	72	U	6.8	J
METALS [1]																			
Aluminum	MG/KG	21200	100%	19520	1	9	9	10100		12200		21200		14500		8730		3760	
Arsenic	MG/KG	5.8	100%	8.9	0	9	9	2.9		2.5		5.8		3.6		2.7		4.5	
Barium	MG/KG	127	100%	300	0	9	9	87.2		58.4		127		62		47.7		92.1	
Beryllium	MG/KG	0.96	100%	1.13	0	9	9	0.43	J	0.55	J	0.96		0.61	J	0.34	J	0.29	J
Calcium	MG/KG	151000	100%	125300	1	9	9	74200	J	24300	J	3700	J	2010	J	75500	J	151000	J
Chromium	MG/KG	30	100%	30	0	9	9	16.3		16.5	J	30	J	23.3	J	12.1	J	4.2	J
Cobalt	MG/KG	16	100%	30	0	9	9	7.6	J	10.4		16		13.3		10.8		7.3	J
Copper	MG/KG	44.7	100%	33	1	9	9	17.5		27.5		44.7		28.8		25.2		22	
Iron	MG/KG	44500	100%	37410	1	9	9	17700		25200		44500		29600		19200		17000	
Lead	MG/KG	27.1	100%	24.4	1	9	9	6	J	16.1	J	27.1	J	19.1	J	9.7	J	17.6	J
Magnesium	MG/KG	21200	100%	21700	0	9	9	21200		6380		8040		6090		14300		6630	
Manganese	MG/KG	747	100%	1100	0	9	9	359		278	J	517	J	287	J	347	J	395	J
Mercury	MG/KG	0.2	22%	0.1	2	2	9	0.05	U	0.06	UJ	0.06	UJ	0.11	J	0.05	UJ	0.05	UJ
Nickel	MG/KG	64.5	100%	50	1	9	9	21		36.4	J	64.5	J	49.1	J	28.6	J	21.5	J
Potassium	MG/KG	2320	100%	2623	0	9	9	1500		1550		2320		1640		1580		1050	

TABLE C-2
BUILDING 819/EM-27
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSIS
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		
		LOCATION ID						MW12-19		MW12-19		MW12-20		MW12-20		MW12-21		MW12-21	
		MATRIX						SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		SAMPLE ID						123041		123042		123047		123048		123050		123051	
		SAMPLE DEPTH TO TOP OF SAMPLE						6		8		4		6		4		6	
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						8		10		6		8		6		8	
		SAMPLE DATE						10/2/1998		10/2/1998		10/3/1998		10/3/1998		10/3/1998		10/3/1998	
		QC CODE						SA		SA		SA		SA		SA		SA	
		STUDY ID						RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER												
			OF	TAGM	ABOVE	OF	OF												
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
Selenium	MG/KG	1.1	22%	2	0	2	9	0.75	UJ	0.37	U	0.42	U	0.37	U	0.44	U	0.39	J
Silver	MG/KG	0.32	11%	0.8	0	1	9	0.2	U	0.19	U	0.32	J	0.19	U	0.23	U	0.2	U
Sodium	MG/KG	125	56%	188	0	5	9	67.9	J	84.2	J	125	J	103	J	48.2	U	84.6	J
Vanadium	MG/KG	33.1	100%	150	0	9	9	18.8		18.1		33.1		19.2		14.9		10.2	
Zinc	MG/KG	143	100%	115	3	9	9	48.3		56	J	131	J	120	J	69.1	J	53.1	J

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

Box represents sample location that contained levels greater than 10 times the TAGM value. Consequently, the drum containing samples from this location will be disposed off-site.

TABLE C-3
Bldg 815/816/EM-28
SUMMARY OF SURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		
		LOCATION ID						MW12-29		MW12-30		MW12-30		
		MATRIX						SOIL		SOIL		SOIL		
		SAMPLE ID						123133		123148		123136		
		SAMPLE DEPTH TO TOP OF SAMPLE						0		0		0		
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						0.2		0.2		0.2		
		SAMPLE DATE						15-Oct-98		16-Oct-98		16-Oct-98		
		QC CODE						SA		DU		SA		
		STUDY ID						RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER							
			OF	TAGM	ABOVE	OF	OF							
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	
VOLATILE ORGANICS														
Toluene	UG/KG	2	33%	1500	0	1	3	15	U	2	J	14	U	
SEMI VOLATILE ORGANICS														
Benzo(a)anthracene	UG/KG	16	100%	224	0	3	3	16	J	11	J	8.6	J	
Benzo(a)pyrene	UG/KG	17	67%	61	0	2	3	17	J	12	J	96	UJ	
Benzo(b)fluoranthene	UG/KG	22	67%	1100	0	2	3	22	J	18	J	96	U	
Benzo(ghi)perylene	UG/KG	10	33%	50000	0	1	3	100	UJ	10	J	96	U	
Benzo(k)fluoranthene	UG/KG	20	33%	1100	0	1	3	20	J	94	U	96	U	
Chrysene	UG/KG	22	100%	400	0	3	3	22	J	17	J	9.7	J	
Fluoranthene	UG/KG	36	100%	50000	0	3	3	36	J	23	J	13	J	
Indeno(1,2,3-cd)pyrene	UG/KG	8.2	33%	3200	0	1	3	100	UJ	8.2	J	96	U	
Phenanthrene	UG/KG	25	100%	50000	0	3	3	25	J	18	J	8.3	J	
Pyrene	UG/KG	34	100%	50000	0	3	3	34	J	20	J	12	J	
METALS [1]														
Aluminum	MG/KG	14900	100%	19520	0	3	3	14900	J	13500	J	12300	J	
Arsenic	MG/KG	5	100%	8.9	0	3	3	5		4.1		4.6		
Barium	MG/KG	113	100%	300	0	3	3	106	J	113	J	106	J	
Beryllium	MG/KG	0.76	100%	1.13	0	3	3	0.7	J	0.76	J	0.74	J	
Cadmium	MG/KG	17.7	33%	2.46	1	1	3	[redacted]		0.08	U	0.06	U	
Calcium	MG/KG	13500	100%	125300	0	3	3	13500		6010		5850		
Chromium	MG/KG	22.6	100%	30	0	3	3	22.6		18.6		17.7		
Cobalt	MG/KG	10.6	100%	30	0	3	3	10.6	J	8.8	J	8.4	J	
Copper	MG/KG	23.1	100%	33	0	3	3	21.1		22.1		23.1		
Iron	MG/KG	28600	100%	37410	0	3	3	28600	J	22300	J	23500	J	
Lead	MG/KG	25	100%	24.4	1	3	3	[redacted]	J	22.6	J	22.4	J	
Magnesium	MG/KG	10300	100%	21700	0	3	3	10300	J	3580	J	3430	J	
Manganese	MG/KG	772	100%	1100	0	3	3	733		650		772		
Mercury	MG/KG	0.1	100%	0.1	0	3	3	0.08	J	0.1	J	0.09	J	
Nickel	MG/KG	30.6	100%	50	0	3	3	30.6	J	26.3	J	25.1	J	
Potassium	MG/KG	1790	100%	2623	0	3	3	1790		1620		1380		
Selenium	MG/KG	1.4	100%	2	0	3	3	1.4	J	1.2	J	1.1	J	
Vanadium	MG/KG	24.6	100%	150	0	3	3	24.6		22		20.4		
Zinc	MG/KG	93.3	100%	115	0	3	3	93.3	J	79.1	J	73.9	J	
(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.														

TABLE C-4
Bldg 815/816/EM-28
SUMMARY OF SUBSURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12	
LOCATION ID								MW12-30	
MATRIX								SOIL	
SAMPLE ID								123138	
SAMPLE DEPTH TO TOP OF SAMPLE								2	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								3.5	
SAMPLE DATE								16-Oct-98	
QC CODE								SA	
STUDY ID								RI Phase 1 Step 1	
			FREQUENCY OF	NYSDEC TAGM	NUMBER ABOVE	NUMBER OF	NUMBER OF		
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)
VOLATILE ORGANICS									
Acetone	UG/KG	4	14%	200	0	1	7	4	J
Toluene	UG/KG	4	14%	1500	0	1	7	4	J
SEMI VOLATILE ORGANICS									
2-Methylnaphthalene	UG/KG	4.4	14%	36400	0	1	7	77	UJ
Benzo(b)fluoranthene	UG/KG	4.7	29%	1100	0	2	7	77	U
Benzo(k)fluoranthene	UG/KG	5.2	29%	1100	0	2	7	77	U
Bis(2-Ethylhexyl)phthalate	UG/KG	11	43%	50000	0	3	7	77	U
Butylbenzylphthalate	UG/KG	93	14%	50000	0	1	7	77	U
Chrysene	UG/KG	6.1	29%	400	0	2	7	77	U
Di-n-butylphthalate	UG/KG	880	86%	8100	0	6	7	77	U
Di-n-octylphthalate	UG/KG	5.5	14%	50000	0	1	7	5.5	J
Diethyl phthalate	UG/KG	28	14%	7100	0	1	7	77	U
Dimethylphthalate	UG/KG	29	14%	2000	0	1	7	77	U
Fluoranthene	UG/KG	7.6	29%	50000	0	2	7	77	U
Phenanthrene	UG/KG	7.7	29%	50000	0	2	7	77	U
Phenol	UG/KG	7.2	14%	30	0	1	7	77	U
Pyrene	UG/KG	6.9	29%	50000	0	2	7	77	UJ
PESTICIDES/PCBS									
4,4'-DDT	UG/KG	21	29%	2100	0	2	7	3.8	U
Aroclor-1260	UG/KG	440	29%	10000	0	2	7	38	U
Dieldrin	UG/KG	5.9	14%	44	0	1	7	3.8	U
Endrin	UG/KG	3.8	14%	100	0	1	7	3.8	U
METALS [1]									
Aluminum	MG/KG	15300	100%	19520	0	7	7	12700	J
Antimony	MG/KG	1.8	29%	6	0	2	7	1.1	R
Arsenic	MG/KG	4.7	100%	8.9	0	7	7	4.7	
Barium	MG/KG	104	100%	300	0	7	7	104	J
Beryllium	MG/KG	0.71	100%	1.13	0	7	7	0.47	J
Calcium	MG/KG	13800	100%	125300	0	7	7	2710	
Chromium	MG/KG	26	100%	30	0	7	7	19	
Cobalt	MG/KG	18	100%	30	0	7	7	12.2	
Copper	MG/KG	30.2	100%	33	0	7	7	28.3	
Iron	MG/KG	33800	100%	37410	0	7	7	21900	J
Lead	MG/KG	14.7	100%	24.4	0	7	7	11.8	J
Magnesium	MG/KG	5960	100%	21700	0	7	7	4940	J
Manganese	MG/KG	667	100%	1100	0	7	7	589	
Mercury	MG/KG	0.07	43%	0.1	0	3	7	0.06	J
Nickel	MG/KG	50.5	100%	50	1	7	7	36	J
Potassium	MG/KG	1330	100%	2623	0	7	7	1090	
Sodium	MG/KG	66.7	43%	188	0	3	7	46	U
Thallium	MG/KG	1.1	14%	0.855	1	1	7	1.1	J
Vanadium	MG/KG	21.2	100%	150	0	7	7	20.2	
Zinc	MG/KG	113	100%	115	0	7	7	68.1	J

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

TABLE C-5
DISPOSAL PIT A/B
SUMMARY OF SURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12				
LOCATION ID								MW12-10		MW12-11		MW12-12		MW12-13		MW12-8		SB12-1				
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL				
SAMPLE ID								123007		123010		123013		123016		123183		12209				
SAMPLE DEPTH TO TOP OF SAMPLE								0		0		0		0		0		0				
SAMPLE DEPTH TO BOTTOM OF SAMPLE								0.2		0.2		0.2		0.2		0.2		0.2				
SAMPLE DATE								29-Sep-98		29-Sep-98		30-Sep-98		01-Oct-98		28-Oct-98		11-Nov-97				
QC CODE								SA		SA		SA		SA		SA		DU				
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1				
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER															
			OF	TAGM	ABOVE	OF	OF															
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)			
VOLATILE ORGANICS																						
Acetone	UG/KG	52	47%	200	0	7	15	11	U	11	U	12	U	12	UJ	52		3	J			
Methyl butyl ketone	UG/KG	1	7%		0	1	15	11	U	11	U	12	U	12	U	13	U	12	U			
Methylene chloride	UG/KG	1	7%	100	0	1	15	11	U	11	U	1	J	12	U	13	U	12	U			
Toluene	UG/KG	4	27%	1500	0	4	15	11	U	11	U	12	U	12	U	13	U	12	U			
SEMI VOLATILE ORGANICS																						
Benzo(a)anthracene	UG/KG	27	33%	224	0	5	15	77	U	72	U	80	U	4.5	J	6.4	J	11	J			
Benzo(a)pyrene	UG/KG	18	33%	61	0	5	15	77	UJ	72	UJ	80	UJ	5	J	8	J	15	J			
Benzo(b)fluoranthene	UG/KG	36	40%	1100	0	6	15	77	U	72	U	80	U	5.9	J	9.7	J	30	J			
Benzo(ghi)perylene	UG/KG	23	33%	50000	0	5	15	77	U	72	U	80	U	4	J	6.6	J	23	J			
Benzo(k)fluoranthene	UG/KG	26	27%	1100	0	4	15	77	U	72	U	80	U	7.6	J	7.4	J	78	U			
Bis(2-Ethylhexyl)phthalate	UG/KG	210	20%	50000	0	3	15	77	U	72	U	210		11	J	83	U	78	U			
Butylbenzylphthalate	UG/KG	6.7	7%	50000	0	1	15	77	U	72	U	80	U	78	U	83	U	6.7	J			
Carbazole	UG/KG	16	7%		0	1	15	77	UJ	72	UJ	80	UJ	78	UJ	83	U	16	J			
Chrysene	UG/KG	51	47%	400	0	7	15	4.3	J	72	UJ	80	UJ	6.8	J	9.1	J	17	J			
Di-n-butylphthalate	UG/KG	68	20%	8100	0	3	15	77	UJ	72	UJ	80	UJ	78	UJ	83	U	68	J			
Di-n-octylphthalate	UG/KG	7.8	13%	50000	0	2	15	77	U	72	U	80	U	78	U	83	U	7.8	J			
Dibenz(a,h)anthracene	UG/KG	16	13%	14	1	2	15	77	U	72	U	80	U	78	U	83	U	16	J			
Dibenzofuran	UG/KG	5.6	7%	6200	0	1	15	77	UJ	72	UJ	80	UJ	78	U	83	U	5.6	J			
Fluoranthene	UG/KG	24	53%	50000	0	8	15	5.5	J	72	UJ	80	UJ	9.1	J	14	J	9.7	J			
Fluorene	UG/KG	5.4	7%	50000	0	1	15	77	U	72	U	80	U	78	U	83	U	5.4	J			
Indeno(1,2,3-cd)pyrene	UG/KG	18	27%	3200	0	4	15	77	U	72	U	80	U	78	U	6.1	J	18	J			
Phenanthrene	UG/KG	8.5	33%	50000	0	5	15	77	U	72	U	80	U	6.5	J	7.8	J	8.5	J			
Pyrene	UG/KG	22	53%	50000	0	8	15	4.2	J	72	U	80	U	9.1	J	22	J	10	J			
PESTICIDES/PCBS																						
4,4'-DDE	UG/KG	15	13%	2100	0	2	15	3.8	U	3.6	U	4	U	4	U	4.2	U	3.9	U			
4,4'-DDT	UG/KG	42	13%	2100	0	2	15	3.8	U	3.6	U	4	U	4	U	4.2	U	3.9	U			
Aroclor-1254	UG/KG	670	20%	10000	0	3	15	38	U	36	U	40	U	40	U	42	U	39	U			
Dieldrin	UG/KG	14	13%	44	0	2	15	3.8	U	3.6	U	4	U	4	U	4.2	U	3.9	U			
Endosulfan I	UG/KG	1.8	7%	900	0	1	15	2	U	1.9	U	2	U	2	U	2.2	U	2	U			
Endosulfan II	UG/KG	2.7	7%	900	0	1	15	3.8	U	3.6	U	4	U	4	U	4.2	U	3.9	U			
Endrin	UG/KG	4.2	13%	100	0	2	15	3.8	U	3.6	U	4	U	4	U	4.2	U	3.9	U			
Endrin aldehyde	UG/KG	5.6	13%		0	2	15	3.8	U	3.6	U	4	U	4	U	4.2	U	3.9	U			
Gamma-Chlordane	UG/KG	11	20%	540	0	3	15	2	U	1.9	U	2	U	2	U	2.2	U	3.2				
Heptachlor epoxide	UG/KG	4.6	13%	20	0	2	15	2	U	1.9	U	2	U	2	U	2.2	U	2	U			

TABLE C-5
DISPOSAL PIT A/B
SUMMARY OF SURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12				
LOCATION ID								MW12-10		MW12-11		MW12-12		MW12-13		MW12-8		SB12-1				
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL				
SAMPLE ID								123007		123010		123013		123016		123183		12209				
SAMPLE DEPTH TO TOP OF SAMPLE								0		0		0		0		0		0				
SAMPLE DEPTH TO BOTTOM OF SAMPLE								0.2		0.2		0.2		0.2		0.2		0.2				
SAMPLE DATE								29-Sep-98		29-Sep-98		30-Sep-98		01-Oct-98		28-Oct-98		11-Nov-97				
QC CODE								SA		SA		SA		SA		SA		DU				
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1				
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER															
			OF	TAGM	ABOVE	OF	OF															
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)			
METALS [1]																						
Aluminum	MG/KG	15800	100%	19520	0	15	15	10100		10600		11800		9960		11700		10200				
Antimony	MG/KG	0.87	13%	6	0	2	15	1.1	UR	1.1	UR	1.3	UR	1.2	UR	1.5	UR	0.81	J			
Arsenic	MG/KG	4.9	100%	8.9	0	15	15	3.5		4		3.3		3.2		3.1		4.9				
Barium	MG/KG	89.2	100%	300	0	15	15	64.5		50.3		58.9		78.6		76.1		89.2				
Beryllium	MG/KG	0.59	100%	1.13	0	15	15	0.38	J	0.39	J	0.44	J	0.32	J	0.58	J	0.38				
Cadmium	MG/KG	3.2	20%	2.46	1	3	15	0.06	U	0.05	U	0.06	U	0.06	U	0.43	U	1.1				
Calcium	MG/KG	77600	100%	125300	0	15	15	46500		1230		11800		1640	J	4240		30600				
Chromium	MG/KG	23.3	100%	30	0	15	15	15.2		14.4		21.5		13		15.1	J	22.8				
Cobalt	MG/KG	17.5	100%	30	0	15	15	8.9	J	8.2	J	13.1		8	J	8.6	J	9.5				
Copper	MG/KG	32.5	100%	33	0	15	15	20.1		14.9		32.5		13.4		15.1		27.5				
Cyanide	MG/KG	1.6	13%	0.35	2	2	15	0.58	U	0.56	U	0.64	U	1.2	J	1.6		0.66	UJ			
Iron	MG/KG	27100	100%	37410	0	15	15	20800	J	19700	J	27100	J	16300		19500		22700				
Lead	MG/KG	22.2	100%	24.4	0	15	15	11.4		13.1		15.5		15.2	J	15.7	J	16.3	J			
Magnesium	MG/KG	21500	100%	21700	0	15	15	9420		3150		6460		2340		3120		7050				
Manganese	MG/KG	1420	100%	1100	1	15	15	478		327		501		783		701		536				
Mercury	MG/KG	0.11	20%	0.1	1	3	15	0.11	J	0.05	UJ	0.06	UJ	0.09	J	0.06	U	0.05	U			
Nickel	MG/KG	39.9	93%	50	0	14	15	24		17.6		39.9		16.2		16.3	UJ	30.4				
Potassium	MG/KG	1740	100%	2623	0	15	15	1190		925		1270		806	J	1170	J	1320				
Selenium	MG/KG	2.5	13%	2	2	2	15	0.86	U	0.83	U	0.94	U	0.89	UJ	0.55	U	2.1				
Silver	MG/KG	0.2	7%	0.8	0	1	15	0.22	U	0.22	U	0.25	U	0.23	U	0.29	U	0.48	U			
Sodium	MG/KG	207	27%	188	1	4	15	47	U	45.7	U	51.7	U	48.9	U	60	U	115				
Thallium	MG/KG	1.8	33%	0.855	5	5	15	0.97	U	0.94	U	1.1	U	1.6	U	1.8	J	1.5				
Vanadium	MG/KG	24	100%	150	0	15	15	17.6		18.3		17.7		17.6		20.8		17.6				
Zinc	MG/KG	83.7	100%	115	0	15	15	50.1		45		81.4		46.1		53.6	J	64.2				

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

TABLE C-5
DISPOSAL PIT A/B
SUMMARY OF SURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12				
LOCATION ID								SB12-1		SB12-2		SB12-2B		SB12-3		SB12-4				
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL				
SAMPLE ID								12534		123112		123064		12524		12530				
SAMPLE DEPTH TO TOP OF SAMPLE								0		0		0		0		0				
SAMPLE DEPTH TO BOTTOM OF SAMPLE								0.2		0.2		0.2		0.2		0.2				
SAMPLE DATE								11-Nov-97		14-Oct-98		04-Oct-98		09-Nov-97		10-Nov-97				
QC CODE								SA		SA		SA		SA		SA				
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1				
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)			
VOLATILE ORGANICS																				
Acetone	UG/KG	52	47%	200	0	7	15	10	J	12	U	12	UJ	4	J	5	J			
Methyl butyl ketone	UG/KG	1	7%		0	1	15	12	U	11	U	12	U	12	U	1	J			
Methylene chloride	UG/KG	1	7%	100	0	1	15	12	U	11	U	12	U	12	U	12	U			
Toluene	UG/KG	4	27%	1500	0	4	15	12	U	11	U	12	U	3	J	4	J			
SEMI VOLATILE ORGANICS																				
Benzo(a)anthracene	UG/KG	27	33%	224	0	5	15	78	U	75	U	4	J	82	U	84	U			
Benzo(a)pyrene	UG/KG	18	33%	61	0	5	15	78	U	75	U	5.7	J	82	U	84	U			
Benzo(b)fluoranthene	UG/KG	36	40%	1100	0	6	15	78	U	75	U	6.2	J	82	U	84	U			
Benzo(ghi)perylene	UG/KG	23	33%	50000	0	5	15	78	U	75	UJ	4.6	J	82	U	84	U			
Benzo(k)fluoranthene	UG/KG	26	27%	1100	0	4	15	78	U	75	U	7	J	82	U	84	U			
Bis(2-Ethylhexyl)phthalate	UG/KG	210	20%	50000	0	3	15	78	U	75	U	73	UJ	82	U	84	U			
Butylbenzylphthalate	UG/KG	6.7	7%	50000	0	1	15	78	U	75	U	73	UJ	82	U	84	U			
Carbazole	UG/KG	16	7%		0	1	15	78	U	75	UJ	73	UJ	82	U	84	U			
Chrysene	UG/KG	51	47%	400	0	7	15	78	U	75	U	7	J	82	U	5.1	J			
Di-n-butylphthalate	UG/KG	68	20%	8100	0	3	15	78	U	75	U	73	U	82	U	84	U			
Di-n-octylphthalate	UG/KG	7.8	13%	50000	0	2	15	78	U	6	J	73	UJ	82	U	84	U			
Dibenz(a,h)anthracene	UG/KG	16	13%	14	1	2	15	78	U	75	UJ	73	U	82	U	84	U			
Dibenzofuran	UG/KG	5.6	7%	6200	0	1	15	78	U	75	U	73	U	82	U	84	U			
Fluoranthene	UG/KG	24	53%	50000	0	8	15	78	U	75	U	8.2	J	82	U	7	J			
Fluorene	UG/KG	5.4	7%	50000	0	1	15	78	U	75	U	73	U	82	U	84	U			
Indeno(1,2,3-cd)pyrene	UG/KG	18	27%	3200	0	4	15	78	U	75	UJ	4.3	J	82	U	84	U			
Phenanthrene	UG/KG	8.5	33%	50000	0	5	15	78	U	75	U	5.8	J	82	U	84	U			
Pyrene	UG/KG	22	53%	50000	0	8	15	4.5	J	75	U	10	J	82	U	6.1	J			
PESTICIDES/PCBS																				
4,4'-DDE	UG/KG	15	13%	2100	0	2	15	3.9	U	3.8	U	4.1	U	4.8	J	4.2	U			
4,4'-DDT	UG/KG	42	13%	2100	0	2	15	1.8	J	3.8	U	4.1	U	4.1	U	4.2	U			
Aroclor-1254	UG/KG	670	20%	10000	0	3	15	39	U	38	U	41	U	440		24	J			
Dieldrin	UG/KG	14	13%	44	0	2	15	3.9	U	3.8	U	4.1	U	5.8	J	4.2	U			
Endosulfan I	UG/KG	1.8	7%	900	0	1	15	2	U	1.9	U	2.1	U	2.1	U	2.2	U			
Endosulfan II	UG/KG	2.7	7%	900	0	1	15	3.9	U	3.8	U	4.1	U	2.7	J	4.2	U			
Endrin	UG/KG	4.2	13%	100	0	2	15	3.9	U	3.8	U	4.1	U	2.6	J	4.2	U			
Endrin aldehyde	UG/KG	5.6	13%		0	2	15	3.9	U	3.8	U	4.1	U	3.5	J	4.2	U			
Gamma-Chlordane	UG/KG	11	20%	540	0	3	15	2	U	1.9	U	2.1	U	9	J	2.2	U			
Heptachlor epoxide	UG/KG	4.6	13%	20	0	2	15	2	U	1.9	U	2.1	U	3.3	J	2.2	U			

