

DEC 18 1996

**DRAFT
SITE INVESTIGATION REPORT**

**FORMER AIR FORCE RADAR STATIONS
INVESTIGATION OF OTHER AREAS OF CONCERN**

**LYNDONVILLE AIR FORCE STATION, EAST HAVEN,
AND
ST. ALBANS AIR FORCE STATION, ST. ALBANS
VERMONT**

**VTDEC SITE NOS. 91-1152 AND 91-1109
DERP PROJECT NO. D01VT03601 AND D01VT036702**

Prepared for:

Department of the Army
New England Division, Corps of Engineers
Waltham, Massachusetts

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Boston, Massachusetts

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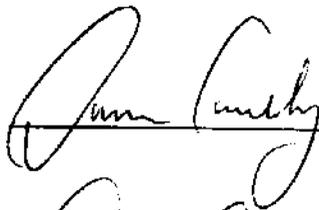
**LYNDONVILLE AIR FORCE STATION, EAST HAVEN,
AND
ST. ALBANS AIR FORCE STATION, ST. ALBANS
VERMONT**

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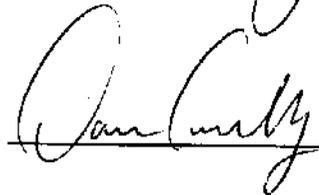
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1.0 EXECUTIVE SUMMARY

This Draft Site Investigation Report (SIR) describes the methods and results of a portion of the ongoing Site Investigation (SI) conducted at the former Lyndonville and St. Albans Air Force Stations. A previous field investigation conducted at the sites in 1995 involved former underground storage tank (UST) and above ground storage tank (AST) locations. The 1996 field investigation includes both a Continued Investigation of Former UST and AST Locations and an Investigation of Other Areas of Concern. Specifically, this SIR addresses the results of Investigation of Other Areas of Concern. The results of the Continued Investigation of Former UST and AST Locations is addressed under separate cover. The work described herein was performed and this report has been prepared by Stone & Webster Environmental Technology & Services (Stone & Webster) under Contract Number DACW33-94-D-0007 for the U.S. Army Corps of Engineers, New England Division (USACE-NED). This SIR presents the results of work performed in accordance with the *Final Addendum to Chemical Data Acquisition Plan (CDAP), Site Investigation of Former Air Force Radar Stations, Lyndonville Air Force Station, East Haven, and St. Albans Air Force Station, St. Albans, Vermont, VTDEC Site Nos. 91-1152 and 91-1109, DERP Project Nos. D01VT036301 and D01VT036702*, dated August 1996.

The purpose of the Investigation of Other Areas of Concern was to investigate potential areas of concern identified during a records search and review conducted in 1995 in order to determine if there are additional sources of contamination which may have resulted from historic usage and activities of the Department of Defense (DOD) at the Lyndonville and St. Albans sites. At the Lyndonville site, these locations consist of a former septic system, leaching field, wash bay, and radar towers, a plateau area reportedly containing a sand filter, a grassy area notably sparse in vegetation, a dry well, and two inactive water supply wells. At the St. Albans site, these locations consist of a former septic system, automobile hobby shop, vehicle maintenance facility, gasoline pump and wash stand area, potential filter cleaning areas, a debris pile, and two active water supply wells.

The Scope of Work (SOW) provided for the performance of soil borings and associated soil sampling, near surface soil sampling, and surface soil sampling, water supply well sampling, surface water sampling, and sediment sampling to evaluate conditions at the potential areas of contamination at the two sites using contract laboratory services. In general, two samples were collected from each soil boring location and one sample was

collected from each of the other locations. The samples were sent offsite for laboratory analysis of volatile organic compounds, (VOCs), semivolatile organic compounds (SVOCs), and RCRA metals. Soil from the former septic systems and a leaching field location was also analyzed for pesticides and polychlorinated biphenyls.

Certain SVOC concentrations in the soil samples collected from the former gas tank excavation, one of the former radar towers, and the former wash bay at the Lyndonville site and the debris pile, the former gas pump and wash stand area, and the former vehicle maintenance area at the St. Albans site exceeded the EPA Region III Risk Based Concentrations for residential soil ingestion.

Based on the qualitative Initial Risk Evaluation conducted in 1995, the Lyndonville site is remote and relatively inaccessible to the public. The landowner does not currently use the property, however, the small developed portions of the site are surrounded by large expanses of natural habitats that support an abundance and diversity of wildlife species, many of which have free access to the areas of concern. At St. Albans, the areas where analytes were detected in concentrations exceeding the screening levels are also not currently being used by the landowners. Also these exceedances are fairly isolated, however their extent has yet to be defined. Because, for both of the sites, the future use is unknown, Stone & Webster recommends that both a human health and ecological risk assessment be performed at these sites. The findings of the risk assessments should also be used to determine the remediation objectives for these sites.

At this point there is not enough data available at the sites to conduct either a human health or ecological risk assessment, especially where the sites are so large, and no ecological information has been collected to date. Prior to conducting the risk assessments, each site should be delineated into sub-units based on the problem areas identified to date. Based on data collected, these areas of concern at the Lyndonville site are the former gas tank excavation, one of the former radar towers, and the former wash bay. At the St. Albans site the areas of concern are the former gas pump and wash stand area, and the former vehicle maintenance area. These areas should be combined with the areas identified as a result of the Continued Investigation of Former UST and AST Locations (see SIR: *Site Investigation Report, Former Air Force Radar Stations, Continued Investigation of Former UST and AST Locations, Lyndonville Air Force Station, East Haven, and St. Albans Air Force Station, St. Albans, Vermont, VTDEC Site Nos. 91-1152 and 91-1109, DERP Project Nos. D01VT036301 and D01VT036702*, dated December 1996).

During the field investigation, kerosene was discovered to in one of the water supply wells at the Lyndonville site. The pump was removed and the product was recovered. During the next field season, the effectiveness of the free product removal from water supply well B at the Lyndonville site should be assessed.

The water supply well located in the Operations Area at the Lyndonville site was not able to be sampled because it could not be located in the field. Information about its location was obtained from the site owner, but only after weather conditions had deteriorated such that travel to the site was inadvisable. The well in the Operations Area at the Lyndonville site should be located and sampled in the late spring.

2.0 GENERAL

2.1 INTRODUCTION

This Draft Site Investigation Report (SIR) describes the methods and results of part of the ongoing Site Investigation (SI) conducted at the former Lyndonville and St. Albans Air Force Stations. A previous field investigation conducted at these sites in 1995 involved former underground storage tank (UST) and above ground storage tank (AST) locations and a records search and review. The 1995 field investigation includes both a Continued Investigation of Former UST Locations and an Investigation of Other Areas of Concern. Specifically, this SIR addresses the Investigation of Other Areas of Concern. The Continued Investigation of Former UST and AST Locations, is addressed under separate cover. The work described herein was performed, and this report has been prepared by Stone & Webster Environmental Technology & Services (Stone & Webster) under Contract Number DACW33-94-D-0007 for the U.S. Army Corps of Engineers, New England Division (USACE-NED). This SIR presents the results of work performed in accordance with the *Final Addendum to Chemical Data Acquisition Plan (CDAP), Site Investigation of Former Air Force Radar Stations, Lyndonville Air Force Station, East Haven, and St. Albans Air Force Station, St. Albans, Vermont, VTDEC Site Nos. 91-1152 and 91-1109, DERP Project Nos. D01VT036301 and D01VT036702*, dated August 1996. This project falls under the Defense Environmental Restoration Program (DERP), Formerly Used Defense Sites (FUDS) and has been conducted in accordance with USACE-NED guidance document ER1110-1-263 (1990) and under the direction of USACE-NED, 424 Trapelo Road, Waltham, Massachusetts, 02254-9149. The USACE-NED Engineering Manager (EM) is Mr. Robert Meader.

2.2 PROJECT OBJECTIVES

The purpose of the Investigation of Other Areas of Concern is to investigate potential areas of contamination due to historic usage and activity of the Department of Defense (DOD). These potential areas of contamination were identified in a records search and review of the former Lyndonville and St. Albans Air Force Stations and are shown in Figures 2-3 and 2-4. The complete findings of this records review are summarized in the *Final Inventory Letter Report, Site Investigation of Former Air Force Radar Stations, Lyndonville Air Force Station, East Haven, and St. Albans Air Force Station*,

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St. Albans, Vermont, dated December 1995 (ILR). The tasks associated with this SI were designed to evaluate conditions at the potential contamination sources first identified in the ILR and later listed in USACE-NED March 1996 Modification to Scope of Work (SOW). This Draft SIR has been submitted to the USACE-NED and the Vermont Department of Environmental Conservation (VTDEC).

2.3 SITE LOCATION, PHYSIOGRAPHY, OWNERSHIP AND PRIOR LAND USE

2.3.1 Lyndonville Site

The 213.95 acre Lyndonville site partially occupies East Mountain in East Haven, Vermont and is in a remote forested area which is not readily accessible to the public (see Figure 2-1). The study areas of the site are generally flat but are located at high elevations. The site consists of an Operations Area at the top of East Mountain and a Cantonment Area at a lower elevation. The Operations Area is located approximately at elevation 3400 feet and the Cantonment Area is located approximately at elevation 2400 feet. The depth to bedrock varies across the site from outcrops exposed at the ground surface to deeper than 20 feet.

The Lyndonville site was acquired by purchase and condemnation between 1956 and 1965. The site was used by the Air Force as a radar station. DOD improvements to the site included four radar towers, a transmitter building, an operations building, a supply building, a telephone building, a gate house, two pump houses, four barracks, a dining hall, a recreational building, an administration building, and a garage. By quitclaim deed dated 4 November 1965, the General Services Administration conveyed the 213.95 acres to Edward G. Sawyer. Mr. Sawyer still owns the property and has previously resided on the property, although he does not live there now.

2.3.2 St. Albans Site

The 142 acre St. Albans site partially occupies Bellevue Hill in St. Albans, Vermont. The site is easily accessible from Route 36 in St. Albans and is in close proximity to I-89 (see Figure 2-2). The study areas of the site are generally flat but are located at high elevations. The approximate elevation of the site is 1200 feet. Depth to bedrock has been found to be very shallow at the site.

The St. Albans site was initially leased from the State of Vermont beginning in 1949 and then purchased by the United States in 1957. This DOD site was used by the Air Force as an aircraft control and warning radar site. Several DOD improvements to the site were made, including dormitories, gym, officers club, bowling alley, dining hall, post exchange, commissary, warehouse, and heating plant. Following the deactivation of the station in 1979, the site was excessed to the General Services Administration on October 5, 1979. The land involving this project is currently owned by the Department of Transportation (DOT) - Federal Aviation Administration (FAA) and Mr. Robert A. Marcotte. The DOT acquired a 12.48 acre parcel in 1981 and Mr. Marcotte acquired a 104.75 acre parcel by quitclaim deed dated March 27, 1984. The FAA currently uses its portion of the property as a radar installation. On the Marcotte parcel, the area formerly used as the commissary now houses the Franklin County Humane Society. Several buildings in the location of the former Officers Quarters have been converted to houses which are currently occupied.

2.5 BACKGROUND

2.5.1 Lyndonville Site

In October, 1991, the USACE-NED implemented a project at the Lyndonville site, which involved the closure of fuel oil storage tanks. This project was completed by Clean Harbors Inc., on December 11, 1991. A total of eleven USTs and one aboveground storage tank AST were removed during the project.

During the removal project, a PID was used to identify potentially contaminated soils. Following the removal of soils exhibiting a headspace reading greater than 10 ppm, an additional "worst case" headspace reading and a composite soil sample were also taken within each of the twelve tank excavations prior to backfilling. The soil samples were analyzed for total recoverable petroleum hydrocarbon (TRPH) by USEPA Method 418.1 and volatile organic compounds (VOCs) by USEPA Method 8240. Of these eleven tank locations, four tank locations were identified as requiring additional work based on confirmatory sampling and were the subject of the 1995 phase of this investigation. These former tank locations consist of one former 3000 gallon UST (UST-04) location, one former 275 gallon UST (UST-06) location, one former 500 gallon UST (UST-08) location, and one former 1500 gallon AST (AST-12) location.

In summer/fall 1995, Stone & Webster conducted field investigation activities at the Lyndonville site. At that time, soil borings were advanced at the former locations of the three USTs previously mentioned (UST-04, UST-06 and UST-08). Soil samples were collected and field screened using a photoionization detector (PID). One sample from each boring, either the sample that produced the highest headspace reading or the sample located at the top of the groundwater table, was selected for offsite analysis. At location UST-04, a monitoring well was installed for future groundwater testing. A background boring/well was also installed during this phase of the project. In addition, three surface soil samples were collected at the former location of AST-12.

Soil samples were analyzed by the contract laboratory, National Environmental Testing, Inc., for TRPH (USEPA Method 418.1) and semivolatile organic compounds (SVOCs) (USEPA Method 8270). Groundwater samples were collected from both monitoring wells and analyzed for TRPH (USEPA Method 418.1) and SVOCs (USEPA Method 8270) and VOCs (USEPA Method 8260). Sample results were compared to the EPA Region III Risk-Based Concentrations for Residential Soil Ingestion and Tap Water. These concentrations were accepted by the Vermont Department of Environmental Conservation (VTDEC) for use as action limits and were adopted as the project screening levels. In addition, the VTDEC has established 200 mg/Kg as the screening level for TRPH in soil. Samples taken from the locations of former UST-08 and AST-12 had TRPH concentrations greater than screening levels. Samples taken from the location of former AST-12 also had certain SVOC concentrations greater than screening levels. The location of former UST-04 was believed to have residual contamination based on visual and olfactory observations. Further action was recommended for the former locations of UST-04, UST-08 and AST-12 based on these results. Field observation and sample analysis in the former location of UST-06 suggested that no further action was required there.

A records search was conducted simultaneously with the 1995 field investigation and the findings summarized in the ILR. This task consisted of document review, site interviews, and site walkovers. The ILR identified potential contamination sources at the Lyndonville site including a former wash bay, a gas tank excavation, a septic system area, a possible "dry well", a leaching field, a plateau area which was believed to contain a sand filter, a grassy area notably sparse in vegetation, and former radar towers all of which are the subject of the current Investigation of Other Areas of Concern.

2.5.2 St. Albans Site

In April 1991, the USACE-NED implemented a project at the St. Albans site which involved the closure of fuel oil storage tanks. This project was completed by Franklin Environmental Services, Inc., on September 27, 1991. A total of nine USTs and two ASTs were removed during the project.

During the removal project, a PID was used to identify potentially contaminated soils. Following the removal of soils exhibiting a headspace reading greater than 10 ppm, a "worst case" composite soil sample was taken within each of the eleven tank excavations prior to backfilling. The soil samples were analyzed for total recoverable petroleum hydrocarbon (TRPH) by USEPA Method 418.1 and volatile organic compounds (VOCs) by USEPA Method 8240. Of these eleven tank locations, four tank locations were identified as requiring additional work based on confirmatory sampling and were the subject of the 1995 phase of this site investigation. The former tank locations consist of one former 8,500 gal. UST (UST-02) location; one former 10,000 gal. UST (UST-03) location; one former 30,000 gal. UST (UST-09) location; and one former 500 gal. AST (AST-05) location.

In summer/fall 1995, Stone & Webster conducted field investigation activities at the St. Albans site. At that time, soil borings were advanced at the former locations of the three USTs previously mentioned (UST-02, UST-03, UST-09). Soil samples were collected and field screened using a PID. One sample from each boring, either the sample that produced the highest headspace reading or the sample located at the top of the groundwater table, was selected for offsite analysis. A background soil boring was also installed during this phase of the project. In addition, three surface soil samples were collected at the former location of AST-05.

Soil samples were analyzed at the contract laboratory, National Environmental Testing, Inc., for TRPH (USEPA Method 418.1) and SVOCs (USEPA Method 8270). Sample results were compared to the project screening levels as described in Section 2.5.1. Samples from the locations of former UST-02 and UST-03 had TRPH and SVOC concentrations above screening levels. Samples from the location of former AST-05 also had certain SVOC concentrations greater than screening levels, although TRPH was not detected in any of the samples. Further action was recommended for the locations of UST-02, UST-03 and AST-05 based on these results. Field observations

and sample analyses in the former location of UST-09 suggested that no further action was required there.

In March 1994, at the request of the FAA, the Vermont Department of Health (VTDOH) completed a test of the water supply on the FAA - owned portion of the site. The analytical results of this test indicated the presence of six chlorinated volatile organic compounds in the well. Trichloroethylene (TCE) and 1,1 dichloroethane (1,1 DCA) concentrations exceeded Vermont drinking water standards. In April 1994, the VTDEC requested both the USACE-NED and the FAA to conduct an investigation to determine the source of as well as the degree of contamination at in the subject area at the site. The FAA contracted with Ground Water of Vermont in response to the VTDEC request.

To develop a work plan, Ground Water of Vermont conducted a site visit and personal interviews with facility personnel who were present during the period of Air Force operations. This work plan identified seven potential contaminant sources including: four former radar domes, where solvents were reported used to clean radar filters; a former loading dock, where solvents were reported used to clean filters and other parts; a former solvent storage area; and the former on-site septic system.

Ground Water of Vermont conducted site investigation activities including a soil gas survey and soil sampling at the FAA portion of the site. The findings of these activities are summarized in the *Initial Site Investigation Report*, prepared in December 1995. Locations of soil contamination were found to correlate with locations in which chlorinated solvents were reportedly stored and used during the period of DOD operation. The former solvent storage area, the largest area of contaminated soils, contained the highest soil-gas concentrations and was the only location where at which volatile organic compounds were detected in analyzed samples.

Stone & Webster conducted a records search and review simultaneous with the previous field investigation and the findings summarized in the ILR. This task consisted of document review, including the December 1995 Ground Water of Vermont report, site interviews, and site walkovers. The ILR identified potential contamination sources at the St. Albans site including a vehicle maintenance shop, a gasoline pump and wash stand area, filter cleaning areas, a septic system, a former solvent storage area, an automotive hobby shop, and a debris pile.

Stone Environmental, Inc. conducted follow-up field activities under contract to the FAA to locate the source of solvent contamination detected in the water supply well at the upper elevation portion of the St. Albans site. This investigation included a geophysical survey of bedrock fractures, soil borings and sampling at the former solvent storage area. The findings of this investigation are summarized in a report *Contaminated Well Investigation, St. Albans Radar Facility, Bellevue Hill, St. Albans, VT*, dated July 3, 1996. Based on these findings, Stone Environmental concluded that the soil in the vicinity of the former solvent storage area is not highly contaminated and therefore not likely to be contaminating the water supply well.

The remaining locations (vehicle maintenance shop, gasoline pump and wash stand area, filter cleaning areas, septic system, automotive hobby shop, and debris pile) are the subject of the current Investigation of Other Areas of Concern.

3.0 SITE INVESTIGATION

3.1 INTRODUCTION

The SI field activities included soil borings and associated sampling, near surface soil sampling, surface soil sampling, water supply well sampling, contract laboratory analyses, and at the Lyndonville site, surface water and sediment sampling. The SOW provided for the performance of this sampling to determine the presence or absence of contamination at several of the locations identified in the ILR as potential contamination sources using contract laboratory services. The following is a general discussion of the sampling procedures used.

At the soil boring locations, soil samples were collected continuously to the water table and then at five-foot intervals. Soil samples were field screened using a PID and two samples from each boring were selected for offsite analysis (See Section 3.4). A Boring Log was completed for each boring (see Appendix D). The installation of monitoring wells was an option to be invoked at the soil boring locations if certain criteria were met and the USACE-NED EM authorized their installation. The criteria to be met was that groundwater had to be encountered within the allowable depth of the boring (20 feet bgs at Lyndonville and 15 feet bgs at St. Albans) and contamination had to be indicated through field screening methods. As this criteria was not met at either site, no monitoring wells were installed.

At the near surface sampling locations, samples were collected using a hand auger. In general, one sample was collected from each location between 4 and 6 feet where site conditions allowed. In situations where near surface sampling replaced a soil boring due to access concerns, two samples were collected unless otherwise stated later in this report. Specific sampling procedures are presented in Section 3.4.

Headspace measurements were not possible at several sampling locations due to apparent PID instrumentation malfunctions. On September 3, 1996, a Thermo Environmental PID: OVM Model 580B was used. Because this instrument measured high background readings at some sampling locations, a new PID was ordered on September 4, 1996, and was delivered to the field team on September 6, 1996. On September 4, 1996, a known source of organic vapors (permanent marker) was used to

test the validity of the PID readings and to confirm that the PID would measure concentrations greater than background. This test confirmed that the PID was responding appropriately. On September 5, 1996, the OVM Model 580B would not calibrate and was not used that day. On September 6, 1996, an HNu PID: Model PI 101 was delivered. This PID arrived without a complete battery charge and could not be used. On September 7, 1996, after eight hours of recharging, it appeared that the PID batteries would not hold the charge and could not be used that day either. Stone & Webster re-mobilized on September 17, 1996, with an HNu PID: Model PI 101. This PID was calibrated before mobilization to ensure that it was working properly. At the site, the PID did not respond to a location suspected to contain organic vapors. Because the PID was calibrated using pressurized isobutylene, it appeared that the fan which draws air into the unit was malfunctioning, or that the unit was clogged. A Rae Systems PID: Mini Rae model, was delivered to the field team on September 18, 1996. Headspace measurements to be made on September 17, 1996, and all subsequent measurements were made with this instrument. For those instances where headspace measurements were not possible, visual and olfactory indications of contamination were used to field screen samples.

3.2 LYNDONVILLE SITE EXPLORATIONS

3.2.1 Soil Borings

On September 4, 1996, Stone & Webster and its subcontractor, American Drilling Services, Inc. of Westminister, Massachusetts (American Drilling), installed one soil boring at the location of the former **septic system** in the Cantonment Area (LYSEPTICA) (see Figure 2-3). The final depth of this boring was 12 feet below ground surface (bgs) and groundwater was encountered at 4 feet bgs. Each sample from this boring produced headspace readings which ranged between 0 and 9.5 ppm, similar to readings from the breathing zone and in areas away from the drill rig.

Due to access restrictions, soil borings to be constructed in the grassy area, and at the location of the former leaching field in the Operations Area were converted to hand augered near surface samples.

3.2.2 Near Surface Soil Samples

ensure no air bubbles were present before shipping them offsite. Containers for SVOC analysis and metals analysis were filled following the VOC containers.

3.5 INVESTIGATION-DERIVED WASTE MANAGEMENT

Investigation-derived waste (IDW) was generated in association with this project (Investigation of Other Areas of Concern as well as Continued Investigation of UST and AST Locations). All IDW was containerized in 55 gallon steel drums and stored on both sites. This waste consisted of:

- All soil cuttings from sampling activities not submitted for laboratory analysis unless headspace field screening results were found to be less than 10 ppm in accordance with the approved CDAP and therefore allowed as backfill.
- Decontamination fluids resulting from decontamination of equipment.
- All disposable personal protective equipment (PPE) and disposable sampling equipment and supplies

Laidlaw Environmental Services (Laidlaw) was contracted by Stone & Webster to transport and dispose of this IDW.

At the St. Albans site, three 55 gallon drums were used to containerize the IDW: one drum containing soil, the second drum containing decontamination fluids, and the third drum containing PPE. On November 7, 1996, Laidlaw visited the St. Albans site and removed the drums. Stone & Webster was present at the site during these operations to ensure proper waste handling procedures were followed, which included labeling the drums and completing the manifest prior to transport. The drums were brought to Laidlaw's disposal facility in Lawrence, Massachusetts.

Similarly, at the Lyndonville site, three 55 gallon drums were used to containerize the IDW: one drum containing soil, the second containing decontamination fluids, and the third containing PPE. These drums were found vandalized prior to their removal. The lids from two drums were removed and all three drums had been punctured with bullet holes, requiring them to be overpacked before being transported. On November 8, 1996, Pollution Solution of Vermont, under contract to Laidlaw, performed the necessary overpacking.

Near surface soil samples were collected in the vicinity of the former **leaching field**. As previously mentioned, a soil boring was originally planned for this location, however, the drill rig could not access the location because of the steep slope. In lieu of one soil boring and two samples, near surface samples were collected from three locations in a triangular pattern (LYLEACHA, LYLEACHB, and LYLEACHC) (see Figure 2-3) with one sample collected from each location. These samples were recovered from the following depths: 3 to 3.5 feet bgs, 2 to 2.5 feet bgs and 1 to 1.5 feet bgs. At each of these locations, refusal was met at the sampling depth. No odor or visual signs of contamination were present.

3.2.3 Surface Soil Samples

On September 17, 1996, Stone & Webster collected one surface soil sample at the former **wash bay** in the Cantonment Area (LYWSHBYA) (see Figure 2-3). This sample was collected between 1 and 5 inches bgs. No odor or visual signs of contamination were present in this sample.

3.2.4 Water Supply Well Samples

On September 17, Stone & Webster collected samples from two **water supply wells** in the Cantonment Area. These wells were sampled using a peristaltic pump and 0.25 inch diameter teflon tubing. Dedicated tubing was used at each location and purged with deionized water before sampling to remove any manufacturers residue. Headspace readings were not possible before sampling due to an apparent instrumentation malfunction. After sampling, the wells were covered and on September 19, 1996, headspace measurements were made using a PID. Although sample from a water supply well in the Operations Area was proposed, at the time of the field activities, a well could not be located. After the conclusion of the field activities, Stone & Webster learned from the site owner that this well is located in an underground bulkhead, accessed through a manhole cover in the vicinity of the former receiver building. The owner reports that this bulkhead is likely filled with water and that a pump will be required to sample the well.

The first well sampled, designated LYWTRSPA (see Figure 2-3), was accessed by lifting a wood cover in the floor of the well house. The depth to the water surface was 10.4 feet from the top of the floor slab at the well casing. After sampling, the wooden

board was replaced over the well and two days later, a headspace of 1.1 ppm was measured.

At the second well sampled, designated LYWTRSPB (see Figure 2-3), the pump motor base was still in place over the well, limiting access for sampling. A sample was collected through a 3/8 inch diameter access port in the motor base. The depth to the surface of the water was estimated to be 15 feet based on the length of tubing required to collect the sample (as no water level probe could be inserted into the access port. Samples collected from this well contained free product later identified as kerosene. After sampling, a steel bolt was placed in the port to allow vapors to collect in the well and two days later, a headspace of 86 ppm was measured.

On November 7 and 8, 1996, following the conclusion of the sampling program, an effort was made to remove the floating product (kerosene) from this well. Access to the well was gained by removing and disassembling the pump shaft, discharge pipe containing the shaft, and motor base. L.G. Cushing & Sons - North, Inc. of Lyndonville, Vermont (Cushing) was subcontracted to Stone & Webster to remove and steam the pump equipment. During the removal process, Cushing personnel observed that the pump had little salvage value due to its age and condition. Stone & Webster used a peristaltic pump and a skimmer called a "PetroTrap," to collect the kerosene. Approximately 3/4 gallon of kerosene was collected using the pump. When more water than product was being removed with the pump, the PetroTrap was installed in the well. Approximately 75 mL of product were removed using the PetroTrap in the first 3 hours. The PetroTrap was removed from the well, cleaned, and reinstalled for an additional 15 hours. After 15 hours only 30 mL of product was recovered. In addition to the diminishing rate at which the kerosene was collected, product was not observed in the drywell (LYDRYWLA), which penetrates the groundwater table less than 20 feet away from the contaminated well, suggesting that free product does not exist in the groundwater.

3.2.5 Sediment / Surface Water Samples

Stone & Webster attempted to collect both a sediment and surface water sample from the former dry well the Cantonment Area (LYDRYWLA) (see Figure 2-3). The depth to the water was estimated to be approximately 6 feet bgs. On September 4, 1996, an Eckman dredge sampler was used to attempt to collect a sediment sample from this location. Due to gravel and debris at the bottom of the well, a sediment sample could

not be collected. On September 19 a surface water sample was collected using a hand bailer. The total depth of water was estimated to be 1 foot. After collecting the surface water sample, the dry well was probed with a steel rod to try to determine its contents and its construction. It appeared that the bottom of the well, below the debris, was covered with approximately 4 inches of coarse gravel and sand. After probing the well, a small sheen (approximately 10 inches in diameter) was observed to form on the water. Because refusal was met at the same depth in several locations, it appeared that the bottom of the structure was constructed from concrete and not boulders, which would have created an uneven surface.

3.3 ST. ALBANS SITE EXPLORATIONS

3.3.1 Soil Borings

On September 6, 1996, Stone & Webster and American Drilling installed one soil boring at the location of the former auto hobby shop at the portion of the site owned by the FAA (SAAUTOHA) (see Figure 2-4).

Due to access restrictions, the soil boring to be installed at the former septic system was installed using a hand auger and the associated samples were collected as augered near surface samples.

The final depth of this boring was 10 feet bgs and groundwater was encountered at 7 feet bgs. Due an apparent instrumentation malfunction, sample headspace was not measured at this location. No visual or olfactory signs of contamination were present in the samples from this boring.

3.3.2 Near Surface Samples

Between September 6 and 7, 1996, Stone & Webster and American Drilling, collected augered near surface soil samples at the debris pile, and former filter cleaning areas (located on the portion of the site owned by the FAA) , as well as at the former septic system (located on the Marcotte property). As with the soil boring constructed at this site, headspace of the near surface samples were not measured. Groundwater was not encountered during this sampling.

The near surface soil samples were collected between 0 and 10 inches bgs at the location of the **debris pile** (SADEBRISA), and between 0 and 5 inches bgs and 0 to 8 inches at the two former **filter cleaning areas** (SAFILTRA and SAFILTRB) (see Figure 2-4). At all three locations refusal was met at the sampling depth. No odor or visual signs of contamination were present in these samples.

The near surface soil samples collected in the vicinity of the former **septic system** (SASEPTICA) (see Figure 2-4) were collected between 1 and 2 feet bgs and 3 and 4 feet bgs. Refusal was reached at 4 feet bgs. No odor or visual signs of contamination were present in these samples.

3.3.3 Surface Soil Samples

On September 18, 1996, Stone & Webster collected three surface soil samples. One sample was collected from the vicinity of the former **vehicle maintenance shop** (SAVHMTA) and two samples were collected from the **gasoline pump and wash stand area** (SAGSPMPA and SAGSPMPB) located on the Marcotte property (see Figure 2-4). These samples were collected between 0 and 5 inches bgs. No odor or visual signs of contamination were present in these samples.

3.3.4 Water Supply Well Samples

On September 18, 1996, Stone & Webster collected samples from two of the **water supply wells** located on the Marcotte property. Samples were collected directly from the plumbing used to control the water distribution from the wells. The first well sampled, designated SAWTRSPB (see Figure 2-4), was in use on the day of sampling. The depth to the water was over 100 feet bgs, which was likely due to the well being in use. The second well sampled, designated SAWTRSPA (see Figure 2-4), was on stand-by status the day of sampling. The depth to the water in this well was measured as 21.24 feet bgs. The second well was then activated and the first well placed on stand-by status. The second well was allowed to produce approximately 120 gallons before sampling to ensure that the water sampled was from the well and not the water distribution system. The owner reported that the total depth of both wells was approximately 750 feet bgs.

3.4 SAMPLING PROGRAM

3.4.1 Introduction

All sampling was conducted in accordance with the approved CDAP. Non-disposable sampling equipment items such as stainless steel spoons and trowels were decontaminated by Stone & Webster field personnel prior to use and after collection of each sample to prevent cross-contamination between sampling points and exploration locations. All sample containers were pre-cleaned and kept sealed until used. Field Data Records were completed for each sample obtained for laboratory analysis and are located in Appendix C. Procedures for sediment sampling are not addressed since no sediment samples were collected.

3.4.2 Soil Borings

Soil boring samples were collected in continuous two-foot intervals until the groundwater table was reached. Below the groundwater table, samples were collected at five-foot intervals to the bottom of the boring. As specified in the approved CDAP, each submitted sample was analyzed for VOCs (USEPA Method 8260A), SVOCs (USEPA Method 8270B) and for RCRA metals (arsenic, barium, cadmium, chromium, lead, selenium, and silver). Of the metals, mercury was analyzed by USEPA Method 7471 and the other metals were analyzed by USEPA Method 6010A. At the location of the septic system at both sites and at the location of the leaching field at the Lyndonville site, soil samples were also analyzed for pesticides and polychlorinated biphenyls (Pest./PCBs) (USEPA Method 8081).

Soil samples were taken as follows: The soil in each split spoon was first scanned with a PID (where possible), noting the soil color, particle size, and any staining or odors (if present) in the sample. The VOC sample container was filled first using soil from the tip of the split spoon and was filled as full and as compact as possible to minimize headspace. Where headspace readings could be taken, the sample container used for the headspace readings was then filled halfway using soil from different parts of the split spoon. The remaining soil was placed in an aluminum pan and composited using a clean stainless steel trowel. Soil for the remaining analyses was placed in the appropriate sample containers with the stainless steel trowel used to composite the sample. Headspace readings are presented with the analytical results on Tables 4-1 and 4-4, and can also be found in the daily quality control reports located in Appendix A.

Two samples from each boring were submitted to the laboratory for analysis: one from the bottom of the boring, and one selected based on field screening. Generally, the sample with the highest headspace reading was chosen as one of the samples selected for offsite analysis, although visual and olfactory observations were also used when necessary. When there were no indications of potential contamination based on field screening, the sample taken closest to or just above the soil/groundwater interface was submitted for laboratory analysis.

3.4.3 Near Surface Soil Samples

Near surface soil samples were collected using a hand auger. In general, one sample was collected from each location between 4 and 6 feet bgs where site conditions allowed. In situations where near surface sampling replaced a soil boring due to access concerns, two samples were collected, except at the location of the former leaching field at the Lyndonville site as previously stated. As specified in the approved CDAP, each submitted sample was analyzed for VOCs (USEPA Method 8260A), SVOCs (USEPA Method 8270B) and for RCRA metals. Of the metals, mercury was analyzed by USEPA Method 7471 and the other metals were analyzed by USEPA Method 6010A. At the location of the septic system at the St. Albans site and at the location of the leaching field at Lyndonville site, soil samples were also analyzed for Pest./PCBs (USEPA Method 8081).

As with the soil boring samples, the VOC sample container was filled first using soil from the tip of the auger and was filled as full and as compact as possible to minimize headspace. In general, where near surface sampling replaced soil boring sampling, a sample container used for headspace readings was then filled halfway using soil from different parts of the sample. The remaining soil was placed in an aluminum pan and composited using a clean stainless steel trowel. Soil for the remaining analyses was placed in the appropriate sample containers with the stainless steel trowel used to composite the sample.

3.4.4 Surface Soil Samples

Surface soil samples were collected using a stainless steel trowel from depths between 0 and 6 inches bgs using a stainless steel trowel. Any debris on the ground surface, if present, was removed before the surface soil samples were collected. As specified in the approved CDAP, each submitted sample was analyzed for VOCs (USEPA Method

8260A), SVOCs (USEPA Method 8270B) and for RCRA metals. Of the metals, mercury was analyzed by USEPA Method 7471 and the other metals were analyzed by USEPA Method 6010A.

As with the other soil samples, the VOC sample container was filled first as full and as compact as possible to minimize headspace. The remaining soil was placed in an aluminum pan and composited using a clean stainless steel trowel. Soil for the remaining analyses was placed in the appropriate sample containers with the stainless steel trowel used to composite the sample.

3.4.5 Water Supply Well Samples

Water supply well samples were collected from both sites. These wells were not purged or developed as they are continuously recharging wells. Water supply wells at the Lyndonville site were abandoned. Samples from these wells were collected using a peristaltic pump and plastic tubing. New tubing was used at each location. At the St. Albans site, the water supply wells are currently in use and water supply well samples were collected directly from the plumbing that controls the water distribution. In general water supply well samples were submitted to the contract laboratory for analysis using drinking water methodologies. Each sample was analyzed for VOCs (USEPA Method 524.2), SVOCs (USEPA Method 525.2), and metals (Mercury by USEPA Method 245.1 and the other metals by USEPA Method 200.7) as specified in the approved CDAP. Departures from these analyses are described in Section 4.2.4.

At each location, sample containers used for VOC analysis were filled first and inspected to ensure no air bubbles were present before shipping them offsite. Containers for SVOC analysis and metals analysis were filled following the VOC containers.

3.4.6 Surface Water Samples

A surface water sample was collected at the Lyndonville site using a hand bailer. As with the other water samples This sample was analyzed for VOCs (USEPA Method 8260A), SVOCs (USEPA Method 8270B), and metals. Of the metals, Mercury was analyzed by USEPA Method 7471, other metals were analyzed by USEPA Method 6010A. Sample containers used for VOC analysis were filled first and inspected to

ensure no air bubbles were present before shipping them offsite. Containers for SVOC analysis and metals analysis were filled following the VOC containers.

3.5 INVESTIGATION-DERIVED WASTE MANAGEMENT

Investigation-derived waste (IDW) was generated in association with this project (Investigation of Other Areas of Concern as well as Continued Investigation of UST and AST Locations). All IDW was containerized in 55 gallon steel drums and stored on both sites. This waste consisted of:

- All soil cuttings from sampling activities not submitted for laboratory analysis unless headspace field screening results were found to be less than 10 ppm in accordance with the approved CDAP and therefore allowed as backfill.
- Decontamination fluids resulting from decontamination of equipment.
- All disposable personal protective equipment (PPE) and disposable sampling equipment and supplies

Laidlaw Environmental Services (Laidlaw) was contracted by Stone & Webster to transport and dispose of this IDW.

At the St. Albans site, three 55 gallon drums were used to containerize the IDW: one drum containing soil, the second drum containing decontamination fluids, and the third drum containing PPE. On November 7, 1996, Laidlaw visited the St. Albans site and removed the drums. Stone & Webster was present at the site during these operations to ensure proper waste handling procedures were followed, which included labeling the drums and completing the manifest prior to transport. The drums were brought to Laidlaw's disposal facility in Lawrence, Massachusetts.

Similarly, at the Lyndonville site, three 55 gallon drums were used to containerize the IDW: one drum containing soil, the second containing decontamination fluids, and the third containing PPE. These drums were found vandalized prior to their removal. The lids from two drums were removed and all three drums had been punctured with bullet holes, requiring them to be overpacked before being transported. On November 8, 1996, Pollution Solution of Vermont, under contract to Laidlaw, performed the necessary overpacking.

In addition to these three drums, two additional 55 gallon drums were used at the Lyndonville site to containerize waste generated during a source-removal effort. This source removal effort involved removing a pump and floating product from LYWTRSPB and is described in Section 3.2.4. The waste generated during the removal effort consisted of one drum containing decontamination water and free product, and a second drum containing plastic sheeting and other disposable supplies.

On November 8, 1996, Laidlaw visited the Lyndonville site to remove the five drums. As at the St. Albans's site, Stone & Webster was present during these operations to ensure proper waste handling procedures were followed. These drums were also brought to Laidlaw's disposal facility in Lawrence, Massachusetts.

4.0 LABORATORY ANALYTICAL RESULTS

4.1 INTRODUCTION

Soil and water samples collected during the September 1996 field effort were analyzed by the Mitkem Corporation in Warwick, Rhode Island (Mitkem), with the exception of the SVOC analysis (USEPA Method 525.2) of the water supply well samples. These SVOC analyses were performed by Environmental Health Laboratories in South Bend, Indiana, Mitkem's subcontractor. The samples were analyzed in accordance with the approved CDAP with noted exceptions. Validated analytical results are presented in Tables 4-1 through 4-3 for the Lyndonville site and in Tables 4-4 and 4-5 for the St. Albans site.

The laboratory data sheets, including the laboratory ion chromatograms, and the results of the laboratory data validation for all samples analyzed are presented in Appendix B. Tabular summaries of the laboratory analytical results and validated analytical results are also presented in Appendix B.

The State of Vermont, Department of Environmental Conservation, has stated in a letter dated January 5, 1996 that it approves of the use of the USEPA Region III Risk Based Concentrations for site screening levels. As such, the analytical results from this field investigation have been compared to the USEPA Region III Residential Risk-Based Concentrations for Residential Soil Ingestion and Tap Water as published in an April 30, 1996 memo distributed by Roy L. Smith, EPA Senior Toxicologist. (See Appendix E for this documentation.)

4.2 LYNDONVILLE SITE

4.2.1 Soil Boring Sample Results

Two samples (LYSEPTICASB X1 and X2) and one duplicate (LYSEPTICASB DS) were collected from the location of the former septic system. The laboratory reported concentrations of methylene chloride, and acetone in these samples. After data validation, these concentrations were qualified to nondetected at 9 U (acetone) and 25 U (methylene chloride) due to blank contamination. One pesticide, 4,4'-DDT was reported in sample LYSEPTICASB X1 and its duplicate LYSEPTICASB DS at

concentrations of 4.0 UJ and 4.1 J ug/Kg respectively. Barium and chromium were detected at concentrations between 49 and 93 mg/Kg. Arsenic, lead, mercury, and selenium were detected at concentrations ranging from 2 to 7 mg/Kg. None of the SVOCs target analytes were detected.

4.2.2 Near Surface Soil Sample Results

Two samples (LYGSTNKANS X1 and LYGSTNKBNS X1) and two duplicates (LYGSTNKANS DS and LYGSTNKBNS DS) were collected at the former gas tank excavation. The laboratory reported concentrations of methylene chloride in sample LYGSTNKANS DS at 19 ug/Kg. After validation, this concentration was qualified to nondetect at 19 U ug/Kg, and the concentration of methylene chloride in sample LYGSTNKANS X1 was qualified from nondetect to estimated nondetect 6 UJ. The laboratory reported concentrations of acetone in all three samples from this location ranging from 7 to 18 ug/Kg. After validation, these concentrations were also qualified as nondetected. Fifteen SVOCs were detected in sample LYGSTNKANS X1 at concentrations ranging from 64 J to 2600 ug/Kg with the four highest concentrations ranging from 1100 J to 2600 J ug/Kg. Of the fourteen SVOCs detected, six were also detected in the duplicate of this sample at concentrations ranging from 44 J to 77 J ug/Kg. SVOC target analytes were not detected in the remaining samples from this location (LYGSTNKBNS X1 and DS). Barium, chromium, and lead were detected in samples from this location at concentrations ranging from 11 to 190 J mg/Kg. Arsenic, cadmium, and selenium were also detected in this location at concentrations ranging from 0.2 to 5 mg/Kg.

One sample (LYGRASSANS X1) was collected from the grassy area. The laboratory reported methylene chloride at a concentration of 23 ug/Kg. After data validation, this concentration was qualified to nondetected at 19 U ug/Kg. SVOC target analytes were not detected in this sample. Arsenic (5 mg/Kg), barium (60 mg/Kg), chromium (24 mg/Kg), lead (21 J mg/Kg) and selenium (3 mg/Kg) were detected.

Two samples (LYRDTWRANS X1 and LYRDWRBNS X1) were collected from the location of two of the former radar towers, with one sample collected from each location. The laboratory reported methylene chloride at both of these locations. After data validation, these concentrations were qualified to nondetect at 15 U ug/Kg (LYRDTWRANS X1) and 30 U ug/Kg (LYRDWRBNS X1). At one of the former radar tower locations, sample LYRDTWRANS X1, sixteen SVOCs were detected at

concentrations ranging from 63 J to 3700 ug/Kg with the highest eight concentrations ranging from 1000 to 3700 ug/Kg. Seven of the same SVOCs were also detected at the other former radar tower (sample LYRDTWBNS X1) at concentrations ranging from 50 J to 160 J ug/Kg. Bis(2-Ethylhexyl)phthalate was detected at 68 J ug/Kg in sample LYRDTWBNS X1 only. Barium, chromium, and lead were detected at both locations at concentrations ranging from 38 to 750 J mg/Kg. Arsenic was detected at both locations at a concentration of 5 mg/Kg. Cadmium (0.3 mg/Kg) and silver (4 mg/Kg) were detected in sample LYRDTWBNS X1 only.

One sample was collected from the plateau area (LYPLATEANS X1). No VOC and SVOC target analytes were detected at this location. Arsenic (4 mg/Kg), barium (51 mg/Kg), chromium (22 mg/Kg), and lead (4.1 J mg/Kg) were detected.

Three samples (LEACHANS X1, LEACHBNS X1, and LEACHCNS X1) were collected from the former leaching field in the Operations Area. The laboratory reported concentrations of acetone in samples LEACHBNS X1 (7 ug/Kg) and LEACHCNS X1 (6 ug/Kg) and methylene chloride, in samples LEACHANS X1 (15 ug/Kg), LEACHBNS X1 (19 ug/Kg), and LEACHCNS X1 (17 ug/Kg). After data validation, these concentrations were qualified to nondetect at 7 U and 6 U ug/Kg (acetone) and 15 U, 19 U, and 17 U ug/Kg (methylene chloride) due to blank contamination. No SVOC target analytes were detected in samples from this area. Barium and chromium were detected at concentrations ranging from 38 to 70 mg/Kg. Arsenic and lead were detected at concentrations ranging from 2.4 J mg/Kg to 5 mg/Kg.

4.2.3 Surface Soil Sample Results

One surface soil sample (LYWSHBYASS X1) was collected from the location of the former wash bay. The laboratory reported two VOCs, 1,1,1-trichloroethane and acetone at concentrations of 6 and 8 ug/Kg respectively. After validation, the acetone concentration was qualified to nondetect (6 U ug/Kg). Eighteen SVOCs were detected in this sample with the highest seven concentrations ranging between 1500 and 3100 ug/Kg and the remaining concentrations ranging between 55 J and 700 ug/Kg. Arsenic (3.6 mg/Kg), barium (57 mg/Kg), chromium (34 mg/Kg), lead (99 mg/Kg), mercury (0.33 mg/Kg), and selenium (3.9 mg/Kg) were also detected in this sample.

4.2.4 Water Supply Sample Results

One VOC, methylene chloride, was detected in sample LYWTRSPA X1 at a concentration of 3 ug/L. This concentration was validated to 3 U ug/L due to blank contamination. Barium was detected at 0.02 mg/L in this sample. No SVOC target analytes were detected.

The water fraction of sample LYWTRSPB X1 and its duplicate LYWTRSPB DS were submitted for analysis by SW-846 methods (VOCs by USEPA Method 8260A, SVOCs by USEPA Method 8270B, RCRA metals by USEPA Methods 6010A and 7471). The product phase was analyzed for TPH by USEPA Method 8015M which produced a concentration of 860000 mg/Kg. The product identification (finger print) indicates that the product is kerosene. Due to a laboratory error, the product phase instead of the water phase was analyzed for SVOCs. By the time the error was discovered, analysis of the archived water phase would have grossly exceeded the extraction holding time. Therefore the water phase was not analyzed for SVOCs. Although Aliphatic hydrocarbons, which are consistent with kerosene, were detected as tentatively identified compounds at very high concentrations (1000 to 13000 mg/L), none of the SVOC target analytes were detected in the product. The water phase was correctly analyzed for VOCs by 8260A and diluted 10 times. Methylene chloride was detected in this sample at 19 ug/L, but validated to 50 UJ due to blank contamination. Because this sample was diluted 10x, the reporting limits exceed the screening levels. The holding time for these samples (seven days) was exceeded by one day. For this reason, all nondetects were validated as estimated nondetect (UJ). Samples LYWTRSPBWS X1 and DS were analyzed for metals by drinking water methodologies (USEPA Methods 200.7 and 245.1) instead of the specified SW-846 methodologies (USEPA Methods 6010A and 7471) which was also an error on the part of the laboratory. Because the reporting limits are less than the screening levels and the methods are similar, this substitution is not significant. Barium (0.02 mg/L), chromium (0.03 mg/L), lead (0.13 J mg/L) and selenium (0.02 mg/L) were detected in sample LYWTRSPB X1 at concentrations between 0.02 and 0.13 J mg/L. Barium and lead only were detected in the sample duplicate at 0.02 and 0.028 J mg/Kg respectively .