TABLE C-5
DISPOSAL PIT A/B
SUMMARY OF SURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
		LOCATION ID						SB12-1		SB12-2		SB12-2B		SB12-3		SB12-4	
		MATRIX						SOIL		SOIL		SOIL		SOIL		SOIL	
		SAMPLE ID						12534		123112		123064		12524		12530	
		SAMPLE DEPTH TO TOP OF SAMPLE						0		0		0		0		0	
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						0.2		0.2		0.2		0.2		0.2	
		SAMPLE DATE						11-Nov-97		14-Oct-98		04-Oct-98		09-Nov-97		10-Nov-97	
		QC CODE						SA		SA		SA		SA		SA	
		STUDY ID						RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER										
			OF	TAGM	ABOVE	OF	OF										
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
METALS [1]																	
Aluminum	MG/KG	15800	100%	19520	0	15	15	8590		7160	J	15800		10500		14400	
Antimony	MG/KG	0.87	13%	6	0	2	15	0.87	J	0.96	UR	1.4	UR	0.83	UJ	0.86	UJ
Arsenic	MG/KG	4.9	100%	8.9	0	15	15	3.9		4	J	4.9		3.6		4.2	
Barium	MG/KG	89.2	100%	300	0	15	15	74.2		75.2		86.2		67.4		84	
Beryllium	MG/KG	0.59	100%	1.13	0	15	15	0.38		0.25	J	0.43	J	0.35	J	0.38	
Cadmium	MG/KG	3.2	20%	2.46	1	3	15	0.86		1.2		0.07	U	0.07	U	0.07	U
Calcium	MG/KG	77600	100%	125300	0	15	15	52700		77600	J	3140		32300		12800	
Chromium	MG/KG	23.3	100%	30	0	15	15	16.7		18.2		23.3		16.9		18.7	
Cobalt	MG/KG	17.5	100%	30	0	15	15	8.3		9.2		17.5		9.5		10.7	
Copper	MG/KG	32.5	100%	33	0	15	15	21.3		23.6		13.4		19.3		16.7	
Cyanide	MG/KG	1.6	13%	0.35	2	2	15	0.67	UJ	0.56	U	0.63	UJ	0.75	U	0.68	U
Iron	MG/KG	27100	100%	37410	0	15	15	17900		16400		26900		18400		20900	
Lead	MG/KG	22.2	100%	24.4	0	15	15	13.4	J	12	J	22.2		11.3		15.9	
Magnesium	MG/KG	21500	100%	21700	0	15	15	7270		21500	J	3820	J	6950		5420	
Manganese	MG/KG	1420	100%	1100	1	15	15	499		417		1420		584		781	
Mercury	MG/KG	0.11	20%	0.1	1	3	15	0.05	U	0.06	U	0.06	U	0.06	U	0.06	U
Nickel	MG/KG	39.9	93%	50	0	14	15	22.7		24.4	J	27.1		25.4		23.2	
Potassium	MG/KG	1740	100%	2623	0	15	15	993		1540		1020	J	1660	J	1740	J
Selenium	MG/KG	2.5	13%	2	2	2	15	2.5		0.72	U	1.1	U	1.1	U	1.2	U
Silver	MG/KG	0.2	7%	0.8	0	1	15	0.49	U	0.2	J	0.28	U	0.5	U	0.52	U
Sodium	MG/KG	207	27%	188	1	4	15	207		56.1	J	59.8	U	144	U	150	U
Thallium	MG/KG	1.8	33%	0.855	5	5	15	1.5	U	1.2	J	1.2	U	1.5	U	1.6	U
Vanadium	MG/KG	24	100%	150	0	15	15	14.7		13.6		23.4		17.7		24	
Zinc	MG/KG	83.7	100%	115	0	15	15	60.7		83.7	J	66.5		61.9	J	63.5	J
(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACK(																	

TABLE C-6
DISPOSAL PIT A/B
SUMMARY OF SUBSURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12			
LOCATION ID								MW12-10		MW12-10		MW12-11		MW12-11		MW12-12		MW12-12		MW12-13			
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
SAMPLE ID								123008		123009		123011		123012		123014		123015		123017			
SAMPLE DEPTH TO TOP OF SAMPLE								4		8		4		8		4		9		4			
SAMPLE DEPTH TO BOTTOM OF SAMPLE								5.7		9.8		5.6		10		6		11		6			
SAMPLE DATE								09/29/98		09/29/98		09/29/98		09/29/98		09/30/98		09/30/98		10/01/98			
QC CODE								SA		SA		SA		SA		SA		SA		SA			
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1			
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)		
VOLATILE ORGANICS																							
Acetone	UG/KG	34	41%	200	0	12	29	3	J	4	J	4	J	4	J	12	U	12	U	11	UJ		
Benzene	UG/KG	6	3%	60	0	1	29	11	U	12	U	11	U	11	U	12	U	12	U	11	U		
Ethyl benzene	UG/KG	66	10%	5500	0	3	29	11	U	12	U	11	U	11	U	12	U	12	U	11	U		
Methylene chloride	UG/KG	3	7%	100	0	2	29	11	U	12	U	11	U	11	U	12	U	12	U	11	U		
Styrene	UG/KG	33	3%		0	1	29	11	U	12	U	11	U	11	U	12	U	12	U	11	U		
Toluene	UG/KG	15	34%	1500	0	10	29	11	U	12	U	11	U	11	U	12	U	12	U	8	J		
Total Xylenes	UG/KG	520	10%	1200	0	3	29	11	U	12	U	11	U	11	U	12	U	12	U	11	U		
Trichloroethene	UG/KG	26	14%	700	0	4	29	11	U	12	U	11	U	11	U	12	U	12	U	11	U		
SEMI VOLATILE ORGANICS																							
2,4-Dimethylphenol	UG/KG	25	4%		0	1	28	73	UJ	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	UJ		
2-Methylnaphthalene	UG/KG	56	11%	36400	0	3	28	73	UJ	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	UJ		
4-Methylphenol	UG/KG	140	4%	900	0	1	28	73	U	74	U	72	U	70	U	81	U	81	U	73	U		
Acenaphthene	UG/KG	23	4%	50000	0	1	28	73	UJ	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	UJ		
Acenaphthylene	UG/KG	33	4%	41000	0	1	28	73	UJ	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	UJ		
Anthracene	UG/KG	96	11%	50000	0	3	28	73	UJ	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	UJ		
Benzo(a)anthracene	UG/KG	180	14%	224	0	4	28	73	UJ	74	U	72	U	70	U	81	U	81	U	73	U		
Benzo(a)pyrene	UG/KG	200	14%	61	1	4	28	73	U	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	U		
Benzo(b)fluoranthene	UG/KG	190	14%	1100	0	4	28	73	UJ	74	U	72	U	70	U	81	U	81	U	73	U		
Benzo(ghi)perylene	UG/KG	120	7%	50000	0	2	28	73	U	74	U	72	U	70	U	81	U	81	U	73	U		
Benzo(k)fluoranthene	UG/KG	160	11%	1100	0	3	28	73	U	74	U	72	U	70	U	81	U	81	U	73	U		
Bis(2-Ethylhexyl)phthalate	UG/KG	930	25%	50000	0	7	28	73	U	74	U	72	U	180		81	U	81	U	83			
Butylbenzylphthalate	UG/KG	5.1	4%	50000	0	1	28	73	U	74	U	72	U	70	U	81	U	81	U	73	U		
Chrysene	UG/KG	240	14%	400	0	4	28	73	UJ	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	U		
Di-n-butylphthalate	UG/KG	1700	11%	8100	0	3	28	73	UJ	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	UJ		
Di-n-octylphthalate	UG/KG	54	43%	50000	0	12	28	73	U	74	U	72	U	13	J	81	U	4.9	J	12	J		
Dibenz(a,h)anthracene	UG/KG	57	7%	14	1	2	28	73	U	74	U	72	U	70	U	81	U	81	U	73	U		
Fluoranthene	UG/KG	420	21%	50000	0	6	28	73	UJ	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	U		
Fluorene	UG/KG	52	7%	50000	0	2	28	73	U	74	U	72	U	70	U	81	U	81	U	73	U		
Indeno(1,2,3-cd)pyrene	UG/KG	120	7%	3200	0	2	28	73	U	74	U	72	U	70	U	81	U	81	U	73	U		
Naphthalene	UG/KG	600	7%	13000	0	2	28	73	UJ	74	UJ	72	UJ	70	UJ	81	UJ	81	UJ	73	U		
Phenanthrene	UG/KG	340	18%	50000	0	5	28	73	U	74	U	72	U	4.6	J	81	U	81	U	73	U		
Phenol	UG/KG	300	7%	30	2	2	28	73	U	74	U	72	U	70	U	81	U	81	U	73	U		
Pyrene	UG/KG	380	18%	50000	0	5	28	73	U	74	U	72	U	70	U	81	U	81	U	73	U		

TABLE C-6
DISPOSAL PIT A/B
SUMMARY OF SUBSURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12				
LOCATION ID								MW12-10		MW12-10		MW12-11		MW12-11		MW12-12		MW12-12		MW12-13				
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL				
SAMPLE ID								123008		123009		123011		123012		123014		123015		123017				
SAMPLE DEPTH TO TOP OF SAMPLE								4		8		4		8		4		9		4				
SAMPLE DEPTH TO BOTTOM OF SAMPLE								5.7		9.8		5.6		10		6		11		6				
SAMPLE DATE								09/29/98		09/29/98		09/29/98		09/29/98		09/30/98		09/30/98		10/01/98				
QC CODE								SA		SA		SA		SA		SA		SA		SA				
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1				
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)			
PESTICIDES/PCBS																								
4,4'-DDE	UG/KG	42	11%	2100	0	3	28	3.7	U	3.7	U	3.6	U	3.5	U	4.1	U	4.1	U	3.7	U			
4,4'-DDT	UG/KG	2.1	4%	2100	0	1	28	3.7	U	3.7	U	3.6	U	3.5	U	4.1	U	4.1	U	3.7	U			
Aldrin	UG/KG	0.79	4%	41	0	1	28	1.9	U	1.9	U	1.9	U	1.8	U	2.1	U	2.1	U	1.9	U			
Alpha-BHC	UG/KG	24	7%	110	0	2	28	1.9	U	1.9	U	1.9	U	1.8	U	2.1	U	2.1	U	1.9	U			
Alpha-Chlordane	UG/KG	4.6	7%		0	2	28	1.9	U	1.9	U	1.9	U	1.8	U	2.1	U	2.1	U	1.9	U			
Aroclor-1254	UG/KG	3000	21%	10000	0	6	28	37	U	37	U	36	U	35	U	41	U	41	U	37	U			
Aroclor-1260	UG/KG	150	7%	10000	0	2	28	37	U	37	U	36	U	35	U	41	U	41	U	37	U			
Beta-BHC	UG/KG	2.2	4%	200	0	1	28	1.9	U	1.9	U	1.9	U	1.8	U	2.1	U	2.1	U	1.9	U			
Dieldrin	UG/KG	40	7%	44	0	2	28	3.7	U	3.7	U	3.6	U	3.5	U	4.1	U	4.1	U	3.7	U			
Endosulfan II	UG/KG	19	7%	900	0	2	28	3.7	U	3.7	U	3.6	U	3.5	U	4.1	U	4.1	U	3.7	U			
Endrin	UG/KG	20	14%	100	0	4	28	3.7	U	3.7	U	3.6	U	3.5	U	4.1	U	4.1	U	3.7	U			
Gamma-Chlordane	UG/KG	58	11%	540	0	3	28	1.9	U	1.9	U	1.9	U	1.8	U	2.1	U	2.1	U	1.9	U			
Heptachlor	UG/KG	13	7%	100	0	2	28	1.9	U	1.9	U	1.9	U	1.8	U	2.1	U	2.1	U	1.9	U			
Heptachlor epoxide	UG/KG	22	7%	20	1	2	28	1.9	U	1.9	U	1.9	U	1.8	U	2.1	U	2.1	U	1.9	U			
METALS [1]																								
Aluminum	MG/KG	17100	100%	19520	0	28	28	8370		7210		10900		4460		14200		11200		4820				
Antimony	MG/KG	7.2	25%	6	1	7	28	1.3	UR	1.2	UR	1	UR	0.9	UR	1.5	UR	1.3	UR	1.2	UR			
Arsenic	MG/KG	5.9	100%	8.9	0	28	28	3.5		3.4		2.9		0.88	J	5.9		5.8		2.5				
Barium	MG/KG	125	100%	300	0	28	28	63.9		68.7		55		17	J	112		100		51.3				
Beryllium	MG/KG	0.74	100%	1.13	0	28	28	0.31	J	0.27	J	0.44	J	0.17	J	0.51	J	0.38	J	0.14	J			
Cadmium	MG/KG	94.3	36%	2.46	7	10	28	0.06	U	0.06	U	0.05	U	0.04	U	0.07	U	0.06	U	0.06	U			
Calcium	MG/KG	142000	100%	125300	1	28	28	83200		73900		46100		6980		54600		42900		75600	J			
Chromium	MG/KG	83.3	100%	30	4	28	28	13.9		12.4		20.4		8.5		21.1		16.2		8.2				
Cobalt	MG/KG	26.5	100%	30	0	28	28	7.7	J	7	J	12.9		9.1		14.3		12.9		5.1	J			
Copper	MG/KG	215	100%	33	5	28	28	20.3		20.5		33.7		11.5		28.4		23.9		13.3				
Cyanide	MG/KG	1.5	7%	0.35	2	2	28	0.55	U	0.6	U	0.53	U	0.53	U	0.63	U	0.64	U	0.57	UJ			
Iron	MG/KG	35700	100%	37410	0	28	28	19100	J	18100	J	27000	J	11000	J	27800	J	22800	J	10100				
Lead	MG/KG	366	100%	24.4	3	28	28	7.3		6.6		16		9		11.9		9.1		3.4	J			
Magnesium	MG/KG	34300	100%	21700	1	28	28	13200		17200		9010		2090		13200		13700		34300				
Manganese	MG/KG	631	100%	1100	0	28	28	408		364		383		169		631		540		339				
Mercury	MG/KG	0.06	18%	0.1	0	5	28	0.05	UJ	0.06	UJ	0.05	UJ	0.06	J	0.06	UJ	0.06	UJ	0.05	U			
Nickel	MG/KG	201	93%	50	2	26	28	23.2		20.3		44		20		34.1	J	25.8	J	12.1				
Potassium	MG/KG	2090	100%	2623	0	28	28	1270		1250		1240		397	J	1980		1770		760	J			
Selenium	MG/KG	1.2	18%	2	0	5	28	0.95	U	0.92	U	0.76	U	0.68	U	1.1	U	0.97	U	0.94	UJ			
Silver	MG/KG	11.9	14%	0.8	2	4	28	0.25	U	0.24	U	0.2	U	0.18	U	0.29	U	0.25	U	0.24	U			
Sodium	MG/KG	134	57%	188	0	16	28	96.5	J	84.9	J	81.8	J	37.1	U	61.3	U	53	U	51.4	U			
Thallium	MG/KG	1.7	25%	0.855	5	7	28	1.1	U	1	U	0.86	U	0.77	U	1.3	U	1.1	U	1.4	U			
Vanadium	MG/KG	25.6	100%	150	0	28	28	14.7		13.1		16.5		5.8	J	25.6		21.3		10.5				
Zinc	MG/KG	424	100%	115	3	28	28	50.3		51.6		94.9		41.5		66.8		52.4		31.6				

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

TABLE C-6
DISPOSAL PIT A/B
SUMMARY OF SUBSURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								MW12-13		MW12-8		MW12-8		SB12-2		SB12-2		SB12-2		SB12-2	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								123018		123184		123185		12532		123113		12533		123114	
SAMPLE DEPTH TO TOP OF SAMPLE								8		4		8		0.2		6		8		10	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								9.6		6		10		2		8		10		12	
SAMPLE DATE								10/01/98		10/28/98		10/28/98		11/10/97		10/14/98		11/10/97		10/14/98	
QC CODE								SA		SA		SA		SA		SA		SA		SA	
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
VOLATILE ORGANICS																					
Acetone	UG/KG	34	41%	200	0	12	29	12	UJ	11	U	12		5	J	11	U	17	J	11	U
Benzene	UG/KG	6	3%	60	0	1	29	12	U	11	U	11	U	12	U	11	U	11	U	11	U
Ethyl benzene	UG/KG	66	10%	5500	0	3	29	12	U	11	U	11	U	12	U	11	U	11	U	11	U
Methylene chloride	UG/KG	3	7%	100	0	2	29	12	U	11	U	11	U	12	U	11	U	1	J	11	U
Styrene	UG/KG	33	3%		0	1	29	12	U	11	U	11	U	12	U	11	U	11	U	11	U
Toluene	UG/KG	15	34%	1500	0	10	29	14		11	U	11	U	15		11	U	10	J	11	U
Total Xylenes	UG/KG	520	10%	1200	0	3	29	12	U	11	U	11	U	12	U	11	U	11	U	11	U
Trichloroethene	UG/KG	26	14%	700	0	4	29	12	U	11	U	11	U	12	U	11	U	11	U	11	U
SEMI VOLATILE ORGANICS																					
2,4-Dimethylphenol	UG/KG	25	4%		0	1	28	76	UJ	73	U	72	U	77	U	72	UJ	74	U	73	UJ
2-Methylnaphthalene	UG/KG	56	11%	36400	0	3	28	76	UJ	73	U	72	U	77	U	72	U	74	U	73	U
4-Methylphenol	UG/KG	140	4%	900	0	1	28	76	U	73	U	72	U	77	U	72	UJ	74	U	73	U
Acenaphthene	UG/KG	23	4%	50000	0	1	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Acenaphthylene	UG/KG	33	4%	41000	0	1	28	76	UJ	73	U	72	U	77	U	72	U	74	U	73	U
Anthracene	UG/KG	96	11%	50000	0	3	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Benzo(a)anthracene	UG/KG	180	14%	224	0	4	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Benzo(a)pyrene	UG/KG	200	14%	61	1	4	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Benzo(b)fluoranthene	UG/KG	190	14%	1100	0	4	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Benzo(ghi)perylene	UG/KG	120	7%	50000	0	2	28	76	U	73	U	72	U	77	U	72	UJ	74	U	73	U
Benzo(k)fluoranthene	UG/KG	160	11%	1100	0	3	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Bis(2-Ethylhexyl)phthalate	UG/KG	930	25%	50000	0	7	28	11	J	73	U	72	U	77	U	72	UJ	74	U	73	UJ
Butylbenzylphthalate	UG/KG	5.1	4%	50000	0	1	28	76	U	73	U	72	U	77	U	72	UJ	74	U	73	UJ
Chrysene	UG/KG	240	14%	400	0	4	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Di-n-butylphthalate	UG/KG	1700	11%	8100	0	3	28	4	J	73	U	72	U	77	U	72	UJ	74	U	73	U
Di-n-octylphthalate	UG/KG	54	43%	50000	0	12	28	6.9	J	19	J	45	J	77	U	6.2	J	74	U	10	J
Dibenz(a,h)anthracene	UG/KG	57	7%	14	1	2	28	76	U	73	U	72	U	77	U	72	UJ	74	U	73	U
Fluoranthene	UG/KG	420	21%	50000	0	6	28	76	U	73	U	72	U	4	J	72	U	74	U	73	U
Fluorene	UG/KG	52	7%	50000	0	2	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Indeno(1,2,3-cd)pyrene	UG/KG	120	7%	3200	0	2	28	76	U	73	U	72	U	77	U	72	UJ	74	U	73	U
Naphthalene	UG/KG	600	7%	13000	0	2	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Phenanthrene	UG/KG	340	18%	50000	0	5	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U
Phenol	UG/KG	300	7%	30	2	2	28	76	U	73	U	72	U	77	U	72	UJ	74	U	73	U
Pyrene	UG/KG	380	18%	50000	0	5	28	76	U	73	U	72	U	77	U	72	U	74	U	73	U

TABLE C-6
DISPOSAL PIT A/B
SUMMARY OF SUBSURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								MW12-13		MW12-8		MW12-8		SB12-2		SB12-2		SB12-2		SB12-2	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								123018		123184		123185		12532		123113		12533		123114	
SAMPLE DEPTH TO TOP OF SAMPLE								8		4		8		0.2		6		8		10	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								9.6		6		10		2		8		10		12	
SAMPLE DATE								10/01/98		10/28/98		10/28/98		11/10/97		10/14/98		11/10/97		10/14/98	
QC CODE								SA		SA		SA		SA		SA		SA		SA	
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
PESTICIDES/PCBS																					
4,4'-DDE	UG/KG	42	11%	2100	0	3	28	3.8	U	3.7	U	3.6	U	3.8	U	3.6	U	3.7	U	3.7	U
4,4'-DDT	UG/KG	2.1	4%	2100	0	1	28	3.8	U	3.7	U	3.6	U	3.8	U	3.6	U	3.7	U	3.7	U
Aldrin	UG/KG	0.79	4%	41	0	1	28	2	U	1.9	U	1.9	U	2	U	1.9	U	1.9	U	1.9	U
Alpha-BHC	UG/KG	24	7%	110	0	2	28	2	U	1.9	U	1.9	U	2	U	1.9	U	1.9	U	1.9	U
Alpha-Chlordane	UG/KG	4.6	7%		0	2	28	2	U	1.9	U	1.9	U	2	U	1.9	U	1.9	U	1.9	U
Aroclor-1254	UG/KG	3000	21%	10000	0	6	28	38	U	37	U	36	U	38	U	36	U	37	U	37	U
Aroclor-1260	UG/KG	150	7%	10000	0	2	28	38	U	37	U	36	U	38	U	36	U	37	U	37	U
Beta-BHC	UG/KG	2.2	4%	200	0	1	28	2	U	1.9	U	1.9	U	2	U	1.9	U	1.9	U	1.9	U
Dieldrin	UG/KG	40	7%	44	0	2	28	3.8	U	3.7	U	3.6	U	3.8	U	3.6	U	3.7	U	3.7	U
Endosulfan II	UG/KG	19	7%	900	0	2	28	3.8	U	3.7	U	3.6	U	3.8	U	3.6	U	3.7	U	3.7	U
Endrin	UG/KG	20	14%	100	0	4	28	3.8	U	3.7	U	3.6	U	3.8	U	3.6	U	3.7	U	3.7	U
Gamma-Chlordane	UG/KG	58	11%	540	0	3	28	2	U	1.9	U	1.9	U	2	U	1.9	U	1.9	U	1.9	U
Heptachlor	UG/KG	13	7%	100	0	2	28	2	U	1.9	U	1.9	U	2	U	1.9	U	1.9	U	1.9	U
Heptachlor epoxide	UG/KG	22	7%	20	1	2	28	2	U	1.9	U	1.9	U	2	U	1.9	U	1.9	U	1.9	U
METALS [1]																					
Aluminum	MG/KG	17100	100%	19520	0	28	28	11200		7440		7550		13200		7890	J	9570		7010	J
Antimony	MG/KG	7.2	25%	6	1	7	28	1.2	UR	1.2	UR	1.2	UR	0.73	J	1.1	UR	0.74	UJ	1.2	UR
Arsenic	MG/KG	5.9	100%	8.9	0	28	28	3.9		3.1		3.3		4.3		3.8	J	4		3.7	J
Barium	MG/KG	125	100%	300	0	28	28	63.4		73.2		65.8		125		63.3		90.5		76.4	
Beryllium	MG/KG	0.74	100%	1.13	0	28	28	0.46	J	0.45	J	0.43	J	0.39		0.3	J	0.36		0.24	J
Cadmium	MG/KG	94.3	36%	2.46	7	10	28	0.06	U	0.36	U	0.35	U	9.0		0.05	U	0.06	U	0.06	U
Calcium	MG/KG	142000	100%	125300	1	28	28	43100	J	87500		64400		46100		97000	J	90900		82100	J
Chromium	MG/KG	83.3	100%	30	4	28	28	20.5		12	J	13.3	J	83.3		14.2		14.9		11.8	
Cobalt	MG/KG	26.5	100%	30	0	28	28	15.2		8.1	J	12.1		9.9		7.6	J	7.5		7.9	J
Copper	MG/KG	215	100%	33	5	28	28	31.5		20		21.9		24.9		22.5		19.6		24.6	
Cyanide	MG/KG	1.5	7%	0.35	2	2	28	0.64	UJ	1.5		0.72		0.68	U	0.58	U	0.64	U	0.59	U
Iron	MG/KG	35700	100%	37410	0	28	28	25500		16500		17300		22300		16300		18400		16500	
Lead	MG/KG	366	100%	24.4	3	28	28	11.5	J	5.9	J	7.6	J	27.2		9.4	J	7.4		7.2	J
Magnesium	MG/KG	34300	100%	21700	1	28	28	8350		16500		13400		12500		16400	J	18200		17100	J
Manganese	MG/KG	631	100%	1100	0	28	28	393		406		416		507		448		375		451	
Mercury	MG/KG	0.06	18%	0.1	0	5	28	0.06	U	0.05	U	0.05	U	0.06	U	0.05	U	0.05	U	0.05	U
Nickel	MG/KG	201	93%	50	2	26	28	44.2		22.9	UJ	27.6	UJ	42.5		22.7	J	21		24.4	J
Potassium	MG/KG	2090	100%	2623	0	28	28	1340		1300		1260		1840	J	1120		2090	J	1220	
Selenium	MG/KG	1.2	18%	2	0	5	28	0.92	UJ	0.46	U	0.57	J	0.94	U	0.84	U	1	U	0.89	U
Silver	MG/KG	11.9	14%	0.8	2	4	28	0.24	U	0.24	U	0.23	U	0.42	U	0.22	U	0.45	U	0.23	U
Sodium	MG/KG	134	57%	188	0	16	28	84	J	99	J	49.2	U	121	U	134	J	129	U	78.9	J
Thallium	MG/KG	1.7	25%	0.855	5	7	28	1.2	U	1.7	J	1.5	J	1.3	U	0.95	U	1.3	U	1.1	J
Vanadium	MG/KG	25.6	100%	150	0	28	28	17		13.9		13.5		22.4		13.5		18.2		12.7	
Zinc	MG/KG	424	100%	115	3	28	28	105		45.4	J	57.2	J	104	J	45.3	J	45.3	J	51.3	J

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKG

TABLE C-6
DISPOSAL PIT A/B
SUMMARY OF SUBSURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								SB12-3		SB12-3		SB12-3		SB12-4		SB12-4	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								12525		12527		12526		12528		12529	
SAMPLE DEPTH TO TOP OF SAMPLE								1		8		10		2		4	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								4		10		11.9		4		6	
SAMPLE DATE								11/09/97		11/09/97		11/09/97		11/09/97		11/09/97	
QC CODE								SA		SA		SA		SA		SA	
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER										
			OF	TAGM	ABOVE	OF	OF										
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
VOLATILE ORGANICS																	
Acetone	UG/KG	34	41%	200	0	12	29	9	J	30	J	20	J	17	J	34	J
Benzene	UG/KG	6	3%	60	0	1	29	12	U	6	J	12	U	12	U	12	U
Ethyl benzene	UG/KG	66	10%	5500	0	3	29	12	U	66		12	U	12	U	12	U
Methylene chloride	UG/KG	3	7%	100	0	2	29	12	U	3	J	12	U	12	U	12	U
Styrene	UG/KG	33	3%		0	1	29	12	U	33		12	U	12	U	12	U
Toluene	UG/KG	15	34%	1500	0	10	29	12	U	2	J	6	J	6	J	2	J
Total Xylenes	UG/KG	520	10%	1200	0	3	29	12	U	10	J	12	U	12	U	12	U
Trichloroethene	UG/KG	26	14%	700	0	4	29	12	U	16	U	12	U	12	U	1	J
SEMI VOLATILE ORGANICS																	
2,4-Dimethylphenol	UG/KG	25	4%		0	1	28	85	U			77	U	80	U	75	U
2-Methylnaphthalene	UG/KG	56	11%	36400	0	3	28	85	U			77	U	80	U	75	U
4-Methylphenol	UG/KG	140	4%	900	0	1	28	85	U			77	U	80	U	75	U
Acenaphthene	UG/KG	23	4%	50000	0	1	28	85	U			77	U	80	U	75	U
Acenaphthylene	UG/KG	33	4%	41000	0	1	28	85	U			77	U	80	U	75	U
Anthracene	UG/KG	96	11%	50000	0	3	28	85	U			77	U	80	U	4.4	J
Benzo(a)anthracene	UG/KG	180	14%	224	0	4	28	85	U			77	U	80	U	5.8	J
Benzo(a)pyrene	UG/KG	200	14%	61	1	4	28	85	U			77	U	80	U	7.1	J
Benzo(b)fluoranthene	UG/KG	190	14%	1100	0	4	28	85	U			77	U	80	U	6	J
Benzo(ghi)perylene	UG/KG	120	7%	50000	0	2	28	85	U			77	U	80	U	6.7	J
Benzo(k)fluoranthene	UG/KG	160	11%	1100	0	3	28	85	U			77	U	80	U	6.4	J
Bis(2-Ethylhexyl)phthalate	UG/KG	930	25%	50000	0	7	28	85	U			390		80	U	75	U
Butylbenzylphthalate	UG/KG	5.1	4%	50000	0	1	28	85	U			77	U	80	U	5.1	J
Chrysene	UG/KG	240	14%	400	0	4	28	85	U			77	U	80	U	5.7	J
Di-n-butylphthalate	UG/KG	1700	11%	8100	0	3	28	85	U			77	U	80	U	75	U
Di-n-octylphthalate	UG/KG	54	43%	50000	0	12	28	7.9	J			54	J	5.2	J	7	J
Dibenz(a,h)anthracene	UG/KG	57	7%	14	1	2	28	85	U			77	U	80	U	6	J
Fluoranthene	UG/KG	420	21%	50000	0	6	28	4.5	J			77	U	80	U	5.1	J
Fluorene	UG/KG	52	7%	50000	0	2	28	85	U			77	U	80	U	75	U
Indeno(1,2,3-cd)pyrene	UG/KG	120	7%	3200	0	2	28	85	U			77	U	80	U	5.7	J
Naphthalene	UG/KG	600	7%	13000	0	2	28	85	U			77	U	80	U	75	U
Phenanthrene	UG/KG	340	18%	50000	0	5	28	85	U			77	U	80	U	4.7	J
Phenol	UG/KG	300	7%	30	2	2	28	85	U			77	U	80	U	75	U
Pyrene	UG/KG	380	18%	50000	0	5	28	4.6	J			77	U	80	U	4.4	J

TABLE C-6
DISPOSAL PIT A/B
SUMMARY OF SUBSURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
		LOCATION ID						SB12-3		SB12-3		SB12-3		SB12-4		SB12-4	
		MATRIX						SOIL		SOIL		SOIL		SOIL		SOIL	
		SAMPLE ID						12525		12527		12526		12528		12529	
		SAMPLE DEPTH TO TOP OF SAMPLE						1		8		10		2		4	
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						4		10		11.9		4		6	
		SAMPLE DATE						11/09/97		11/09/97		11/09/97		11/09/97		11/09/97	
		QC CODE						SA		SA		SA		SA		SA	
		STUDY ID						RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
PESTICIDES/PCBS																	
4,4'-DDE	UG/KG	42	11%	2100	0	3	28	42	J			26	J	4	U	3.8	U
4,4'-DDT	UG/KG	2.1	4%	2100	0	1	28	13	U			3.8	U	4	U	3.8	U
Aldrin	UG/KG	0.79	4%	41	0	1	28	6.5	U			2	U	2	U	1.9	U
Alpha-BHC	UG/KG	24	7%	110	0	2	28	6.5	U			2	U	2	U	1.9	U
Alpha-Chlordane	UG/KG	4.6	7%		0	2	28	6.5	U			4.6	J	2	U	1.9	U
Aroclor-1254	UG/KG	3000	21%	10000	0	6	28	3000				1900		40	U	38	U
Aroclor-1260	UG/KG	150	7%	10000	0	2	28	130	U			38	U	40	U	38	U
Beta-BHC	UG/KG	2.2	4%	200	0	1	28	6.5	U			2	U	2	U	1.9	U
Dieldrin	UG/KG	40	7%	44	0	2	28	40	J			25	J	4	U	3.8	U
Endosulfan II	UG/KG	19	7%	900	0	2	28	19	J			9.5	J	4	U	3.8	U
Endrin	UG/KG	20	14%	100	0	4	28	16	J			8.6	J	4	U	3.8	U
Gamma-Chlordane	UG/KG	58	11%	540	0	3	28	58	J			44	J	2	U	1.9	U
Heptachlor	UG/KG	13	7%	100	0	2	28	6.5	U			2	U	2	U	1.9	U
Heptachlor epoxide	UG/KG	22	7%	20	1	2	28	11	J			2	U	2	U	1.9	U
METALS [1]																	
Aluminum	MG/KG	17100	100%	19520	0	28	28	12900				15700		11900		13100	
Antimony	MG/KG	7.2	25%	6	1	7	28	1.3	J			0.76	UJ	0.75	UJ	0.81	J
Arsenic	MG/KG	5.9	100%	8.9	0	28	28	4.3				3.6		5.5		3.8	
Barium	MG/KG	125	100%	300	0	28	28	86.1				74.5		67.4		82.1	
Beryllium	MG/KG	0.74	100%	1.13	0	28	28	0.43	J			0.72	J	0.36		0.52	
Cadmium	MG/KG	94.3	36%	2.46	7	10	28	1.1				0.6		0.06	U	0.07	U
Calcium	MG/KG	142000	100%	125300	1	28	28	37200				5510		35900		52000	
Chromium	MG/KG	83.3	100%	30	4	28	28	19.5				30.1		16.6		23.4	
Cobalt	MG/KG	26.5	100%	30	0	28	28	11				15.4		11.9		15	
Copper	MG/KG	215	100%	33	5	28	28	27.8				63.7		18.6		32.2	
Cyanide	MG/KG	1.5	7%	0.35	2	2	28	0.76	U			0.7	U	0.73	U	0.66	U
Iron	MG/KG	35700	100%	37410	0	28	28	21900				35700		20500		27800	
Lead	MG/KG	366	100%	24.4	3	28	28	15				61.9		11.8		17.9	
Magnesium	MG/KG	34300	100%	21700	1	28	28	8000				7120		8050		9610	
Manganese	MG/KG	631	100%	1100	0	28	28	619				395		561		430	
Mercury	MG/KG	0.06	18%	0.1	0	5	28	0.06	U			0.05	U	0.06	U	0.04	U
Nickel	MG/KG	201	93%	50	2	26	28	29				70.4		23.6		48.9	
Potassium	MG/KG	2090	100%	2623	0	28	28	1650	J			1740	J	1380	J	1740	J
Selenium	MG/KG	1.2	18%	2	0	5	28	1.1	U			1	U	1	U	1.1	U
Silver	MG/KG	11.9	14%	0.8	2	4	28	0.5	U			1.6		0.45	U	0.48	U
Sodium	MG/KG	134	57%	188	0	16	28	145	U			131	U	129	U	138	U
Thallium	MG/KG	1.7	25%	0.855	5	7	28	1.5	U			1.4	U	1.3	U	1.4	U
Vanadium	MG/KG	25.6	100%	150	0	28	28	21.2				21		20.3		19.5	
Zinc	MG/KG	424	100%	115	3	28	28	79.4	J			160	J	61.7	J	110	J

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKG

TABLE C-7
DISPOSAL PIT C
SUMMARY OF SURFACE SOIL CHEMICAL ANALYSIS
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12					
LOCATION ID								MW12-14		MW12-15		MW12-33		MW12-34		MW12-7					
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL					
SAMPLE ID								123099		123028		123195		123198		123180					
SAMPLE DEPTH TO TOP OF SAMPLE								0		0		0		0		0					
SAMPLE DEPTH TO BOTTOM OF SAMPLE								0.2		0.2		0.2		0.2		0.2					
SAMPLE DATE								14-Oct-98		01-Oct-98		31-Oct-98		31-Oct-98		28-Oct-98					
QC CODE								SA		SA		SA		SA		SA					
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1					
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER														
			OF	TAGM	ABOVE	OF	OF														
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)				
VOLATILE ORGANICS																					
Acetone	UG/KG	15	56%	200	0	5	9	14	U	11	UJ	15		8	J	7	J				
SEMI VOLATILE ORGANICS																					
Anthracene	UG/KG	4.6	11%	50000	0	1	9	85	U	73	U	4.6	J	81	U	85	U				
Benzo(a)anthracene	UG/KG	20	56%	224	0	5	9	85	U	73	U	20	J	9.8	J	5.4	J				
Benzo(a)pyrene	UG/KG	20	67%	61	0	6	9	85	U	73	U	20	J	10	J	6.7	J				
Benzo(b)fluoranthene	UG/KG	28	67%	1100	0	6	9	85	U	73	U	28	J	12	J	7.4	J				
Benzo(ghi)perylene	UG/KG	18	44%	50000	0	4	9	85	U	73	U	18	J	9	J	7.5	J				
Benzo(k)fluoranthene	UG/KG	19	56%	1100	0	5	9	85	U	73	U	19	J	11	J	7.7	J				
Bis(2-Ethylhexyl)phthalate	UG/KG	5.8	11%	50000	0	1	9	85	UJ	5.8	J	86	U	100	U	85	U				
Carbazole	UG/KG	6.4	11%		0	1	9	85	UJ	73	UJ	86	UJ	81	UJ	85	U				
Chrysene	UG/KG	27	89%	400	0	8	9	5.9	J	4.5	J	27	J	13	J	7.7	J				
Di-n-butylphthalate	UG/KG	4.5	22%	8100	0	2	9	85	U	4.5	J	86	U	81	U	85	U				
Di-n-octylphthalate	UG/KG	7.3	11%	50000	0	1	9	85	UJ	73	U	86	U	7.3	J	85	U				
Dibenz(a,h)anthracene	UG/KG	5.8	22%	14	0	2	9	85	U	73	U	5.8	J	81	U	85	U				
Fluoranthene	UG/KG	40	67%	50000	0	6	9	85	U	73	U	40	J	19	J	11	J				
Indeno(1,2,3-cd)pyrene	UG/KG	15	44%	3200	0	4	9	85	U	73	U	15	J	8.9	J	6	J				
Phenanthrene	UG/KG	21	78%	50000	0	7	9	6	J	73	U	21	J	9.4	J	6.6	J				
Pyrene	UG/KG	40	67%	50000	0	6	9	85	U	73	U	40	J	20	J	13	J				
PESTICIDES/PCBS																					
4,4'-DDD	UG/KG	8.6	11%	2900	0	1	9	8.6		3.7	U	4.3	U	4.1	U	4.3	U				
4,4'-DDT	UG/KG	2.2	11%	2100	0	1	9	4.2	U	3.7	U	2.2	J	4.1	U	4.3	U				
METALS [1]																					
Aluminum	MG/KG	14100	100%	19520	0	9	9	12000	J	6480		14100		10200		12400					
Arsenic	MG/KG	4.3	100%	8.9	0	9	9	4.3	J	3.1		3.9		2.9		4.1					
Barium	MG/KG	108	100%	300	0	9	9	90.7		58		94.6		93.8		81.6					
Beryllium	MG/KG	0.69	100%	1.13	0	9	9	0.51	J	0.26	J	0.69	J	0.47	J	0.63	J				
Calcium	MG/KG	75900	100%	125300	0	9	9	2620	J	75900	J	7570		11000		3720					
Chromium	MG/KG	21.6	100%	30	0	9	9	16.5		11.2		21.6	J	15.1		16.5	J				
Cobalt	MG/KG	11	100%	30	0	9	9	11		7.7	J	10.7	J	9.5	J	9	J				
Copper	MG/KG	22.1	100%	33	0	9	9	14.6		17.2		20.8		15.8		15.7					
Iron	MG/KG	23200	100%	37410	0	9	9	23200		15400		22700	J	20800	J	20300					
Lead	MG/KG	24.9	100%	24.4	1	9	9	18.6	J	6.7	J	24.9	J	16.3	J	16	J				
Magnesium	MG/KG	18600	100%	21700	0	9	9	3070	J	18600		4570		4930		3200					
Manganese	MG/KG	700	100%	1100	0	9	9	693		389		700		632	J	640					
Mercury	MG/KG	0.06	11%	0.1	0	1	9	0.06	U	0.05	U	0.06	U	0.06	J	0.06	U				
Nickel	MG/KG	27.6	78%	50	0	7	9	19.5	J	21.9		22.1	UJ	21.4		17.2	UJ				
Potassium	MG/KG	1980	100%	2623	0	9	9	1110	J	891	J	1980		1010	J	1280					
Selenium	MG/KG	0.95	56%	2	0	5	9	1	U	0.9	UJ	0.95	J	1.1	UJ	0.84	J				
Sodium	MG/KG	92.4	33%	188	0	3	9	57.5	U	92.4	J	53.8	U	58.5	U	64.2	U				
Thallium	MG/KG	1.7	33%	0.855	3	3	9	1.6	J	1.3	U	1.6	J	1.5	J	1.3	U				
Vanadium	MG/KG	24.6	100%	150	0	9	9	21.8		12.2		24.6		18.9		21.8					
Zinc	MG/KG	97.3	100%	115	0	9	9	57.6	J	43.5		97.3	J	55.6	J	54.2	J				

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

TABLE C-8
DISPOSAL PIT C
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSIS
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12				
LOCATION ID								MW12-14		MW12-14		MW12-15		MW12-15		MW12-33		MW12-33				
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL				
SAMPLE ID								123100		123101		123029		123030		123196		123197				
SAMPLE DEPTH TO TOP OF SAMPLE								8		10		6		8		6		10				
SAMPLE DEPTH TO BOTTOM OF SAMPLE								10		12		8		10		8		0				
SAMPLE DATE								14-Oct-98		14-Oct-98		01-Oct-98		01-Oct-98		31-Oct-98		31-Oct-98				
QC CODE								SA		SA		SA		SA		SA		SA				
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1				
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER															
			OF	TAGM	ABOVE	OF	OF															
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q			
VOLATILE ORGANICS																						
Acetone	UG/KG	61	21%	200	0	9	42	14	UJ	14	UJ	9	J	11	UJ	15		10	J			
Chlorobenzene	UG/KG	5	5%	1700	0	2	42	11	UJ	11	UJ	11	UR	11	UJ	11	U	11	UJ			
Methylene chloride	UG/KG	180	12%	100	1	5	42	11	U	11	UJ	11	U	11	U	11	U	11	UJ			
Tetrachloroethene	UG/KG	2	2%	1400	0	1	42	11	UJ	11	UJ	11	UJ	11	U	11	U	11	UJ			
Toluene	UG/KG	62	14%	1500	0	6	42	11	UJ	7	J	10	J	62		11	U	11	UJ			
Total Xylenes	UG/KG	14	2%	1200	0	1	42	11	UJ	11	UJ	11	UR	11	UJ	11	U	11	UJ			
Trichloroethene	UG/KG	2	2%	700	0	1	42	11	UJ	11	UJ	11	UJ	11	U	11	U	11	UJ			
SEMI VOLATILE ORGANICS																						
2-Methylnaphthalene	UG/KG	22	10%	36400	0	4	42	72	U	73	U	72	UJ	72	UJ	74	U	72	U			
Acenaphthene	UG/KG	44	12%	50000	0	5	42	72	U	73	U	72	U	72	U	74	U	72	U			
Anthracene	UG/KG	63	21%	50000	0	9	42	72	U	73	U	72	U	72	U	74	U	72	U			
Benzo(a)anthracene	UG/KG	200	45%	224	0	19	42	72	U	73	U	72	U	72	U	74	U	6.3	J			
Benzo(a)pyrene	UG/KG	180	48%	61	4	20	42	72	U	73	U	72	U	72	U	74	U	8.8	J			
Benzo(b)fluoranthene	UG/KG	320	48%	1100	0	20	42	72	U	73	U	72	U	72	U	74	U	12	J			
Benzo(ghi)perylene	UG/KG	98	43%	50000	0	18	42	72	UJ	73	UJ	72	U	72	U	4.3	J	8.1	J			
Benzo(k)fluoranthene	UG/KG	170	38%	1100	0	16	42	72	U	73	U	72	U	72	U	74	U	10	J			
Bis(2-Ethylhexyl)phthalate	UG/KG	16	14%	50000	0	6	42	74	UJ	73	UJ	12	J	14	J	74	U	100	U			
Butylbenzylphthalate	UG/KG	30	12%	50000	0	5	42	72	UJ	73	UJ	72	U	72	U	74	U	72	U			
Carbazole	UG/KG	40	14%		0	6	42	72	UJ	73	UJ	72	UJ	72	U	74	UJ	72	UJ			
Chrysene	UG/KG	310	50%	400	0	21	42	72	U	73	U	72	U	72	UJ	74	U	13	J			
Di-n-butylphthalate	UG/KG	52	19%	8100	0	8	42	72	U	73	U	11	J	10	J	74	U	72	U			
Di-n-octylphthalate	UG/KG	20	24%	50000	0	10	42	11	J	9.1	J	3.8	J	8.4	J	74	U	15	J			
Dibenz(a,h)anthracene	UG/KG	99	19%	14	4	8	42	72	UJ	73	UJ	72	U	72	U	74	U	72	U			
Dibenzofuran	UG/KG	4.1	2%	6200	0	1	42	72	U	73	U	72	U	72	U	74	U	72	U			
Fluoranthene	UG/KG	320	45%	50000	0	19	42	72	U	73	U	72	U	72	U	74	U	11	J			
Fluorene	UG/KG	35	5%	50000	0	2	42	72	U	73	U	72	U	72	U	74	U	72	U			
Indeno(1,2,3-cd)pyrene	UG/KG	140	31%	3200	0	13	42	72	UJ	73	UJ	72	U	72	U	74	U	6.3	J			
N-Nitrosodiphenylamine	UG/KG	9500	2%		0	1	42	72	U	73	U	72	U	72	U	74	U	72	U			
Naphthalene	UG/KG	13	2%	13000	0	1	42	72	U	73	U	72	U	72	U	74	U	72	U			
Phenanthrene	UG/KG	280	43%	50000	0	18	42	72	U	73	U	72	U	72	U	74	U	6.8	J			
Pyrene	UG/KG	310	48%	50000	0	20	42	72	U	73	U	72	U	72	U	74	U	17	J			
PESTICIDE/ PCBs																						
4,4'-DDD	UG/KG	25	10%	2900	0	4	42	3.6	U	3.7	U	3.6	U	3.6	U	3.7	U	3.6	U			
4,4'-DDE	UG/KG	6.4	17%	2100	0	7	42	3.6	U	3.7	U	3.6	U	3.6	U	3.7	U	3.6	U			
4,4'-DDT	UG/KG	4.9	19%	2100	0	8	42	3.6	U	3.7	U	3.6	U	3.6	U	3.7	U	3.6	U			
Alpha-BHC	UG/KG	5.8	2%	110	0	1	42	1.8	U	1.9	U	1.8	U	1.8	U	1.9	U	1.9	U			
Alpha-Chlordane	UG/KG	2.6	2%		0	1	42	1.8	U	1.9	U	1.8	U	1.8	U	1.9	U	1.9	U			
Aroclor-1254	UG/KG	28	2%	10000	0	1	42	36	U	37	U	36	U	36	U	37	U	36	U			
Aroclor-1260	UG/KG	25	2%	10000	0	1	42	36	U	37	U	25	J	36	U	37	U	36	U			

TABLE C-8
DISPOSAL PIT C
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSIS
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT

								FACILITY														
								LOCATION ID														
								MATRIX														
								SAMPLE ID														
								SAMPLE DEPTH TO TOP OF SAMPLE														
								SAMPLE DEPTH TO BOTTOM OF SAMPLE														
								SAMPLE DATE														
								QC CODE														
STUDY ID																						
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER															
			OF	TAGM	ABOVE	OF	OF															
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES															
								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12				
								MW12-14		MW12-14		MW12-15		MW12-15		MW12-33		MW12-33				
								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL				
								123100		123101		123029		123030		123196		123197				
								8		10		6		8		6		10				
								10		12		8		10		8		0				
								14-Oct-98		14-Oct-98		01-Oct-98		01-Oct-98		31-Oct-98		31-Oct-98				
								SA		SA		SA		SA		SA		SA				
								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1				
								VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q			
Beta-BHC	UG/KG	1.7	2%	200	0	1	42	1.8	U	1.9	U	1.8	U	1.8	U	1.9	U	1.9	U			
Gamma-Chlordane	UG/KG	2.3	5%	540	0	2	42	1.8	U	1.9	U	1.8	U	1.8	U	1.9	U	1.9	U			
Heptachlor	UG/KG	8.4	7%	100	0	3	42	1.8	U	1.9	U	1.8	U	1.8	U	1.9	U	1.9	U			
Heptachlor epoxide	UG/KG	2	2%	20	0	1	42	1.8	U	1.9	U	1.8	U	1.8	U	1.9	U	1.9	U			
METALS [1]																						
Aluminum	MG/KG	18600	100%	19520	0	42	42	6380	J	5990	J	7220		5330		8690		6170				
Antimony	MG/KG	0.39	7%	6	0	3	42	1	UR	0.83	UR	1.2	UR	1.1	UR	1.1	UR	1.1	UJ			
Arsenic	MG/KG	11.1	100%	8.9	1	42	42	3.1	J	3.1	J	3.1		1.9		3.3		2.1				
Barium	MG/KG	135	100%	300	0	42	42	69.8		76.7		71.8		63		74.7		90.8				
Beryllium	MG/KG	0.83	100%	1.13	0	42	42	0.23	J	0.23	J	0.28	J	0.18	J	0.47	J	0.32	J			
Cadmium	MG/KG	6	24%	2.46	2	10	42	0.05	U	0.04	U	0.06	U	0.05	U	0.32	U	0.05	U			
Calcium	MG/KG	224000	100%	125300	3	42	42	96500	J	84000	J	66500	J	65000	J	94800		65100				
Chromium	MG/KG	29.7	100%	30	0	42	42	11.4		11		12.5		9.1		14.2	J	10.7				
Cobalt	MG/KG	16.3	100%	30	0	42	42	7	J	8	J	7.6	J	6.1	J	10.5		6.8	J			
Copper	MG/KG	74.5	100%	33	3	42	42	16.7		15.2		17.7		13.4		22.1		19				
Cyanide	MG/KG	2.2	2%	0.35	1	1	42	0.57	U	0.57	U	0.56	UJ	0.55	UJ	0.61	U	0.55	U			
Iron	MG/KG	51000	100%	37410	1	42	42	15500		15300		16400		12400		17600	J	15400	J			
Lead	MG/KG	431	100%	24.4	8	42	42	6.7	J	6	J	4.9	J	3.8	J	5.2	J	8	J			
Magnesium	MG/KG	36100	100%	21700	2	42	42	21000	J	21200	J	14500		19700		20200		16800				
Manganese	MG/KG	857	100%	1100	0	42	42	385		359		350		341		493		312	J			
Mercury	MG/KG	0.15	45%	0.1	3	19	42	0.05	U	0.05	U	0.05	U	0.05	U	0.06	U	0.06	U			
Nickel	MG/KG	45.5	93%	50	0	39	42	19.3	J	21.4	J	23.2		15.6		23.3	UJ	20.9				
Potassium	MG/KG	3670	100%	2623	2	42	42	1200		1110		1180		979		1830		1080				
Selenium	MG/KG	1.9	26%	2	0	11	42	0.77	U	0.63	U	0.93	UJ	0.82	UJ	0.41	U	0.8	UJ			
Silver	MG/KG	1.8	14%	0.8	1	6	42	0.23	J	0.16	U	0.24	U	0.21	U	0.21	U	0.21	U			
Sodium	MG/KG	1420	81%	188	4	34	42	113	J	113	J	73	J	93.4	J	79.7	J	43.8	U			
Thallium	MG/KG	1.7	40%	0.855	12	17	42	1.9	J	0.62	J	1.3	U	1.2	U	0.78	J	1.3	J			
Vanadium	MG/KG	36.4	100%	150	0	42	42	11.8		10.9		12.4		10.1		15.7		11.7				
Zinc	MG/KG	6080	100%	115	7	42	42	33.5	J	38.9	J	53.2		29.6		51.1	J	41	J			

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

TABLE C-8
DISPOSAL PIT C
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSIS
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT

		FACILITY						SEAD-12		SEAD-12		SEAD-12		SEAD-12		
		LOCATION ID						MW12-34		MW12-34		MW12-7		MW12-7		
		MATRIX						SOIL		SOIL		SOIL		SOIL		
		SAMPLE ID						123199		123200		123181		123182		
		SAMPLE DEPTH TO TOP OF SAMPLE						4		10		4		8		
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						6		12		6		10		
		SAMPLE DATE						31-Oct-98		31-Oct-98		28-Oct-98		28-Oct-98		
		QC CODE						SA		SA		SA		SA		
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		
			FREQUENCY OF	NYSDEC TAGM	NUMBER ABOVE	NUMBER OF	NUMBER OF									
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	
VOLATILE ORGANICS																
Acetone	UG/KG	61	21%	200	0	9	42	13		9	J	6	J	5	J	
Chlorobenzene	UG/KG	5	5%	1700	0	2	42	12	U	11	U	12	U	11	U	
Methylene chloride	UG/KG	180	12%	100	1	5	42	12	U	11	U	12	U	11	U	
Tetrachloroethene	UG/KG	2	2%	1400	0	1	42	12	U	11	U	12	U	11	U	
Toluene	UG/KG	62	14%	1500	0	6	42	12	U	11	U	12	U	11	U	
Total Xylenes	UG/KG	14	2%	1200	0	1	42	12	U	11	U	12	U	11	U	
Trichloroethene	UG/KG	2	2%	700	0	1	42	12	U	11	U	12	U	11	U	
SEMI VOLATILE ORGANICS																
2-Methylnaphthalene	UG/KG	22	10%	36400	0	4	42	74	U	72	U	76	U	72	U	
Acenaphthene	UG/KG	44	12%	50000	0	5	42	74	U	72	U	76	U	72	U	
Anthracene	UG/KG	63	21%	50000	0	9	42	74	U	72	U	76	U	72	U	
Benzo(a)anthracene	UG/KG	200	45%	224	0	19	42	4.4	J	72	U	76	U	72	U	
Benzo(a)pyrene	UG/KG	180	48%	61	4	20	42	5.1	J	72	U	76	U	72	U	
Benzo(b)fluoranthene	UG/KG	320	48%	1100	0	20	42	7	J	72	U	76	U	72	U	
Benzo(ghi)perylene	UG/KG	98	43%	50000	0	18	42	5.6	J	5	J	76	U	72	U	
Benzo(k)fluoranthene	UG/KG	170	38%	1100	0	16	42	4.2	J	72	U	76	U	72	U	
Bis(2-Ethylhexyl)phthalate	UG/KG	16	14%	50000	0	6	42	74	U	130	U	76	U	72	U	
Butylbenzylphthalate	UG/KG	30	12%	50000	0	5	42	74	U	72	U	76	U	72	U	
Carbazole	UG/KG	40	14%		0	6	42	74	UJ	72	U	76	U	72	U	
Chrysene	UG/KG	310	50%	400	0	21	42	8.4	J	9.2	J	76	U	72	U	
Di-n-butylphthalate	UG/KG	52	19%	8100	0	8	42	74	U	72	U	76	U	72	U	
Di-n-octylphthalate	UG/KG	20	24%	50000	0	10	42	6.1	J	20	J	14	J	6.9	J	
Dibenz(a,h)anthracene	UG/KG	99	19%	14	4	8	42	74	U	72	U	76	U	72	U	
Dibenzofuran	UG/KG	4.1	2%	6200	0	1	42	74	U	72	U	76	U	72	U	
Fluoranthene	UG/KG	320	45%	50000	0	19	42	6.1	J	72	U	76	U	72	U	
Fluorene	UG/KG	35	5%	50000	0	2	42	74	U	72	U	76	U	72	U	
Indeno(1,2,3-cd)pyrene	UG/KG	140	31%	3200	0	13	42	74	U	72	U	76	U	72	U	
N-Nitrosodiphenylamine	UG/KG	9500	2%		0	1	42	74	U	72	U	76	U	72	U	
Naphthalene	UG/KG	13	2%	13000	0	1	42	74	U	72	U	76	U	72	U	
Phenanthrene	UG/KG	280	43%	50000	0	18	42	74	U	4.6	J	76	U	72	U	
Pyrene	UG/KG	310	48%	50000	0	20	42	6.2	J	7	J	76	U	72	U	
PESTICIDE/ PCBs																
4,4'-DDD	UG/KG	25	10%	2900	0	4	42	3.7	U	3.6	U	3.8	U	3.6	U	
4,4'-DDE	UG/KG	6.4	17%	2100	0	7	42	3.7	U	3.6	U	3.8	U	3.6	U	
4,4'-DDT	UG/KG	4.9	19%	2100	0	8	42	3.7	U	3.6	U	3.8	U	3.6	U	
Alpha-BHC	UG/KG	5.8	2%	110	0	1	42	1.9	U	1.9	U	2	U	1.8	U	
Alpha-Chlordane	UG/KG	2.6	2%		0	1	42	1.9	U	1.9	U	2	U	1.8	U	
Aroclor-1254	UG/KG	28	2%	10000	0	1	42	37	U	36	U	38	U	36	U	
Aroclor-1260	UG/KG	25	2%	10000	0	1	42	37	U	36	U	38	U	36	U	

TABLE C-8
DISPOSAL PIT C
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSIS
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT

		FACILITY						SEAD-12		SEAD-12		SEAD-12		SEAD-12	
		LOCATION ID						MW12-34		MW12-34		MW12-7		MW12-7	
		MATRIX						SOIL		SOIL		SOIL		SOIL	
		SAMPLE ID						123199		123200		123181		123182	
		SAMPLE DEPTH TO TOP OF SAMPLE						4		10		4		8	
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						6		12		6		10	
		SAMPLE DATE						31-Oct-98		31-Oct-98		28-Oct-98		28-Oct-98	
		QC CODE						SA		SA		SA		SA	
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER								
			OF	TAGM	ABOVE	OF	OF								
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Beta-BHC	UG/KG	1.7	2%	200	0	1	42	1.9	U	1.9	U	2	U	1.8	U
Gamma-Chlordane	UG/KG	2.3	5%	540	0	2	42	1.9	U	1.9	U	2	U	1.8	U
Heptachlor	UG/KG	8.4	7%	100	0	3	42	1.9	U	1.9	U	2	U	1.8	U
Heptachlor epoxide	UG/KG	2	2%	20	0	1	42	1.9	U	1.9	U	2	U	1.8	U
METALS [1]															
Aluminum	MG/KG	18600	100%	19520	0	42	42	6380		6930		7400		7700	
Antimony	MG/KG	0.39	7%	6	0	3	42	1	UJ	0.95	UJ	1.2	UR	0.89	UR
Arsenic	MG/KG	11.1	100%	8.9	1	42	42	1.3	J	2.5		3		3.3	
Barium	MG/KG	135	100%	300	0	42	42	51.9		76.8		62.7		68.2	
Beryllium	MG/KG	0.83	100%	1.13	0	42	42	0.32	J	0.29	J	0.39	J	0.38	J
Cadmium	MG/KG	6	24%	2.46	2	10	42	0.05	U	0.05	U	0.35	U	0.26	U
Calcium	MG/KG	224000	100%	125300	3	42	42	16500		72700		72400		62500	
Chromium	MG/KG	29.7	100%	30	0	42	42	12.5		13.4		12.4	J	13.3	J
Cobalt	MG/KG	16.3	100%	30	0	42	42	5	J	9.8		8.2	J	8.4	
Copper	MG/KG	74.5	100%	33	3	42	42	11		24.3		19.4		18.5	
Cyanide	MG/KG	2.2	2%	0.35	1	1	42	0.6	U	0.57	U	0.58	U	0.54	U
Iron	MG/KG	51000	100%	37410	1	42	42	14200	J	18100	J	16500		17200	
Lead	MG/KG	431	100%	24.4	8	42	42	9.6	J	12.1	J	5	J	4.7	J
Magnesium	MG/KG	36100	100%	21700	2	42	42	3590		14200		15300		13800	
Manganese	MG/KG	857	100%	1100	0	42	42	143	J	377	J	378		387	
Mercury	MG/KG	0.15	45%	0.1	3	19	42	0.05	U	0.05	U	0.05	U	0.05	U
Nickel	MG/KG	45.5	93%	50	0	39	42	21.4		29.3		21.7	UJ	21.3	UJ
Potassium	MG/KG	3670	100%	2623	2	42	42	404	J	893		1160		1290	
Selenium	MG/KG	1.9	26%	2	0	11	42	0.77	UJ	1.5	J	0.45	U	0.34	U
Silver	MG/KG	1.8	14%	0.8	1	6	42	0.2	U	0.19	U	0.23	U	0.18	U
Sodium	MG/KG	1420	81%	188	4	34	42	42.5	U	64.9	J	75.1	J	103	J
Thallium	MG/KG	1.7	40%	0.855	12	17	42	0.88	U	1.3	J	1.3	J	1.1	J
Vanadium	MG/KG	36.4	100%	150	0	42	42	9.3		12.8		13.6		13.6	
Zinc	MG/KG	6080	100%	115	7	42	42	37.7	J	85.4	J	49.6	J	50.5	J
(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGF															

TABLE C-9
FORMER DRY WASTE DISPOSAL PIT
SUMMARY OF SURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

								FACILITY		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
								LOCATION ID		MW12-16		MW12-17		MW12-18		MW12-18		MW12-35		MW12-9		SB12-5A	
								MATRIX		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE ID		123149		123152		123043		123037		123186		123155		123096	
								SAMPLE DEPTH TO TOP OF SAMPLE		0		0		0		0		0		0		0	
								SAMPLE DEPTH TO BOTTOM OF SAMPLE		0.2		0.2		0.2		0.2		0.2		0.2		0.2	
								SAMPLE DATE		17-Oct-98		16-Oct-98		02-Oct-98		02-Oct-98		29-Oct-98		17-Oct-98		14-Oct-98	
								QC CODE		SA		SA		DU		SA		SA		SA		SA	
								STUDY ID		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER																
			OF	TAGM	ABOVE	OF	OF																
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)		
VOLATILE ORGANICS																							
Acetone	UG/KG	7	9%	200	0	1	11	12	U	12	UJ	11	UJ	11	U	12	U	12	U	11	U		
Toluene	UG/KG	26	18%	1500	0	2	11	12	U	12	U	26	J	3	J	12	U	12	U	11	U		
SEMI VOLATILE ORGANICS																							
1,2,4-Trichlorobenzene	UG/KG	11	9%	3400	0	1	11	89	UJ	84	U	72	U	11	J	76	U	82	U	75	U		
2-Methylnaphthalene	UG/KG	5.5	9%	36400	0	1	11	89	U	84	UJ	72	U	72	UJ	76	U	82	U	5.5	J		
Benzo(a)anthracene	UG/KG	26	45%	224	0	5	11	89	U	84	U	8	J	5.7	J	9.3	J	82	U	8.3	J		
Benzo(a)pyrene	UG/KG	20	55%	61	0	6	11	89	U	84	UJ	9.4	J	6.2	J	8.8	J	82	U	7.7	J		
Benzo(b)fluoranthene	UG/KG	34	55%	1100	0	6	11	89	U	84	U	10	J	9	J	11	J	82	U	9.9	J		
Benzo(ghi)perylene	UG/KG	11	18%	50000	0	2	11	89	U	84	U	11	J	72	U	6.6	J	82	U	75	UJ		
Benzo(k)fluoranthene	UG/KG	20	55%	1100	0	6	11	89	U	84	U	11	J	7.5	J	9.2	J	82	U	9.8	J		
Bis(2-Ethylhexyl)phthalate	UG/KG	36	27%	50000	0	3	11	36	J	84	U	72	U	9.9	J	76	UJ	11	J	75	UJ		
Butylbenzylphthalate	UG/KG	5.9	9%	50000	0	1	11	89	U	84	U	72	UJ	72	UJ	76	UJ	5.9	J	75	UJ		
Chrysene	UG/KG	32	64%	400	0	7	11	9.2	J	84	U	11	J	7.5	J	13	J	82	U	14	J		
Di-n-butylphthalate	UG/KG	4.5	27%	8100	0	3	11	610	UJ	84	U	72	UJ	4.1	J	76	U	570	UJ	75	UJ		
Di-n-octylphthalate	UG/KG	15	36%	50000	0	4	11	89	U	15	J	7.4	J	15	J	76	U	82	U	9.8	J		
Diethyl phthalate	UG/KG	11	9%	7100	0	1	11	89	U	84	U	72	U	72	UJ	76	U	82	U	11	J		
Fluoranthene	UG/KG	64	82%	50000	0	9	11	89	U	11	J	16	J	11	J	17	J	5.6	J	16	J		
Indeno(1,2,3-cd)pyrene	UG/KG	7.5	36%	3200	0	4	11	89	U	84	U	7.5	J	4.8	J	5.8	J	82	U	5.2	J		
Naphthalene	UG/KG	5.4	9%	13000	0	1	11	89	U	84	UJ	72	U	72	U	76	U	82	U	5.4	J		
Phenanthrene	UG/KG	34	64%	50000	0	7	11	12	J	84	U	8.2	J	6.2	J	8.8	J	82	U	14	J		
Pyrene	UG/KG	51	82%	50000	0	9	11	89	U	8.9	J	14	J	13	J	17	J	5.2	J	20	J		
PESTICIDES/PCBS																							
4,4'-DDE	UG/KG	2	9%	2100	0	1	11	4.4	U	4.2	U	3.6	U	3.6	U	3.8	U	4.1	U	3.8	U		
4,4'-DDT	UG/KG	4.2	9%	2100	0	1	11	4.4	U	4.2	U	3.6	U	3.6	U	3.8	U	4.1	U	3.8	U		
Aroclor-1242	UG/KG	17	9%		0	1	11	44	U	42	U	36	U	36	U	38	U	41	U	38	U		
Aroclor-1254	UG/KG	23	9%	10000	0	1	11	44	U	42	U	36	U	36	U	38	U	41	U	38	U		
Aroclor-1260	UG/KG	25	9%	10000	0	1	11	44	U	42	U	36	U	36	U	38	U	41	U	38	U		
Endrin aldehyde	UG/KG	2.2	9%		0	1	11	4.4	U	4.2	U	3.6	U	3.6	U	3.8	U	4.1	U	3.8	U		
METALS [1]																							
Aluminum	MG/KG	13600	100%	19520	0	11	11	13600		11600	J	7580		8220		10300		11800		6760	J		
Antimony	MG/KG	1.2	9%	6	0	1	11	1.2	UR	1.4	UR	1.1	UR	1.2	J	1.2	UR	1.2	UR	1	UR		
Arsenic	MG/KG	6.6	100%	8.9	0	11	11	3.9		4.3		3.7		4.5		4.2		4.4		5.2	J		
Barium	MG/KG	102	100%	300	0	11	11	95.4		86.5	J	58.1		63.5		76.4		63.1		77.9			
Beryllium	MG/KG	0.56	100%	1.13	0	11	11	0.5	J	0.56	J	0.23	J	0.32	J	0.54	J	0.43	J	0.28	J		
Cadmium	MG/KG	0.63	9%	2.46	0	1	11	0.06	U	0.07	U	0.05	U	0.06	U	0.36	U	0.06	U	0.05	U		
Calcium	MG/KG	116000	100%	125300	0	11	11	8330		4870		88500	J	68900	J	45600		2820		72100	J		
Chromium	MG/KG	17.3	100%	30	0	11	11	17.3		15.4		9.4	J	13.5		15.7	J	15.4		12.3			
Cobalt	MG/KG	10.4	100%	30	0	11	11	9.1	J	8.6	J	8.6	J	8.6	J	9.7	J	9.6	J	10.4	J		
Copper	MG/KG	30.4	100%	33	0	11	11	22.8		16.9		19.3		21.2		23.8		15.9		20.7			
Iron	MG/KG	23400	100%	37410	0	11	11	20500		21500	J	15900		17400		20600		20100		20600			
Lead	MG/KG	20.5	100%	24.4	0	11	11	20.5		15.7	J	8.5	J	7.7		8.9	J	14	J	14.7	J		
Magnesium	MG/KG	23800	100%	21700	1	11	11	4290		3640	J	13000		12900		9060		3280		10900	J		
Manganese	MG/KG	551	100%	1100	0	11	11	551		445		517	J	409		431		469		392			
Mercury	MG/KG	0.04	9%	0.1	0	1	11	0.07	U	0.06	U	0.05	UJ	0.05	U	0.05	U	0.06	U	0.06	U		
Nickel	MG/KG	30.3	91%	50	0	10	11	23.3		20.8	J	21.4	J	24.4		25.4	UJ	19.3		30.3	J		
Potassium	MG/KG	1870	100%	2623	0	11	11	1770		1010	J	1600		1530		1510		1030		932			
Selenium	MG/KG	1.3	27%	2	0	3	11	0.91	UJ	1.1	UJ	0.41	U	0.86	U	0.68	J	0.91	UJ	0.77	U		
Silver	MG/KG	0.39	18%	0.8	0	2	11	0.24	U	0.28	U	0.27	J	0.22	U	0.39	J	0.24	U	0.2	U		
Sodium	MG/KG	276	64%	188	3	7	11	49.6	U	59.7	U	**276**	J	**259**	J	49.8	U	49.9	U	97.5	J		

TABLE C-9
FORMER DRY WASTE DISPOSAL PIT
SUMMARY OF SURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								MW12-16		MW12-17		MW12-18		MW12-18		MW12-35		MW12-9		SB12-5A	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								123149		123152		123043		123037		123186		123155		123096	
SAMPLE DEPTH TO TOP OF SAMPLE								0		0		0		0		0		0		0	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								0.2		0.2		0.2		0.2		0.2		0.2		0.2	
SAMPLE DATE								17-Oct-98		16-Oct-98		02-Oct-98		02-Oct-98		29-Oct-98		17-Oct-98		14-Oct-98	
QC CODE								SA		SA		DU		SA		SA		SA		SA	
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER														
			OF	TAGM	ABOVE	OF	OF														
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
Thallium	MG/KG	2	36%	0.855	3	4	11	[redacted]	J	1.2	U	0.92	UJ	1.3	U	[redacted]	J	1	U	[redacted]	J
Vanadium	MG/KG	22.8	100%	150	0	11	11	22.8		19.9		14.5		15.6		18.7		19.5		12.8	
Zinc	MG/KG	72.5	100%	115	0	11	11	72.5		47	J	40.6	J	52.2		60.3	J	48		59.2	J
(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.																					