4.2.5 Surface Water Sample Results

One surface water sample (LYDRYWLASW X1) and a duplicate (LYDRYWLASW DS), were collected from the former dry well. One VOC, 1,1,1-trichloroethane, was detected at a concentration of 1 J ug/L in the regular sample. This compound was not detected in the sample duplicate. Three other VOCs: chloromethane, methylene

chloride, and trichloroethene, were detected in both this sample (2 J, 5, and 2 J ug/Kg) and its duplicate (4 J, 7, and 2 J ug/Kg). After validation, these concentrations were qualified as not detected (2 U, 5 U, and 2 U ug/Kg), (4 U, 7 U, and 2 U ug/Kg). Two SVOCs, Phenanthrene and Fluoranthene, were both detected at 1 J ug/L in the duplicate sample only. Due to an error on the part of the laboratory, these samples were analyzed for metals by drinking water methodologies (USEPA Methods 200.7 and 245.1) instead of the specified SW-846 methodologies (USEPA Methods 6010A and 7471). Because the reporting limits are less than the screening levels, and the methods are similar, this substitution is not significant. Barium and lead were detected at 0.05 ug/L and 0.009 ug/L respectively in the regular sample. Similar concentrations, (0.02 and 0.028 mg/L) were detected in the duplicate.

4.2.6 Comparison to Screening Levels

4.2.6.1 Soil Screening Levels

Three soil samples collected from the former gas tank excavation, one of the former radar tower locations, and at the former wash bay had SVOC concentrations which exceeded the USEPA Region III Risk-Based Concentrations, which are considered the project screening levels. The screening levels for benzo(a)anthracene, benzo(b)fluoranthene, and benzo(a)pyrene were exceeded in one sample from the former gas tank excavation (LYGSTNKANS X1), one of the former radar tower area samples (LYRDTWRANS X1), and the sample near the former wash bay (LYWSHBYASS X1). In addition, the screening level for dibenzo(a,h)anthracene was also exceeded in samples LYRDTWRANS X1 and LYWSHBYASS X1. No detected concentrations of VOCs, RCRA metals, or Pest./PCBs exceeded the project screening levels in any of the soil samples collected as part of the Investigation of Other Areas of Concern.

4.2.6.2 Water Screening Levels

Although no positive hits were present in samples from location LYWTRSPB, this is likely due to the dilutions and subsequently high reporting limits. Because free product was found at this location, it is likely that screening levels were exceeded. No detected concentrations of VOCs, SVOCs, or metals exceeded the screening levels in the sample from water supply well A (LYWTRSPA X1) or in the samples from the dry well (LYDRYWLASW X1 and DS).

4.3 ST. ALBANS SITE

4.3.1 Soil Boring Sample Results

Two samples (SAAUTOHASB X1 and X2) were collected from the location of the former septic system. The laboratory reported concentrations of acetone (10 and 15 ug/Kg) and methylene chloride (9 ug/Kg) in both of these samples. After data validations, these concentrations were qualified to nondetected at 10 U and 15 U ug/Kg (acetone) and 9 ug/Kg (methylene chloride). Bis(2-Ethylhexyl)phthalate was detected at 48 J ug/Kg (SAAUTOHASB X1) and 72 J ug/Kg (SAAUTOHASB X2). Barium and chromium were detected at concentrations ranging from 12 to 43 mg/Kg. Arsenic, lead, and selenium were detected at concentration ranging from 1.8 to 8 mg/Kg.

4.3.2 Near Surface Soil Sample Results

One sample (SADBRISANS X1) was collected from the debris pile location. The laboratory reported concentrations of acetone and methylene chloride were detected at 8 ug/Kg. After data validation, these concentrations were qualified to nondetected at 8 U ug/Kg. Seventeen SVOCs were detected at this location at concentrations ranging from 36 J to 1300 ug/Kg with the highest three concentrations ranging from 860 to 1300 ug/Kg. Arsenic (4 mg/Kg), barium (28 mg/Kg), cadmium (0.3 mg/Kg), chromium (12 mg/Kg), lead (130 mg/Kg), and selenium (1.4 mg/Kg) were also detected.

Two samples (SAFILTRANS X1 and SAFILTRBNS X1) and a duplicate (SAFILTRANS DS) were collected from former filter cleaning areas. Trichlorofluoromethane (6 J ug/Kg), toluene (9 J ug/Kg), and xylene (6 J ug/Kg) were detected in sample SAFILTRANS DS. Toluene was detected in sample SAFILTRBNS X1 at 9 ug/Kg. The laboratory reported concentrations of acetone, in samples SAFILTRANS DS (8 ug/Kg) and SAFILTRBNS X1 (7 ug/Kg); 1,2,4-trimethylbenzene in sample SAFILTRANS X1 (6 ug/Kg); and methylene chloride in sample SAFILTRBNS X1 (11 ug/Kg). After validation, acetone was qualified to estimated nondetect at 8 UJ ug/Kg in sample SAFILTRANS DS. The remaining concentrations were qualified to nondetect at 7 U, 6 U, and 11 U ug/Kg. In addition trichlorofluoromethane, acetone, toluene, xylene, and 1,2,4-trimethylbenzene were qualified to estimated nondetect at 6 UJ ug/Kg in sample SAFILTRANS X1. Ten SVOCs were detected in sample SAFILTRBNS X1 at concentrations ranging from 34 J to 170 J ug/Kg. Three of the same SVOCs, phenanthrene (77 J ug/Kg), pyrene (90 J

ug/Kg) and bis(2-Ethylhexyl)phthalate (140 J) were also detected in sample SAFILTRANS X1. Pyrene (42 J) was the only SVOC target analyte detected in the duplicate of this sample (SAFILTRANS DS).

Two samples and a duplicate (SASEPTICANS X1, X2, and DS) were collected from the former septic system. The laboratory reported concentrations of methylene chloride in all three samples (9 ug/Kg, 9 ug/Kg, and 18 ug/Kg) and reported concentrations of acetone in two samples: SASEPTICANS DS (10 ug/Kg) and SASEPTICANS X2 (9 ug/Kg). After data validation, these concentrations were qualified to nondetect at 9 U, 9 U, and 18 U ug/Kg (methylene chloride) and 10 U and 9 U ug/Kg (acetone). In sample SASEPTICANS X1 acetone was qualified from nondetect, to estimated nondetect at 5 UJ ug/Kg. Bis(2-Ethylhexyl)phthalate was detected in all three samples at 170 J ug/Kg (SASEPTICANS X1), 82 J ug/Kg (SASEPTICANS DS), and 140 J ug/Kg (SASEPTICANS X1). No other SVOC target analytes were detected. Barium and chromium were detected in concentrations ranging from 11 to 30 mg/Kg. Arsenic, lead, and selenium were detected in concentrations ranging from 1.4 to 5 ug/Kg.

4.3.3 Surface Soil Sample Results

Two samples and a duplicate (SAGSPMPASS X1, SAGSPMPBSS X1 and SAGSPMPBSS DS) were collected from the gasoline pump and wash stand area. Four VOCs, 1,1,1-trichloroethane, trichloroethene, toluene, and tetrachloroethene were detected in samples SAGSPMPASS X1 and SAGSPMPBSS DS. In sample SAGSPMPASS X1, 1,1,1-trichloroethane was detected at 78 ug/Kg, trichloroethene at 24 ug/Kg, toluene at 9 ug/Kg, and tetrachloroethene at 10 ug/Kg. In sample SAGSPMPBSS DS, 1,1,1-trichloroethane was detected at 96 ug/Kg, trichloroethene at 20 J ug/Kg, toluene at 10 J ug/Kg, and tetrachloroethene at 6 ug/Kg. In addition, methylene chloride was also detected in sample SAGSPMPBSS DS at 14 J ug/Kg. The laboratory reported concentrations of acetone in samples SAGSPMPASS X1 and SAGSPMPBSS DS at 7 and 8 ug/Kg. Methylene chloride was also reported in sample SAGSPMPASS X1 at 12 ug/Kg. After data validation, these concentrations were qualified to nondetect at 7 U, 8 U, and 12 U ug/Kg. In addition, concentrations of methylene chloride, trichloroethene, and toluene were qualified to estimated nondetect at 6 UJ ug/Kg in sample SAGSPMPBSS X1. Nineteen SVOCs were samples from this area at concentrations ranging from 48 J to 1100 J ug/Kg with the five highest concentrations ranging from to 530 to 940 J ug/Kg. Barium, chromium, and lead were

detected at concentrations ranging from 15 to 200 mg/Kg, arsenic, cadmium, mercury, and selenium were detected at concentrations ranging from 0.2 to 6.7 mg/Kg.

One sample (SAVHMTASS X1) was collected from the vicinity of the former vehicle maintenance shop. One VOC, 1,1,1-trichloroethane, was detected at 46 ug/Kg. The laboratory reported concentrations of methylene chloride (9 ug/Kg), and trichloroethene (7 ug/Kg) in this sample. After data validation, these concentrations were qualified to nondetect at 9 U and 7 U ug/Kg. Twenty SVOCs were detected in concentrations ranging from 77 J to 4100 ug/Kg with the highest seven concentrations ranging from 1600 to 4100 ug/Kg. Arsenic (6.8 mg/Kg), barium (59 mg/Kg), chromium (21 mg/Kg), lead (180 mg/Kg), mercury (6.9 ug/Kg) and selenium (6.9 mg/Kg) were also detected.

4.3.4 Water Supply Sample Results

Two samples and duplicate (SAWTRSPAWS X1, SAWTRSPAWS DS, and SAWTRSPBWS X1) were collected from the water supply wells. Trichloroethene was detected in sample SAWTRSPAWS X1 at 0.9 J ug/L and sample SAWTRSPBWS X1 at 0.8 ug/L. The laboratory reported concentrations of methylene chloride in all three samples: sample SAWTRSPAWS X1 (3 ug/L), sample SAWTRSPAWS DS (1 ug/L) and SAWTRSPBWS X1 (2 ug/L). After validation, these concentrations were validated to estimated nondetect in samples SAWTRSPAWS X1 and DS (3 UJ and 1 UJ ug/L) and nondetect in sample SAWTRSPBWS X1 (2 U ug/L). No SVOCs were detected. Barium was detected in sample SAWTRSPAWS X1 (0.06 mg/L), sample SAWTRSPAWS DS (0.08 mg/L) and in sample SAWTRSPBWS X1 (0.15 mg/L). Lead was detected in samples SAWTRSPAWS X1 and DS at 0.006 J and 0.009 J mg/L. Chromium was detected in sample SAWTRSPBWS X1 at 0.01 mg/L.

4.3.5 Comparison to Screening Levels

Benzo(a)pyrene was detected in soil samples at concentrations exceeding the Region III Risk-Based concentrations at the debris pile in sample SADBRISANS X1, former gas pump and wash stand area in samples SAGSPMPA X1 and SAGSPMB X1, and at the former vehicle maintenance shop in sample SAVHMTASS X1. Screening levels for Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(a)pyrene, and Dibenzo(a,h)anthracene were also exceeded in sample as also exceeded in samples

SAVHMTASS X1. No detected concentrations of VOCs, metals, or Pest./PCBs exceeded the project screening levels in the soil samples collected.

Screening levels for VOCs, SVOCs, and metals were not exceeded in the water supply well samples collected.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

The following conclusions can be drawn from this Investigation of Other Areas of Concern portion of the SI:

1. Certain SVOC concentrations in the soil samples collected from the former gas tank excavation, one of the former radar towers, and the former wash bay at the Lyndonville site and the debris pile, the former gas pump and wash stand area, and the former vehicle maintenance area at the St. Albans site exceeded the EPA Region III Risk Based Concentrations for residential soil ingestion.
2. Kerosene was determined to be present as free product in water supply well B at the Lyndonville site.
3. The water supply well located in the Operations Area at the Lyndonville site was not able to be sampled because it could not be located in the field. Information about its location was obtained from the site owner only after weather conditions had deteriorated such that travel to the site was inadvisable.

5.2 RECOMMENDATIONS FOR FUTURE REMEDIAL INVESTIGATION

The following recommendations are made to respond to the conclusions discussed above:

1. Based on the qualitative Initial Risk Evaluation conducted in 1995, the Lyndonville site is remote and relatively inaccessible to the public. The landowner does not currently use the property, however, the small developed portions of the site are surrounded by large expanses of natural habitats that support an abundance and diversity of wildlife species, many of which have free access to the areas of concern. At St. Albans, the areas where analytes were detected in concentrations exceeding the screening levels are also not currently being used by the landowners. Because for both sites, the future use is unknown, Stone & Webster recommends that both a human health and ecological risk be performed at these sites and that the goal of the next field program be to conduct the sampling required to perform

a risk assessment. The findings of the risk assessment should be used to determine the remediation objectives for these sites.

At this point there is not enough data available at the sites to conduct either a human health or ecological risk assessment, especially where the sites are large, and no ecological information has been collected to date. Prior to conducting the risk assessments, each site should be delineated into sub-units based on the problem areas identified to date. These areas of concern at the Lyndonville site are the former gas tank excavation, one of the former radar towers, and the former wash bay. The areas of concern at the St. Albans site are the debris pile, the former gas pump and wash stand area, and the former vehicle maintenance area. These areas should be combined with the areas identified as a result of the Continued Investigation of Former UST and AST Locations. Overlapping or adjacent areas should be grouped into one area (i.e. the former wash bay area combined with the former UST-08 location at the Lyndonville site). Each area of concern should be defined so that both nature and extent of the contamination are known. Field screening of soil contamination is the easiest way to do this, with confirmatory samples being sent to an offsite laboratory for analysis and later correlation. A guideline that could be followed is that, for each one acre within each area of concern, laboratory data from a minimum of ten surface and ten subsurface samples be available for the risk assessment. Data from the past sampling efforts can be used after validation. The most efficient way to augment this sampling data would be using drive point sampling. At this point SVOCs seem to be the primary concern so that the field program should be focussed on collecting soil for SVOC analysis. Headspace readings have been elevated in some locations and so it is also recommended that soil be collected for headspace readings using a PID or similar equipment. If headspace readings are elevated in some samples then those samples should be sent offsite for VOC analysis. Also background will also need to be established for each site. For the ecological risk assessment, ecological media (i.e. surface water and sediment) should also be sampled from any locations that may be hydrologically connected to the areas of concern but which are free from possible cross-contamination from other sources.

2. During the next field season, the effectiveness of the free product removal from water supply well B at the Lyndonville site should be assessed. It is recommended that the well be reopened to see if additional free product has been captured. If there is minimal to no free product present and thus there is still no reason to believe that a source is present, the free product should be removed and the well

re-sampled to determine if the contaminant concentrations are attenuating. If there is a significant amount of free product present in the well such that it appears that a source does exist, efforts should be made to locate the source and remove it.

3. The well in the Operations Area at the Lyndonville site should be located and sampled if possible in late spring 1997.

GLOSSARY OF ABBREVIATIONS AND ACRONYMS

AST	Above Ground Storage Tank
bgs	below ground surface
CDAP	Chemical Data Acquisition Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Chain-of-Custody
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
DQCR	Daily Quality Control Report
EM	Engineering Manager
FUDS	Formerly Used Defense Site
GSA	General Services Administration
IDW	Investigation Derived Waste
mg/kg	milligram per kilogram
mg/L	milligram per liter
MRD	Missouri River Division
P.E.	Professional Engineer
PPE	Personal Protective Equipment
ppm	parts per million
PVC	polyvinyl chloride
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act

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INVESTIGATION OF OTHER AREAS OF CONCERN

RPD	Relative Percent Difference
SI	Site Investigation
SOW	Scope of Work
S.H.P.	Site Safety and Health Plan
SVOC	Semivolatile Organic Compound
TPH	Total Petroleum Hydrocarbon
TRPH	Total Recoverable Petroleum Hydrocarbon
USACE-NED	U.S. Army Corps of Engineers - New England Division
USEPA	U.S. Environmental Protection Agency
UST	Underground Storage Tank
VOA	Volatile Organic Analysis
VOC	Volatile Organic Compound
VTDEC	Vermont Department of Environmental Conservation

Stone & Webster Environmental Technology & Services

December 1996

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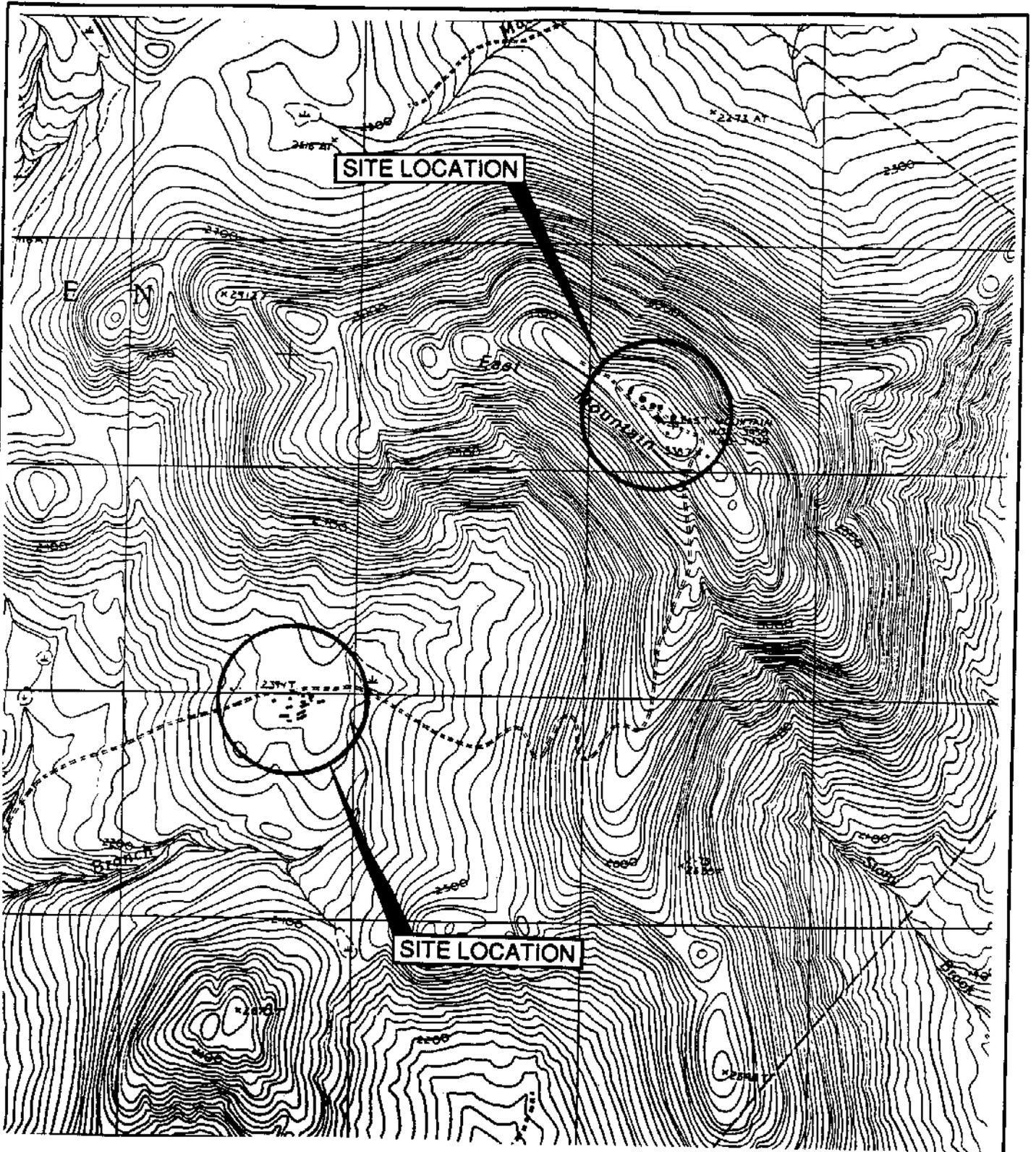


FIGURE 2-1
SITE LOCATION MAP
FORMER LYNDONVILLE AIR FORCE STATION, EAST HAVEN, VT

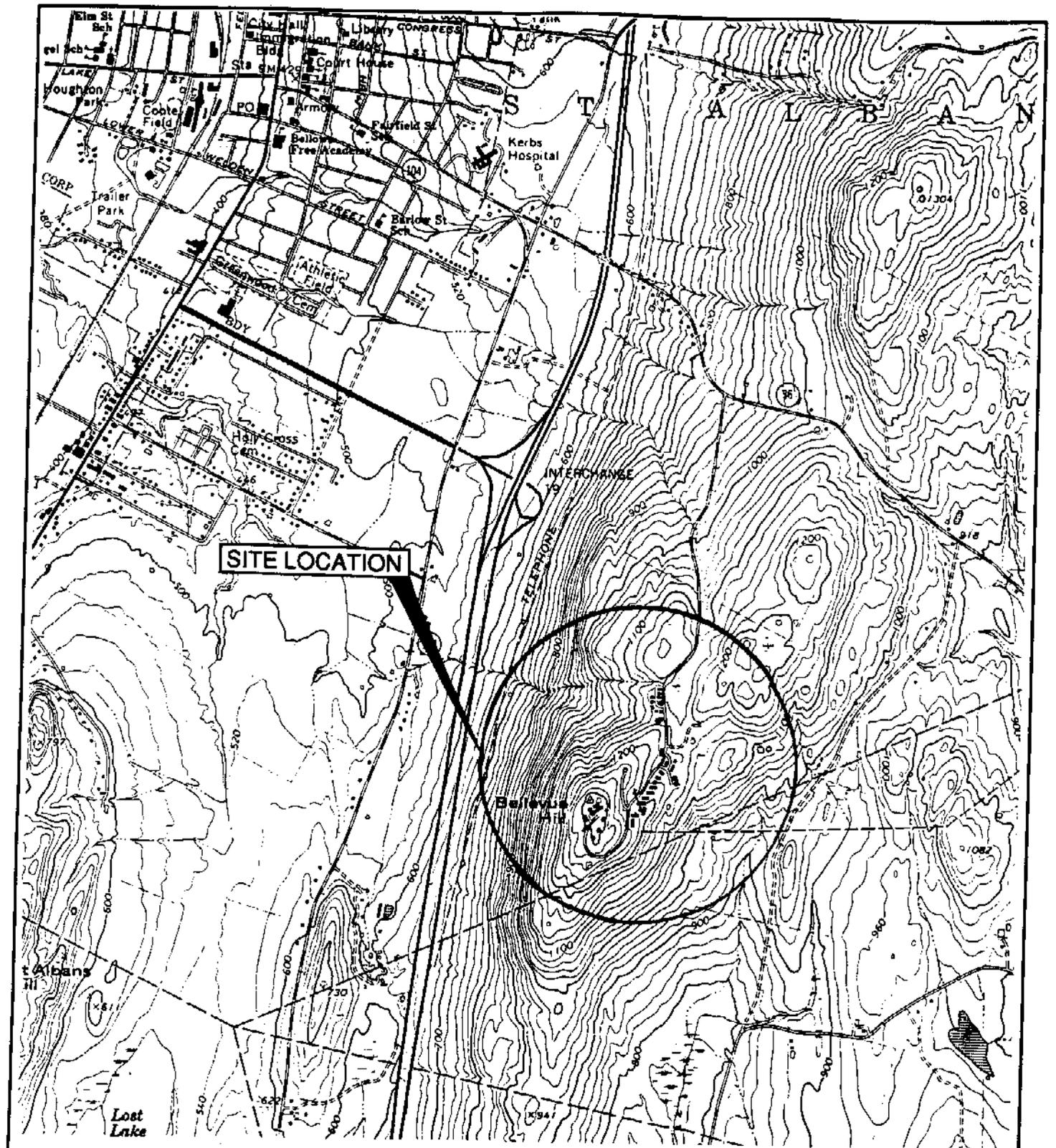
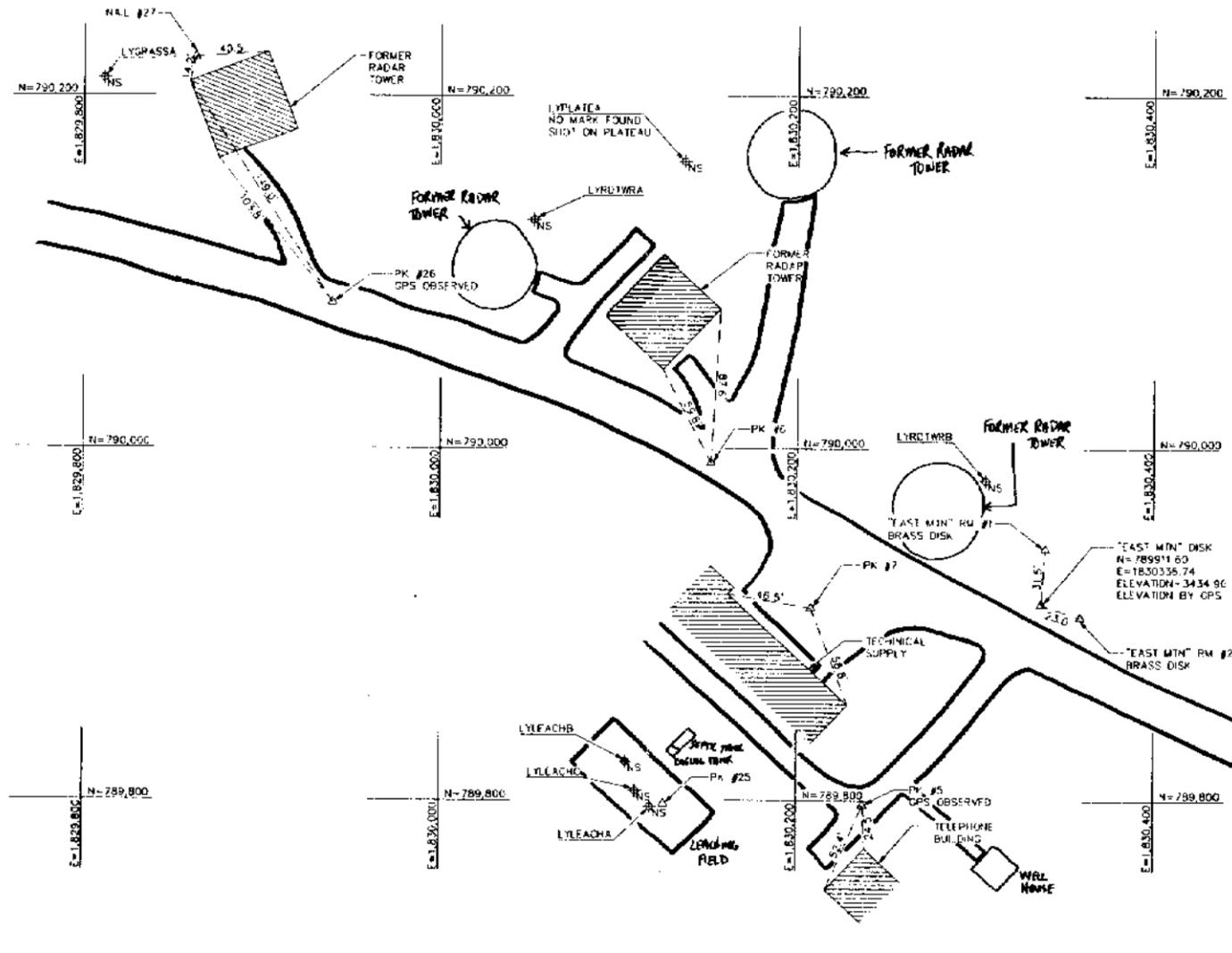