TABLE C-10
FORMER DRY WASTE DISPOSAL PIT
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								MW12-16		MW12-16		MW12-17		MW12-17		MW12-18		MW12-18		MW12-35		MW12-35		MW12-9	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								123150		123151		123153		123154		123038		123039		123187		123188		123156	
SAMPLE DEPTH TO TOP OF SAMPLE								4		6		6		10		6		10		10		14		6	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								6		8		8		12		8		12		12		15.5		8	
SAMPLE DATE								17-Oct-98		17-Oct-98		16-Oct-98		16-Oct-98		02-Oct-98		02-Oct-98		29-Oct-98		29-Oct-98		17-Oct-98	
QC CODE								SA		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																									
Acetone	UG/KG	98	39%	200	0	15	38	11	U	11	U	11	UJ	19	J	11	UJ	8	J	30	U	12	U	11	U
Benzene	UG/KG	2	3%	60	0	1	38	11	U	11	U	11	U	11	U	11	U	11	U	12	U	12	U	11	U
Carbon disulfide	UG/KG	3	5%	2700	0	2	38	11	U	11	U	11	U	11	U	11	U	11	U	12	U	12	U	11	U
Methyl ethyl ketone	UG/KG	3	3%	300	0	1	38	11	U	11	U	11	UJ	11	UJ	11	U	11	U	12	U	12	U	11	U
Methylene chloride	UG/KG	2	11%	100	0	4	38	11	U	11	U	11	U	11	U	11	U	11	U	12	U	12	U	11	U
Toluene	UG/KG	15	24%	1500	0	9	38	11	U	11	U	15		11	UJ	11	U	4	J	12	U	12	U	11	U
SEMI VOLATILE ORGANICS																									
4-Methylphenol	UG/KG	4.7	3%	900	0	1	38	72	U	69	U	72	U	72	U	71	UJ	78	UJ	78	U	75	U	72	U
Benzo(a)anthracene	UG/KG	11	5%	224	0	2	38	5.8	J	69	U	72	U	72	U	71	U	78	U	78	U	75	U	72	U
Benzo(a)pyrene	UG/KG	12	5%	61	0	2	38	5.4	J	69	U	72	UJ	72	UJ	71	U	78	U	78	U	75	U	72	U
Benzo(b)fluoranthene	UG/KG	13	11%	1100	0	4	38	6	J	69	U	72	U	72	U	5	J	78	UJ	78	U	75	U	72	U
Benzo(ghi)perylene	UG/KG	9.6	5%	50000	0	2	38	5.2	J	69	U	72	U	72	U	71	U	78	U	78	U	75	U	72	U
Benzo(k)fluoranthene	UG/KG	10	5%	1100	0	2	38	6	J	69	U	72	U	72	U	71	U	78	U	78	U	75	U	72	U
Bis(2-Ethylhexyl)phthalate	UG/KG	83	29%	50000	0	11	38	29	J	31	J	130	U	110	U	14	J	16	J	78	UJ	75	U	10	J
Butylbenzylphthalate	UG/KG	7.2	5%	50000	0	2	38	72	U	7.2	J	72	U	72	U	71	UJ	78	UJ	78	UJ	75	UJ	5.4	J
Chrysene	UG/KG	15	18%	400	0	7	38	8.3	J	69	U	72	U	72	U	4.9	J	5.7	J	4	J	75	U	72	U
Di-n-butylphthalate	UG/KG	53	13%	8100	0	5	38	500	UJ	610	UJ	72	U	72	U	9.2	J	9	J	78	U	75	U	400	UJ
Di-n-octylphthalate	UG/KG	34	21%	50000	0	8	38	4	J	69	U	11	J	34	J	14	J	8.7	J	78	U	75	U	72	U
Dibenz(a,h)anthracene	UG/KG	4.8	3%	14	0	1	38	72	U	69	U	72	U	72	U	71	U	78	U	78	UJ	75	UJ	72	U
Diethyl phthalate	UG/KG	5.8	3%	7100	0	1	38	72	U	69	U	72	U	72	U	71	UJ	78	UJ	78	U	75	U	72	U
Fluoranthene	UG/KG	18	11%	50000	0	4	38	13	J	69	U	72	U	72	U	71	U	78	U	6	J	75	U	72	U
Indeno(1,2,3-cd)pyrene	UG/KG	7.3	5%	3200	0	2	38	4.2	J	69	U	72	U	72	U	71	U	78	U	78	UJ	75	UJ	72	U
Phenanthrene	UG/KG	13	16%	50000	0	6	38	9.2	J	69	U	72	U	72	U	4.5	J	5.9	J	4.1	J	75	U	72	U
Pyrene	UG/KG	20	13%	50000	0	5	38	12	J	69	U	72	U	72	U	71	U	7.9	J	5.9	J	75	U	72	U
PESTICIDE/ PCBs																									
Aroclor-1242	UG/KG	16	3%		0	1	38	35	U	35	U	36	U	36	U	35	U	39	U	39	U	38	U	36	U
METALS [1]																									
Aluminum	MG/KG	14500	100%	19520	0	38	38	9510		7620		7390	J	6630	J	7240		6730		10100		8970		7010	
Antimony	MG/KG	0.67	3%	6	0	1	38	1.1	UR	1	UR	1.2	UR	1.1	UR	0.96	UR	1.3	UR	1.2	UR	1.1	UR	1.1	UR
Arsenic	MG/KG	8.1	100%	8.9	0	38	38	3.8		3.3		4.6		3.3		3.5		3.2		4.1		8.1		3.8	
Barium	MG/KG	138	100%	300	0	38	38	65.2		66.9		87.3	J	89.6	J	82		82.7		84.2		85.4		80.1	
Beryllium	MG/KG	0.62	100%	1.13	0	38	38	0.34	J	0.31	J	0.3	J	0.26	J	0.31	J	0.23	J	0.59	J	0.48	J	0.27	J
Cadmium	MG/KG	0.52	21%	2.46	0	8	38	0.06	U	0.05	U	0.06	U	0.05	U	0.05	U	0.06	U	0.35	U	0.32	U	0.06	U
Calcium	MG/KG	132000	100%	125300	1	38	38	83800		80000		69200		95600		75900	J	99200	J	51600		96500		93000	
Chromium	MG/KG	20.8	100%	30	0	38	38	14.7		13.1		10.8		11.2		13.3		12.1		15.4	J	15.9	J	11.9	
Cobalt	MG/KG	14.5	100%	30	0	38	38	11.5		7.3	J	10.3		8	J	9.7		8.1	J	9.6	J	9.6		9.3	J
Copper	MG/KG	41.1	100%	33	4	38	38	21.2		18.3		18.3		17.5		23.6		18		23		26.2		20.5	

TABLE C-10
FORMER DRY WASTE DISPOSAL PIT
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								MW12-16		MW12-16		MW12-17		MW12-17		MW12-18		MW12-18		MW12-35		MW12-35		MW12-9	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								123150		123151		123153		123154		123038		123039		123187		123188		123156	
SAMPLE DEPTH TO TOP OF SAMPLE								4		6		6		10		6		10		10		14		6	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								6		8		8		12		8		12		12		15.5		8	
SAMPLE DATE								17-Oct-98		17-Oct-98		16-Oct-98		16-Oct-98		02-Oct-98		02-Oct-98		29-Oct-98		29-Oct-98		17-Oct-98	
QC CODE								SA		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
Iron	MG/KG	41100	100%	37410	1	38	38	18800		17200		15000	J	16000	J	18300		16400		19100		21900		17000	
Lead	MG/KG	16.4	100%	24.4	0	38	38	8.4		7.8	J	7.7	J	8	J	6.9	J	5.5	J	9.8	J	13.3	J	7.5	J
Magnesium	MG/KG	34200	100%	21700	2	38	38	12000		10700		14600	J	16800	J	14600		11500		12600		19100		16900	
Manganese	MG/KG	596	100%	1100	0	38	38	473		363		410		407		392		499		463		470		413	
Mercury	MG/KG	0.5	34%	0.1	4	13	38	0.05	U	0.07	J	0.05	U	0.05	U	0.05	U	0.06	U	0.06	U	0.06	U	0.05	U
Nickel	MG/KG	50.9	92%	50	1	35	38	28.8		23.8		20.6	J	22.4	J	30		23.5		24.7	UJ	28.4	UJ	25.8	
Potassium	MG/KG	2330	100%	2623	0	38	38	1520		1170		1280		1240		1170		1200		1410		1490		1010	
Selenium	MG/KG	2.5	18%	2	2	7	38	0.85	UJ	0.77	UJ	0.92	UJ	0.9	J	0.72	UJ	0.98	UJ	0.44	U	0.93		0.87	UJ
Silver	MG/KG	0.27	8%	0.8	0	3	38	0.22	U	0.2	U	0.24	U	0.22	U	0.19	J	0.26	U	0.23	U	0.21	U	0.23	U
Sodium	MG/KG	252	71%	188	2	27	38	111	J	97.2	J	50.6	U	54.9	J	129	J	147	J	58.1	J	74	J	73.2	UJ
Thallium	MG/KG	2.2	34%	0.855	7	13	38	[illegible]	J	0.87	U	1	U	0.94	U	1.2	U	[illegible]		[illegible]		[illegible]	J	0.98	U
Vanadium	MG/KG	23.8	100%	150	0	38	38	16.5		12.7		13.5		11.8		12.9		11.2		18.9		16.5		12	
Zinc	MG/KG	142	100%	115	1	38	38	52.4		41		44	J	35.7	J	42.6		68.8		57.5	J	60.5	J	49.1	

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

TABLE C-10
FORMER DRY WASTE DISPOSAL PIT
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12					
LOCATION ID								MW12-9		SB12-10		SB12-5A		SB12-5A		SB12-5A		SB12-5A					
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL					
SAMPLE ID								123157		123179		12519		12520		123097		12521					
SAMPLE DEPTH TO TOP OF SAMPLE								10		0		0		3		6		6					
SAMPLE DEPTH TO BOTTOM OF SAMPLE								12		0		3		6		8		9					
SAMPLE DATE								17-Oct-98		27-Oct-98		08-Nov-97		08-Nov-97		14-Oct-98		08-Nov-97					
QC CODE								SA		SA		SA		SA		SA		SA					
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1					
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q				
VOLATILE ORGANICS																							
Acetone	UG/KG	98	39%	200	0	15	38	12		26		8	J	98		16	U	35					
Benzene	UG/KG	2	3%	60	0	1	38	11	U	12	U	11	U	12	U	11	U	11	U				
Carbon disulfide	UG/KG	3	5%	2700	0	2	38	11	U	12	U	11	U	12	U	11	U	11	U				
Methyl ethyl ketone	UG/KG	3	3%	300	0	1	38	11	U	12	U	11	U	12	U	11	U	11	U				
Methylene chloride	UG/KG	2	11%	100	0	4	38	11	U	12	U	11	U	12	U	11	U	11	U				
Toluene	UG/KG	15	24%	1500	0	9	38	11	U	12	U	3	J	12	U	11	U	11	U				
SEMI VOLATILE ORGANICS																							
4-Methylphenol	UG/KG	4.7	3%	900	0	1	38	74	U	4.7	J	74	U	77	U	72	U	74	U				
Benzo(a)anthracene	UG/KG	11	5%	224	0	2	38	74	U	11	J	74	U	77	U	72	U	74	U				
Benzo(a)pyrene	UG/KG	12	5%	61	0	2	38	74	U	12	J	74	U	77	U	72	U	74	U				
Benzo(b)fluoranthene	UG/KG	13	11%	1100	0	4	38	74	U	13	J	74	U	77	U	72	U	74	U				
Benzo(ghi)perylene	UG/KG	9.6	5%	50000	0	2	38	74	U	9.6	J	74	U	77	U	72	UJ	74	U				
Benzo(k)fluoranthene	UG/KG	10	5%	1100	0	2	38	74	U	10	J	74	U	77	U	72	U	74	U				
Bis(2-Ethylhexyl)phthalate	UG/KG	83	29%	50000	0	11	38	22	J	85	U	74	U	77	U	72	UJ	74	U				
Butylbenzylphthalate	UG/KG	7.2	5%	50000	0	2	38	74	U	85	U	74	U	77	U	72	UJ	74	U				
Chrysene	UG/KG	15	18%	400	0	7	38	74	U	15	J	74	U	77	U	72	U	74	U				
Di-n-butylphthalate	UG/KG	53	13%	8100	0	5	38	1100	UJ	85	U	74	U	77	U	72	U	74	U				
Di-n-octylphthalate	UG/KG	34	21%	50000	0	8	38	74	U	15	J	74	U	77	U	13	J	74	U				
Dibenz(a,h)anthracene	UG/KG	4.8	3%	14	0	1	38	74	U	4.8	J	74	U	77	U	72	UJ	74	U				
Diethyl phthalate	UG/KG	5.8	3%	7100	0	1	38	74	U	85	U	74	U	77	U	72	U	74	U				
Fluoranthene	UG/KG	18	11%	50000	0	4	38	74	U	18	J	74	U	77	U	72	U	74	U				
Indeno(1,2,3-cd)pyrene	UG/KG	7.3	5%	3200	0	2	38	74	U	7.3	J	74	U	77	U	72	UJ	74	U				
Phenanthrene	UG/KG	13	16%	50000	0	6	38	74	U	13	J	74	U	77	U	72	U	74	U				
Pyrene	UG/KG	20	13%	50000	0	5	38	74	U	20	J	74	U	77	U	72	U	74	U				
PESTICIDE/ PCBs																							
Aroclor-1242	UG/KG	16	3%		0	1	38	37	U	42	U	37	U	38	U	36	U	37	U				
METALS [1]																							
Aluminum	MG/KG	14500	100%	19520	0	38	38	6810		8590		9170		9790		7920	J	10400					
Antimony	MG/KG	0.67	3%	6	0	1	38	1.2	UR	1.5	UR	0.76	UJ	0.71	UJ	1.3	UR	0.76	UJ				
Arsenic	MG/KG	8.1	100%	8.9	0	38	38	2.7		5.8		4.5		3.7		3.6	J	3.9					
Barium	MG/KG	138	100%	300	0	38	38	72.7		90.4		97.9		71		108		71.1					
Beryllium	MG/KG	0.62	100%	1.13	0	38	38	0.22	J	0.46	J	0.33		0.36		0.33	J	0.34					
Cadmium	MG/KG	0.52	21%	2.46	0	8	38	0.06	U	0.45	U	0.07	U	0.06	U	0.07	U	0.06	U				
Calcium	MG/KG	132000	100%	125300	1	38	38	91000		73600		74500		71600		85500	J	82300					
Chromium	MG/KG	20.8	100%	30	0	38	38	11		18.9	J	14.3		14.9		14.1		16.3					
Cobalt	MG/KG	14.5	100%	30	0	38	38	7.5	J	9.9	J	10.9		9.2		8	J	10.2					
Copper	MG/KG	41.1	100%	33	4	38	38	23.1		41.1		24.6		23.3		21.9		22.9					

TABLE C-10
FORMER DRY WASTE DISPOSAL PIT
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY							SEAD-12			SEAD-12			SEAD-12			SEAD-12			SEAD-12			SEAD-12		
LOCATION ID							MW12-9			SB12-10			SB12-5A			SB12-5A			SB12-5A			SB12-5A		
MATRIX							SOIL			SOIL			SOIL			SOIL			SOIL			SOIL		
SAMPLE ID							123157			123179			12519			12520			123097			12521		
SAMPLE DEPTH TO TOP OF SAMPLE							10			0			0			3			6			6		
SAMPLE DEPTH TO BOTTOM OF SAMPLE							12			0			3			6			8			9		
SAMPLE DATE							17-Oct-98			27-Oct-98			08-Nov-97			08-Nov-97			14-Oct-98			08-Nov-97		
QC CODE							SA			SA			SA			SA			SA			SA		
STUDY ID							RI PHASE 1 STEP 1			RI PHASE 1 STEP 1			RI PHASE 1 STEP 1			RI PHASE 1 STEP 1			RI PHASE 1 STEP 1			RI PHASE 1 STEP 1		
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER																	
			OF	TAGM	ABOVE	OF	OF																	
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	Q	VALUE	Q		VALUE	Q		VALUE	Q		VALUE	Q		VALUE	Q	
Iron	MG/KG	41100	100%	37410	1	38	38	14100		41100			19900			19000			14500			21300		
Lead	MG/KG	16.4	100%	24.4	0	38	38	6.3		5.1	J		12.9			11.2			8	J		11.1		
Magnesium	MG/KG	34200	100%	21700	2	38	38	16100		19400			12300			12500			15400	J		13900		
Manganese	MG/KG	596	100%	1100	0	38	38	432		596			526			454			349			573		
Mercury	MG/KG	0.5	34%	0.1	4	13	38	0.05	U	0.5			0.06			0.06	U		0.05	U		0.05	U	
Nickel	MG/KG	50.9	92%	50	1	35	38	40.9		31.4	UJ		28.7			26.8			24.5	J		31.1		
Potassium	MG/KG	2330	100%	2623	0	38	38	1430		1300			1470	J		1830	J		1470			1980	J	
Selenium	MG/KG	2.5	18%	2	2	7	38	0.87	UJ	0.66	J		1	UJ		0.95	UJ		1	U		1	UJ	
Silver	MG/KG	0.27	8%	0.8	0	3	38	0.23	U	0.3	U		0.46	U		0.43	U		0.26	U		0.45	U	
Sodium	MG/KG	252	71%	188	2	27	38	59.3	J	112	J		133	U		123	U		116	J		131	U	
Thallium	MG/KG	2.2	34%	0.855	7	13	38	1	J	1.1	J		1.4	U		1.3	U		1.1	U		1.4	U	
Vanadium	MG/KG	23.8	100%	150	0	38	38	13.2		18.3			16.3			18			14.2			17.5		
Zinc	MG/KG	142	100%	115	1	38	38	46.8		80	J		56.5			52.8			144	J		56.1		

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGR(

TABLE C-10
FORMER DRY WASTE DISPOSAL PIT
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								SB12-5A		SB12-5A		SB12-5A		SB12-6		SB12-6		SB12-6		SB12-6		SB12-6	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								12522		12523		123098		12514		12515		12516		12517		12518	
SAMPLE DEPTH TO TOP OF SAMPLE								9		12		12		0		3		6		9		12	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								12		14		14		3		6		9		12		14.3	
SAMPLE DATE								08-Nov-97		08-Nov-97		14-Oct-98		08-Nov-97		08-Nov-97		08-Nov-97		08-Nov-97		08-Nov-97	
QC CODE								SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1	
PARAMETER	UNIT	MAXIMUM	FREQUENCY OF DETECTION	NYSDEC TAGM 4046	NUMBER ABOVE TAGM	NUMBER OF DETECTS	NUMBER OF ANALYSES	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q
VOLATILE ORGANICS																							
Acetone	UG/KG	98	39%	200	0	15	38	8	J	20		12	U	11	J	7	J	17		7	J	17	
Benzene	UG/KG	2	3%	60	0	1	38	11	U	2	J	12	U	11	U	11	U	11	U	11	U	11	U
Carbon disulfide	UG/KG	3	5%	2700	0	2	38	11	U	3	J	12	U	11	U	11	U	11	U	11	U	11	U
Methyl ethyl ketone	UG/KG	3	3%	300	0	1	38	11	U	11	UJ	12	U	11	U	11	U	11	U	11	U	11	U
Methylene chloride	UG/KG	2	11%	100	0	4	38	11	U	2	J	12	U	11	U	11	U	2	J	11	U	2	J
Toluene	UG/KG	15	24%	1500	0	9	38	11	U	13	UJ	12	U	11	U	11	U	3	J	11	U	3	J
SEMI VOLATILE ORGANICS																							
4-Methylphenol	UG/KG	4.7	3%	900	0	1	38	73	U	72	U	73	U	75	U	76	U	76	U	75	U	75	U
Benzo(a)anthracene	UG/KG	11	5%	224	0	2	38	73	U	72	U	73	U	75	U	76	U	76	U	75	U	75	U
Benzo(a)pyrene	UG/KG	12	5%	61	0	2	38	73	U	72	U	73	U	75	U	76	U	76	U	75	U	75	U
Benzo(b)fluoranthene	UG/KG	13	11%	1100	0	4	38	73	U	72	U	73	U	75	U	76	U	76	U	75	U	75	U
Benzo(ghi)perylene	UG/KG	9.6	5%	50000	0	2	38	73	U	72	U	73	UJ	75	U	76	U	76	U	75	U	75	U
Benzo(k)fluoranthene	UG/KG	10	5%	1100	0	2	38	73	U	72	U	73	U	75	U	76	U	76	U	75	U	75	U
Bis(2-Ethylhexyl)phthalate	UG/KG	83	29%	50000	0	11	38	73	U	72	U	73	UJ	33	J	76	U	76	U	75	U	75	U
Butylbenzylphthalate	UG/KG	7.2	5%	50000	0	2	38	73	U	72	U	73	UJ	75	U	76	U	76	U	75	U	75	U
Chrysene	UG/KG	15	18%	400	0	7	38	73	U	72	U	73	U	4.5	J	76	U	76	U	75	U	75	U
Di-n-butylphthalate	UG/KG	53	13%	8100	0	5	38	73	U	72	U	73	U	75	U	4.1	J	76	U	75	U	75	U
Di-n-octylphthalate	UG/KG	34	21%	50000	0	8	38	73	U	72	U	6.4	J	75	U	76	U	76	U	75	U	75	U
Dibenz(a,h)anthracene	UG/KG	4.8	3%	14	0	1	38	73	U	72	U	73	UJ	75	U	76	U	76	U	75	U	75	U
Diethyl phthalate	UG/KG	5.8	3%	7100	0	1	38	73	U	72	U	73	U	75	U	5.8	J	76	U	75	U	75	U
Fluoranthene	UG/KG	18	11%	50000	0	4	38	73	U	72	U	73	U	5.3	J	76	U	76	U	75	U	75	U
Indeno(1,2,3-cd)pyrene	UG/KG	7.3	5%	3200	0	2	38	73	U	72	U	73	UJ	75	U	76	U	76	U	75	U	75	U
Phenanthrene	UG/KG	13	16%	50000	0	6	38	73	U	72	U	73	U	4.5	J	76	U	76	U	75	U	75	U
Pyrene	UG/KG	20	13%	50000	0	5	38	73	U	72	U	73	U	5.9	J	76	U	76	U	75	U	75	U
PESTICIDE/ PCBs																							
Aroclor-1242	UG/KG	16	3%		0	1	38	37	U	36	U	37	U	38	U	38	U	38	U	38	U	38	U
METALS [1]																							
Aluminum	MG/KG	14500	100%	19520	0	38	38	9060		8460		6080	J	14500		10900		9160		8890		8230	
Antimony	MG/KG	0.67	3%	6	0	1	38	0.64	UJ	0.67	J	1.2	UR	0.76	UJ	0.74	UJ	0.69	UJ	0.73	UJ	0.77	UJ
Arsenic	MG/KG	8.1	100%	8.9	0	38	38	4.6		3.3		5	J	4.6		4.7		3.8		3.7		2.8	
Barium	MG/KG	138	100%	300	0	38	38	60		42.4		52.7		110		76.8		65.9		61.2		39.1	
Beryllium	MG/KG	0.62	100%	1.13	0	38	38	0.36	J	0.31	J	0.17	J	0.62		0.46		0.34		0.3		0.3	
Cadmium	MG/KG	0.52	21%	2.46	0	8	38	0.06	U	0.05	U	0.06	U	0.07	U	0.06	U	0.06	U	0.06	U	0.07	U
Calcium	MG/KG	132000	100%	125300	1	38	38	79400		95800		105000	J	23300		56800		70500		92400		98600	
Chromium	MG/KG	20.8	100%	30	0	38	38	16.9		14.9		11.3		20.8		17.2		13.2		14.8		14.2	
Cobalt	MG/KG	14.5	100%	30	0	38	38	14.5		9		8.9		10.2		10.7		9.3		11		9.1	
Copper	MG/KG	41.1	100%	33	4	38	38	**34.5**		22.2		16.7		26.9		26.6		20.9		**39.2**		22	

TABLE C-10
FORMER DRY WASTE DISPOSAL PIT
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12								
LOCATION ID								SB12-5A		SB12-5A		SB12-5A		SB12-6		SB12-6		SB12-6		SB12-6		SB12-6								
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL								
SAMPLE ID								12522		12523		123098		12514		12515		12516		12517		12518								
SAMPLE DEPTH TO TOP OF SAMPLE								9		12		12		0		3		6		9		12								
SAMPLE DEPTH TO BOTTOM OF SAMPLE								12		14		14		3		6		9		12		14.3								
SAMPLE DATE								08-Nov-97		08-Nov-97		14-Oct-98		08-Nov-97		08-Nov-97		08-Nov-97		08-Nov-97		08-Nov-97								
QC CODE								SA		SA		SA		SA		SA		SA		SA		SA								
STUDY ID								RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1		RI PHASE 1 STEP 1								
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER																							
			OF	TAGM	ABOVE	OF	OF																							
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q	VALUE	Q							
Iron	MG/KG	41100	100%	37410	1	38	38	25000		19600		16600		24500		23500		17600		20800		18900								
Lead	MG/KG	16.4	100%	24.4	0	38	38	16.4		9.5		6.7	J	11.1		12.8		8.1		12.3		8.2								
Magnesium	MG/KG	34200	100%	21700	2	38	38	9080		12500		12700	J	6860		8890		12000		15100		11700								
Manganese	MG/KG	596	100%	1100	0	38	38	478		415		541		513		432		418		526		418								
Mercury	MG/KG	0.5	34%	0.1	4	13	38	0.04	U	0.05	U	0.06	U	0.06		0.04	U	0.1		0.05	U	0.05	U							
Nickel	MG/KG	50.9	92%	50	1	35	38	44.6		27.1		23	J	31.9		32.1		25.5		37.1		26.7								
Potassium	MG/KG	2330	100%	2623	0	38	38	1230	J	1460	J	1000		1950	J	1870	J	1500	J	1520	J	1550	J							
Selenium	MG/KG	2.5	18%	2	2	7	38	0.87	U	0.83	U	0.88	U	1	UJ	1	UJ	0.92	UJ	0.98	UJ	1	J							
Silver	MG/KG	0.27	8%	0.8	0	3	38	0.39	U	0.37	U	0.23	U	0.46	U	0.45	U	0.41	U	0.44	U	0.46	U							
Sodium	MG/KG	252	71%	188	2	27	38	132	J	140	J	169	J	132	U	129	U	119	U	127	U	133	U							
Thallium	MG/KG	2.2	34%	0.855	7	13	38	1.2	U	1.1	U	0.99	U	1.4	U	1.3	U	1.2	U	1.3	U	1.3	U							
Vanadium	MG/KG	23.8	100%	150	0	38	38	14.9		14.2		10.5		23.8		19.2		15.6		15		13.9								
Zinc	MG/KG	142	100%	115	1	38	38	73.5	J	64.7	J	40.6	J	70		62.4		52.6		54.8		61.8								

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGR(

TABLE C-11
EM-5
SUMMARY OF SURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12	
LOCATION ID								MW12-22		MW12-23	
MATRIX								SOIL		SOIL	
SAMPLE ID								123068		123079	
SAMPLE DEPTH TO TOP OF SAMPLE								0		0	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								0.2		2	
SAMPLE DATE								10/4/1998		10/5/1998	
QC CODE								SA		SA	
STUDY ID								RI Phase 1 Step 1		RI Phase 1 Step 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER				
			OF	TAGM	ABOVE	OF	OF				
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)
VOLATILE ORGANICS											
Acetone	UG/KG	5	20%	200	0	1	5	11	UJ	5	J
Toluene	UG/KG	3	20%	1500	0	1	5	3	J	12	U
SEMI VOLATILE ORGANICS											
Benzo(a)anthracene	UG/KG	16	60%	224	0	3	5	10	J	5.2	J
Benzo(a)pyrene	UG/KG	19	60%	61	0	3	5	11	J	6.1	J
Benzo(b)fluoranthene	UG/KG	20	60%	1100	0	3	5	17	J	9	J
Benzo(ghi)perylene	UG/KG	20	40%	50000	0	2	5	9.8	J	77	U
Benzo(k)fluoranthene	UG/KG	20	60%	1100	0	3	5	13	J	8.4	J
Bis(2-Ethylhexyl)phthalate	UG/KG	900	60%	50000	0	3	5	8.3	J	10	J
Carbazole	UG/KG	7.6	20%		0	1	5	80	UJ	77	UJ
Chrysene	UG/KG	23	60%	400	0	3	5	17	J	9.8	J
Di-n-octylphthalate	UG/KG	5.3	20%	50000	0	1	5	80	UJ	5.3	J
Dibenz(a,h)anthracene	UG/KG	6.8	20%	14	0	1	5	80	U	77	U
Fluoranthene	UG/KG	36	60%	50000	0	3	5	20	J	13	J
Indeno(1,2,3-cd)pyrene	UG/KG	16	40%	3200	0	2	5	8.8	J	77	U
Phenanthrene	UG/KG	22	60%	50000	0	3	5	14	J	7.9	J
Pyrene	UG/KG	37	60%	50000	0	3	5	25	J	12	J
PESTICIDES/PCBS											
Endrin	UG/KG	2.8	20%	100	0	1	5	2.8	J	3.8	U
METALS [1]											
Aluminum	MG/KG	18100	100%	19520	0	5	5	11100		11900	
Arsenic	MG/KG	4.4	100%	8.9	0	5	5	4.4		4.1	
Barium	MG/KG	150	100%	300	0	5	5	89.7		60.2	
Beryllium	MG/KG	0.74	100%	1.13	0	5	5	0.34	J	0.42	J
Calcium	MG/KG	14700	100%	125300	0	5	5	3150		2020	
Chromium	MG/KG	26.9	100%	30	0	5	5	15.4		17.3	
Cobalt	MG/KG	15.6	100%	30	0	5	5	9.5	J	8.8	J
Copper	MG/KG	37.3	100%	33	1	5	5	15.8		17.4	
Iron	MG/KG	37000	100%	37410	0	5	5	18300		19900	
Lead	MG/KG	142	100%	24.4	2	5	5	34		23.8	
Magnesium	MG/KG	5250	100%	21700	0	5	5	2540	J	3220	J
Manganese	MG/KG	835	100%	1100	0	5	5	835		374	
Mercury	MG/KG	0.27	60%	0.1	1	3	5	0.06	J	0.06	U
Nickel	MG/KG	36.6	100%	50	0	5	5	17		21.3	
Potassium	MG/KG	2570	100%	2623	0	5	5	1590		1730	
Selenium	MG/KG	1.4	60%	2	0	3	5	1.1	U	0.83	U
Silver	MG/KG	0.35	20%	0.8	0	1	5	0.35	J	0.22	U
Sodium	MG/KG	70.9	20%	188	0	1	5	59	U	45.7	U
Vanadium	MG/KG	25.4	100%	150	0	5	5	19.8		20.1	
Zinc	MG/KG	174	100%	115	1	5	5	65.7		69.5	

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

TABLE C-12
EM-5
SUMMARY OF SUBURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12	
LOCATION ID								MW12-22		MW12-23	
MATRIX								SOIL		SOIL	
SAMPLE ID								123069		123080	
SAMPLE DEPTH TO TOP OF SAMPLE								2		2	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								4		4	
SAMPLE DATE								10/4/1998		10/5/1998	
QC CODE								SA		SA	
STUDY ID								RI Phase 1 Step 1		RI Phase 1 Step 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER				
			OF	TAGM	ABOVE	OF	OF				
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)
VOLATILE ORGANICS											
Toluene	UG/KG	20	63%	1500	0	5	8	4	J	12	U
SEMI VOLATILE ORGANICS											
2-Methylnaphthalene	UG/KG	520	13%	36400	0	1	8	72	U	72	U
Acenaphthene	UG/KG	1300	13%	50000	0	1	8	72	U	72	U
Anthracene	UG/KG	2700	13%	50000	0	1	8	72	U	72	U
Benzo(a)anthracene	UG/KG	3500	63%	224	1	5	8	72	U	72	U
Benzo(a)pyrene	UG/KG	2600	75%	61	1	6	8	72	U	72	U
Benzo(b)fluoranthene	UG/KG	2200	75%	1100	1	6	8	72	U	72	U
Benzo(ghi)perylene	UG/KG	1400	63%	50000	0	5	8	72	U	72	U
Benzo(k)fluoranthene	UG/KG	2600	75%	1100	1	6	8	72	U	72	U
Bis(2-Ethylhexyl)phthalate	UG/KG	16	75%	50000	0	6	8	16	J	72	UJ
Carbazole	UG/KG	1600	13%		0	1	8	72	UJ	72	UJ
Chrysene	UG/KG	3000	88%	400	1	7	8	3.7	J	72	U
Di-n-butylphthalate	UG/KG	6.6	50%	8100	0	4	8	72	UJ	72	UJ
Di-n-octylphthalate	UG/KG	11	25%	50000	0	2	8	11	J	4.2	J
Dibenz(a,h)anthracene	UG/KG	710	13%	14	1	1	8	72	U	72	U
Dibenzofuran	UG/KG	1000	13%	6200	0	1	8	72	U	72	U
Fluoranthene	UG/KG	7400	75%	50000	0	6	8	72	U	72	U
Fluorene	UG/KG	1500	13%	50000	0	1	8	72	U	72	U
Indeno(1,2,3-cd)pyrene	UG/KG	1500	63%	3200	0	5	8	72	U	72	U
Naphthalene	UG/KG	860	25%	13000	0	2	8	72	U	72	U
Phenanthrene	UG/KG	8500	63%	50000	0	5	8	72	U	72	U
Pyrene	UG/KG	5900	75%	50000	0	6	8	72	U	72	U
PESTICIDES/PCBS											
4,4'-DDD	UG/KG	4	13%	2900	0	1	8	3.6	U	3.6	U
4,4'-DDE	UG/KG	3	13%	2100	0	1	8	3.6	U	3.6	U
4,4'-DDT	UG/KG	4.5	13%	2100	0	1	8	3.6	U	3.6	U
Endosulfan I	UG/KG	1.5	13%	900	0	1	8	1.8	U	1.8	U
Endosulfan sulfate	UG/KG	18	13%	1000	0	1	8	3.6	U	3.6	U
Endrin aldehyde	UG/KG	7.5	13%		0	1	8	3.6	U	3.6	U
Endrin ketone	UG/KG	13	13%		0	1	8	3.6	U	3.6	U
Gamma-Chlordane	UG/KG	3.8	13%	540	0	1	8	1.8	U	1.8	U
Methoxychlor	UG/KG	42	13%		0	1	8	18	U	18	U

TABLE C-12
EM-5
SUMMARY OF SUBURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12	
		LOCATION ID						MW12-22		MW12-23	
		MATRIX						SOIL		SOIL	
		SAMPLE ID						123069		123080	
		SAMPLE DEPTH TO TOP OF SAMPLE						2		2	
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						4		4	
		SAMPLE DATE						10/4/1998		10/5/1998	
		QC CODE						SA		SA	
		STUDY ID						RI Phase 1 Step 1		RI Phase 1 Step 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER				
			OF	TAGM	ABOVE	OF	OF				
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)
METALS [1]											
Aluminum	MG/KG	15000	100%	19520	0	8	8	14200		13100	
Arsenic	MG/KG	5	100%	8.9	0	8	8	3.8		4.1	
Barium	MG/KG	116	100%	300	0	8	8	54.9		55.7	
Beryllium	MG/KG	0.6	100%	1.13	0	8	8	0.57	J	0.5	J
Cadmium	MG/KG	0.12	13%	2.46	0	1	8	0.06	U	0.06	U
Calcium	MG/KG	28900	100%	125300	0	8	8	28900		15900	
Chromium	MG/KG	24.8	100%	30	0	8	8	24.8		23.9	
Cobalt	MG/KG	15.4	100%	30	0	8	8	13.3		15.4	
Copper	MG/KG	73.3	100%	33	5	8	8	33.7		35.4	
Iron	MG/KG	35800	100%	37410	0	8	8	27600		27300	
Lead	MG/KG	112	100%	24.4	6	8	8	19.7		22.3	
Magnesium	MG/KG	8210	100%	21700	0	8	8	6910	J	5500	J
Manganese	MG/KG	723	100%	1100	0	8	8	422		487	
Mercury	MG/KG	1	50%	0.1	3	4	8	0.05	U	0.05	U
Nickel	MG/KG	52	100%	50	1	8	8	48.5		52	
Potassium	MG/KG	2810	100%	2623	3	8	8	1570		1290	
Selenium	MG/KG	1.2	38%	2	0	3	8	0.98	U	0.88	U
Silver	MG/KG	0.32	13%	0.8	0	1	8	0.32	J	0.23	U
Sodium	MG/KG	102	50%	188	0	4	8	75.4	J	66.8	J
Vanadium	MG/KG	25.1	100%	150	0	8	8	20.7		18.4	
Zinc	MG/KG	280	100%	115	6	8	8	95.8		84.8	
(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.											

TABLE C-13
EM-6
SUMMARY OF SURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		
LOCATION ID								MW12-24		MW12-25		MW12-26		
MATRIX								SOIL		SOIL		SOIL		
SAMPLE ID								123161		123164		123167		
SAMPLE DEPTH TO TOP OF SAMPLE								0		0		0		
SAMPLE DEPTH TO BOTTOM OF SAMPLE								0.2		0.2		0.2		
SAMPLE DATE								19-Oct-98		18-Oct-98		18-Oct-98		
QC CODE								SA		SA		SA		
STUDY ID								RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER							
			OF	TAGM	ABOVE	OF	OF							
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	
SEMI VOLATILE ORGANICS														
Benzo(b)fluoranthene	UG/KG	4.3	33%	1100	0	1	3	76	U	4.3	J	77	U	
Bis(2-Ethylhexyl)phthalate	UG/KG	46	100%	50000	0	3	3	36	J	43	J	46	J	
Butylbenzylphthalate	UG/KG	67	67%	50000	0	2	3	76	U	55	J	67	J	
Chrysene	UG/KG	4.4	33%	400	0	1	3	76	U	4.4	J	77	U	
Di-n-octylphthalate	UG/KG	4.2	33%	50000	0	1	3	76	U	80	U	4.2	J	
Fluoranthene	UG/KG	5.8	33%	50000	0	1	3	76	U	5.8	J	77	U	
Pyrene	UG/KG	6.3	33%	50000	0	1	3	76	U	6.3	J	77	U	
METALS [1]														
Aluminum	MG/KG	13300	100%	19520	0	3	3	12100		13300		12500		
Arsenic	MG/KG	5.4	100%	8.9	0	3	3	4.1		5.4		4.3		
Barium	MG/KG	84	100%	300	0	3	3	68.2		70.5		84		
Beryllium	MG/KG	0.5	100%	1.13	0	3	3	0.47	J	0.46	J	0.5	J	
Calcium	MG/KG	23900	100%	125300	0	3	3	20000		2480		23900		
Chromium	MG/KG	19.1	100%	30	0	3	3	18.3		18.7		19.1		
Cobalt	MG/KG	17.7	100%	30	0	3	3	10.9		17.7		12.6		
Copper	MG/KG	26.2	100%	33	0	3	3	21.2		26.2		23.6		
Iron	MG/KG	27100	100%	37410	0	3	3	23200		25600		27100		
Lead	MG/KG	16.2	100%	24.4	0	3	3	10.4	J	16.2	J	14.8	J	
Magnesium	MG/KG	6560	100%	21700	0	3	3	6560		4350		5450		
Manganese	MG/KG	1120	100%	1100	1	3	3	495		1170		644		
Nickel	MG/KG	40.8	100%	50	0	3	3	29.8		40.8		30.8		
Potassium	MG/KG	1120	100%	2623	0	3	3	1120		894	J	1020	J	
Selenium	MG/KG	1.1	33%	2	0	1	3	0.96	UJ	1.1	J	1	UJ	
Thallium	MG/KG	2	67%	0.855	2	2	3	1.1	U	2		1.1	J	
Vanadium	MG/KG	20.1	100%	150	0	3	3	18.3		20.1		19.7		
Zinc	MG/KG	75.8	100%	115	0	3	3	64.1		71.5		75.8		
(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.														

TABLE C-14
EM-6
SUMMARY OF SUBSURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								MW12-25		MW12-25		MW12-26		MW12-26		MW12-24		MW12-24	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								123165		123166		123168		123169		123162		123163	
SAMPLE DEPTH TO TOP OF SAMPLE								2		6		2		6		2		6	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								4		8		4		8		4		8	
SAMPLE DATE								18-Oct-98		18-Oct-98		18-Oct-98		18-Oct-98		19-Oct-98		19-Oct-98	
QC CODE								SA		SA		SA		SA		SA		SA	
STUDY ID								RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER												
			OF	TAGM	ABOVE	OF	OF												
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
VOLATILE ORGANICS																			
Acetone	UG/KG	160	33%	200	0	4	12	12		5	J	160		11	UJ	11	UJ	12	UJ
Ethyl benzene	UG/KG	3	8%	5500	0	1	12	11	U	11	U	3	J	11	U	11	U	12	U
Methyl ethyl ketone	UG/KG	34	17%	300	0	2	12	11	U	11	U	34		11	UJ	11	UJ	12	UJ
Toluene	UG/KG	8	25%	1500	0	3	12	11	U	11	U	12	U	11	U	11	U	4	J
SEMI VOLATILE ORGANICS																			
Anthracene	UG/KG	23	8%	50000	0	1	12	70	U	70	U	75	U	74	U	240	U	250	U
Benzo(a)anthracene	UG/KG	56	17%	224	0	2	12	70	U	70	U	75	U	74	U	240	U	250	U
Benzo(a)pyrene	UG/KG	55	8%	61	0	1	12	70	U	70	U	75	U	74	U	240	U	250	U
Benzo(b)fluoranthene	UG/KG	56	8%	1100	0	1	12	70	U	70	U	75	U	74	U	240	U	250	U
Benzo(ghi)perylene	UG/KG	32	8%	50000	0	1	12	70	U	70	U	75	U	74	U	240	U	250	U
Benzo(k)fluoranthene	UG/KG	61	8%	1100	0	1	12	70	U	70	U	75	U	74	U	240	U	250	U
Bis(2-Ethylhexyl)phthalate	UG/KG	120	25%	50000	0	3	12	19	J	70	U	84		120		240	U	250	U
Butylbenzylphthalate	UG/KG	160	17%	50000	0	2	12	70	U	70	U	100		160		240	U	250	U
Carbazole	UG/KG	27	8%		0	1	12	70	UJ	70	UJ	75	U	74	U	240	UJ	250	UJ
Chrysene	UG/KG	55	17%	400	0	2	12	70	U	70	U	75	U	74	U	240	U	250	U
Di-n-octylphthalate	UG/KG	6.8	17%	50000	0	2	12	70	U	70	U	4.5	J	6.8	J	240	U	250	U
Dibenz(a,h)anthracene	UG/KG	13	8%	14	0	1	12	70	U	70	U	75	U	74	U	240	U	250	U
Fluoranthene	UG/KG	150	25%	50000	0	3	12	70	U	70	U	4.5	J	74	U	240	U	250	U
Fluorene	UG/KG	19	8%	50000	0	1	12	70	U	70	U	75	U	74	U	240	U	250	U
Indeno(1,2,3-cd)pyrene	UG/KG	36	8%	3200	0	1	12	70	U	70	U	75	U	74	U	240	U	250	U
Phenanthrene	UG/KG	120	25%	50000	0	3	12	70	U	70	U	75	U	74	U	240	U	250	U
Pyrene	UG/KG	100	25%	50000	0	3	12	70	U	70	U	4.6	J	74	U	240	U	250	U
METALS [1]																			
Aluminum	MG/KG	16500	100%	19520	0	12	12	12400		9690		12300		12300		9860	J	16500	
Arsenic	MG/KG	6.4	100%	8.9	0	12	12	4.3		3.5		3.6		4.9		4.4		6.2	
Barium	MG/KG	130	100%	300	0	12	12	57.8		53.4		74.8		63.5		47.4		68.8	
Beryllium	MG/KG	0.68	92%	1.13	0	11	12	0.48	J	0.36	J	0.44	J	0.45	J	0.36	J	0.68	J
Calcium	MG/KG	76300	100%	125300	0	12	12	76300		52700		9490		36200		20000		8240	
Chromium	MG/KG	29.6	100%	30	0	12	12	21.4		17.1		19.5		21.5		13.2	J	29.6	J
Cobalt	MG/KG	36.3	100%	30	1	12	12	12.4		9.9		12.6		12.6		7.8	J	17.2	
Copper	MG/KG	28.7	100%	33	0	12	12	26.8		19.4		21.6		28.7		23.2		28.3	
Iron	MG/KG	40600	100%	37410	1	12	12	27300		21300		24800		28900		17400	J	34600	J
Lead	MG/KG	34	100%	24.4	2	12	12	7.9		8.9		11.4	J	7.9	J	5	J	2.6	J
Magnesium	MG/KG	15400	100%	21700	0	12	12	15400		8450		5400		7390		10500		6590	
Manganese	MG/KG	4110	100%	1100	1	12	12	459		372		559		522		424		564	
Mercury	MG/KG	0.06	8%	0.1	0	1	12	0.05	U	0.05	U	0.05	UJ	0.05	UJ	0.05	U	0.06	U
Nickel	MG/KG	47.2	83%	50	0	10	12	36.3		29		32.5		37.3		12.5	UJ	36.8	UJ
Potassium	MG/KG	1570	100%	2623	0	12	12	1220		1100		1150		1140		1160		1260	
Selenium	MG/KG	1.6	17%	2	0	2	12	0.79	UJ	0.79	UJ	0.89	UJ	0.98	UJ	0.48	U	0.43	J

TABLE C-14
EM-6
SUMMARY OF SUBSURFACE SOIL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12				
		LOCATION ID						MW12-25		MW12-25		MW12-26		MW12-26		MW12-24		MW12-24				
		MATRIX						SOIL		SOIL		SOIL		SOIL		SOIL		SOIL				
		SAMPLE ID						123165		123166		123168		123169		123162		123163				
		SAMPLE DEPTH TO TOP OF SAMPLE						2		6		2		6		2		6				
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						4		8		4		8		4		8				
		SAMPLE DATE						18-Oct-98		18-Oct-98		18-Oct-98		18-Oct-98		19-Oct-98		19-Oct-98				
		QC CODE						SA		SA		SA		SA		SA		SA				
		STUDY ID						RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1				
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER															
			OF	TAGM	ABOVE	OF	OF															
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)			
Silver	MG/KG	0.2	8%	0.8	0	1	12	0.21	U	0.21	U	0.23	U	0.26	U	0.25	U	0.2	J			
Sodium	MG/KG	197	75%	188	1	9	12	102	J	55.7	J	48.5	U	53.6	U	98.9	J	148	J			
Thallium	MG/KG	3.8	67%	0.855	7	8	12	1.1	J	0.89	U	1.3	J	1.1	U	1.1	U	0.75	J			
Vanadium	MG/KG	23.8	100%	150	0	12	12	17.8		13.4		18.3		17.5		18.7		23.8				
Zinc	MG/KG	391	100%	115	4	12	12	87.7		68.2		69.3		82.2		47.6	J	80.2	J			
(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.																						

TABLE C-15
CLASS III
SUMMARY OF SURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12			
LOCATION ID								MW12-27		MW12-31		MW12-32		MW12-32		MW12-37		MW12-37		MW12-40			
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
SAMPLE ID								123061		123172		123178		123175		123201		123210		123121			
SAMPLE DEPTH TO TOP OF SAMPLE								0		0		0		0		0		0		0			
SAMPLE DEPTH TO BOTTOM OF SAMPLE								0.2		0.2		0.2		0.2		0.2		0.2		0.2			
SAMPLE DATE								10/4/1998		26-Oct-98		26-Oct-98		26-Oct-98		01-Nov-98		01-Nov-98		14-Oct-98			
QC CODE								SA		SA		DU		SA		SA		SA		SA			
STUDY ID								RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1			
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER																
			OF	TAGM	ABOVE	OF	OF																
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)		
VOLATILE ORGANICS																							
Acetone	UG/KG	55	29%	200	0	17	58	12	UJ	13	UJ	12	UJ	11	UJ	8	J	15		12	U		
Toluene	UG/KG	14	10%	1500	0	6	58	12	U	13	U	4	J	11	U	14		12	U	12	U		
SEMI VOLATILE ORGANICS																							
2-Methylnaphthalene	UG/KG	160	10%	36400	0	6	58	85	U	90	U	90	U	87	U	160	J	36	J	86	U		
2-Methylphenol	UG/KG	36	3%	100	0	2	58	85	U	90	U	5.8	J	87	U	1500	U	390	U	86	U		
4-Methylphenol	UG/KG	930	7%	900	1	4	58	85	U	15	J	90	U	87	U	1500	U	390	U	86	U		
Acenaphthene	UG/KG	1200	9%	50000	0	5	58	85	U	90	U	90	U	87	U	1200	J	280	J	86	U		
Acenaphthylene	UG/KG	22	5%	41000	0	3	58	85	U	90	U	90	U	87	U	1500	U	390	U	86	U		
Anthracene	UG/KG	1500	16%	50000	0	9	58	85	U	90	U	5.1	J	87	U	1500	J	270	J	86	U		
Benzo(a)anthracene	UG/KG	3500	72%	224	3	42	58	6.8	J	12	J	24	J	19	J	3500		980		6	J		
Benzo(a)pyrene	UG/KG	3200	78%	61	5	45	58	8.1	J	11	J	23	J	17	J	3200		920		86	U		
Benzo(b)fluoranthene	UG/KG	2800	90%	1100	1	52	58	10	J	15	J	38	J	28	J	2800		870		86	U		
Benzo(ghi)perylene	UG/KG	2000	57%	50000	0	33	58	85	UJ	13	J	20	J	16	J	2000		520		86	UJ		
Benzo(k)fluoranthene	UG/KG	2900	78%	1100	1	45	58	10	J	12	J	31	J	22	J	2900		900		86	U		
Bis(2-Ethylhexyl)phthalate	UG/KG	10000	14%	50000	0	8	58	85	UJ	90	U	90	U	87	U	1500	UJ	390	UJ	86	U		
Butylbenzylphthalate	UG/KG	23	3%	50000	0	2	58	85	UJ	90	U	90	U	87	U	1500	UJ	390	UJ	86	U		
Carbazole	UG/KG	1100	22%		0	13	58	85	UJ	90	U	9.2	J	5.6	J	1100	J	260	J	86	UJ		
Chrysene	UG/KG	3600	93%	400	3	54	58	11	J	18	J	42	J	31	J	3600		1000		17	J		
Di-n-butylphthalate	UG/KG	23	55%	8100	0	32	58	85	U	90	U	90	U	87	U	1500	U	390	U	86	U		
Di-n-octylphthalate	UG/KG	15	3%	50000	0	2	58	85	UJ	90	U	13	J	87	U	1500	U	390	U	15	J		
Dibenz(a,h)anthracene	UG/KG	680	17%	14	5	10	58	85	UJ	90	U	6.9	J	4.6	J	680	J	190	J	86	UJ		
Dibenzofuran	UG/KG	500	9%	6200	0	5	58	85	U	90	U	90	U	87	U	500	J	110	J	86	U		
Diethyl phthalate	UG/KG	92	5%	7100	0	3	58	85	U	90	U	90	U	87	U	1500	U	390	U	86	U		
Fluoranthene	UG/KG	8500	97%	50000	0	56	58	13	J	24	J	59	J	48	J	8500		2200		19	J		
Fluorene	UG/KG	830	9%	50000	0	5	58	85	U	90	U	90	U	87	U	830	J	190	J	86	U		
Indeno(1,2,3-cd)pyrene	UG/KG	1700	57%	3200	0	33	58	85	UJ	8.1	J	19	J	14	J	1700		500		86	UJ		
Naphthalene	UG/KG	540	9%	13000	0	5	58	85	U	90	U	90	U	87	U	540	J	100	J	86	U		
Phenanthrene	UG/KG	7500	86%	50000	0	50	58	10	J	9	J	27	J	16	J	7500		1800		9.6	J		
Phenol	UG/KG	42	29%	30	2	17	58	19	J	90	U	90	U	87	U	1500	U	390	U	86	U		
Pyrene	UG/KG	7000	93%	50000	0	54	58	16	J	25	J	61	J	46	J	7000		2200		15	J		
PESTICIDES/PCBS																							
4,4'-DDD	UG/KG	51	10%	2900	0	6	58	4.2	U	4.5	U	4.5	U	4.3	U	3.9	U	3.9	U	4.3	U		
4,4'-DDE	UG/KG	5	12%	2100	0	7	58	4.2	U	4.5	U	4.5	U	4.3	U	3.2	J	3.1	J	4.3	U		
4,4'-DDT	UG/KG	5.1	10%	2100	0	6	58	4.2	U	4.5	U	4.5	U	4.3	U	4	J	3.5	J	4.3	U		
Alpha-BHC	UG/KG	51	5%	110	0	3	58	2.2	U	2.4		24		51		2	U	2	U	2.2	U		
Alpha-Chlordane	UG/KG	2.8	3%		0	2	58	2.2	U	2.3	U	2.3	U	2.2	U	2	U	2	U	2.2	U		
Aroclor-1254	UG/KG	64	2%	10000	0	1	58	42	U	45	U	45	U	43	U	39	U	39	U	43	U		
Beta-BHC	UG/KG	6.1	5%	200	0	3	58	2.2	U	2.3	U	3.9		6.1		2	U	2	U	2.2	U		
Dieldrin	UG/KG	3.2	2%	44	0	1	58	4.2	U	4.5	U	4.5	U	4.3	U	3.9	U	3.9	U	4.3	U		
Endosulfan I	UG/KG	1.9	3%	900	0	2	58	2.2	U	2.3	U	2.3	U	2.2	U	2	U	2	U	2.2	U		
Endosulfan II	UG/KG	3	3%	900	0	2	58	4.2	U	4.5	U	4.5	U	4.3	U	3.9	U	3.9	U	4.3	U		
Endosulfan sulfate	UG/KG	5.6	5%	1000	0	3	58	4.2	U	4.5	U	4.5	U	4.3	U	3.9	U	3.5	J	4.3	U		
Endrin	UG/KG	5.8	5%	100	0	3	58	4.2	U	4.5	U	4.5	U	4.3	U	3.9	U	3.9	U	4.3	U		
Gamma-BHC/Lindane	UG/KG	17	2%	60	0	1	58	2.2	U	2.3	U	2.3	U	17		2	U	2	U	2.2	U		
Gamma-Chlordane	UG/KG	1.5	3%	540	0	2	58	2.2	U	2.3	U	2.3	U	2.2	U	1.2	J	2	U	2.2	U		
Heptachlor epoxide	UG/KG	6.5	3%	20	0	2	58	2.2	U	2.3	U	2.3	U	2.2	U	6.5		5.4	J	2.2	U		