FIGURE 2-2
SITE LOCATION MAP
FORMER ST. ALBANS AIR FORCE STATION, ST. ALBANS, VT



VERMONT STATE PLANE COORDINATES AND DISTANCES ARE IN FEET BASED UPON COAST & GEODETIC SURVEY STATION "EAST MTN" (STANDARD DISK), NAD 83 (1992) HORIZONTAL DATUM. COORDINATES WERE TRANSFERRED TO LOWER SITE BY GPS OBSERVATIONS. ELEVATIONS ARE BASED UPON A BRASS DISK FOUND AS SHOWN ON THE LOWER SITE AND TRANSFERRED TO STATION "EAST MTN" BY GPS OBSERVATIONS. DATUM UNKNOWN. ALL OTHER INFORMATION OBTAINED BY EDM TOTAL STATION FIELD SURVEYS FROM GPS OBSERVED POINTS.

- LEGEND**
- △ CONTROL POINT
 - ★ SOIL BORING
 - ★ NEAR SURFACE SOIL SAMPLE

NOT TO SCALE

FIGURE 2-3

LYNDONVILLE AIR FORCE STATION UPPER SITE	24/2 12/13/96
EAST HAVEN, VERMONT FOR STONE AND WEBSTER BOSTON, MASSACHUSETTS	DRAWING NO. SHEET 2 OF 2 PROJECT NO.

TABLE 4-1 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID			LYRDTWRANS X1	LYRDTWRBNS X1	LYPLATEANS X1	LYLEACHANS X1	LYLEACHBNS X1	LYLEACHCNS X1	LYWSHBYASS X1
	SCREENING	MDL							
ANALYTICAL PARAMETERS	LEVELS**		depth interval 0"-8"	depth interval 4"-12"	depth interval 5.5' - 6'	depth interval 3'-3.5'	depth interval 2'-2.5'	depth interval 1'-1.5'	depth interval 1"-5"
VOCs (Method 8260A) ug/Kg									
Dichlorodifluoromethane	1600000	0.13	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Chloromethane	49000	1.12	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Vinyl Chloride	340	1.97	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Bromomethane	110000	2.28	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Chloroethane	3100000	0.56	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Trichlorofluoromethane	2300000	0.28	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,1-Dichloroethene +	1100	0.45	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Carbon Disulfide	7800000	0.18	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Iodomethane		2.6	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Acetone	7800000	5.82	6 U	7 U	5 U	5 U	7 U	6 U	6 U
Methylene Chloride	85000	1.26	15 U	30 U	5 U	15 U	19 U	17 U	5 U
Trans-1,2-Dichloroethene +	1600000	0.7	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,1-Dichloroethane	7800000	0.4	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Vinyl Acetate	7800000	0.83	6 U	7 U	5 U	5 U	6 U	6 U	5 U
2,2-Dichloropropane +	9400	1.53	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Cis-1,2-Dichloroethene +	7800000	0.35	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Methyl Ethyl Ketone (2-Butanone)	47000000	2.15	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Bromochloromethane		0.43	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Chloroform	100000	0.45	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,1,1-Trichloroethane	2700000	0.27	6 U	7 U	5 U	5 U	6 U	6 U	8
Carbon Tetrachloride	4900	0.3	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,1-Dichloropropene		0.25	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Benzene	22000	0.18	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,2-Dichloroethane	7000	0.44	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Trichloroethene +	58000	0.58	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,2-Dichloropropane	9400	0.95	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Dibromomethane +	7.5	0.35	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Bromodichloromethane	10000	0.32	6 U	7 U	5 U	5 U	6 U	6 U	5 U
2-Chloroethyl vinyl ether	2000000	1.95	6 U	7 U	5 U	5 U	6 U	6 U	5 U
cis-1,3-Dichloropropene +	3700	0.22	6 U	7 U	5 U	5 U	6 U	6 U	5 U
4-Methyl-2-Pentanone		0.86	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Toluene	16000000	0.31	6 U	7 U	5 U	5 U	6	6 U	5 U
trans-1,3-Dichloropropene +	3700	0.24	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,1,2-Trichloroethane	11000	0.28	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Tetrachloroethene	12000	0.34	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,3-Dichloropropane		0.34	6 U	7 U	5 U	5 U	6 U	6 U	5 U
2-Hexanone		1.46	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Dibromochloromethane +	7600	0.43	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,2-Dibromoethane	7.5	0.36	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Chlorobenzene	1600000	0.27	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,1,1,2-Tetrachloroethane	25000	0.21	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Ethylbenzene	7800000	0.19	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Xylenes - Total	16000000	0.54	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Styrene	16000000	0.19	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Bromoform	81000	0.61	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Isopropylbenzene		0.33	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Bromobenzene		0.11	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,1,2,2-Tetrachloroethane	3200	0.5	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,2,3-Trichloropropane	91	0.29	6 U	7 U	5 U	5 U	6 U	6 U	5 U
n-Propylbenzene		0.32	6 U	7 U	5 U	5 U	6 U	6 U	5 U
2-Chlorotoluene		0.57	6 U	7 U	5 U	5 U	6 U	6 U	5 U
4-Chlorotoluene		0.19	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,3,5-trimethylbenzene	3900000	0.44	6 U	7 U	5 U	5 U	6 U	6 U	5 U
tert-butylbenzene	780000	0.38	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,2,4-trimethylbenzene	3900000	0.47	6 U	7 U	5 U	5 U	6 U	6 U	5 U
Sec-Butylbenzene	780000	0.39	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,3-dichlorobenzene	7000000	0.28	6 U	7 U	5 U	5 U	6 U	6 U	5 U
4-isopropyltoluene		0.45	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,4-dichlorobenzene	27000	0.2	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,2-dichlorobenzene	7000000	0.28	6 U	7 U	5 U	5 U	6 U	6 U	5 U
n-butylbenzene		0.71	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,2-dibromo-3-chloropropane	460	0.42	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,2,4-trichlorobenzene	780000	0.76	6 U	7 U	5 U	5 U	6 U	6 U	5 U
hexachlorobutadiene	8200	0.42	6 U	7 U	5 U	5 U	6 U	6 U	5 U
1,2,3-trichlorobenzene		0.58	6 U	7 U	5 U	5 U	6 U	6 U	5 U
MTBE	390000	0.703	6 U	7 U	5 U	5 U	6 U	6 U	5 U
			0	0	0	0	6	0	8

TABLE 4-1 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID			LYSEPTICASB X1	LYSEPTICASB DS	LYSEPTICASB X2	LYGSTNKANS X1 ^N	LYGSTNKANS DS ^N	LYGSTNKBNS X1 ^N	LYGSTNKBNS DS ^N	LYGRASSANA X1
	SCREENING	MDL	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	
ANALYTICAL PARAMETERS	LEVELS**		depth interval 2'-4'	depth interval 2'-4'	depth interval 10'-12'	depth interval 4"-12"	depth interval 4"-12"	depth interval 4"-12"	depth interval 4"-12"	depth interval 4"-12"
SVOCs (Method 8270B) ug/Kg										
Phenol	4700000	12.6	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
bis(2-Chloromethyl)ether	580	26.5	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2-Chlorophenol	390000	20.533	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
1,3-Dichlorobenzene	7000000	20	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
1,4-Dichlorobenzene	27000	20	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
1,2-Dichlorobenzene	7000000	23.4	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2-Methylphenol (o-Cresol)	3900000	16.633	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2,2'-Oxybis(1-chloro)propane		47.933	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
4-Methylphenol (p-Cresol)	390000	18.4	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
N-Nitrosodi-n-Propylamine	91	60.433	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Hexachloroethane	46000	21.933	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Nitrobenzene	39000	25.433	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Isophorone	670000	20.1	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2-Nitrophenol +	4800000	26.467	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2,4-Dimethylphenol	1600000	37.633	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
bis(2-Chloroethoxy)methane		23.733	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2,4-Dichlorophenol	230000	18.1	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
1,2,4-Trichlorobenzene	780000	26.4	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Naphthalene	3100000	23.3	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
4-Chloroaniline	310000	86.233	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Hexachlorobutadiene	8200	25.433	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
4-Chloro-3-Methylphenol		24.833	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2-Methylnaphthalene		22.8	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Hexachlorocyclopentadiene	550000	53.767	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2,4,6-Trichlorophenol	58000	20.067	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2,4,5-Trichlorophenol	7800000	19.333	950 U	990 U	990 U	1000 U	1000 U	900 U	900 U	1300 U
2-Chloronaphthalene		17.733	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2-Nitroaniline	4700	60.533	950 U	990 U	990 U	1000 U	1000 U	900 U	900 U	1300 U
Dimethyl Phthalate	780000000	17.467	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Acenaphthylene		26.4	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2,6-Dinitrotoluene	78000	41.967	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
3-Nitroaniline	230000	19.9	950 U	990 U	990 U	1000 U	1000 U	900 U	900 U	1300 U
Acenaphthene	4700000	19.033	380 U	400 U	400 U	64 J	400 U	370 U	360 U	520 U
2,4-Dinitrophenol	1600000	80.967	950 U	990 U	990 U	1000 U	1000 U	900 U	900 U	1300 U
4-Nitrophenol	4800000	49.533	950 U	990 U	990 U	1000 U	1000 U	900 U	900 U	1300 U
Dibenzofuran	310000	17.933	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
2,4-Dinitrotoluene	160000	18.9	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Diethyl Phthalate	63000000	19.333	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Fluorene	3100000	17.033	380 U	400 U	400 U	70 J	400 U	370 U	360 U	520 U
4-Chloropheny Phenyl Ether		16.2	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
4-Nitroaniline	230000	51	950 U	990 U	990 U	1000 U	1000 U	900 U	900 U	1300 U
4,6-Dinitro-2-Methylphenol		43.033	950 U	990 U	990 U	1000 U	1000 U	900 U	900 U	1300 U
N-Nitrosodiphenylamine	130000	78.8	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
4-Bromopheny Phenyl Ether	4500000	17.467	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Hexachlorobenzene	400	18.233	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Pentachlorophenol	5300	21.267	950 U	990 U	990 U	1000 U	1000 U	900 U	900 U	1300 U
Phenanthrene		25.533	380 U	400 U	400 U	1400 J	400 U	370 U	360 U	520 U
Anthracene	23000000	14.367	380 U	400 U	400 U	420 J	400 U	370 U	360 U	520 U
Di-n-Butyl Phthalate +	7800000	48.467	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Carbazole	32000	69.467	380 U	400 U	400 U	250 J	400 U	370 U	360 U	520 U
Fluoranthene	3100000	19.033	380 U	400 U	400 U	2600 J	77 J	370 U	360 U	520 U
Pyrene	2300000	40.433	380 U	400 U	400 U	1700 J	65 J	370 U	360 U	520 U
Butylbenzylphthalate	16000000	54.133	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Benzo(a)anthracene	880	14.7	380 U	400 U	400 U	1100 J	44 J	370 U	360 U	520 U
Chrysene	88000	17.867	380 U	400 U	400 U	910 J	64 J	370 U	360 U	520 U
3,3'-Dichlorobenzidine	1400	19.567	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
bis(2-Ethylhexyl)phthalate	46000	58.3	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Di-n-Octylphthalate	1600000	108.03	380 U	400 U	400 U	400 U	400 U	370 U	360 U	520 U
Benzo(b)fluoranthene	880	53.567	380 U	400 U	400 U	900 J	71 J	370 U	360 U	520 U
Benzo(k)fluoranthene	8800	110.13	380 U	400 U	400 U	310 J	400 U	370 U	360 U	520 U
Benzo(a)pyrene	88	38.5	380 U	400 U	400 U	760 J	49 J	370 U	360 U	520 U
Indeno(1,2,3-c,d)pyrene	880	93.7	380 U	400 U	400 U	210 J	400 U	370 U	360 U	520 U
Dibenzo(a,h)anthracene	88	97.933	380 U	400 U	400 U	65 J	400 U	370 U	360 U	520 U
Benzo(g,h,i)perylene		87.067	380 U	400 U	400 U	210 J	400 U	370 U	360 U	520 U
Total SVOCs			0	0	0	10969	370	0	0	0

TABLE 4-1 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE

SAMPLE ID			LYRDTWRANS X1	LYRDTWRBNS X1	LYPLATEANS X1	LYLEACHANS X1	LYLEACHBNS X1	LYLEACHCNS X1	LYWSHBYASS X1
SCREENING	MDL								
ANALYTICAL PARAMETERS	LEVELS**		depth interval 0"-8"	depth interval 4"-12"	depth interval 5.5' - 6'	depth interval 3'-3.5'	depth interval 2'-2.5'	depth interval 1'-1.5'	depth interval 1"-5"
SVOCs (Method 8270B) ug/Kg									
Phenol	47000000	12.6	360 U	490 U	350 U	350 U	360 U	370 U	350 U
bis(2-Chloroethyl)ether	580	26.5	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2-Chlorophenol	390000	20.533	360 U	490 U	350 U	350 U	360 U	370 U	350 U
1,3-Dichlorobenzene	7000000	20	360 U	490 U	350 U	350 U	360 U	370 U	350 U
1,4-Dichlorobenzene	27000	20	360 U	490 U	350 U	350 U	360 U	370 U	350 U
1,2-Dichlorobenzene	7000000	23.4	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2-Methylphenol (o-Cresol)	3900000	16.633	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2,2'-Oxybis(1-chloro)propane		47.933	360 U	490 U	350 U	350 U	360 U	370 U	350 U
4-Methylphenol (p-Cresol)	390000	18.4	360 U	490 U	350 U	350 U	360 U	370 U	350 U
N-Nitrosodi-n-Propylamine	91	60.433	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Hexachloroethane	46000	21.933	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Nitrobenzene	39000	25.433	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Isophorone	670000	20.1	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2-Nitrophenol +	4800000	26.467	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2,4-Dimethylphenol	1600000	37.633	360 U	490 U	350 U	350 U	360 U	370 U	350 U
bis(2-Chloroethoxy)methane		23.733	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2,4-Dichlorophenol	230000	18.1	360 U	490 U	350 U	350 U	360 U	370 U	350 U
1,2,4-Trichlorobenzene	780000	26.4	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Naphthalene	3100000	23.3	360 U	490 U	350 U	350 U	360 U	370 U	190 J
4-Chloroaniline	310000	86.233	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Hexachlorobutadiene	8200	25.433	360 U	490 U	350 U	350 U	360 U	370 U	350 U
4-Chloro-3-Methylphenol		24.833	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2-Methylnaphthalene		22.8	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Hexachlorocyclopentadiene	550000	53.767	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2,4,6-Trichlorophenol	58000	20.067	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2,4,5-Trichlorophenol	7800000	19.333	900 U	1200 U	860 U	880 U	890 U	920 U	870 U
2-Chloronaphthalene		17.733	360 U	490 U	350 U	350 U	360 U	370 U	350 U
2-Nitroaniline	4700	60.533	900 U	1200 U	860 U	880 U	890 U	920 U	870 U
Dimethyl Phthalate	78000000	17.467	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Acenaphthylene		26.4	240 J	490 U	350 U	350 U	360 U	370 U	55 J
2,6-Dinitrotoluene	78000	41.967	360 U	490 U	350 U	350 U	360 U	370 U	350 U
3-Nitroaniline	230000	19.9	900 U	1200 U	860 U	880 U	890 U	920 U	870 U
Acenaphthene	4700000	19.033	64 J	490 U	350 U	350 U	360 U	370 U	530
2,4-Dinitrophenol	1600000	80.967	900 U	1200 U	860 U	880 U	890 U	920 U	870 U
4-Nitrophenol	4800000	49.533	900 U	1200 U	860 U	880 U	890 U	920 U	870 U
Dibenzofuran	310000	17.933	360 U	490 U	350 U	350 U	360 U	370 U	230 J
2,4-Dinitrotoluene	160000	18.9	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Diethyl Phthalate	63000000	19.333	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Fluorene	3100000	17.033	63 J	490 U	350 U	350 U	360 U	370 U	330 J
4-Chloropheny Phenyl Ether		16.2	360 U	490 U	350 U	350 U	360 U	370 U	350 U
4-Nitroaniline	230000	51	900 U	1200 U	860 U	880 U	890 U	920 U	870 U
4,6-Dinitro-2-Methylphenol		43.033	900 U	1200 U	860 U	880 U	890 U	920 U	870 U
N-Nitrosodiphenylamine	130000	78.8	360 U	490 U	350 U	350 U	360 U	370 U	350 U
4-Bromophenyl Phenyl Ether	4500000	17.467	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Hexachlorobenzene	400	18.233	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Pentachlorophenol	5300	21.267	900 U	1200 U	860 U	880 U	890 U	920 U	870 U
Phenanthrene		25.533	1000	490 U	350 U	350 U	360 U	370 U	2300
Anthracene	23000000	14.367	580	490 U	350 U	350 U	360 U	370 U	460
Di-n-Butyl Phthalate +	7800000	48.467	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Carbazole	32000	69.467	250 J	490 U	350 U	350 U	360 U	370 U	490
Fluoranthene	3100000	19.033	3600	150 J	350 U	350 U	360 U	370 U	3100
Pyrene	23000000	40.433	3700	77 J	350 U	350 U	360 U	370 U	2800
Butylbenzylphthalate	16000000	54.133	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Benzo(a)anthracene	880	14.7	2700	50 J	350 U	350 U	360 U	370 U	1500
Chrysene	88000	17.867	2100	110 J	350 U	350 U	360 U	370 U	1700
3,3'-Dichlorobenzidine	1400	19.567	360 U	490 U	350 U	350 U	360 U	370 U	350 U
bis(2-Ethylhexyl)phthalate	46000	58.3	360 U	68 J	350 U	350 U	360 U	370 U	350 U
Di-n-Octylphthalate	1600000	108.03	360 U	490 U	350 U	350 U	360 U	370 U	350 U
Benzo(b)fluoranthene	880	53.567	2300	160 J	350 U	350 U	360 U	370 U	2200
Benzo(k)fluoranthene	8800	110.13	1000	50 J	350 U	350 U	360 U	370 U	700
Benzo(a)pyrene	88	38.5	2200	69 J	350 U	350 U	360 U	370 U	1500
Indeno(1,2,3-c,d)pyrene	880	93.7	790	490 U	350 U	350 U	360 U	370 U	460
Dibenzo(a,h)anthracene	88	97.933	220 J	490 U	350 U	350 U	360 U	370 U	140 J
Benzo(g,h,i)perylene		87.067	840	490 U	350 U	350 U	360 U	370 U	490
Total SVOCs			21647	734	0	0	0	0	19175

TABLE 4-1 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE

SAMPLE ID			LYRDTWRANS X1	LYRDTWRBNS X1	LYPLATEANS X1	LYLEACHANS X1	LYLEACHBNS X1	LYLEACHCNS X1	LYWSHBYASS X1
	SCREENING	IDL							
ANALYTICAL PARAMETERS	LEVELS**		depth interval 0"-5"	depth interval 4"-12"	depth interval 5.5' - 6'	depth interval 3'-3.5'	depth interval 2'-2.5'	depth interval 1'-1.5'	depth interval 1"-5"
RCRA Metals mg/Kg (Method 6010A except where noted)									
Arsenic	23	0.2	5	5	4	4	5	5	3.6
Barium	5500	0.5	57	51	51	55	48	70	57
Cadmium	39	0.03	0.1 U	0.3	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chromium	78000	0.07	38	42	22	38	46	49	34
Lead		0.15	44 J	750 J	4.1 J	3.9 J	2.9 J	2.4 J	99
Mercury (Method 7471)	23	0.004	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.33
Selenium	390	0.5	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	3.9
Silver	390	0.4	0.6 U	4	0.6 U	0.6 U	0.6 U	0.6 U	2 U
Total Metals			144	852.3	81.1	101.5	101.9	126.4	197.83

TABLE 4-1 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID			LYSEPTICASB X1	LYSEPTICASB DS	LYSEPTICASB X2	LYGSTNKANS XI ^N	LYGSTNKANS DS ^N	LYGSTNKBNS XI ^N	LYGSTNKBNS DS ^N	LYGRASSANA X1
		SCREENING	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	
ANALYTICAL PARAMETERS		IDL	depth interval 2'-4'	depth interval 2'-4'	depth interval 10'-12'	depth interval 4"-12"	depth interval 4"-12"	depth interval 4"-12"	depth interval 4"-12"	depth interval 4"-12"
LEVELS**										
RCRA Metals mg/Kg										
(Method 6010A except where noted)										
Arsenic	23	0.2	7	6	5	5	4	4	4	5
Barium	5500	0.5	78	93	88	60 J	190 J	60	51	60
Cadmium	39	0.03	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.4	0.2	0.1 U
Chromium	78000	0.07	49	55	64	45	40	37	24	24
Lead		0.15	2.6	2.2	2.9	16	14	12	11	21 J
Mercury (Method 7471)	23	0.004	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U
Selenium	390	0.5	2	0.6 U	2	2	2 U	0.6 U	2 U	3
Silver	390	0.4	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Total Metals			138.6	156.2	161.9	128	253	116.4	103.2	113

TABLE 4-1 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID	SCREENING MDL		LYSEPTICASB X1	LYSEPTICASB DS	LYSEPTICASB X2	LYGSTINKANS XI ^N	LYGSTINKANS DS ^N	LYGSTINKBNS XI ^N	LYGSTINKBNS DS ^N	LYGRASSANA X1
			headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm	headspace 9.5 ppm
ANALYTICAL PARAMETERS	LEVELS**		depth interval 2'-4'	depth interval 2'-4'	depth interval 10'-12'	depth interval 4"-12"	depth interval 4"-12"	depth interval 4"-12"	depth interval 4"-12"	depth interval 4"-12"
Alpha BHC	100	0.0029	2.0 U	2.0 U	2.1 U					
Beta BHC	350	0.0214	2.0 U	2.0 U	2.1 U					
Delta BHC		0.0013	2.0 U	2.0 U	2.1 U					
Gamma-BHC (Lindane)	490	0.0038	2.0 U	2.0 U	2.1 U					
Heptachlor	140	0.0091	2.0 U	2.0 U	2.1 U					
Aldrin	38	0.0033	2.0 U	2.0 U	2.1 U					
Heptachlor Epoxide	70	0.0020	2.0 U	2.0 U	2.1 U					
Alpha Endosulfan (Endosulfan I) +	470000	0.0038	2.0 U	2.0 U	2.1 U					
Dieldrin	440	0.0063	4.0 U	4.0 U	4.1 U					
4,4'-DDE +	1900	0.0043	4.0 U	4.0 U	4.1 U					
Endrin	23000	0.0117	4.0 U	4.0 U	4.1 U					
Beta Endosulfan (Endosulfan II) +	470000	0.0074	4.0 U	4.0 U	4.1 U					
4,4'-DDD +	2700	0.0071	4.0 U	4.0 U	4.1 U					
Endosulfan Sulfate		0.0054	4.0 U	4.0 U	4.1 U					
4,4'-DDT +	1900	0.0069	4.0 U	4.1 J	4.1 U					
Methoxychlor	390000	0.2250	20 U	20 U	21 U					
Endrin Ketone		0.0072	2.0 U	2.0 U	2.1 U					
Endrin Aldehyde		0.0208	4.0 U	4.0 U	4.1 U					
Alpha-chlordane		0.0021	2.0 U	2.0 U	2.1 U					
Gamma-chlordane		0.0022	2.0 U	2.0 U	2.1 U					
Chlordane	490	0.0250	100 U	100 U	100 U					
Toxaphene	580	0.0404	200 U	200 U	210 U					
PCB-1016 (Aroclor 1016)	5500	0.0480	40 U	40 U	41 U					
PCB-1221 (Aroclor 1221)	83	0.0517	80 U	80 U	82 U					
PCB-1232 (Aroclor 1232)	83	0.0128	40 U	40 U	41 U					
PCB-1242 (Aroclor 1242)	83	0.0077	40 U	40 U	41 U					
PCB-1248 (Aroclor 1248)	83	0.0145	40 U	40 U	41 U					
PCB-1254 (Aroclor 1254)	1600	0.0153	40 U	40 U	41 U					
PCB-1260 (Aroclor 1260)	83	0.0383	40 U	40 U	41 U					
Total Pest./PCBs			0	4.1	0					

TABLE 4-1 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID	SCREENING MDL	LYRDTWRANS X1	LYRDTWRBNS X1	LYPLATEANS X1	LYLEACHANS X1	LYLEACHBNS X1	LYLEACHCNS X1	LYWSHBYASS X1
Alpha BHC	100	0.0029				1.8 U	1.9 U	1.9 U
Beta BHC	350	0.0214				1.8 U	1.9 U	1.9 U
Delta BHC		0.0013				1.8 U	1.9 U	1.9 U
Gamma-BHC (Lindane)	490	0.0038				1.8 U	1.9 U	1.9 U
Heptachlor	140	0.0091				1.8 U	1.9 U	1.9 U
Aldrin	38	0.0033				1.8 U	1.9 U	1.9 U
Heptachlor Epoxide	70	0.0020				1.8 U	1.9 U	1.9 U
Alpha Endosulfan (Endosulfan I) +	470000	0.0038				1.8 U	1.9 U	1.9 U
Dieldrin	440	0.0063				3.7 U	3.8 U	3.9 U
4,4'-DDE +	1900	0.0043				3.7 U	3.8 U	3.9 U
Endrin	23000	0.0117				3.7 U	3.8 U	3.9 U
Beta Endosulfan (Endosulfan II) +	470000	0.0074				3.7 U	3.8 U	3.9 U
4,4'-DDD +	2700	0.0071				3.7 U	3.8 U	3.9 U
Endosulfan Sulfate		0.0054				3.7 U	3.8 U	3.9 U
4,4'-DDT +	1900	0.0069				3.7 U	3.8 U	3.9 U
Methoxychlor	390000	0.2250				18 U	19 U	19 U
Endrin Ketone		0.0072				1.8 U	1.9 U	1.9 U
Endrin Aldehyde		0.0208				3.7 U	3.8 U	3.9 U
Alpha-chlordane		0.0021				1.8 U	1.9 U	1.9 U
Gamma-chlordane		0.0022				1.8 U	1.9 U	1.9 U
Chlordane	490	0.0250				93 U	94 U	97 U
Toxaphene	580	0.0404				180 U	190 U	190 U
PCB-1016 (Aroclor 1016)	5500	0.0480				37 U	38 U	39 U
PCB-1221 (Aroclor 1221)	83	0.0517				74 U	75 U	77 U
PCB-1232 (Aroclor 1232)	83	0.0128				37 U	38 U	39 U
PCB-1242 (Aroclor 1242)	83	0.0077				37 U	38 U	39 U
PCB-1248 (Aroclor 1248)	83	0.0145				37 U	38 U	39 U
PCB-1254 (Aroclor 1254)	1600	0.0153				37 U	38 U	39 U
PCB-1260 (Aroclor 1260)	83	0.0383				37 U	38 U	39 U
Total Pest./PCBs						0	0	0

TABLE 4-1 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

** Screening levels are EPA Region III Risk-Based Concentrations presented in memo, dated April 30, 1996, distributed by Roy L. Smith, EPA Senior Toxicologist.

These concentrations are residential, soil ingestion values. A blank space indicates no level was specified by the EPA.

DS in the sample designation indicates a field duplicate.

J = Quantitation is approximate due to limitations identified in the quality control review.

U = Value is the lowest achievable detection limit based on quality control review.

UJ = Detection limit is approximate due to limitations identified in the quality control review.

N = Samples from locations LYGSTNKA and LYGSTNKB are designated LYGSTNUA and LYGSTUB in the laboratory resu

- + RBC for Trichloroethylene used for Trichloroethene
- RBC for 1,2-Dibromoethane used for Dibromomethane
- RBC for Tetrachloroethylene used for Tetrachloroethene
- RBC for Chlorodibromomethane used for Dibromochloromethane
- RBC for 1,2-Dichloroethylene (trans) used for Trans-1,2-Dichloroethene
- RBC for 1,2-Dichloropropane used for 2,2-Dichloropropane
- RBC for Cis-1,2-Dichloroethylene used for Cis-1,2-Dichloroethene
- RBC for 1,3-Dichloropropene used for Cis-1,3-Dichloropropene
- RBC for 1,3-Dichloropropene used for trans-1,3-Dichloropropene
- RBC for 1,1-Dichloroethylene used for 1,1-Dichloroethene
- RBC for Dibutyl Phthalate used for Di-n-Butyl Phthalate
- RBC for DDD used for 4,4'-DDD
- RBC for DDT used for 4,4'-DDT
- RBC for DDE used for 4,4'-DDE
- RBC for Endosulfan used for Alpha Endosulfan (Endosulfan I)
- RBC for Endosulfan used for Beta Endosulfan (Endosulfan II)

TABLE 4-2 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID	LYWTRSPAWS X1		
	SCREENING	MDL	
ANALYTICAL PARAMETERS	LEVELS**		
VOCs (Method 524.2) ug/L			
Dichlorodifluoromethane	390	0.113	0.5 U
Chloromethane	1.4	0.116	0.5 U
Vinyl Chloride	0.019	0.087	0.5 U
Bromomethane	8.7	0.148	0.5 U
Chloroethane	8600	0.086	0.5 U
Trichlorofluoromethane	1300	0.07	0.5 U
1,1-Dichloroethene +	0.044	0.064	0.5 U
Methylene Chloride	4.1	0.081	3 U
trans-1,2-dichloroethene +	120	0.057	0.5 U
1,1-Dichloroethane	810	0.069	0.5 U
2,2-dichloropropane +		0.143	0.5 U
Cis- 1,2-Dichloroethene +	61	0.059	0.5 U
Bromochloromethane		0.074	0.5 U
Chloroform	0.15	0.059	0.5 U
1,1,1-Trichloroethane	790	0.067	0.5 U
Carbon Tetrachloride	0.16	0.114	0.5 U
1,1- Dichloropropene		0.094	0.5 U
Benzene	0.36	0.072	0.5 U
1,2-Dichloroethane	0.12	0.095	0.5 U
Trichloroethene +	1.6	0.084	0.5 U
1,2-Dichloropropane	0.16	0.077	0.5 U
Bromodichloromethane	0.17	0.081	0.5 U
cis-1,3-Dichloropropene +	0.077	0.094	0.5 U
Toluene	750	0.092	0.5 U
trans-1,3-Dichloropropene +	0.077	0.094	0.5 U
1,1,2-Trichloroethane	0.19	0.16	0.5 U
Tetrachloroethene +	1.1	0.11	0.5 U
1,3-Dichloropropane		0.08	0.5 U
Chlorobenzene	39	0.082	0.5 U
1,1,1,2-Tetrachloroethane	0.41	0.1	0.5 U
Ethylbenzene	1300	0.105	0.5 U
p- & m-xylene	1400	0.251	0.5 U
o-xylene	1400	0.094	0.5 U
Styrene	1600	0.088	0.5 U
Bromoform	2.4	0.184	0.5 U
Isopropylbenzene		0.104	0.5 U
Bromobenzene		0.097	0.5 U
1,1,2,2-Tetrachloroethane	0.052	0.154	0.5 U
1,2,3-Trichloropropane	0.0015	0.152	0.5 U
n- Propylbenzene		0.121	0.5 U
2-Chlorotoluene		0.086	0.5 U
4-Chlorotoluene		0.101	0.5 U
1,3,5-trimethylbenzene	300	0.116	0.5 U
tert-butylbenzene	61	0.119	0.5 U
1,2,4-trimethylbenzene	300	0.138	0.5 U
Sec-Butylbenzene	61	0.138	0.5 U
1,3-dichlorobenzene	540	0.102	0.5 U
4-isopropyltoluene		0.117	0.5 U
1,4-dichlorobenzene	0.44	0.101	0.5 U
1,2-dichlorobenzene	270	0.133	0.5 U
n-butylbenzene		0.125	0.5 U
1,2-dibromo-3-chloropropane	0.048	0.193	0.5 U
1,2,4-trichlorobenzene	190	0.204	0.5 U
hexachlorobutadiene	0.14	0.145	0.5 U
Naphthane		0.229	0.5 U
1,2,3-trichlorobenzene		0.245	0.5 U
Total VOCs			0

TABLE 4-2 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID	SCREENING	MDL	LYWTRSPAWS X1
ANALYTICAL PARAMETERS	LEVELS**		
SVOCs (Method 525.2) ug/L			
Acenaphthylene		0.025	0.1 UJ
Alachlor	0.73	0.045	0.1 UJ
Aldrin	0.004	0.057	0.1 UJ
Anthracene	11000	0.032	0.1 UJ
Atrazine	0.3	0.062	0.1 UJ
Benzo(a)anthracene	0.092	0.066	0.1 UJ
Benzo(b)fluoranthene	0.092	0.048	0.1 UJ
Benzo(k)fluoranthene	0.92	0.096	0.1 UJ
Benzo(g,h,i)perylene		0.07	0.1 UJ
Benzo(a)pyrene	0.0092	0.014	0.1 UJ
Gamma-BHC	0.052	0.015	0.02 UJ
Butylbenzylphthalate	7300	0.115	1.0 UJ
Alpha-chlordane		0.044	0.1 UJ
Gamma-chlordane		0.036	0.1 UJ
2-Chlorobiphenyl		0.025	0.1 UJ
Chrysene	9.2	0.054	0.1 UJ
Dibenz(a,h)anthracene	0.0092	0.021	0.1 UJ
Di-n-Butyl Phthalate +	3700	0.133	1.0 UJ
2,3 Dichlorobiphenyl		0.035	0.1 UJ
Di-2(ethylhexyl)adipate	56	0.05	0.6 UJ
Di-2(ethylhexyl)phthalate		0.329	0.6 UJ
Diethylphthalate	29000	0.059	1.0 UJ
Dimethylphthalate	370000	0.042	1.0 UJ
2,4-Dinitrotoluene	73	0.052	0.1 UJ
2,6-Dinitrotoluene	37	0.066	0.1 UJ
Di-n-Octylphthalate	730	0.04	1.0 UJ
Endrin	11	0.009	0.01 UJ
Fluorene	1500	0.065	0.1 UJ
Heptachlor	0.0023	0.048	0.04 UJ
Heptachlor Epoxide	0.0012	0.012	0.02 UJ
2,2',3,3',4,4',6-Heptachlorobiphenyl		0.047	0.1 UJ
Hexachlorobenzene	0.0066	0.089	0.1 UJ
2,2',4,4',5,6'-Hexachlorobiphenyl		0.1	0.1 UJ
Hexachlorocyclopentadiene	0.15	0.079	0.1 UJ
Indeno(1,2,3-c,d)pyrene	0.092	0.041	0.1 UJ
Isophorone	71	0.72	0.1 UJ
Methoxychlor	180	0.032	0.1 UJ
2,2',3,3',4,5',6,6'-Octachlorobiphenyl		0.087	0.1 UJ
2,2',3',4,6-Pentachlorobiphenyl		0.018	0.1 UJ
Pentachlorophenol	0.56	0.334	0.1 UJ
Phenanthrene		0.029	0.1 UJ
Pyrene	1100	0.073	0.1 UJ
Simazine	0.56	0.033	0.07 UJ
2,2',4,4',Tetrachlorobiphenyl		0.046	0.1 UJ
Toxaphene ++	0.061	25	25 UJ
2,4,5-Trichlorobiphenyl		0.025	0.1 UJ
Total SVOCs			0

TABLE 4-2 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID	LYWTRSPAWS XI		
ANALYTICAL PARAMETERS	SCREENING LEVELS**	IDL	
RCRA Metals mg/L			
(Method 200.7 except where noted)			
Arsenic	0.011	0.002	0.01 U
Barium	2.6	0.008	0.02
Cadmium	0.018	0.003	0.001 U
Chromium	37	0.007	0.01 U
Lead		0.0015	0.005 U
Mercury (Method 245.1)	0.011	0.00004	0.0005 U
Selenium	0.18	0.005	0.02 U
Silver	0.18	0.004	0.01 U
Total Metals			0.02

TABLE 4-2 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID			LYWTRSPBWS XI ^W	LYWTRSPBWS DS ^W
	SCREENING LEVELS ^{**}	MDL		
ANALYTICAL PARAMETERS				
VOCs (Method 8260B) ug/L				
Dichlorodifluoromethane	390	0.13	50 U	50 U
Chloromethane	1.4	1.12	50 U	50 U
Vinyl Chloride	0.019	1.97	50 U	50 U
Bromomethane	8.7	2.28	50 U	50 U
Chloroethane	8600	0.56	50 U	50 U
Trichlorofluoromethane	1300	0.28	50 U	50 U
1,1-Dichloroethene +	810	0.45	50 U	50 U
Carbon Disulfide	1000	0.18	50 U	50 U
Iodomethane		2.6	50 U	50 U
Acetone	3700	5.82	50 U	50 U
Methylene Chloride	4.1	1.26	50 U	50 U
Trans-1,2-Dichloroethene +	120	0.7	50 U	50 U
1,1-Dichloroethane	810	0.4	50 U	50 U
Vinyl Acetate	37000	0.83	50 U	50 U
2,2-Dichloropropane +	0.16	1.53	50 U	50 U
Cis-1,2-Dichloroethene +	61	0.35	50 U	50 U
Methyl Ethyl Ketone (2-Butanone)	1900	2.15	50 U	50 U
Bromochloromethane		0.43	50 U	50 U
Chloroform	0.15	0.45	50 U	50 U
1,1,1-Trichloroethane	790	0.27	50 U	50 U
Carbon Tetrachloride	0.16	0.3	50 U	50 U
1,1-Dichloropropene		0.25	50 U	50 U
Benzene	0.36	0.18	50 U	50 U
1,2-Dichloroethane	0.12	0.44	50 U	50 U
Trichloroethene +	1.6	0.58	50 U	50 U
1,2-Dichloropropane	0.16	0.95	50 U	50 U
Dibromomethane +	0.00075	0.35	50 U	50 U
Bromodichloromethane	0.17	0.32	50 U	50 U
2-Chloroethyl vinyl ether	150	1.95	50 U	50 U
cis-1,3-Dichloropropene +	0.077	0.22	50 U	50 U
4-Methyl-2-Pentanone		0.86	50 U	50 U
Toluene	750	0.31	50 U	50 U
trans-1,3-Dichloropropene +	0.077	0.24	50 U	50 U
1,1,2-Trichloroethane	0.19	0.28	50 U	50 U
Tetrachloroethane	1.1	0.34	50 U	50 U
1,3-Dichloropropene		0.34	50 U	50 U
2-Hexanone		1.46	50 U	50 U
Dibromochloromethane +	0.13	0.43	50 U	50 U
1,2-Dibromoethane	0.00075	0.36	50 U	50 U
Chlorobenzene	39	0.27	50 U	50 U
1,1,1,2-Tetrachloroethane	0.41	0.21	50 U	50 U
Ethylbenzene	1300	0.19	50 U	50 U
Xylenes - Total	1400	0.54	50 U	50 U
Styrene	1600	0.19	50 U	50 U
Bromoform	2.4	0.61	50 U	50 U
Isopropylbenzene		0.33	50 U	50 U
Bromobenzene		0.11	50 U	50 U
1,1,2,2-Tetrachloroethane	0.052	0.5	50 U	50 U
1,2,3-Trichloropropane	0.0015	0.29	50 U	50 U
n-Propylbenzene		0.32	50 U	50 U
2-Chlorotoluene		0.57	50 U	50 U
4-Chlorotoluene		0.19	50 U	50 U
1,3,5-trimethylbenzene	300	0.44	50 U	50 U
tert-butylbenzene	61	0.38	50 U	50 U
1,2,4-trimethylbenzene	300	0.47	50 U	50 U
Sec-Butylbenzene	61	0.39	50 U	50 U
1,3-dichlorobenzene	540	0.28	50 U	50 U
4-isopropyltoluene		0.45	50 U	50 U
1,4-dichlorobenzene	0.44	0.2	50 U	50 U
1,2-dichlorobenzene	270	0.28	50 U	50 U
n-butylbenzene		0.71	50 U	50 U
1,2-dibromo-3-chloropropane	0.048	0.42	50 U	50 U
1,2,4-trichlorobenzene	190	0.76	50 U	50 U
hexachlorobutadiene	0.14	0.42	50 U	50 U
1,2,3-trichlorobenzene		0.58	50 U	50 U
MTBE	180	5	50 U	50 U
Total VOCs			0	0

TABLE 4-2 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID	LYWTRSPBWS XI		LYWTRSPBWS XI	LYWTRSPBWS XI
	SCREENING LEVELS**	MDL		
ANALYTICAL PARAMETERS				
SVOCs (Method 8270) ug/L				
Phenol	22000	0.379	99000 UJ	99000 UJ
bis(2-Chloroethyl)ether	0.0092	0.795	99000 UJ	99000 UJ
2-Chlorophenol	180	0.616	99000 UJ	99000 UJ
1,3-Dichlorobenzene	540	0.6	99000 UJ	99000 UJ
1,4-Dichlorobenzene	0.44	0.6	99000 UJ	99000 UJ
1,2-Dichlorobenzene	270	0.702	99000 UJ	99000 UJ
2-Methylphenol (o-Cresol)	1800	0.499	99000 UJ	99000 UJ
2,2'-Oxybis(1-chloro)propane		1.438	99000 UJ	99000 UJ
4-Methylphenol (p-Cresol)	180	0.552	99000 UJ	99000 UJ
N-Nitrosodi-n-Propylamine	0.0096	1.813	99000 UJ	99000 UJ
Hexachloroethane	0.75	0.658	99000 UJ	99000 UJ
Nitrobenzene	3.4	0.763	99000 UJ	99000 UJ
Isophorone	71	0.603	99000 UJ	99000 UJ
2-Nitrophenol +	2300	0.794	99000 UJ	99000 UJ
2,4-Dimethylphenol	730	1.129	99000 UJ	99000 UJ
bis(2-Chloroethoxy)methane		0.712	99000 UJ	99000 UJ
2,4-Dichlorophenol	110	0.543	99000 UJ	99000 UJ
1,2,4-Trichlorobenzene	190	0.792	99000 UJ	99000 UJ
Naphthalene	1500	0.699	99000 UJ	99000 UJ
4-Chloroaniline	150	2.587	99000 UJ	99000 UJ
Hexachlorobutadiene	0.14	0.763	99000 UJ	99000 UJ
4-Chloro-3-Methylphenol		0.745	99000 UJ	99000 UJ
2-Methylnaphthalene		0.684	99000 UJ	99000 UJ
Hexachlorocyclopentadiene	0.15	1.613	99000 UJ	99000 UJ
2,4,6-Trichlorophenol	6.1	0.602	99000 UJ	99000 UJ
2,4,5-Trichlorophenol	3700	0.580	2500000 UJ	2500000 UJ
2-Chloronaphthalene		0.532	99000 UJ	99000 UJ
2-Nitroaniline	2.2	1.816	2500000 UJ	2500000 UJ
Dimethyl Phthalate	370000	0.524	99000 UJ	99000 UJ
Acenaphthylene		0.792	99000 UJ	99000 UJ
2,6-Dinitrotoluene	37	1.259	99000 UJ	99000 UJ
3-Nitroaniline	110	0.597	2500000 UJ	2500000 UJ
Acenaphthene	2200	0.571	99000 UJ	99000 UJ
2,4-Dinitrophenol	730	2.429	2500000 UJ	2500000 UJ
4-Nitrophenol	2300	1.486	2500000 UJ	2500000 UJ
Dibenzofuran	150	0.538	99000 UJ	99000 UJ
2,4-Dinitrotoluene	73	0.567	99000 UJ	99000 UJ
Diethyl Phthalate	29000	0.580	99000 UJ	99000 UJ
Fluorene	1500	0.511	99000 UJ	99000 UJ
4-Chloropheny Phenyl Ether		0.486	99000 UJ	99000 UJ
4-Nitroaniline	110	1.530	2500000 UJ	2500000 UJ
4,6-Dinitro-2-Methylphenol		1.291	2500000 UJ	2500000 UJ
N-Nitrosodiphenylamine	14	2.364	99000 UJ	99000 UJ
4-Bromophenyl Phenyl Ether	2100	0.524	99000 UJ	99000 UJ
Hexachlorobenzene	0.0066	0.547	99000 UJ	99000 UJ
Pentachlorophenol	0.56	0.638	2500000 UJ	2500000 UJ
Phenanthrene		0.766	99000 UJ	99000 UJ
Anthracene	11000	0.431	99000 UJ	99000 UJ
Di-n-Butyl Phthalate +	3700	1.454	99000 UJ	99000 UJ
Carbazole	3.4	2.084	99000 UJ	99000 UJ
Fluoranthene	1500	0.571	99000 UJ	99000 UJ
Pyrene	1100	1.213	99000 UJ	99000 UJ
Butylbenzylphthalate	7300	1.624	99000 UJ	99000 UJ
Benzo(a)anthracene	0.092	0.441	99000 UJ	99000 UJ
Chrysene	9.2	0.536	99000 UJ	99000 UJ
3,3'-Dichlorobenzidine	0.15	0.587	99000 UJ	99000 UJ
bis(2-Ethylhexyl)phthalate	4.8	1.749	99000 UJ	99000 UJ
Di-n-Octylphthalate	730	3.241	99000 UJ	99000 UJ
Benzo(b)fluoranthene	0.092	1.607	99000 UJ	99000 UJ
Benzo(k)fluoranthene	0.92	3.304	99000 UJ	99000 UJ
Benzo(a)pyrene	0.0092	1.155	99000 UJ	99000 UJ
Indeno(1,2,3-c,d)pyrene	0.092	2.811	99000 UJ	99000 UJ
Dibenzo(a,h)anthracene	0.0092	2.938	99000 UJ	99000 UJ
Benzo(g,h,i)perylene		2.612	99000 UJ	99000 UJ
Total SVOCs			0	0

TABLE 4-2 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID	SCREENING IDL		LYWTRSPBWS XI	LYWTRSPBWS DS
ANALYTICAL PARAMETERS	LEVELS			
RCRA Metals mg/L				
(Method 200.7 except where noted)				
Arsenic	0.011	0.002	0.01 U	0.01 U
Barium	2.6	0.008	0.02	0.02
Cadmium	0.018	0.003	0.001 U	0.001 U
Chromium	37	0.007	0.03	0.01 U
Lead		0.0015	0.13 J	0.028 J
Mercury (Method 245.1)	0.011	0.00004	0.0005 U	0.0005 U
Selenium	0.18	0.005	0.02	0.02 U
Silver	0.18	0.004	0.01 U	0.01 U
Total Metals			0.2	0.048

TABLE 4-2 VALIDATED WATER SUPPLY WELL SOIL SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

** Screening levels are EPA Region III Risk-Based Concentrations presented in memo, dated April 30, 1996, distributed by Roy L. Smith, EPA Senior Toxicologist.