TABLE C-15
CLASS III
SUMMARY OF SURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA army DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12			
LOCATION ID								MW12-27		MW12-31		MW12-32		MW12-32		MW12-37		MW12-37		MW12-40			
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
SAMPLE ID								123061		123172		123178		123175		123201		123210		123121			
SAMPLE DEPTH TO TOP OF SAMPLE								0		0		0		0		0		0		0			
SAMPLE DEPTH TO BOTTOM OF SAMPLE								0.2		0.2		0.2		0.2		0.2		0.2		0.2			
SAMPLE DATE								10/4/1998		26-Oct-98		26-Oct-98		26-Oct-98		01-Nov-98		01-Nov-98		14-Oct-98			
QC CODE								SA		SA		DU		SA		SA		SA		SA			
STUDY ID								RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1			
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER																
			OF	TAGM	ABOVE	OF	OF																
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)		
METALS [1]																							
Aluminum	MG/KG	18700	100%	19520	0	58	58	14800		16700		14500		12300		6440		6610		13500	J		
Antimony	MG/KG	1.6	3%	6	0	2	58	1.2	R	1.5	R	1.5	R	1.3	R	1.1	UJ	0.96	UJ	1	R		
Arsenic	MG/KG	6.2	100%	8.9	0	58	58	5.2		4.6		2.5		3.9		1.9		2.6		4.3	J		
Barium	MG/KG	146	100%	300	0	58	58	77.3		86.2		126		111		36.8		40.4		80			
Beryllium	MG/KG	0.96	100%	1.13	0	58	58	0.47	J	0.67	J	0.71	J	0.61	J	0.22	J	0.23	J	0.56	J		
Cadmium	MG/KG	0.86	2%	2.46	0	1	58	0.06	U	0.44	U	0.43	U	0.37	U	0.05	U	0.05	U	0.05	U		
Calcium	MG/KG	154000	100%	125300	1	58	58	1690		4800		8100		7610		21700		34200		13200	J		
Chromium	MG/KG	26.8	100%	30	0	58	58	22.8		23.1	J	21.3	J	19.8	J	13.1		13.5		22.3			
Cobalt	MG/KG	17.1	100%	30	0	58	58	13		9.4	J	12.2		11.7		6.8	J	6.5	J	12.9			
Copper	MG/KG	35.4	100%	33	3	58	58	16.9		18.5		26.2		21.1		13		15.6		24.3			
Cyanide	MG/KG	1.4	2%	0.35	1	1	58	0.62	U	0.71	U	0.69	U	0.66	U	0.59	U	0.64	U	0.69	U		
Iron	MG/KG	31500	100%	37410	0	58	58	25200		25100	J	24500		22400	J	13100	J	14000	J	30900			
Lead	MG/KG	43.8	100%	24.4	16	58	58	[redacted]		17.1	J	15.9	J	14.6	J	[redacted]	J	[redacted]	J	18.3	J		
Magnesium	MG/KG	15700	100%	21700	0	58	58	3790	J	3620		4440		3750		7410		10600		5710	J		
Manganese	MG/KG	2370	100%	1100	4	58	58	936		408		[redacted]		[redacted]		401	J	423	J	475			
Mercury	MG/KG	0.17	53%	0.1	6	31	58	0.06	U	0.07	U	0.07	U	0.07	U	0.05	U	0.05	U	0.06	U		
Nickel	MG/KG	57.4	95%	50	2	55	58	28.2		19.9	UJ	28	UJ	23.6	UJ	15.1		16.1		40.6	J		
Potassium	MG/KG	2970	100%	2623	2	58	58	1220		1810		1610		1110		628	J	627	J	1320			
Selenium	MG/KG	2.3	43%	2	2	25	58	1.5	J	0.56	U	[redacted]		1.6		0.83	U	0.72	U	0.76	J		
Silver	MG/KG	0.25	3%	0.8	0	2	58	0.24	U	0.29	U	0.29	U	0.25	U	0.22	U	0.19	U	0.24	J		
Sodium	MG/KG	153	22%	188	0	13	58	50.7	U	153	J	60.4	U	82.7	J	45.7	U	39.6	U	68.5	J		
Thallium	MG/KG	2.5	31%	0.855	18	18	58	1	U	1.3	UJ	[redacted]	J	1.1	UJ	0.94	U	0.82	U	[redacted]	J		
Vanadium	MG/KG	33.1	100%	150	0	58	58	22.5		24.2		22.8		20.3		11		11.4		21.1			
Zinc	MG/KG	197	100%	115	5	58	58	73.1		[redacted]	J	110	J	98.8	J	52.5	J	56.9	J	90.6	J		

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

Box represents sample location that contained levels greater than 10 times the TAGM value. Consequently, the drum containing samples from this location will be disposed off-site.

TABLE C-16
CLASS III
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								MW12-27		MW12-27		MW12-31		MW12-32		MW12-37		MW12-38	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								123062		123063		123174		123177		123203		123204	
SAMPLE DEPTH TO TOP OF SAMPLE								2		4		2		2		2		1	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								4		6		4		3		4		1.2	
SAMPLE DATE								10/4/1998		10/4/1998		26-Oct-98		26-Oct-98		01-Nov-98		01-Nov-98	
QC CODE								SA		SA		SA		SA		SA		SA	
STUDY ID								RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER												
			OF	TAGM	ABOVE	OF	OF												
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
VOLATILE ORGANICS																			
Acetone	UG/KG	100	26%	200	0	10	38	11	UJ	4	J	10	J	12	UJ	14		30	
Methyl ethyl ketone	UG/KG	35	3%	300	0	1	38	11	U	11	U	11	UJ	12	UJ	11	U	11	U
Toluene	UG/KG	10	21%	1500	0	8	38	9	J	5	J	11	U	12	U	11	U	2	J
Total Xylenes	UG/KG	2	3%	1200	0	1	38	11	U	11	U	11	U	12	U	11	U	2	J
Trichloroethene	UG/KG	54	3%	700	0	1	38	11	U	11	U	11	U	12	U	54		11	U
SEMI VOLATILE ORGANICS																			
4-Methylphenol	UG/KG	8.6	5%	900	0	2	38	74	U	73	U	74	U	72	U	72	U	71	U
Acenaphthene	UG/KG	28	5%	50000	0	2	38	74	U	73	U	74	U	72	U	72	U	71	U
Acenaphthylene	UG/KG	21	8%	41000	0	3	38	74	U	73	U	74	U	72	U	72	U	71	U
Anthracene	UG/KG	74	16%	50000	0	6	38	74	U	73	U	74	U	72	U	72	U	71	U
Benzo(a)anthracene	UG/KG	760	42%	224	1	16	38	74	U	73	U	74	U	5.9	J	72	U	71	U
Benzo(a)pyrene	UG/KG	1000	45%	61	3	17	38	74	U	73	U	74	U	4.5	J	72	U	71	U
Benzo(b)fluoranthene	UG/KG	1100	45%	1100	0	17	38	74	U	73	U	74	U	5.9	J	72	U	71	U
Benzo(ghi)perylene	UG/KG	820	34%	50000	0	13	38	74	U	73	U	74	U	4.3	J	72	U	71	U
Benzo(k)fluoranthene	UG/KG	1100	39%	1100	0	15	38	74	U	73	U	74	U	5.6	J	72	U	71	U
Bis(2-Ethylhexyl)phthalate	UG/KG	73	24%	50000	0	9	38	13	J	16	J	74	U	72	UJ	72	UJ	71	UJ
Butylbenzylphthalate	UG/KG	6.2	5%	50000	0	2	38	74	UJ	73	UJ	74	U	72	UJ	72	U	71	U
Carbazole	UG/KG	120	13%		0	5	38	74	UJ	73	UJ	74	U	72	U	72	U	71	U
Chrysene	UG/KG	1000	53%	400	1	20	38	74	U	4.1	J	74	U	8.1	J	72	U	71	U
Di-n-octylphthalate	UG/KG	34	16%	50000	0	6	38	23	J	34	J	74	U	4.1	J	72	U	3.9	J
Dibenz(a,h)anthracene	UG/KG	300	18%	14	4	7	38	74	U	73	U	74	U	72	U	72	UJ	71	UJ
Dibenzofuran	UG/KG	16	5%	6200	0	2	38	74	U	73	U	74	U	72	U	72	U	71	U
Diethyl phthalate	UG/KG	4.3	3%	7100	0	1	38	74	U	73	U	74	U	72	U	72	U	71	U
Fluoranthene	UG/KG	1900	47%	50000	0	18	38	74	U	73	U	74	U	8.2	J	72	U	71	U
Fluorene	UG/KG	44	8%	50000	0	3	38	74	U	73	U	74	U	72	U	72	U	71	U
Indeno(1,2,3-cd)pyrene	UG/KG	830	34%	3200	0	13	38	74	U	73	U	74	U	72	U	72	U	71	U
Naphthalene	UG/KG	8.6	3%	13000	0	1	38	74	U	73	U	74	U	72	U	72	U	71	U
Phenanthrene	UG/KG	680	45%	50000	0	17	38	74	U	73	U	74	U	5.5	J	3.7	J	71	U
Pyrene	UG/KG	1500	47%	50000	0	18	38	74	U	73	U	74	U	6	J	72	U	71	U
PESTICIDES/PCBS																			
4,4'-DDD	UG/KG	3.2	3%	2900	0	1	38	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	3.5	U
4,4'-DDE	UG/KG	2.1	3%	2100	0	1	38	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	3.5	U
4,4'-DDT	UG/KG	2.6	3%	2100	0	1	38	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	3.5	U
Alpha-Chlordane	UG/KG	7.5	3%		0	1	38	1.9	U	1.9	U	1.9	U	1.8	U	1.8	U	1.8	U
Endosulfan sulfate	UG/KG	3	3%	1000	0	1	38	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	3.5	U
Endrin	UG/KG	20	3%	100	0	1	38	3.7	U	3.7	U	3.7	U	3.6	U	3.6	U	3.5	U

TABLE C-16
CLASS III
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY								SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID								MW12-27		MW12-27		MW12-31		MW12-32		MW12-37		MW12-38	
MATRIX								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID								123062		123063		123174		123177		123203		123204	
SAMPLE DEPTH TO TOP OF SAMPLE								2		4		2		2		2		1	
SAMPLE DEPTH TO BOTTOM OF SAMPLE								4		6		4		3		4		1.2	
SAMPLE DATE								10/4/1998		10/4/1998		26-Oct-98		26-Oct-98		01-Nov-98		01-Nov-98	
QC CODE								SA		SA		SA		SA		SA		SA	
STUDY ID								RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1	
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER												
			OF	TAGM	ABOVE	OF	OF												
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)
METALS [1]																			
Aluminum	MG/KG	16700	100%	19520	0	38	38	14200		13600		9860		14800		10600		3120	
Arsenic	MG/KG	9.8	100%	8.9	1	38	38	6.4		8.4		1.7		2.3		3.2		1.8	J
Barium	MG/KG	186	100%	300	0	38	38	61		61.4		30.4		57.9		74.7		24.1	J
Beryllium	MG/KG	1.1	97%	1.13	0	37	38	0.45	J	0.36	J	0.46	J	0.67		0.46	J	0.05	J
Cadmium	MG/KG	13.3	8%	2.46	1	3	38	0.05	U	0.06	U	0.26	U	0.23	U	0.06	U	0.06	U
Calcium	MG/KG	73300	100%	125300	0	38	38	21900		3510		1470		7850		49100		60800	
Chromium	MG/KG	26	100%	30	0	38	38	25.2		24.1		18.2	J	25.9	J	19.6		4.5	
Cobalt	MG/KG	19.6	100%	30	0	38	38	15.5		19.6		12.6		17		14.3		3.4	J
Copper	MG/KG	34	100%	33	3	38	38	30.7		33.8		9.3		20.9		24.8		21.3	
Iron	MG/KG	53400	100%	37410	3	38	38	29200		30700		21900	J	32000		25300	J	7350	J
Lead	MG/KG	284	100%	24.4	10	38	38	13.2		9.2		2.7	J	3.8	J	17.2	J	3.5	J
Magnesium	MG/KG	19200	100%	21700	0	38	38	5830	J	5590	J	4500		6580		8150		14400	
Manganese	MG/KG	3200	100%	1100	3	38	38	696		706		383		550		422	J	349	J
Mercury	MG/KG	0.2	42%	0.1	8	16	38	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
Nickel	MG/KG	51.3	95%	50	1	36	38	46.2		46		28.1	UJ	41.2	UJ	41.2		7.5	J
Potassium	MG/KG	3460	100%	2623	2	38	38	1150		1010	J	531	J	1020		876	J	597	J
Selenium	MG/KG	1.8	21%	2	0	8	38	0.75	U	0.96	U	0.34	U	0.7		0.86	U	0.87	U
Silver	MG/KG	0.26	8%	0.8	0	3	38	0.2	J	0.25	U	0.18	U	0.15	U	0.22	U	0.23	U
Sodium	MG/KG	748	47%	188	3	18	38	82.4	J	107	J	57.1	J	57.2	J	71.3	J	53.5	J
Thallium	MG/KG	1.6	26%	0.855	10	10	38	0.85	U	1.1	U	0.77	UJ	1.3	J	1.6	J	0.98	U
Vanadium	MG/KG	29.3	100%	150	0	38	38	20.2		16.6		12.4		19.8		16.1		6.2	J
Zinc	MG/KG	3370	100%	115	4	38	38	91.8		113		70.9	J	98.7	J	54.8	J	36.6	J

(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGROUND DATA SET.

Box represents sample location that contained levels greater than 10 times the TAGM value. Consequently, the drum containing samples from this location will be disposed off-site.

TABLE C-16
CLASS III
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		SEAD-12		
		LOCATION ID						MW12-38		MW12-39		MW12-40		MW12-40		
		MATRIX						SOIL		SOIL		SOIL		SOIL		
		SAMPLE ID						123206		123207		123122		123123		
		SAMPLE DEPTH TO TOP OF SAMPLE						3		1.5		2		4		
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						4		2.4		4		6		
		SAMPLE DATE						01-Nov-98		01-Nov-98		14-Oct-98		14-Oct-98		
		QC CODE						SA		SA		SA		SA		
		STUDY ID						RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER									
			OF	TAGM	ABOVE	OF	OF									
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	
VOLATILE ORGANICS																
Acetone	UG/KG	100	26%	200	0	10	38	45		11		11	U	11	U	
Methyl ethyl ketone	UG/KG	35	3%	300	0	1	38	11	U	11	U	11	U	11	U	
Toluene	UG/KG	10	21%	1500	0	8	38	11	U	11	U	5	J	11	U	
Total Xylenes	UG/KG	2	3%	1200	0	1	38	11	U	11	U	11	U	11	U	
Trichloroethene	UG/KG	54	3%	700	0	1	38	11	U	11	U	11	U	11	U	
SEMI VOLATILE ORGANICS																
4-Methylphenol	UG/KG	8.6	5%	900	0	2	38	76	U	69	U	72	U	71	U	
Acenaphthene	UG/KG	28	5%	50000	0	2	38	76	U	69	U	72	U	71	U	
Acenaphthylene	UG/KG	21	8%	41000	0	3	38	76	U	69	U	72	U	71	U	
Anthracene	UG/KG	74	16%	50000	0	6	38	76	U	69	U	72	U	71	U	
Benzo(a)anthracene	UG/KG	760	42%	224	1	16	38	76	U	69	U	72	U	71	U	
Benzo(a)pyrene	UG/KG	1000	45%	61	3	17	38	76	U	69	U	72	U	71	U	
Benzo(b)fluoranthene	UG/KG	1100	45%	1100	0	17	38	76	U	69	U	72	U	71	U	
Benzo(ghi)perylene	UG/KG	820	34%	50000	0	13	38	76	U	69	U	72	U	71	U	
Benzo(k)fluoranthene	UG/KG	1100	39%	1100	0	15	38	76	U	69	U	72	U	71	U	
Bis(2-Ethylhexyl)phthalate	UG/KG	73	24%	50000	0	9	38	76	UJ	69	UJ	72	UJ	71	UJ	
Butylbenzylphthalate	UG/KG	6.2	5%	50000	0	2	38	76	U	69	UJ	72	UJ	71	UJ	
Carbazole	UG/KG	120	13%		0	5	38	76	U	69	UJ	72	UJ	71	UJ	
Chrysene	UG/KG	1000	53%	400	1	20	38	76	U	69	U	72	U	71	U	
Di-n-octylphthalate	UG/KG	34	16%	50000	0	6	38	76	U	69	U	7.3	J	8.7	J	
Dibenz(a,h)anthracene	UG/KG	300	18%	14	4	7	38	76	UJ	69	U	72	U	71	U	
Dibenzofuran	UG/KG	16	5%	6200	0	2	38	76	U	69	U	72	U	71	U	
Diethyl phthalate	UG/KG	4.3	3%	7100	0	1	38	76	U	69	U	4.3	J	71	U	
Fluoranthene	UG/KG	1900	47%	50000	0	18	38	76	U	69	U	72	U	71	U	
Fluorene	UG/KG	44	8%	50000	0	3	38	76	U	69	U	72	U	71	U	
Indeno(1,2,3-cd)pyrene	UG/KG	830	34%	3200	0	13	38	76	U	69	U	72	U	71	U	
Naphthalene	UG/KG	8.6	3%	13000	0	1	38	76	U	69	U	72	U	71	U	
Phenanthrene	UG/KG	680	45%	50000	0	17	38	76	U	69	U	72	U	6.1	J	
Pyrene	UG/KG	1500	47%	50000	0	18	38	76	U	69	U	72	U	71	U	
PESTICIDES/PCBS																
4,4'-DDD	UG/KG	3.2	3%	2900	0	1	38	3.7	U	3.5	U	3.6	U	3.5	U	
4,4'-DDE	UG/KG	2.1	3%	2100	0	1	38	3.7	U	3.5	U	3.6	U	3.5	U	
4,4'-DDT	UG/KG	2.6	3%	2100	0	1	38	3.7	U	3.5	U	3.6	U	3.5	U	
Alpha-Chlordane	UG/KG	7.5	3%		0	1	38	1.9	U	1.8	U	1.8	U	1.8	U	
Endosulfan sulfate	UG/KG	3	3%	1000	0	1	38	3.7	U	3.5	U	3.6	U	3.5	U	
Endrin	UG/KG	20	3%	100	0	1	38	3.7	U	3.5	U	3.6	U	3.5	U	

TABLE C-16
CLASS III
SUMMARY OF SUBSURFACE SOIL CHEMICAL ANALYSES
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

		FACILITY						SEAD-12		SEAD-12		SEAD-12		SEAD-12		
		LOCATION ID						MW12-38		MW12-39		MW12-40		MW12-40		
		MATRIX						SOIL		SOIL		SOIL		SOIL		
		SAMPLE ID						123206		123207		123122		123123		
		SAMPLE DEPTH TO TOP OF SAMPLE						3		1.5		2		4		
		SAMPLE DEPTH TO BOTTOM OF SAMPLE						4		2.4		4		6		
		SAMPLE DATE						01-Nov-98		01-Nov-98		14-Oct-98		14-Oct-98		
		QC CODE						SA		SA		SA		SA		
		STUDY ID						RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		
			FREQUENCY	NYSDEC	NUMBER	NUMBER	NUMBER									
			OF	TAGM	ABOVE	OF	OF									
PARAMETER	UNIT	MAXIMUM	DETECTION	4046	TAGM	DETECTS	ANALYSES	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	VALUE	(Q)	
METALS [1]																
Aluminum	MG/KG	16700	100%	19520	0	38	38	10700		9350		10100	J	10900	J	
Arsenic	MG/KG	9.8	100%	8.9	1	38	38	2.7		2.8		2.9	J	3.5	J	
Barium	MG/KG	186	100%	300	0	38	38	76.7		37.8		60.2		66.5		
Beryllium	MG/KG	1.1	97%	1.13	0	37	38	0.54	J	0.26	J	0.48	J	0.5	J	
Cadmium	MG/KG	13.3	8%	2.46	1	3	38	0.05	U	0.05	U	0.06	U	0.05	U	
Calcium	MG/KG	73300	100%	125300	0	38	38	20000		73300		30900	J	41700	J	
Chromium	MG/KG	26	100%	30	0	38	38	19		16.5		18.2		20		
Cobalt	MG/KG	19.6	100%	30	0	38	38	10.2		10.7		13.8		11.5		
Copper	MG/KG	34	100%	33	3	38	38	26.3		17.6		22.9		27		
Iron	MG/KG	53400	100%	37410	3	38	38	24000	J	20800	J	30900		25600		
Lead	MG/KG	284	100%	24.4	10	38	38	14.2	J	5.7	J	14.7	J	17.4	J	
Magnesium	MG/KG	19200	100%	21700	0	38	38	5760		18100		4820	J	7480	J	
Manganese	MG/KG	3200	100%	1100	3	38	38	387	J	612	J	364		307		
Mercury	MG/KG	0.2	42%	0.1	8	16	38	0.06	J	0.05	U	0.05	U	0.05	U	
Nickel	MG/KG	51.3	95%	50	1	36	38	38.2		25.9		51.3	J	40.5	J	
Potassium	MG/KG	3460	100%	2623	2	38	38	635	J	1320		817	J	1240		
Selenium	MG/KG	1.8	21%	2	0	8	38	0.82	U	0.81	U	0.98	U	0.78	U	
Silver	MG/KG	0.26	8%	0.8	0	3	38	0.21	U	0.21	U	0.25	U	0.2	U	
Sodium	MG/KG	748	47%	188	3	18	38	201	J	309	J	53.4	U	61.3	J	
Thallium	MG/KG	1.6	26%	0.855	10	10	38	0.91	J	0.92	U	1.1	U	0.98	J	
Vanadium	MG/KG	29.3	100%	150	0	38	38	16.8		14.5		14.3		16.2		
Zinc	MG/KG	3370	100%	115	4	38	38	60.7	J	48.6	J	71.4	J	57.3	J	
(1) NYSDEC TAGM FOR ALL METALS (EXCEPT MERCURY), IS EQUAL TO THE 95TH PERCENTILE OF BACKGF																
Box represents sample location that contained levels greater than 10 times the TAGM value. Conseque																

Attachments D

Soil Analysis Summary Tables (Radiological)

TABLE D-1
RADIOLOGICAL SOIL ANALYSES FOR DRUMS DESIGNATED
FOR OFF-SITE DISPOSAL DUE TO POTENTIAL THREAT FROM CHEMICALS
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY			SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID			MW12-19		MW12-19		MW12-20		MW12-20		MW12-21		MW12-21		MW12-21		MW12-19		MW12-20		MW12-37	
MATRIX			SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE ID			123041		123042		123047		123048		123049		123050		123051		123040		123046		123203	
DEPTH TO TOP OF SAMPLE			6		8		4		6		0		4		6		0		0		2	
DEPTH TO BOTTOM OF SAMPLE			8		10		6		8		0.8		6		8		0.2		0.2		4	
SAMPLE DATE			10/2/1998		10/2/1998		10/3/1998		10/3/1998		10/3/1998		10/3/1998		10/3/1998		10/2/1998		10/3/1998		11/1/1998	
QC CODE			SA		SA		SA		SA		SA		SA		SA		SA		SA		SA	
STUDY ID		2X	RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1	
Parameter	Units	Average Background [1]	Value	(Q)	Value	(Q)	Value	(Q)	Value	(Q)	Value	(Q)	Value	(Q)	Value	(Q)	Value	(Q)	Value	(Q)	Value	(Q)
Bismuth -214	pCi/g	2.7	1.6	J	2.3	J	2.1		[redacted]		1.9		1.6		1.5		2.3	J	1.8	J	1.8	
Cesium-137	pCi/g	0.6	0.1	U	0.2		0.1	J	[redacted]	J	[redacted]	J	0.1	J	0.1	J	0.2	J	[redacted]		0.7	UJ
Cobalt-57	pCi/g	0.1	0.1	U	0.1		0.1	U	[redacted]		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Cobalt-60	pCi/g	0.3	[redacted]		0.2		[redacted]	J	[redacted]	J	[redacted]	J	0.1	UJ	[redacted]	J	0.2	J	[redacted]		0.4	UJ
Lead-210	pCi/g	11.2	3.8	J	35.3	UJ	[redacted]	J	2.2	UJ	9.9	J	[redacted]	J	5.3	J	[redacted]	J	6.2	J	3.9	J
Lead-211	pCi/g	6.4	1	UJ	6.3	J	[redacted]	J	3	UJ	1.1	UJ	[redacted]	J	[redacted]	J	2.7	UJ	[redacted]	J	1.1	UJ
Lead-214	pCi/g	3.0	1.9		1.6		1.4		2.2		2		1.3		1.7		1.8		2.7		1.8	UJ
Plutonium-239	pCi/g	0.3	0.1	U	0.1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.1	UJ	0.1	U	0.1	U	0.1	UJ
Promethium-147	pCi/g																					
Radium-223	pCi/g	0.4	[redacted]		[redacted]		[redacted]	J	0.6	UJ	0.6	UJ	0.4	UJ	[redacted]	J	0.4	U	0.6	U	0.5	UJ
Radium-226	pCi/g	2.7	1.6	J	2.3	J	2.1		[redacted]		1.9		1.6		1.5		2.3	J	1.8	J	1.8	
Radium-228	pCi/g	3.5	2.6		1.7		1.8		1.9		2.7		1.5		2.5		2.1		2.8		1.8	
Thorium-230	pCi/g	1.1	1.2	U	[redacted]		[redacted]	J	[redacted]		[redacted]		1		1		[redacted]		[redacted]		[redacted]	J
Thorium-232	pCi/g	2.0	0.5	U	1		1	J	0.8		1		0.6		0.6		0.8		1.2		1.8	J
Tritium	pCi/g	3.4	0.1	U	0.1	U	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ	0.1	U	0.1	U	0.1	U
Uranium-233/234	pCi/g	0.9	0.7		[redacted]		[redacted]		1	U	1	UJ	[redacted]		1.1	UJ	0.7		[redacted]		0.9	J
Uranium-235	pCi/g	0.2	0.1		0.4	U	0.1		0.1	U	0.1	J	[redacted]		0.1	J	0.4	UJ	0.2		0.1	U
Uranium-238	pCi/g	1.3	1	J	1	J	1.1	J	0.8	J	[redacted]	J	1.3	J	[redacted]	J	1.1	J	0.6	J	0.9	

1. Site average radiological background data is presented in Table D-3.
Samples MW12-19, MW12-20, and MW12-21 were collected from Building 819. Sample MW12-37 was collected from Class III areas.