These concentrations are residential, soil ingestion values. A blank space indicates no level was specified by the EPA. DS in the sample designation indicates a field duplicate.

J = Quantitation is approximate due to limitations identified in the quality control review.

U = Value is the lowest achievable detection limit based on quality control review.

UJ = Detection limit is approximate due to limitations identified in the quality control review.

+ RBC for Trichloroethylene used for Trichloroethene

RBC for 1,2-Dibromoethane used for Dibromomethane

RBC for Tetrachloroethylene used for Tetrachloroethene

RBC for Chlorodibromomethane used for Dibromochloromethane

RBC for 1,2-Dichloroethylene (trans) used for Trans-1,2-Dichloroethene

RBC for 1,2-Dichloropropane used for 2,2-Dichloropropane

RBC for Cis- 1,2-Dichloroethylene used for Cis- 1,2-Dichloroethene

RBC for 1,3-Dichloropropene used for Cis 1,3-Dichloropropene

RBC for 1,3-Dichloropropene used for trans-1,3-Dichloropropene

RBC for 1,1-Dichloroethylene used for 1,1-Dichloroethene

RBC for Bromodichloromethane used for Bromodichloromethane

RBC for Dibutyl Phthalate used for Di-n-Butyl Phthalate

++ Multiple peak compounds not amenable to GC/MS procedure.

TABLE 4-3 VALIDATED SURFACE WATER SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID	SCREENING MDL		LYDRYWLASW XI	LYDRYWLASW DS
ANALYTICAL PARAMETERS	LEVELS**			
VOCs (Method 8260B) ug/L				
Dichlorodifluoromethane	390	0.13	5 U	5 U
Chloromethane	1.4	1.12	5 U	5 U
Vinyl Chloride	0.019	1.97	5 U	5 U
Bromomethane	8.7	2.28	5 U	5 U
Chloroethane	8600	0.56	5 U	5 U
Trichlorofluoromethane	1300	0.28	5 U	5 U
1,1-Dichloroethene +	810	0.45	5 U	5 U
Carbon Disulfide	1000	0.18	5 U	5 U
Iodomethane		2.6	5 U	5 U
Acetone	3700	5.82	6 U	5 U
Methylene Chloride	4.1	1.26	5 U	7 U
Trans-1,2-Dichloroethene +	120	0.7	5 U	5 U
1,1-Dichloroethane	810	0.4	5 U	5 U
Vinyl Acetate	37000	0.83	5 U	5 U
2,2-Dichloropropane +	0.16	1.53	5 U	5 U
Cis- 1,2-Dichloroethene +	61	0.35	5 U	5 U
Methyl Ethyl Ketone (2-Butanone)	1900	2.15	5 U	5 U
Bromochloromethane		0.43	5 U	5 U
Chloroform	0.15	0.45	5 U	5 U
1,1,1-Trichloroethane	790	0.27	1 J	5 U
Carbon Tetrachloride	0.16	0.3	5 U	5 U
1,1- Dichloropropene		0.25	5 U	5 U
Benzene	0.36	0.18	5 U	5 U
1,2-Dichloroethane	0.12	0.44	5 U	5 U
Trichloroethene +	1.6	0.58	5 U	5 U
1,2-Dichloropropane	0.16	0.95	5 U	5 U
Dibromomethane +	0.00075	0.35	5 U	5 U
Bromodichloromethane	0.17	0.32	5 U	5 U
2-Chloroethyl vinyl ether	150	1.95	5 U	5 U
cis-1,3-Dichloropropene +	0.077	0.22	5 U	5 U
4-Methyl-2-Pentanone		0.86	5 U	5 U
Toluene	750	0.31	5 U	5 U
trans-1,3-Dichloropropene +	0.077	0.24	5 U	5 U
1,1,2-Trichloroethane	0.19	0.28	5 U	5 U
Tetrachloroethene	1.1	0.34	5 U	5 U
1,3-Dichloropropane		0.34	5 U	5 U
2-Hexanone		1.46	5 U	5 U
Dibromochloromethane +	0.13	0.43	5 U	5 U
1,2-Dibromoethane	0.00075	0.36	5 U	5 U
Chlorobenzene	39	0.27	5 U	5 U
1,1,1,2-Tetrachloroethane	0.41	0.21	5 U	5 U
Ethylbenzene	1300	0.19	5 U	5 U
Xylenes - Total	1400	0.54	5 U	5 U
Styrene	1600	0.19	5 U	5 U
Bromoform	2.4	0.61	5 U	5 U
Isopropylbenzene		0.33	5 U	5 U
Bromobenzene		0.11	5 U	5 U
1,1,2,2-Tetrachloroethane	0.052	0.5	5 U	5 U
1,2,3-Trichloropropane	0.0015	0.29	5 U	5 U
n- Propylbenzene		0.32	5 U	5 U
2-Chlorotoluene		0.57	5 U	5 U
4-Chlorotoluene		0.19	5 U	5 U
1,3,5-trimethylbenzene	300	0.44	5 U	5 U
tert-butylbenzene	61	0.38	5 U	5 U
1,2,4-trimethylbenzene	300	0.47	5 U	5 U
Sec-Butylbenzene	61	0.39	5 U	5 U
1,3-dichlorobenzene	540	0.28	5 U	5 U
4-isopropyltoluene		0.45	5 U	5 U
1,4-dichlorobenzene	0.44	0.2	5 U	5 U
1,2-dichlorobenzene	270	0.28	5 U	5 U
n-butylbenzene		0.71	5 U	5 U
1,2-dibromo-3-chloropropane	0.048	0.42	5 U	5 U
1,2,4-trichlorobenzene	190	0.76	5 U	5 U
hexachlorobutadiene	0.14	0.42	5 U	5 U
1,2,3-trichlorobenzene		0.58	5 U	5 U
MTBE	180	5	5 U	5 U
Total VOCs			1	0

TABLE 4-3 VALIDATED SURFACE WATER SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID			LYDRYWLASW XI	LYDRYWLASW DS
	SCREENING LEVELS**	MDL		
ANALYTICAL PARAMETERS				
SVOCs (Method 8270B) ug/L				
Phenol	22000	0.379	10 U	10 U
bis(2-Chloroethy)ether	0.0092	0.795	10 U	10 U
2-Chlorophenol	180	0.616	10 U	10 U
1,3-Dichlorobenzene	540	0.600	10 U	10 U
1,4-Dichlorobenzene	0.44	0.600	10 U	10 U
1,2-Dichlorobenzene	270	0.702	10 U	10 U
2-Methylphenol (o-Cresol)	1800	0.499	10 U	10 U
2,2'-Oxybis(1-chloro)propane		1.438	10 U	10 U
4-Methylphenol (p-Cresol)	180	0.552	10 U	10 U
N-Nitrosodi-n-Propylamine	0.0096	1.813	10 U	10 U
Hexachloroethane	0.75	0.658	10 U	10 U
Nitrobenzene	3.4	0.763	10 U	10 U
Isophorone	71	0.603	10 U	10 U
2-Nitrophenol +	2300	0.794	10 U	10 U
2,4-Dimethylphenol	730	1.129	10 U	10 U
bis(2-Chloroethoxy)methane		0.712	10 U	10 U
2,4-Dichlorophenol	110	0.543	10 U	10 U
1,2,4-Trichlorobenzene	190	0.792	10 U	10 U
Naphthalene	1500	0.699	10 U	10 U
4-Chloroaniline	150	2.587	10 U	10 U
Hexachlorobutadiene	0.14	0.763	10 U	10 U
4-Chloro-3-Methylphenol		0.745	10 U	10 U
2-Methylnaphthalene		0.684	10 U	10 U
Hexachlorocyclopentadiene	0.15	1.613	10 U	10 U
2,4,6-Trichlorophenol	6.1	0.602	10 U	10 U
2,4,5-Trichlorophenol	3700	0.580	25 U	25 U
2-Chloronaphthalene		0.532	10 U	10 U
2-Nitroaniline	2.2	1.816	25 U	25 U
Dimethyl Phthalate	370000	0.524	10 U	10 U
Acenaphthylene		0.792	10 U	10 U
2,6-Dinitrotoluene	37	1.259	10 U	10 U
3-Nitroaniline	110	0.597	25 U	25 U
Acenaphthene	2200	0.571	10 U	10 U
2,4-Dinitrophenol	730	2.429	25 U	25 U
4-Nitrophenol	2300	1.486	25 U	25 U
Dibenzofuran	150	0.538	10 U	10 U
2,4-Dinitrotoluene	73	0.567	10 U	10 U
Diethyl Phthalate	29000	0.580	10 U	10 U
Fluorene	1500	0.511	10 U	10 U
4-Chloropheny Phenyl Ether		0.486	10 U	10 U
4-Nitroaniline	110	1.530	25 U	25 U
4,6-Dinitro-2-Methylphenol		1.291	25 U	25 U
N-Nitrosodiphenylamine	14	2.364	10 U	10 U
4-Bromopheny Phenyl Ether	2100	0.524	10 U	10 U
Hexachlorobenzene	0.0066	0.547	10 U	10 U
Pentachlorophenol	0.56	0.638	25 U	25 U
Phenanthrene		0.766	10 U	1 J
Anthracene	11000	0.431	10 U	10 U
Di-n-Butyl Phthalate +	3700	1.454	10 U	10 U
Carbazole	3.4	2.084	10 U	10 U
Fluoranthene	1500	0.571	10 U	1 J
Pyrene	1100	1.213	10 U	10 U
Butylbenzylphthalate	7300	1.624	10 U	10 U
Benzo(a)anthracene	0.092	0.441	10 U	10 U
Chrysene	9.2	0.536	10 U	10 U
3,3'-Dichlorobenzidine	0.15	0.587	10 U	10 U
bis(2-Ethylhexyl)phthalate	4.8	1.749	10 U	10 U
Di-n-Octylphthalate	730	3.241	10 U	10 U
Benzo(b)fluoranthene	0.092	1.607	10 U	10 U
Benzo(k)fluoranthene	0.92	3.304	10 U	10 U
Benzo(a)pyrene	0.0092	1.155	10 U	10 U
Indeno(1,2,3-c,d)pyrene	0.092	2.811	10 U	10 U
Dibenzo(a,h)anthracene	0.0092	2.938	10 U	10 U
Benzo(g,h,i)perylene		2.612	10 U	10 U
Total SVOCs			0	2

TABLE 4-3 VALIDATED SURFACE WATER SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

SAMPLE ID			LYDRYWLASW XI	LYDRYWLASW DS
	SCREENING	IDL		
ANALYTICAL PARAMETERS	LEVELS**			
RCRA Metals mg/L				
(Method 200.7 except where noted)				
Arsenic	0.011	0.002	0.01 U	0.01 U
Barium	2.6	0.008	0.05	0.04
Cadmium	0.018	0.003	0.001 U	0.001 U
Chromium	37	0.007	0.01 U	0.01 U
Lead		0.0015	0.009 U	0.005 U
Mercury (Method 245.1)	0.011	0.00004	0.0005 U	0.0005 U
Selenium	0.18	0.005	0.02 U	0.02 U
Silver	0.18	0.004	0.01 U	0.01 U
Total Metals			0.059	0.045

TABLE 4-3 VALIDATED SURFACE WATER SAMPLING ANALYTICAL RESULTS - FORMER LYNDONVILLE AIR FORCE STATION

** Screening levels are EPA Region III Risk-Based Concentrations presented in memo, dated April 30, 1996, distributed by Roy L. Smith, EPA Senior Toxicologist.

These concentrations are residential, soil ingestion values. A blank space indicates no level was specified by the EPA.

DS in the sample designation indicates a field duplicate.

J = Quantitation is approximate due to limitations identified in the quality control review.

U = Value is the lowest achievable detection limit based on quality control review.

UJ = Detection limit is approximate due to limitations identified in the quality control review.

+ RBC for Trichloroethylene used for Trichloroethene

RBC for 1,2-Dibromoethane used for Dibromomethane

RBC for Tetrachloroethylene used for Tetrachloroethene

RBC for Chlorodibromomethane used for Dibromochloromethane

RBC for 1,2-Dichloroethylene (trans) used for Trans-1,2-Dichloroethene

RBC for 1,2-Dichloropropane used for 2,2-Dichloropropane

RBC for Cis-1,2-Dichloroethylene used for Cis-1,2-Dichloroethene

RBC for 1,3-Dichloropropene used for Cis-1,3-Dichloropropene

RBC for 1,3-Dichloropropene used for trans-1,3-Dichloropropene

RBC for 1,1-Dichloroethylene used for 1,1-Dichloroethene

RBC for Dibutyl Phthalate used for Di-n-Butyl Phthalate

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST ALBANS AIR FORCE STATION

SAMPLE ID	SCREENING	MDL	SAAUTOHASB X1	SAAUTOHASB X2	SADBRISANS X1	SAFILTRANS X1	SAFILTRANS DS	SAFILTRBNS X1	SASEPTICANS X1	SASEPTICANS DS
ANALYTICAL PARAMETERS	LEVELS**		depth interval 6'-8'	depth interval 8'-10'	depth interval 0'-10"	depth interval 0'-5"	depth interval 0'-5"	depth interval 0'-8"	depth interval 1'-2'	depth interval 1'-2'
VOCs (Method 8260A) ug/Kg										
Dichlorodifluoromethane	1600000	0.13	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Chloromethane	49000	1.12	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Vinyl Chloride	340	1.97	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Bromomethane	110000	2.28	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Chloroethane	3100000	0.56	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Trichlorofluoromethane	2300000	0.28	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,1-Dichloroethene +	1100	0.45	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Carbon Disulfide	7800000	0.18	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Iodomethane		2.6	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Acetone	7800000	5.82	10 U	15 U	8 U	6 U	8 U	7 U	5 U	10 U
Methylene Chloride	85000	1.26	9 U	9 U	8 U	6 U	6 U	11 U	9 U	6 U
Trans-1,2-Dichloroethene +	1600000	0.7	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,1-Dichloroethane	7800000	0.4	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Vinyl Acetate	7800000	0.83	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
2,2-Dichloropropane +	9400	1.53	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Cis-1,2-Dichloroethene +	7800000	0.35	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Methyl Ethyl Ketone (2-Butanone)	47000000	2.15	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Bromochloromethane		0.43	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Chloroform	100000	0.45	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,1,1-Trichloroethane	2700000	0.27	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Carbon Tetrachloride	4900	0.3	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,1-Dichloropropene		0.25	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Benzene	22000	0.18	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,2-Dichloroethane	7000	0.44	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Trichloroethene +	58000	0.58	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,2-Dichloropropane	9400	0.95	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Dibromomethane +	7.5	0.35	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Bromodichloromethane	10000	0.32	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
2-Chloroethyl vinyl ether	2000000	1.95	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
cis-1,3-Dichloropropene +	3700	0.22	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
4-Methyl-2-Pentanone		0.86	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Toluene	16000000	0.31	6 U	6 U	5 U	6 U	9 U	9 U	5 U	6 U
trans-1,3-Dichloropropene +	3700	0.24	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,1,2-Trichloroethane	11000	0.28	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Tetrachloroethene	12000	0.34	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,3-Dichloropropane		0.34	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
2-Hexanone		1.46	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Dibromochloromethane +	7600	0.43	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,2-Dibromoethane	7.5	0.36	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Chlorobenzene	1600000	0.27	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,1,1,2-Tetrachloroethane	25000	0.21	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Ethylbenzene	7800000	0.19	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Xylenes - Total	16000000	0.54	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Styrene	16000000	0.19	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Bromoform	81000	0.61	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Isopropylbenzene		0.33	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Bromobenzene		0.11	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,1,2,2-Tetrachloroethane	3200	0.5	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,2,3-Trichloropropane	91	0.29	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
n-Propylbenzene		0.32	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
2-Chlorotoluene		0.57	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
4-Chlorotoluene		0.19	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,3,5-trimethylbenzene	3900000	0.44	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
tert-butylbenzene	780000	0.38	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,2,4-trimethylbenzene	3900000	0.47	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Sec-Butylbenzene	780000	0.39	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,3-dichlorobenzene	7000000	0.28	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
4-isopropyltoluene		0.45	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,4-dichlorobenzene	27000	0.2	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,2-dichlorobenzene	7000000	0.28	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
n-butylbenzene		0.71	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,2-dibromo-3-chloropropane	460	0.42	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,2,4-trichlorobenzene	780000	0.76	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
hexachlorobutadiene	8200	0.42	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
1,2,3-trichlorobenzene		0.58	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
MTBE	390000	0.703	6 U	6 U	5 U	6 U	6 U	5 U	5 U	6 U
Total VOCs			0	0	0	0	21	9	0	0

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST ALBANS AIR FORCE STATION

SAMPLE ID	SCREENING	MDL	SASEPTICANS X2	SAGSPMPASS X1	SAGSPMPBSS X1	SAGSPMPBSS DS	SAVHMTASS X1
ANALYTICAL PARAMETERS	LEVELS**		depth interval 3'-4'	depth interval 0"-5"	depth interval 0"-5"	depth interval 0"-5"	depth interval 0"-5"
VOCs (Method 8260A) ug/Kg							
Dichlorodifluoromethane	1600000	0.13	7 U	6 U	6 U	6 U	6 U
Chloromethane	49000	1.12	7 U	6 U	6 U	6 U	6 U
Vinyl Chloride	340	1.97	7 U	6 U	6 U	6 U	6 U
Bromomethane	110000	2.28	7 U	6 U	6 U	6 U	6 U
Chloroethane	3100000	0.56	7 U	6 U	6 U	6 U	6 U
Trichlorofluoromethane	2300000	0.28	7 U	6 U	6 U	6 U	6 U
1,1-Dichloroethene +	1100	0.45	7 U	6 U	6 U	6 U	6 U
Carbon Disulfide	7800000	0.18	7 U	6 U	6 U	6 U	6 U
Iodomethane		2.6	7 U	6 U	6 U	6 U	6 U
Acetone	7800000	5.82	9 U	7 U	6 U	8 U	6 U
Methylene Chloride	85000	1.26	18 U	12 U	6 UJ	14 J	9 U
Trans-1,2-Dichloroethene +	1600000	0.7	7 U	6 U	6 U	6 U	6 U
1,1-Dichloroethane	7800000	0.4	7 U	6 U	6 U	6 U	6 U
Vinyl Acetate	78000000	0.83	7 U	6 U	6 U	6 U	6 U
2,2-Dichloropropane +	9400	1.53	7 U	6 U	6 U	6 U	6 U
Cis- 1,2-Dichloroethene +	7800000	0.35	7 U	6 U	6 U	6 U	6 U
Methyl Ethyl Ketone (2-Butanone)	47000000	2.15	7 U	6 U	6 U	6 U	6 U
Bromochloromethane		0.43	7 U	6 U	6 U	6 U	6 U
Chloroform	100000	0.45	7 U	6 U	6 U	6 U	6 U
1,1,1-Trichloroethane	2700000	0.27	7 U	78	24 J	96 J	46
Carbon Tetrachloride	4900	0.3	7 U	6 U	6 U	6 U	6 U
1,1- Dichloropropene		0.25	7 U	6 U	6 U	6 U	6 U
Benzene	22000	0.18	7 U	6 U	6 U	6 U	6 U
1,2-Dichloroethane	7000	0.44	7 U	6 U	6 U	6 U	6 U
Trichloroethene +	58000	0.58	7 U	24	6 UJ	20 J	7 U
1,2-Dichloropropane	9400	0.95	7 U	6 U	6 U	6 U	6 U
Dibromomethane +	7.5	0.35	7 U	6 U	6 U	6 U	6 U
Bromodichloromethane	10000	0.32	7 U	6 U	6 U	6 U	6 U
2-Chloroethyl vinyl ether	2000000	1.95	7 U	6 U	6 U	6 U	6 U
cis-1,3-Dichloropropene +	3700	0.22	7 U	6 U	6 U	6 U	6 U
4-Methyl-2-Pentanone		0.86	7 U	6 U	6 U	6 U	6 U
Toluene	16000000	0.31	7 U	9	6 UJ	10 J	6 U
trans-1,3-Dichloropropene +	3700	0.24	7 U	6 U	6 U	6 U	6 U
1,1,2-Trichloroethane	11000	0.28	7 U	6 U	6 U	6 U	6 U
Tetrachloroethene	12000	0.34	7 U	10	6 U	6	6 U
1,3-Dichloropropane		0.34	7 U	6 U	6 U	6 U	6 U
2-Hexanone		1.46	7 U	6 U	6 U	6 U	6 U
Dibromochloromethane +	7600	0.43	7 U	6 U	6 U	6 U	6 U
1,2-Dibromoethane	7.5	0.36	7 U	6 U	6 U	6 U	6 U
Chlorobenzene	1600000	0.27	7 U	6 U	6 U	6 U	6 U
1,1,1,2-Tetrachloroethane	25000	0.21	7 U	6 U	6 U	6 U	6 U
Ethylbenzene	7800000	0.19	7 U	6 U	6 U	6 U	6 U
Xylenes - Total	16000000	0.54	7 U	6 U	6 U	6 U	6 U
Styrene	16000000	0.19	7 U	6 U	6 U	6 U	6 U
Bromoform	81000	0.61	7 U	6 U	6 U	6 U	6 U
Isopropylbenzene		0.33	7 U	6 U	6 U	6 U	6 U
Bromobenzene		0.11	7 U	6 U	6 U	6 U	6 U
1,1,2,2-Tetrachloroethane	3200	0.5	7 U	6 U	6 U	6 U	6 U
1,2,3-Trichloropropane	91	0.29	7 U	6 U	6 U	6 U	6 U
n- Propylbenzene		0.32	7 U	6 U	6 U	6 U	6 U
2-Chlorotoluene		0.57	7 U	6 U	6 U	6 U	6 U
4-Chlorotoluene		0.19	7 U	6 U	6 U	6 U	6 U
1,3,5-trimethylbenzene	3900000	0.44	7 U	6 U	6 U	6 U	6 U
tert-butylbenzene	780000	0.38	7 U	6 U	6 U	6 U	6 U
1,2,4-trimethylbenzene	3900000	0.47	7 U	6 U	6 U	6 U	6 U
Sec-Butylbenzene	780000	0.39	7 U	6 U	6 U	6 U	6 U
1,3-dichlorobenzene	7000000	0.28	7 U	6 U	6 U	6 U	6 U
4-isopropyltoluene		0.45	7 U	6 U	6 U	6 U	6 U
1,4-dichlorobenzene	27000	0.2	7 U	6 U	6 U	6 U	6 U
1,2-dichlorobenzene	7000000	0.28	7 U	6 U	6 U	6 U	6 U
n-butylbenzene		0.71	7 U	6 U	6 U	6 U	6 U
1,2-dibromo-3-chloropropane	460	0.42	7 U	6 U	6 U	6 U	6 U
1,2,4-trichlorobenzene	780000	0.76	7 U	6 U	6 U	6 U	6 U
hexachlorobutadiene	8200	0.42	7 U	6 U	6 U	6 U	6 U
1,2,3-trichlorobenzene		0.58	7 U	6 U	6 U	6 U	6 U
MTBE	390000	0.703	7 U	6 U	6 U	6 U	6 U
Total VOCs			0	121	24	146	46