TABLE D-2
EM-5
RADIOLOGICAL SOIL ANALYSES FOR DRUMS DESIGNATED FOR OFF-SITE DISPOSAL
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

Area			EM-5		EM-5		EM-5		EM-5	
FACILITY			SEAD-12		SEAD-12		SEAD-12		SEAD-12	
LOCATION ID			MW12-22		MW12-22		MW12-23		MW12-23	
MATRIX			SOIL		SOIL		SOIL		SOIL	
SAMPLE ID			123068		123069		123079		123080	
DEPTH TO TOP OF SAMPLE			0		2		0		2	
DEPTH TO BOTTOM OF SAMPLE			0.2		4		2		4	
SAMPLE DATE			10/4/1998		10/4/1998		10/5/1998		10/5/1998	
QC CODE			SA		SA		SA		SA	
STUDY ID		2X	RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1		RI Phase 1 Step 1	
Parameter	Units	Average Background [1]	Value	(Q)	Value	(Q)	Value	(Q)	Value	(Q)
Bismuth -214	pCi/g	2.7	1.2		1.7		2		1.6	
Cesium-137	pCi/g	0.6	0.7	J	0.2	UJ	0.6	J	0.2	J
Cobalt-57	pCi/g	0.1	0.1	UJ	0.1	UJ	0.1	UJ	0.1	UJ
Cobalt-60	pCi/g	0.3	0.1	J	0.4	J	0.3	J	0.2	J
Lead-210	pCi/g	11.2	38		38.9		6.6		23.1	U
Lead-211	pCi/g	6.4	11.7		7.5		7.8		3.7	
Lead-214	pCi/g	3.0	1.4		1.7		2.1		1.5	
Plutonium-239	pCi/g	0.3	0.1	UJ	0.1	UJ	0.2	U	0.1	U
Radium-223	pCi/g	0.4	0.5	U	0.5	U	0.5	U	0.5	U
Radium-226	pCi/g	2.7	1.2		1.7		2		1.6	
Radium-228	pCi/g	3.5	0.7		2.3		2.7		2.5	
Thorium-230	pCi/g	1.1	1.0		1.5	J	1		1.5	
Thorium-232	pCi/g	2.0	1		1.9	J	0.6		1	
Tritium	pCi/g	3.4	7.3	J	0.1	UJ	0.4	J	0.1	UJ
1. Site average radiological background data is presented in Table D-3.										

TABLE D-3
BACKGROUND RADIOLOGICAL DATA-SOIL
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY						SEAD-12			SEAD-12			SEAD-12			SEAD-12		
LOCATION ID						MW12-1			MW12-1			MW12-1			MW12-2		
MATRIX						SOIL			SOIL			SOIL			SOIL		
SAMPLE ID						12507			12506			12508			12512		
DEPTH TO TOP OF SAMPLE						0			0.2			4			0		
DEPTH TO BOTTOM OF SAMPLE						0.2			2			6			0.2		
SAMPLE DATE						05-Nov-97			05-Nov-97			05-Nov-97			06-Nov-97		
QC CODE						SA			SA			SA			SA		
STUDY ID			FREQUENCY	NUMBER	NUMBER	RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1		
			OF	OF	OF												
PARAMETER	AVERAGE	MAXIMUM	DETECTION	DETECTS	ANALYSES	N			N			N			N		
Bismuth-214	1.35	2.6	77%	27	35	1.3	UJ		1.2	J	+/-0.3	1.4	J	+/-0.3	1.1	J	+/-0.4
Cesium-137	0.32	0.7	34%	12	35	0.6		+/-0.2	0.2	U		0.2	U		0.7		+/-0.2
Cobalt-57	0.06	0.1	14%	5	35	0.1	U		0.1	U		0.1	U		0.1	U	
Cobalt-60	0.13	0.4	17%	6	35	0.2	U		0.2	U		0.3	U		0.4	U	
Lead-210	5.62	4.3	14%	5	35	23.2	U		21.6	U		1.2	U		25.9	U	
Lead-211	3.20	10	11%	4	35	13.8	U		4.5	U		2	U		11.6	U	
Lead-214	1.48	2.5	94%	33	35	1.3		+/-0.3	1.2		+/-0.2	1.2		+/-0.3	1.3		+/-0.2
Plutonium-239/240	0.13	0.2	23%	8	35	0.2	J	+/-0.3	0.2		+/-0.2	0.1		+/-0.1	0.3	U	+/-0.1
Promethium-147	6.43	17.8	34%	10	29	14.4	U	+/-5.1	13.3	U	+/-5.1	9.6	U	+/-5	10.3	U	+/-5
Radium-223	0.22	0.7	3%	1	35	0.3	U		0.4	U		0.4	U		0.4	U	
Radium-226	1.36	2.6	77%	27	35	1.3	UJ		1.2	J	+/-0.3	1.4	J	+/-0.3	1.1	J	+/-0.4
Radium-228	1.73	3.5	97%	34	35	1.8	J	+/-0.4	2	J	+/-0.5	2.1	J	+/-0.4	1.7	J	+/-0.4
Thorium-227	0.23	0.4	28%	8	29	0.6	U	+/-0.1	0.3	UJ	+/-0.1	0.4	UJ	+/-0.1	0.1	J	+/-0.2
Thorium-230	0.54	2.7	26%	9	35	1.8	U	+/-0.9	1.7	UJ	+/-0.8	1.8	UJ	+/-0.9	2.1	UJ	+/-1
Thorium-232	0.98	2	97%	34	35	1.3		+/-0.8	0.9	J	+/-0.5	1.1	J	+/-0.6	1.2	J	+/-0.7
Tritium	1.68	60.4	17%	6	35	0.1	UJ	+/-0.1	0.1	UJ	+/-0.1	0.1	UJ	+/-0.1	0.1	U	+/-0.1
Uranium-233/234	0.46	1.9	49%	17	35	0.6	UJ	+/-0.3	1.1	UJ	+/-0.4	1.1	UJ	+/-0.4	1.6	UJ	+/-0.4
Uranium-235	0.11	0.4	54%	19	35	0.1	U	+/-0.1	0.1	U	+/-0.1	0.1	U	+/-0.1	0.1	U	+/-0.1
Uranium-238	0.67	1.4	77%	27	35	0.7		+/-0.3	0.6	J	+/-0.3	1		+/-0.3	0.8		+/-0.3

TABLE D-3
BACKGROUND RADIOLOGICAL DATA-SOIL
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY						SEAD-12			SEAD-12			SEAD-12			SEAD-12			
LOCATION ID						MW12-2			MW12-3			MW12-3			MW12-3			
MATRIX						SOIL			SOIL			SOIL			SOIL			
SAMPLE ID						12513			12509			12510			12511			
DEPTH TO TOP OF SAMPLE						2			0			0.2			6			
DEPTH TO BOTTOM OF SAMPLE						4			0.2			2			8			
SAMPLE DATE						06-Nov-97			06-Nov-97			06-Nov-97			06-Nov-97			
QC CODE						SA			SA			SA			SA			
STUDY ID			FREQUENCY	NUMBER	NUMBER	RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1			
			OF	OF	OF													
PARAMETER	AVERAGE	MAXIMUM	DETECTION	DETECTS	ANALYSES	N			N			N			N			
Bismuth-214	1.35	2.6	77%	27	35	1.6	UJ		1.4	J	+/-0.4	1.5	J	+/-0.4	1.5	J	+/-0.4	
Cesium-137	0.32	0.7	34%	12	35	0.2	U		0.9	U		0.1	U		0.1	U		
Cobalt-57	0.06	0.1	14%	5	35	0.1	U		0.1	U		0.1	U		0.1	U		
Cobalt-60	0.13	0.4	17%	6	35	0.4	U		0.1	U		0.3	U		0.5	U		
Lead-210	5.62	4.3	14%	5	35	3.1	U		2.3	U		14.7	U		4.1	U		
Lead-211	3.20	10	11%	4	35	1.4	U		6.3	U		4.1	U		5.3	U		
Lead-214	1.48	2.5	94%	33	35	1.8		+/-0.4	1.3		+/-0.3	1.5		+/-0.3	1.1		+/-0.3	
Plutonium-239/240	0.13	0.2	23%	8	35	0.3	UJ	+/-0.1	0.2	J	+/-0.2	0.3	UJ	+/-0.1	0.2		+/-0.2	
Promethium-147	6.43	17.8	34%	10	29	5.1	U	+/-5	8.3	U	+/-5	5.6	U	+/-5	6.5	U	+/-5	
Radium-223	0.22	0.7	3%	1	35	0.4	U		0.5	U		0.4	U		0.4	U		
Radium-226	1.36	2.6	77%	27	35	1.6	UJ		1.4	J	+/-0.4	1.5	J	+/-0.4	1.5	J	+/-0.4	
Radium-228	1.73	3.5	97%	34	35	3.5	J	+/-0.6	1.4	J	+/-0.5	2.1	J	+/-0.5	1.7	J	+/-0.4	
Thorium-227	0.23	0.4	28%	8	29	0.1		+/-0.2	0.1		+/-0.1	0.2	U	+/-0.1	0.2		+/-0.2	
Thorium-230	0.54	2.7	26%	9	35	1	U	+/-0.6	1.5	U	+/-0.7	2.9	U	+/-1.1	1.1	U	+/-0.6	
Thorium-232	0.98	2	97%	34	35	0.9		+/-0.5	1.1		+/-0.6	1.2		+/-0.6	0.8		+/-0.5	
Tritium	1.68	60.4	17%	6	35	0.1	U	+/-0.1	0.4	UJ	+/-0.1	0.1	U	+/-0.1	0.1	U	+/-0.1	
Uranium-233/234	0.46	1.9	49%	17	35	0.7	UJ	+/-0.3	0.7	UJ	+/-0.3	0.5	UJ	+/-0.2	1	UJ	+/-0.3	
Uranium-235	0.11	0.4	54%	19	35	0.1	U	+/-0.1	0.1	U	+/-0.1	0.1	U	+/-0.1	0.1	U	+/-0.1	
Uranium-238	0.67	1.4	77%	27	35	0.7		+/-0.2	0.6	U	+/-0.2	0.6	U	+/-0.2	0.7		+/-0.3	

TABLE D-3
BACKGROUND RADIOLOGICAL DATA-SOIL
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY						SEAD-12			SEAD-12			SEAD-12			SEAD-12		
LOCATION ID						MW12-4			MW12-4			MW12-4			MW12-5		
MATRIX						SOIL			SOIL			SOIL			SOIL		
SAMPLE ID						12505			12501			12502			12504		
DEPTH TO TOP OF SAMPLE						0			4			6			0		
DEPTH TO BOTTOM OF SAMPLE						0.2			5.4			8			0.2		
SAMPLE DATE						05-Nov-97			04-Nov-97			04-Nov-97			05-Nov-97		
QC CODE						SA			SA			SA			SA		
STUDY ID			FREQUENCY	NUMBER	NUMBER	RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1		
			OF	OF	OF												
PARAMETER	AVERAGE	MAXIMUM	DETECTION	DETECTS	ANALYSES	N			N			N			N		
Bismuth-214	1.35	2.6	77%	27	35	1.9	J	+/-0.4	1	J	+/-0.3	1	J	+/-0.3	1.5	J	+/-0.2
Cesium-137	0.32	0.7	34%	12	35	0.7		+/-0.2	0.1	U		0.3	U		0.9	U	
Cobalt-57	0.06	0.1	14%	5	35	0.2	U		0.1	U		0.1	U		0.2	U	
Cobalt-60	0.13	0.4	17%	6	35	0.3	U		0.1	U		0.2	U		0.1	U	
Lead-210	5.62	4.3	14%	5	35	1.3	U		17	U		1.2	U		3.9	U	
Lead-211	3.20	10	11%	4	35	9.7	U		0.8	U		2.2	U		10.7	U	
Lead-214	1.48	2.5	94%	33	35	1.1		+/-0.3	1		+/-0.2	1.3		+/-0.3	1.4		+/-0.4
Plutonium-239/240	0.13	0.2	23%	8	35	0.2		+/-0.1	0.1		+/-0.1	0.1	J	+/-0.1	0.3	UJ	+/-0.1
Promethium-147	6.43	17.8	34%	10	29	7.9	U	+/-5	3.2		+/-3.7	2.1		+/-3.7	8.9	U	+/-5
Radium-223	0.22	0.7	3%	1	35	0.6	U		0.3	U		0.3	U		0.6	U	
Radium-226	1.36	2.6	77%	27	35	1.9	J	+/-0.4	1	J	+/-0.3	1	J	+/-0.3	1.5	J	+/-0.2
Radium-228	1.73	3.5	97%	34	35	1.5	J	+/-0.4	1.5	J	+/-0.4	1	J	+/-0.4	1.6	J	+/-0.4
Thorium-227	0.23	0.4	28%	8	29	0.3	J	+/-0.3	0.5	UJ	+/-0.2	0.1		+/-0.3	0.3	U	+/-0.1
Thorium-230	0.54	2.7	26%	9	35	2.7	J	+/-1.3	1.8	UJ	+/-0.9	0.9	U	+/-0.5	1.5	U	+/-0.7
Thorium-232	0.98	2	97%	34	35	0.9	UJ	+/-0.6	2	J	+/-0.9	0.9		+/-0.5	1.2		+/-0.6
Tritium	1.68	60.4	17%	6	35	0.5	J	+/-0.1	0.1	UJ	+/-0.1	0.1	UJ	+/-0.1	0.5	J	+/-0.1
Uranium-233/234	0.46	1.9	49%	17	35	0.9	UJ	+/-0.3	0.9	UJ	+/-0.3	1	UJ	+/-0.4	0.6	UJ	+/-0.2
Uranium-235	0.11	0.4	54%	19	35	0.1	U	+/-0.1	0.1	U	+/-0.1	0.1	U	+/-0.1	0.1	U	+/-0.1
Uranium-238	0.67	1.4	77%	27	35	0.8		+/-0.3	0.6		+/-0.2	0.5	U	+/-0.2	0.9		+/-0.3

TABLE D-3
BACKGROUND RADIOLOGICAL DATA-SOIL
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY						SEAD-12			SEAD-12			SEAD-12			SEAD-12		
LOCATION ID						MW12-5			MW12-5			MW12-6			MW12-6		
MATRIX						SOIL			SOIL			SOIL			SOIL		
SAMPLE ID						12500			12503			123190			123191		
DEPTH TO TOP OF SAMPLE						2			8			0			4		
DEPTH TO BOTTOM OF SAMPLE						3.5			9.7			0.2			6		
SAMPLE DATE						04-Nov-97			04-Nov-97			30-Oct-98			30-Oct-98		
QC CODE						SA			SA			SA			SA		
STUDY ID			FREQUENCY	NUMBER	NUMBER	RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1		
			OF	OF	OF												
PARAMETER	AVERAGE	MAXIMUM	DETECTION	DETECTS	ANALYSES	N			N			N			N		
Bismuth-214	1.35	2.6	77%	27	35	1.2	J	+/-0.3	1.1	J	+/-0.4	1.7		+/-0.4	1.2		+/-0.4
Cesium-137	0.32	0.7	34%	12	35	0.1	U		0.1	U		0.6		+/-0.2	0.3		+/-0.2
Cobalt-57	0.06	0.1	14%	5	35	0.1		+/-0.1	0.1	U		0.1	U		0.1		+/-0.1
Cobalt-60	0.13	0.4	17%	6	35	0.2	U		0.1	U		0.1		+/-0.1	0.2		+/-0.1
Lead-210	5.62	4.3	14%	5	35	3.7	U		15.6	U		4.3	J	+/-2.4	1.5	UJ	
Lead-211	3.20	10	11%	4	35	1.5	U		1.3	U		1.8	U		10		+/-8.6
Lead-214	1.48	2.5	94%	33	35	1.5		+/-0.4	1		+/-0.2	1.3		+/-0.3	1.5		+/-0.4
Plutonium-239/240	0.13	0.2	23%	8	35	0.2	U	+/-0.1	0.3	U	+/-0.1	0.2	U	+/-0.1	0.2	U	+/-0.1
Promethium-147	6.43	17.8	34%	10	29	10		+/-3.9	2.1		+/-3.7						
Radium-223	0.22	0.7	3%	1	35	0.4	U		0.3	U		0.4	U		0.4	U	
Radium-226	1.36	2.6	77%	27	35	1.2	J	+/-0.3	1.1	J	+/-0.4	1.7		+/-0.4	1.2		+/-0.4
Radium-228	1.73	3.5	97%	34	35	1.8	J	+/-0.4	1.1	J	+/-0.2	1.2	J	+/-0.4	1.5	J	+/-0.4
Thorium-227	0.23	0.4	28%	8	29	0.4	J	+/-0.4	0.3	J	+/-0.5						
Thorium-230	0.54	2.7	26%	9	35	1.9	UJ	+/-0.9	1.7	UJ	+/-1.1	1	J	+/-0.5	0.5	J	+/-0.3
Thorium-232	0.98	2	97%	34	35	1.4	J	+/-0.7	0.8	J	+/-0.7	1.1		+/-0.5	0.5		+/-0.3
Tritium	1.68	60.4	17%	6	35	0.1	UJ	+/-0.1	0.1	UJ	+/-0.1	14.2	J	+/-0.2	0.1	UJ	+/-0.1
Uranium-233/234	0.46	1.9	49%	17	35	0.7	UJ	+/-0.3	1	UJ	+/-0.3	1		+/-0.3	0.6		+/-0.2
Uranium-235	0.11	0.4	54%	19	35	0.2	U	+/-0.1	0.1	U	+/-0.1	0.1		+/-0.1	0.1		+/-0.1
Uranium-238	0.67	1.4	77%	27	35	0.7		+/-0.3	0.9		+/-0.3	1.2		+/-0.4	0.8		+/-0.3

TABLE D-3
BACKGROUND RADIOLOGICAL DATA-SOIL
SEAD-12 REMEDIAL INVESTIGATION
SENECA ARMY DEPOT ACTIVITY

FACILITY						SEAD-12			SEAD-12			SEAD-12			SEAD-12			
LOCATION ID						MW12-6			SB12-7			SB12-8			SB12-9			
MATRIX						SOIL			SOIL			SOIL			SOIL			
SAMPLE ID						123192			123194			123193			123189			
DEPTH TO TOP OF SAMPLE						6			4			4			4			
DEPTH TO BOTTOM OF SAMPLE						8			5			6			6			
SAMPLE DATE						30-Oct-98			30-Oct-98			30-Oct-98			29-Oct-98			
QC CODE						SA			SA			SA			SA			
STUDY ID			FREQUENCY	NUMBER	NUMBER	RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1			RI Phase 1 Step 1			
			OF	OF	OF													
PARAMETER	AVERAGE	MAXIMUM	DETECTION	DETECTS	ANALYSES	N			N			N			N			
Bismuth-214	1.35	2.6	77%	27	35	1.4		+/-0.4	1.6		+/-0.5	2.3		+/-0.3	2.2		+/-0.6	
Cesium-137	0.32	0.7	34%	12	35	0.4		+/-0.2	0.2		+/-0.1	0.5		+/-0.1	0.1		+/-0.1	
Cobalt-57	0.06	0.1	14%	5	35	0.1		+/-0.1	0.1	U		0.1		+/-0.1	0.1		+/-0.1	
Cobalt-60	0.13	0.4	17%	6	35	0.1		+/-0.1	0.4		+/-0.1	0.3		+/-0.1	0.1		+/-0.1	
Lead-210	5.62	4.3	14%	5	35	2.6	J	+/-1.7	2.9	J	+/-1.7	4	J	+/-3.4	1.8	UJ		
Lead-211	3.20	10	11%	4	35	1.5	U		1.9	U		1.4	U		1.3	U		
Lead-214	1.48	2.5	94%	33	35	1.2		+/-0.3	1.5		+/-0.3	1.7		+/-0.4	1.9		+/-0.4	
Plutonium-239/240	0.13	0.2	23%	8	35	0.1	U	+/-0.1	0.1	U	+/-0.1	0.1	U	+/-0.1	0.1	U	+/-0.1	
Promethium-147	6.43	17.8	34%	10	29													
Radium-223	0.22	0.7	3%	1	35	0.3	U		0.4	U		0.4	U		0.5	U		
Radium-226	1.36	2.6	77%	27	35	1.4		+/-0.4	1.6		+/-0.5	2.3		+/-0.3	2.2		+/-0.6	
Radium-228	1.73	3.5	97%	34	35	1.5	J	+/-0.4	1.8	J	+/-0.4	2.6	J	+/-0.5	1.3	J	+/-0.4	
Thorium-227	0.23	0.4	28%	8	29													
Thorium-230	0.54	2.7	26%	9	35	0.2	J	+/-0.4	0.8	J	+/-0.6	0.9	J	+/-0.5	0.8	J	+/-0.5	
Thorium-232	0.98	2	97%	34	35	0.7	J	+/-0.5	1	J	+/-0.6	0.7		+/-0.4	0.7		+/-0.4	
Tritium	1.68	60.4	17%	6	35	0.1	UJ	+/-0.1	0.1	UJ	+/-0.1	0.1	UJ	+/-0.1	0.1	UJ	+/-0.1	
Uranium-233/234	0.46	1.9	49%	17	35	0.5		+/-0.2	0.8		+/-0.3	0.7		+/-0.3	0.9		+/-0.3	
Uranium-235	0.11	0.4	54%	19	35	0.1		+/-0.1	0.1		+/-0.1	0.1		+/-0.1	0.1		+/-0.1	
Uranium-238	0.67	1.4	77%	27	35	0.4		+/-0.2	1.1		+/-0.3	0.7		+/-0.2	0.9		+/-0.3	