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST ALBANS AIR FORCE STATION

SAMPLE ID	SCREENING MDL	SAAUTOHASB X1	SAAUTOHASB X2	SADBRISANS X1	SAFILTRANS X1	SAFILTRANS DS	SAFILTRBNS X1	SASEPTICANS X1	SASEPTICANS DS
ANALYTICAL PARAMETERS	LEVELS**	depth interval 6'-8'	depth interval 8'-10'	depth interval 0'-10"	depth interval 0'-5"	depth interval 0'-5"	depth interval 0'-8"	depth interval 1'-2'	depth interval 1'-2'
SVOCs (Method 8270B) ug/Kg									
Phenol	4700000	12.6	380 U	370 U	350 U	750 U	750 U	340 U	360 U
bis(2-Chloroethyl)ether	580	26.5	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2-Chlorophenol	390000	20.533	380 U	370 U	350 U	750 U	750 U	340 U	360 U
1,3-Dichlorobenzene	7000000	20	380 U	370 U	350 U	750 U	750 U	340 U	360 U
1,4-Dichlorobenzene	27000	20	380 U	370 U	350 U	750 U	750 U	340 U	360 U
1,2-Dichlorobenzene	7000000	23.4	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2-Methylphenol (o-Cresol)	3900000	16.633	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2,2'-Oxybis(1-chloro)propane		47.933	380 U	370 U	350 U	750 U	750 U	340 U	360 U
4-Methylphenol (p-Cresol)	390000	18.4	380 U	370 U	350 U	750 U	750 U	340 U	360 U
N-Nitrosodi-n-Propylamine	91	60.433	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Hexachloroethane	46000	21.933	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Nitrobenzene	39000	25.433	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Isophorone	670000	20.1	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2-Nitrophenol +	4800000	26.467	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2,4-Dimethylphenol	1600000	37.633	380 U	370 U	350 U	750 U	750 U	340 U	360 U
bis(2-Chloroethoxy)methane		23.733	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2,4-Dichlorophenol	230000	18.1	380 U	370 U	350 U	750 U	750 U	340 U	360 U
1,2,4-Trichlorobenzene	780000	26.4	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Naphthalene	3100000	23.3	380 U	370 U	350 U	750 U	750 U	340 U	360 U
4-Chloroaniline	310000	86.233	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Hexachlorobutadiene	8200	25.433	380 U	370 U	350 U	750 U	750 U	340 U	360 U
4-Chloro-3-Methylphenol		24.833	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2-Methylnaphthalene		22.8	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Hexachlorocyclopentadiene	550000	53.767	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2,4,6-Trichlorophenol	58000	20.067	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2,4,5-Trichlorophenol	7800000	19.333	950 U	370 U	860 U	1700 U	1900 U	850 U	910 U
2-Chloronaphthalene		17.733	380 U	370 U	350 U	750 U	750 U	340 U	360 U
2-Nitroaniline	4700	60.533	950 U	370 U	860 U	1700 U	1900 U	850 U	910 U
Dimethyl Phthalate	78000000	17.467	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Acenaphthylene		26.4	380 U	370 U	45 J	750 U	750 U	340 U	360 U
2,6-Dinitrotoluene	78000	41.967	380 U	370 U	350 U	750 U	750 U	340 U	360 U
3-Nitroaniline	230000	19.9	950 U	370 U	860 U	1700 U	1900 U	850 U	910 U
Acenaphthene	4700000	19.033	380 U	370 U	66 J	750 U	750 U	340 U	360 U
2,4-Dinitrophenol	1600000	80.967	950 U	370 U	860 U	1700 U	1900 U	850 U	910 U
4-Nitrophenol	4800000	49.533	950 U	370 U	860 U	1700 U	1900 U	850 U	910 U
Dibenzofuran	310000	17.933	380 U	370 U	36 J	750 U	750 U	340 U	360 U
2,4-Dinitrotoluene	160000	18.9	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Diethyl Phthalate	63000000	19.333	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Fluorene	3100000	17.033	380 U	370 U	94 J	750 U	750 U	340 U	360 U
4-Chloropheny Phenyl Ether		16.2	380 U	370 U	350 U	750 U	750 U	340 U	360 U
4-Nitroaniline	230000	51	950 U	370 U	860 U	1700 U	1900 U	850 U	910 U
4,6-Dinitro-2-Methylphenol		43.033	950 U	370 U	860 U	1700 U	1900 U	850 U	910 U
N-Nitrosodiphenylamine	130000	78.8	380 U	370 U	350 U	750 U	750 U	340 U	360 U
4-Bromopheny Phenyl Ether	4500000	17.467	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Hexachlorobenzene	400	18.233	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Pentachlorophenol	5300	21.267	950 U	370 U	860 U	1700 U	1900 U	850 U	910 U
Phenanthrene		25.533	380 U	370 U	860	77 J	750 U	160 J	360 U
Anthracene	23000000	14.367	380 U	370 U	260 J	750 U	750 U	340 U	360 U
Di-n-Butyl Phthalate +	7800000	48.467	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Carbazole	32000	69.467	380 U	370 U	170 J	750 U	750 U	49 J	360 U
Fluoranthene	3100000	19.033	380 U	370 U	950	750 U	750 U	120 J	360 U
Pyrene	2300000	40.433	380 U	370 U	1300	90 J	42 J	170 J	360 U
Butylbenzylphthalate	16000000	54.133	380 U	370 U	56 J	750 U	750 U	340 U	360 U
Benzo(a)anthracene	880	14.7	380 U	370 U	640	750 U	750 U	88 J	360 U
Chrysene	88000	17.867	380 U	370 U	660	750 U	750 U	97 J	360 U
3,3'-Dichlorobenzidine	1400	19.567	380 U	370 U	350 U	750 U	750 U	340 U	360 U
bis(2-Ethylhexyl)phthalate	46000	58.3	48 J	72 J	350 U	140 J	750 U	34 J	170 J
Di-n-Octylphthalate	1600000	108.03	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Benzo(b)fluoranthene	880	53.567	380 U	370 U	460	750 U	750 U	82 J	360 U
Benzo(k)fluoranthene	8800	110.13	380 U	370 U	160 J	750 U	750 U	37 J	360 U
Benzo(a)pyrene	88	38.5	380 U	370 U	400	750 U	750 U	73 J	360 U
Indeno(1,2,3-c,d)pyrene	880	93.7	380 U	370 U	91 J	750 U	750 U	340 U	360 U
Dibenzo(a,h)anthracene	88	97.933	380 U	370 U	350 U	750 U	750 U	340 U	360 U
Benzo(g,h,i)perylene		87.067	380 U	370 U	110 J	750 U	750 U	340 U	360 U
Total SVOCs			48	72	6358	307	42	910	170

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST ALBANS AIR FORCE STATION

SAMPLE ID	SCREENING	MDL	SASEPTICANS X2	SAGSPMPASS X1	SAGSPMPBSS X1	SAGSPMPBSS DS	SAVHMTASS X1
ANALYTICAL PARAMETERS	LEVELS**		depth interval 3'-4'	depth interval 0"-5"	depth interval 0"-5"	depth interval 0"-5"	depth interval 0"-5"
SVOCs (Method 8270B) ug/Kg							
Phenol	4700000	12.6	360 U	380 U	1500 U	390 U	420 U
bis(2-Chloroethyl)ether	580	26.5	360 U	380 U	1500 U	390 U	420 U
2-Chlorophenol	390000	20.533	360 U	380 U	1500 U	390 U	420 U
1,3-Dichlorobenzene	7000000	20	360 U	380 U	1500 U	390 U	420 U
1,4-Dichlorobenzene	27000	20	360 U	380 U	1500 U	390 U	420 U
1,2-Dichlorobenzene	7000000	23.4	360 U	380 U	1500 U	390 U	420 U
2-Methylphenol (o-Cresol)	3900000	16.633	360 U	380 U	1500 U	390 U	420 U
2,2'-Oxybis(1-chloropropane)		47.933	360 U	380 U	1500 U	390 U	420 U
4-Methylphenol (p-Cresol)	390000	18.4	360 U	380 U	1500 U	390 U	420 U
N-Nitrosodi-n-Propylamine	91	60.433	360 U	380 U	1500 U	390 U	420 U
Hexachloroethane	46000	21.933	360 U	380 U	1500 U	390 U	420 U
Nitrobenzene	39000	25.433	360 U	380 U	1500 U	390 U	420 U
Isophorone	670000	20.1	360 U	380 U	1500 U	390 U	420 U
2-Nitrophenol +	4800000	26.467	360 U	380 U	1500 U	390 U	420 U
2,4-Dimethylphenol	1600000	37.633	360 U	380 U	1500 U	390 U	420 U
bis(2-Chloroethoxy)methane		23.733	360 U	380 U	1500 U	390 U	420 U
2,4-Dichlorophenol	230000	18.1	360 U	380 U	1500 U	390 U	420 U
1,2,4-Trichlorobenzene	780000	26.4	360 U	380 U	1500 U	390 U	420 U
Naphthalene	3100000	23.3	360 U	110 J	780 J	600	410 J
4-Chloroaniline	310000	86.233	360 U	380 U	1500 U	390 U	420 U
Hexachlorobutadiene	8200	25.433	360 U	380 U	1500 U	390 U	420 U
4-Chloro-3-Methylphenol		24.833	360 U	380 U	1500 U	390 U	420 U
2-Methylnaphthalene		22.8	360 U	110 J	940 J	710	230 J
Hexachlorocyclopentadiene	550000	53.767	360 U	380 U	1500 U	390 U	420 U
2,4,6-Trichlorophenol	58000	20.067	360 U	380 U	1500 U	390 U	420 U
2,4,5-Trichlorophenol	7800000	19.333	910 U	940 J	3900 U	980 U	1000 U
2-Chloronaphthalene		17.733	360 U	380 U	1500 U	390 U	420 U
2-Nitroaniline	4700	60.533	910 U	940 J	3900 U	980 U	1000 U
Dimethyl Phthalate	780000000	17.467	360 U	380 U	1500 U	390 U	420 U
Acenaphthylene		26.4	360 U	380 U	1500 U	48 J	77 J
2,6-Dinitrotoluene	78000	41.967	360 U	380 U	1500 U	390 U	420 U
3-Nitroaniline	230000	19.9	910 U	940 J	3900 U	980 U	1000 U
Acenaphthene	4700000	19.033	360 U	48 J	1500 U	390 U	350 J
2,4-Dinitrophenol	1600000	80.967	910 U	940 J	3900 U	980 U	1000 U
4-Nitrophenol	4800000	49.533	910 U	940 J	3900 U	980 U	1000 U
Dibenzofuran	310000	17.933	360 U	45 J	170 J	140 J	250 J
2,4-Dinitrotoluene	160000	18.9	360 U	380 U	1500 U	390 U	420 U
Diethyl Phthalate	63000000	19.333	360 U	380 U	1500 U	390 U	420 U
Fluorene	3100000	17.033	360 U	59 J	1500 U	51 J	380 J
4-Chloropheny Phenyl Ether		16.2	360 U	380 U	1500 U	390 U	420 U
4-Nitroaniline	230000	51	910 U	940 J	3900 U	980 U	1000 U
4,6-Dinitro-2-Methylphenol		43.033	910 U	940 J	3900 U	980 U	1000 U
N-Nitrosodiphenylamine	130000	78.8	360 U	380 U	1500 U	390 U	420 U
4-Bromophenyl Phenyl Ether	4500000	17.467	360 U	380 U	1500 U	390 U	420 U
Hexachlorobenzene	400	18.233	360 U	380 U	1500 U	390 U	420 U
Pentachlorophenol	5300	21.267	910 U	940 J	3900 U	980 U	1000 U
Phenanthrene		25.533	360 U	490	500 J	460	3300
Anthracene	23000000	14.367	360 U	100 J	1500 U	80 J	540
Di-n-Butyl Phthalate +	7800000	48.467	360 U	380 U	160 J	390 U	420 U
Carbazole	32000	69.467	360 U	80 J	1500 U	60 J	670
Fluoranthene	3100000	19.033	360 U	530	400 J	390	4100
Pyrene	2300000	40.433	360 U	660	450 J	480	3700
Butylbenzylphthalate	16000000	54.133	360 U	380 U	220 J	1100 J	120 J
Benzo(a)anthracene	880	14.7	360 U	250 J	230 J	190 J	1600
Chrysene	88000	17.867	360 U	260 J	310 J	270 J	2000
3,3'-Dichlorobenzidine	1400	19.567	360 U	380 U	1500 U	390 U	420 U
bis(2-Ethylhexyl)phthalate	46000	58.3	140 J	57 J	370 J	180 J	420 U
Di-n-Octylphthalate	1600000	108.03	360 U	380 U	1500 U	390 U	420 U
Benzo(b)fluoranthene	880	53.567	360 U	350 J	370 J	360 J	3000
Benzo(k)fluoranthene	8800	110.13	360 U	87 J	1500 U	92 J	580
Benzo(a)pyrene	88	38.5	360 U	220 J	240 J	220 J	1600
Indeno(1,2,3-c,d)pyrene	880	93.7	360 U	71 J	1500 U	110 J	600
Dibenzo(a,h)anthracene	88	97.933	360 U	380 U	1500 U	390 U	160 J
Benzo(g,h,i)perylene		87.067	360 U	80 J	200 J	170 J	680
Total SVOCs			140	3607	5340	5711	24347

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST ALBANS AIR FORCE STATION

SAMPLE ID	SCREENING IDL	SAAUTOHASB X1	SAAUTOHASB X2	SADBRISANS X1	SAFILTRANS X1	SAFILTRANS DS	SAFILTRBNS X1	SASEPTICANS X1	SASEPTICANS DS
ANALYTICAL PARAMETERS	LEVELS**	depth interval 6'-8'	depth interval 8'-10'	depth interval 0'-10"	depth interval 0'-5"	depth interval 0'-5"	depth interval 0'-8"	depth interval 1'-2'	depth interval 1'-2'
RCRA Metals mg/Kg									
(Method 6010A except where noted)									
Arsenic	23	0.2	4	5	4	5	5	4	4
Barium	5500	0.5	32	43	28	57	60	27	27
Cadmium	39	0.03	0.1 U	0.1 U	0.3	0.1 U	0.1 U	0.1 U	0.1 U
Chromium	78000	0.07	12	15	12	9	15	11	12
Lead		0.15	6.5	8.0	130	64	55	3.5	4.2
Mercury (Method 7471)	23	0.004	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Selenium	390	0.5	1.8	1.8	1.4	2.1	1.6	1.7	1.6
Silver	390	0.4	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Total Metals			56.3	72.8	175.7	137.1	130.6	47.1	48.8

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST ALBANS AIR FORCE STATION

SAMPLE ID			SASEPTICANS X2	SAGSPMPASS X1	SAGSPMPBSS X1	SAGSPMPBSS DS	SAVHMTASS X1
	SCREENING	IDL					
ANALYTICAL PARAMETERS	LEVELS**		depth interval 3'-4'	depth interval 0"-5"	depth interval 0"-5"	depth interval 0"-5"	depth interval 0"-5"
RCRA Metals mg/Kg							
(Method 6010A except where noted)							
Arsenic	23	0.2	4	4.8	5.2	4.8	6.8
Barium	5500	0.5	30	41	48	43	59
Cadmium	39	0.03	0.1 U	0.1 U	0.7 J	1.3 J	0.1 U
Chromium	78000	0.07	12	15	21	23	21
Lead		0.15	5	48	270	200	180
Mercury (Method 7471)	23	0.004	0.3 U	0.3	0.2	0.2	0.8
Selenium	390	0.5	1.4	6.7	5.3	4.6	6.9
Silver	390	0.4	0.6 U	2 U	2 U	2 U	2 U
Total Metals			52.4	115.8	350.4	276.9	274.5

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST ALBANS AIR FORCE STATION

SAMPLE ID	SAAUTOHASB X1		SAAUTOHASB X2		SADBRISANS X1		SAFILTRANS X1		SAFILTRANS DS		SAFILTRBNS X1		SASEPTICANS X1		SASEPTICANS DS	
	SCREENING	MDL	depth interval 6'-8'	depth interval 8'-10'	depth interval 0'-10'	depth interval 0'-5'	depth interval 0'-5'	depth interval 0'-8"	depth interval 1'-2'	depth interval 1'-2'						
ANALYTICAL PARAMETERS	LEVELS**															
Pest. /PCBs (Method 8081) ug/Kg																
Alpha BHC	100	0.0029												1.9 U		1.8 U
Beta BHC	350	0.0214												1.9 U		1.8 U
Delta BHC		0.0013												1.9 U		1.8 U
Gamma-BHC (Lindane)	490	0.0038												1.9 U		1.8 U
Heptachlor	140	0.0091												1.9 U		1.8 U
Aldrin	38	0.0033												1.9 U		1.8 U
Heptachlor Epoxide	70	0.0020												1.9 U		1.8 U
Alpha Endosulfan (Endosulfan I) +	470000	0.0038												1.9 U		1.8 U
Dieldrin	440	0.0063												3.8 U		3.8 U
4,4'-DDE +	1900	0.0043												3.8 U		3.8 U
Endrin	23000	0.0117												3.8 U		3.8 U
Beta Endosulfan (Endosulfan II) +	470000	0.0074												3.8 U		3.8 U
4,4'-DDD +	2700	0.0071												3.8 U		3.8 U
Endosulfan Sulfate		0.0054												3.8 U		3.8 U
4,4'-DDT +	1900	0.0069												3.8 U		3.8 U
Methoxychlor	390000	0.2250												19 U		19 U
Endrin Ketone		0.0072												1.9 U		1.9 U
Endrin Aldehyde		0.0208												3.8 U		3.8 U
Alpha-chlordane		0.0021												1.9 U		1.9 U
Gamma-chlordane		0.0022												1.9 U		1.9 U
Chlordane	490	0.0250												95 U		95 U
Toxaphene	580	0.0404												190 U		190 U
PCB-1016 (Aroclor 1016)	5500	0.0480												38 U		38 U
PCB-1221 (Aroclor 1221)	83	0.0517												76 U		76 U
PCB-1232 (Aroclor 1232)	83	0.0128												38 U		38 U
PCB-1242 (Aroclor 1242)	83	0.0077												38 U		38 U
PCB-1248 (Aroclor 1248)	83	0.0145												38 U		38 U
PCB-1254 (Aroclor 1254)	1600	0.0153												38 U		38 U
PCB-1260 (Aroclor 1260)	83	0.0383												38 U		38 U
Total Pest./PCBs														0		0

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST ALBANS AIR FORCE STATION

SAMPLE ID			SASEPTICANS X2	SAGSPMPASS X1	SAGSPMPBSS X1	SAGSPMPBSS DS	SAVHMTASS X1
	SCREENING	MDL					
ANALYTICAL PARAMETERS	LEVELS**		depth interval 3'-4'	depth interval 0"-5"	depth interval 0"-5"	depth interval 0"-5"	depth interval 0"-5"
Pest. /PCBs (Method 8081) ug/Kg.							
Alpha BHC	100	0.0029	1.9 U				
Beta BHC	350	0.0214	1.9 U				
Delta BHC		0.0013	1.9 U				
Gamma-BHC (Lindane)	490	0.0038	1.9 U				
Heptachlor	140	0.0091	1.9 U				
Aldrin	38	0.0033	1.9 U				
Heptachlor Epoxide	70	0.0020	1.9 U				
Alpha Endosulfan (Endosulfan I) +	470000	0.0038	1.9 U				
Dieldrin	440	0.0063	3.8 U				
4,4'-DDE +	1900	0.0043	3.8 U				
Endrin	23000	0.0117	3.8 U				
Beta Endosulfan (Endosulfan II) +	470000	0.0074	3.8 U				
4,4'-DDD +	2700	0.0071	3.8 U				
Endosulfan Sulfate		0.0054	3.8 U				
4,4'-DDT +	1900	0.0069	3.8 U				
Methoxychlor	390000	0.2250	19 U				
Endrin Ketone		0.0072	1.9 U				
Endrin Aldehyde		0.0208	3.8 U				
Alpha-chlordane		0.0021	1.9 U				
Gamma-chlordane		0.0022	1.9 U				
Chlordane	490	0.0250	95 U				
Toxaphene	580	0.0404	190 U				
PCB-1016 (Aroclor 1016)	5500	0.0480	38 U				
PCB-1221 (Aroclor 1221)	83	0.0517	76 U				
PCB-1232 (Aroclor 1232)	83	0.0128	38 U				
PCB-1242 (Aroclor 1242)	83	0.0077	38 U				
PCB-1248 (Aroclor 1248)	83	0.0145	38 U				
PCB-1254 (Aroclor 1254)	1600	0.0153	38 U				
PCB-1260 (Aroclor 1260)	83	0.0383	38 U				
Total Pest./PCBs			0				

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST. ALBANS AIR FORCE STATION

** Screening levels are EPA Region III Risk-Based Concentrations presented in memo, dated April 30, 1996, distributed by Roy L. Smith, EPA Senior Toxicologist.

These concentrations are residential, soil ingestion values. A blank space indicates no level was specified by the EPA.

DS in the sample designation indicates a field duplicate.

J = Quantitation is approximate due to limitations identified in the quality control review.

U = Value is the lowest achievable detection limit based on quality control review.

UJ = Detection limit is approximate due to limitations identified in the quality control review.

+ RBC for Trichloroethylene used for Trichloroethene

RBC for 1,2 Dibromoethane used for Dibromomethane

RBC for Tetrachloroethylene used for Tetrachloroethene

RBC for Chlorodibromomethane used for Dibromochloromethane

RBC for 1,2-Dichloroethylene (trans) used for Trans-1,2-Dichloroethene

RBC for 1,2-Dichloropropane used for 2,2-Dichloropropane

RBC for Cis- 1,2-Dichloroethylene used for Cis- 1,2-Dichloroethene

RBC for 1,3-Dichloropropene used for Cis 1,3-Dichloropropene

RBC for 1,3-Dichloropropene used for trans-1,3-Dichloropropene

RBC for 1,1-Dichloroethylene used for 1,1-Dichloroethene

RBC for Dibutyl Phthalate used for Di-n-Butyl Phthalate

RBC for DDD used for 4,4'-DDD

RBC for DDT used for 4,4'-DDT

RBC for DDE used for 4,4'-DDE

RBC for Endosulfan used for Alpha Endosulfan (Endosulfan I)

RBC for Endosulfan used for Beta Endosulfan (Endosulfan II)

TABLE 4-5 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER ST. ALBANS AIR FORCE STATION

SAMPLE ID	SCREENING MDL		SAWTRSPAWS X1	SAWTRSPAWS DS	SAWTRSPBWS X1
	LEVELS**				
VOCs (Method 524.2) ug/L					
Dichlorodifluoromethane	390	0.113	0.5 U	0.5 U	0.5 U
Chloromethane	1.4	0.116	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.019	0.087	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	0.148	0.5 U	0.5 U	0.5 U
Chloroethane	8600	0.086	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	1300	0.07	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene +	0.044	0.064	0.5 U	0.5 U	0.5 U
Methylene Chloride	4.1	0.081	3 UJ	1 UJ	2 U
trans-1,2-dichloroethene +	120	0.057	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	810	0.069	0.5 U	0.5 U	0.5 U
2,2-dichloropropane +		0.143	0.5 U	0.5 U	0.5 U
Cis- 1,2-Dichloroethene +	61	0.059	0.5 U	0.5 U	0.5 U
Bromochloromethane		0.074	0.5 U	0.5 U	0.5 U
Chloroform	0.15	0.059	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	790	0.067	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.16	0.114	0.5 U	0.5 U	0.5 U
1,1- Dichloropropene		0.094	0.5 U	0.5 U	0.5 U
Benzene	0.36	0.072	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.12	0.095	0.5 U	0.5 U	0.5 U
Trichloroethene +	1.6	0.084	0.9 J	0.5 UJ	0.8
1,2-Dichloropropane	0.16	0.077	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.17	0.081	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene +	0.077	0.094	0.5 U	0.5 U	0.5 U
Toluene	750	0.092	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene +	0.077	0.094	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.19	0.16	0.5 U	0.5 U	0.5 U
Tetrachloroethene +	1.1	0.11	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane		0.08	0.5 U	0.5 U	0.5 U
Chlorobenzene	39	0.082	0.5 U	0.5 U	0.5 U
1,1,1,2-Tetrachloroethane	0.41	0.1	0.5 U	0.5 U	0.5 U
Ethylbenzene	1300	0.105	0.5 U	0.5 U	0.5 U
p- & m-xylene	1400	0.251	0.5 U	0.5 U	0.5 U
o-xylene	1400	0.094	0.5 U	0.5 U	0.5 U
Styrene	1600	0.088	0.5 U	0.5 U	0.5 U
Bromoform	2.4	0.184	0.5 U	0.5 U	0.5 U
Isopropylbenzene		0.104	0.5 U	0.5 U	0.5 U
Bromobenzene		0.097	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.052	0.154	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	0.0015	0.152	0.5 U	0.5 U	0.5 U
n- Propylbenzene		0.121	0.5 U	0.5 U	0.5 U
2-Chlorotoluene		0.086	0.5 U	0.5 U	0.5 U
4-Chlorotoluene		0.101	0.5 U	0.5 U	0.5 U
1,3,5-trimethylbenzene	300	0.116	0.5 U	0.5 U	0.5 U
tert-butylbenzene	61	0.119	0.5 U	0.5 U	0.5 U
1,2,4-trimethylbenzene	300	0.138	0.5 U	0.5 U	0.5 U
Sec-Butylbenzene	61	0.138	0.5 U	0.5 U	0.5 U
1,3-dichlorobenzene	540	0.102	0.5 U	0.5 U	0.5 U
4-isopropyltoluene		0.117	0.5 U	0.5 U	0.5 U
1,4-dichlorobenzene	0.44	0.101	0.5 U	0.5 U	0.5 U
1,2-dichlorobenzene	270	0.133	0.5 U	0.5 U	0.5 U
n-butylbenzene		0.125	0.5 U	0.5 U	0.5 U
1,2-dibromo-3-chloropropane	0.048	0.193	0.5 U	0.5 U	0.5 U
1,2,4-trichlorobenzene	190	0.204	0.5 U	0.5 U	0.5 U
hexachlorobutadiene	0.14	0.145	0.5 U	0.5 U	0.5 U
Naphthane		0.229	0.5 U	0.5 U	0.5 U
1,2,3-trichlorobenzene		0.245	0.5 U	0.5 U	0.5 U
Total VOCs			0.9	0	0.8

TABLE 4-5 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER ST. ALBANS AIR FORCE STATION

SAMPLE ID	SCREENING MDL		SAWTRSPAWS XI	SAWTRSPAWS DS	SAWTRSPBWS XI
ANALYTICAL PARAMETERS	LEVELS**				
SVOCs (Method 525.2) ug/L					
Acenaphthylene		0.025	0.1 U	0.1 U	0.1 U
Alachlor	0.73	0.045	0.1 U	0.1 U	0.1 U
Aldrin	0.004	0.057	0.1 UJ	0.1 UJ	0.1 UJ
Anthracene	11000	0.032	0.1 U	0.1 U	0.1 U
Atrazine	0.3	0.062	0.1 U	0.1 U	0.1 UJ
Benzo(a)anthracene	0.092	0.066	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	0.092	0.048	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	0.92	0.096	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene		0.07	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	0.0092	0.014	0.1 U	0.1 U	0.1 U
Gamma-BHC	0.052	0.015	0.02 U	0.02 U	0.02 UJ
Butylbenzylphthalate	7300	0.115	1.0 U	1.0 U	1.0 U
Alpha-chlordane		0.044	0.1 U	0.1 U	0.1 U
Gamma-chlordane		0.036	0.1 U	0.1 U	0.1 U
2-Chlorobiphenyl		0.025	0.1 U	0.1 U	0.1 U
Chrysene	9.2	0.054	0.1 U	0.1 U	0.1 U
Dibenz(a,h)anthracene	0.0092	0.021	0.1 U	0.1 U	0.1 U
Di-n-Butyl Phthalate +	3700	0.133	1.0 U	1.0 U	1.0 U
2,3-Dichlorobiphenyl		0.035	0.1 U	0.1 U	0.1 U
Di-2(ethylhexyl)adipate	56	0.05	0.6 U	0.6 U	0.6 U
Di-2(ethylhexyl)phthalate		0.329	0.6 U	0.6 U	0.6 U
Diethylphthalate	29000	0.059	1.0 U	1.0 U	1.0 U
Dimethylphthalate	370000	0.042	1.0 U	1.0 U	1.0 U
2,4-Dinitrotoluene	73	0.052	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	37	0.066	0.1 U	0.1 U	0.1 U
Di-n-Octylphthalate	730	0.04	1.0 U	1.0 U	1.0 U
Endrin	11	0.009	0.01 U	0.01 U	0.01 U
Fluorene	1500	0.065	0.1 U	0.1 U	0.1 U
Heptachlor	0.0023	0.048	0.04 U	0.04 U	0.04 UJ
Heptachlor Epoxide	0.0012	0.012	0.02 U	0.02 U	0.02 UJ
2,2',3,3',4,4',6-Heptachlorobiphenyl		0.047	0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.0066	0.089	0.1 U	0.1 U	0.1 U
2,2',4,4',5,6'-Hexachlorobiphenyl		0.1	0.1 U	0.1 U	0.1 U
Hexachlorocyclopentadiene	0.15	0.079	0.1 U	0.1 U	0.1 UJ
Indeno(1,2,3-c,d)pyrene	0.092	0.041	0.1 U	0.1 U	0.1 U
Isophorone	71	0.72	0.1 U	0.1 U	0.1 U
Methoxychlor	180	0.032	0.1 U	0.1 U	0.1 U
2,2',3,3',4,5',6,6'-Octachlorobiphenyl		0.087	0.1 U	0.1 U	0.1 U
2,2',3',4,6-Pentachlorobiphenyl		0.018	0.1 U	0.1 U	0.1 U
Pentachlorophenol	0.56	0.334	0.1 U	0.1 U	0.1 U
Phenanthrene		0.029	0.1 U	0.1 U	0.1 UJ
Pyrene	1100	0.073	0.1 U	0.1 U	0.1 U
Simazine	0.56	0.033	0.07 UJ	0.07 UJ	0.07 UJ
2,2',4,4',Tetrachlorobiphenyl		0.046	0.1 U	0.1 U	0.1 U
Toxaphene ++	0.061	25	25 U	25 U	25 U
2,4,5-Trichlorobiphenyl		0.025	0.1 U	0.1 U	0.1 U
Total SVOCs			0	0	0

TABLE 4-5 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER ST. ALBANS AIR FORCE STATION

SAMPLE ID	SCREENING LEVELS	IDL	SAWTRSPAWS X1	SAWTRSPAWS DS	SAWTRSPBWS X1
RCRA Metals mg/L					
(Method 200.7 except where noted)					
Arsenic	0.011	0.002	0.01 U	0.01 U	0.01 U
Barium	2.6	0.008	0.06	0.08	0.15
Cadmium	0.018	0.003	0.001 U	0.001 U	0.001 U
Chromium	37	0.007	0.01 U	0.01 U	0.01
Lead		0.0015	0.0006 J	0.009 J	0.005 U
Mercury (Method 245.1)	0.011	0.00004	0.0005 U	0.0005 U	0.0005 U
Selenium	0.18	0.005	0.02 U	0.02 U	0.02 U
Silver	0.18	0.004	0.01 U	0.01 U	0.01 U
Total Metals			0.066	0.089	0.16

TABLE 4-5 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER ST. ALBANS AIR FORCE STATION

** Screening levels are EPA Region III Risk-Based Concentrations presented in memo, dated April 30, 1996, distributed by Roy L. Smith, EPA Senior Toxicologist.

These concentrations are residential, soil ingestion values. A blank space indicates no level was specified by the EPA.

DS in the sample designation indicates a field duplicate.

J = Quantitation is approximate due to limitations identified in the quality control review.

U = Value is the lowest achievable detection limit based on quality control review.

UJ = Detection limit is approximate due to limitations identified in the quality control review.

+ RBC for Trichloroethylene used for Trichloroethene

RBC for 1,2-Dibromoethane used for Dibromomethane

RBC for Tetrachloroethylene used for Tetrachloroethene

RBC for Chlorodibromomethane used for Dibromochloromethane

RBC for 1,2-Dichloroethylene (trans) used for Trans-1,2-Dichloroethene

RBC for 1,2-Dichloropropane used for 2,2-Dichloropropane

RBC for Cis-1,2-Dichloroethylene used for Cis-1,2-Dichloroethene

RBC for 1,3-Dichloropropene used for Cis-1,3-Dichloropropene

RBC for 1,3-Dichloropropene used for trans-1,3-Dichloropropene

RBC for 1,1-Dichloroethylene used for 1,1-Dichloroethene

RBC for Bromodichloromethane used for Bromodichloromethane

RBC for Dibutyl Phthalate used for Di-n-Butyl Phthalate

++ Multiple peak compounds not amenable to GC/MS procedure.

QUALITY CONTROL SUMMARY REPORTS

**DAILY QUALITY
CONTROL REPORT**

DATE 3 September 1996

REPORT NUMBER: _____

COE ENGINEERING MANAGER: Robert Meader

PROJECT: Lyndonville Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-D-0007

Day	S	M	T X	W	T	F	S
-----	---	---	--------	---	---	---	---

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	T ³²	32-80	50-70	70-85	85 Up
Wind	Calm	Moderate	High	Report No.	
Humidity	Dry	Moderate	High		

SUB-CONTRACTORS ON SITE:

American Drilling (AD)

EQUIPMENT ON SITE: Thermo Environmental PID: OVM Model 580B, Mini Ram Dust Monitor, Micro Max LEL and oxygen / hydrogen sulfide meter, CME - 75 Hollow Stem Auger Rig Central Mining Equipment, Model 75

WORK PERFORMED (INCLUDING SAMPLING)

Set up decontamination pad.

Located landfill area.

Identified soil boring and near-surface soil sample locations in cantonment area.

Drilled in the vicinity of former UST-08.

LYUST08A: final depth of boring was 7 feet below ground surface, boring stopped at refusal, groundwater was encountered at 6.5 feet below ground surface. Sampled at two foot intervals. The OVM was used initially after opening each spoon and to measure the headspace of each sample. Samples were taken from 0-2 ft, 2-4 ft, 4-6 ft, 6-7 ft. Headspace of 0-2 ft sample was 7 ppm, headspace of 2-4 ft sample alternated between 0.0 and 7.5 ppm, remaining headspaces were 0.0 ppm. Two samples were collected for offsite analysis:

- 0-2 ft as LYUST08ASBX1 (highest headspace reading - 7.5 ppm)
- 6-7 ft as LYUST08ASBX2 (bottom of boring)

The hole was backfilled and topped off with grout.

LYUST08B: final depth of boring was 7 feet below ground surface, boring stopped at refusal, groundwater was encountered between 6 and 7 feet below ground surface. Sampled at two foot intervals. The OVM was used initially after opening each spoon and to measure the headspace of each sample. Samples were taken from 0-2 ft, 2-4 ft, 4-6 ft, and 6-7 ft. Headspace measurements for all samples resulted a reading which alternated between 0.0 and 7.5 ppm. Because OVM measurements of the breathing space and in areas away from the drill rig resulted in the same reading, this reading appeared to be a background reading. Two samples were collected for offsite analysis:

- 0-2 ft as LYUST08BSBX1 (highest headspace of previous boring was at 0-2 ft)
- 6-7 ft as LYUST08BSBX2 (bottom of boring)

The hole was backfilled and topped off with grout

PROJECT: Lyndonville Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 3 September 1996

LYUST08C: final depth of boring was 7 feet below ground surface, boring stopped at refusal, groundwater was encountered between 6 and 7 feet below ground surface. Sampled at two foot intervals. The OVM was used initially after opening each spoon and to measure the headspace of each sample. Samples were taken from 0-2 ft, 2-4 ft, 4-6 ft, and 6-7 ft. The initial scan of the spoons showed the alternating reading of 0.0/7.5 ppm observed at LYUST08B. The background reading went back to 0.0 ppm when the OVM was placed in the shade. The headspace of each sample was measured at 0.0 ppm. Two samples were collected for offsite analysis:

0-2 ft	as	LYUST08CSBX1	(highest headspace of LYUST08A was at 0-2 ft)
6-7 ft	as	LYUST08CSBX2	(bottom of boring)

The hole was backfilled and topped off with grout

Because the first 3 holes did not exceed the allotted footage in this area and LYUST08B was located near a previously installed boring, a fourth boring was installed.

Drilled at location LYUST08D. Maximum depth of boring was 7 feet below ground surface, boring stopped at refusal, groundwater was encountered at between 6 and 7 feet below ground surface. Sampled at two foot intervals. The OVM was used initially after opening each spoon and to measure the headspace of each sample. Samples were taken from 0-2 ft, 2-4 ft, 4-6 ft, and 6-7 ft. Headspace readings were 0.0 ppm for all four samples. Two samples were collected for offsite analysis:

0-2 ft	as	LYUST08DSBX1	(highest headspace of LYUST08A was at 0-2 ft)
6-7 ft	as	LYUST08DSBX2	(bottom of boring)

The hole was backfilled and topped off with grout.

Cleared vegetation from the vicinity of the septic tank (LYSEPTICA) in the cantonment area. Walked over the operations area at the end of the day to identify soil boring and near surface soil sample locations and determine access.

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

Calibrated OVM to 100.0 ppm isobutylene
Drill rig, augers and rods were decontaminated after LYUST08A, LYUST08B, LYUST08C, and LYUST08D.
Other sampling equipment was decontaminated after each sample.

HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)

Inspected Gas Tank Excavation to ensure that the excavation was in compliance with OSHA requirements.
Conducted initial health and safety briefing - Attendees were:

R. Skryness - S&W	P. Loughran - S&W	D. Crawford - AD
D. Connelly - S&W	R. Meader - CENED	
T. Sponseller - S&W	R. Francis - AD	
J. Carter - S&W	M. Hayes - AD	

PROJECT: Lyndonville Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 3 September 1996

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:
OVM gave a background reading which alternated between 0.0 and 7.5 ppm. This seems to have been influenced by direct sunlight. In the future we will keep the OVM out of the sun.
SPECIAL NOTES
None
TOMORROW'S EXPECTATIONS
Finish borings in cantonment area Take near surface samples in the cantonment area Clear soil boring and near surface soil sample locations in the operations area



DAILY QUALITY CONTROL REPORT

DATE 4 September 1996

REPORT NUMBER: _____

COE ENGINEERING MANAGER: Robert Meader

PROJECT: Lyndonville Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-D-0007

Day	S	M	T	W	T	F	S
-----	---	---	---	--------------	---	---	---

Weather	Bright Sun	Clear X	Overcast	Rain	Snow
Temperature	T°32	32-50	50-70	<u>70-85</u>	8° Up
Wind	<u>Calm</u>	Moderate	High	Report No.	
Humidity	Dry	<u>Moderate</u>	High		

SUB-CONTRACTORS ON SITE:

American Drilling

EQUIPMENT ON SITE:

Thermo Environmental PID: OVM Model 580B, Mini Ram Dust Monitor, Micro Max LEL and oxygen / hydrogen sulfide meter, CME - 75 hollow stem auger rig

WORK PERFORMED (INCLUDING SAMPLING)

Drilled at former location of septic system LYSEPTICA. Final depth of boring 12 feet below ground surface, boring stopped at refusal, groundwater was encountered at 4 feet below ground surface. Sampled at two foot intervals. The OVM was used initially after opening each spoon and to measure the headspace of each sample. Samples were taken from 0-2 ft, 2-4 ft, 4-6 ft, 6-8 ft., 8-10 ft, and 10-12 feet. Initial scan with OVM showed 0.0 ppm, except for the 10-12 ft sample which showed 9.5 ppm. Headspace readings for each sample alternated between 0.0 and 9.5 ppm in a manner similar to the readings at LYUSTO8B. Because the OVM produced the same reading in the breathing space and in areas away from the drill rig, this reading appeared to be a background reading. The OVM was kept out of the sun. Five samples were collected for offsite analysis:

- 2-4 ft as LYSEPTICASBX1 (at water table)
- 2-4 ft as LYSEPTICASBDS (duplicate)
- 10-12 ft as LYSEPTICASBX2 (bottom of boring)
- 10-12 ft as LYSEPTICASBMSMD (for MS/MSD)
- 10-12 ft as LYSEPTICASBQA (QA for PEST/PCBs)

The hole was backfilled and topped off with grout.

Attempted to take sediment sample from the dry well (LYDRYWLA).

Sampling was not possible due to the gravel content.

Took near surface soil samples from the gas tank excavation

LYGSTNKA: Removed the first 4 inches (debris only) before using hand auger. Final depth was 12 inches due to refusal, groundwater was not encountered. Headspace reading registered 0.0/9.5 ppm as at LYSEPTICA. The OVM was kept in the shade. Two samples were collected for offsite analysis:

- 4-12 in as LYGSTNKANSX1 (only auger recovered)
- 4-12 in as LYGSTNKANSDS (Duplicate)

The hole was backfilled.

PROJECT: Lyndonville Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 4 September 1996

LYGSTNKB: Removed the first 4 inches (debris only) before using hand auger. Final depth was also 12 inches due to refusal, groundwater was not encountered. Headspace reading registered 0.0/9.5 ppm as at LYSEPTICA. The OVM was kept in the shade. Two samples were collected for offsite analysis:

4-12 in	as	LYGSTNKBNSX1	(only auger recovered)
4-12 in	as	LYGSTNKBNSDS	(duplicate)

The hole was backfilled.

Drilled in the vicinity of the former location of UST-04

LYUST04A: final depth was 20 feet below ground surface, groundwater was encountered at 8 feet below ground surface. Sampled at two foot intervals to 10 feet, sampled at five foot intervals after 10 feet. A gasoline odor was noted in samples collected between 0 and 10 feet. The OVM was used initially after opening each spoon and to measure the headspace of each sample. Samples were taken from 0-2 ft, 2-4 ft, 4-6 ft, 6-8 ft., 8-10 ft, 13-15 ft and 18-20 ft. Headspace readings registered 0.0/9.5 ppm as at LYSEPTICA for all but two of the samples. The OVM was kept in the shade. Samples from 6-8 feet and 13-15 feet produced a headspace reading of 19 ppm. Four samples were collected for offsite analysis:

6-8 ft	as	LYUST04ASBX1	(high headspace and top of water table)
6-8 ft	as	LYUST04ASBQA1	(QA sample)
18-20 ft	as	LYUST04ASBX2	(bottom of boring)
18-20 ft	as	LYUST04ASBQA2	(QA sample)

Not enough soil was recovered from 13-15 to analyze offsite
Will backfill the hole with grout on Thursday (5 Sept.)

LYUST04B: final depth of boring was 20 feet below ground surface, groundwater was encountered at 7 feet below ground surface. Sampled at two foot intervals to 8 feet, sampled at five foot intervals after 8 feet. The OVM was used initially after opening each spoon and to measure the headspace of each sample. Samples were taken from 0-2 ft, 2-4 ft, 4-6 ft, 6-8 ft., 13-15 ft and 18-20 ft. Headspace readings registered 0.0/9.5 ppm as at LYSEPTICA. OVM was kept in the shade. We tested the OVM by placing the cap of a magic marker over the end of the probe. This resulted in a reading of approximately 1500 ppm, showing that the OVM would measure volatiles in the headspace and breathing space. Two samples were collected for offsite analysis:

6-8 ft	as	LYUST04BSBX1	(top of water table)
6-8 ft	as	LYUST04BSBDS1	(duplicate sample)
18-20 ft	as	LYUST04BSBX2	(bottom of boring)
18-20 ft	as	LYUST04BSBDS2	(duplicate sample)

The hole was backfilled. Will top off the hole with grout on Thursday (5 Sept.)

LYUST04C: final depth of boring was 20 feet below ground surface, groundwater was encountered at 6 feet below ground surface. Sampled at two foot intervals to 6 feet, sampled at five foot intervals after 6 feet. The OVM was used initially after opening each spoon and to measure the headspace of each sample. Samples were taken from 0-2 ft, 2-4 ft, 4-6 ft, 10-12 ft, 13-15 ft and 18-20 ft. Headspace readings registered 0.0/9.5 ppm as at LYSEPTICA. OVM was kept in the shade. Two samples were collected for offsite analysis:

4-6 ft	as	LYUST04CSBX1	(top of water table)
18-20 ft	as	LYUST04CSBX2	(bottom of boring)

The hole was backfilled. Will top off the hole with grout on Thursday (5 Sept.)
Cleared the trees from the leach field in the operations area.

PROJECT: Lyndonville Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 4 September 1996

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)
Calibrated OVM to 100.0 ppm isobutylene Calibrated the dust monitor Calibrated the LEL, oxygen, and hydrogen sulfide meter. Decontaminated the drill rig, rods and augers after LYSEPTICA, LYUST04A, LYUST04B, and LYUST04C. Decontaminated the other sampling equipment after each hole.
HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)
No health and safety issues to report
PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:
Continued to have problems with the OVM. Requested a new PID to be delivered Thursday (5 Sept.)
SPECIAL NOTES
TOMORROW'S EXPECTATIONS
Grout LYUST04A, top off LYUST04B and LYUST04C Install borings and take near surface soil samples in the operations area Package samples for shipment to offsite laboratories Demobilize and move to St. Albans site.



DAILY QUALITY CONTROL REPORT

REPORT NUMBER: _____

DATE 5 September 1996

COE ENGINEERING MANAGER: Robert Meader

PROJECT: Lyndonville Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-D-0007

Day	S	M	T	W	T	F	S
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Weather	Bright Sun	Clear X	Overcast	Rain	Snow
Temperature	T*32	32-50	50-70	70-85	85 Lp
Wind	Calm	Moderate	High	Report No.	
Humidity	Dry	Moderate	High		

SUB-CONTRACTORS ON SITE:

American Drilling

EQUIPMENT ON SITE:

Thermo Environmental PID: OVM Model 580B, Mini Ram Dust Monitor, Micro Max LEL and oxygen / hydrogen sulfide meter. CME - 75 hollow stem auger rig

WORK PERFORMED (INCLUDING SAMPLING)

Drilled in the vicinity of the former location of AST-12 in the operations area.
 LYAST12A: final depth of boring 2.5 feet below ground surface, boring ended at refusal, groundwater not encountered. OVM would not calibrate. Readings alternated between 726 and 1229 ppm in the breathing space. Unable to take headspace readings, field screening was conducted with visual and olfactory indicators. Samples were taken from 0-2 ft and 2 -2.5 feet. No odor or visual signs of contamination were present. Three samples were collected for offsite analysis:

0-2 ft	as	LYAST12ASBX1	(only soil recovered)
0-2 ft	as	LYAST12ASBQA	(QA sample)
2-2.5 ft	as	LYAST12ASBX2	(bottom of boring)

LYAST12B: final depth of boring 4.5 feet below ground surface, boring ended at refusal, groundwater not encountered. Sampled at two foot intervals. OVM still not working, same problem as at LYUST12A. Samples were taken from 0-2 ft, 2-4 ft and 4-4.5 ft. No odor or visual signs of contamination were present. Two samples were collected for offsite analysis:

0-2 ft	as	LYAST12BSBX1	
4-4.5 ft	as	LYAST12BSBX2	(bottom of boring)

Backfilled LYAST12A, LYAST12B, and LYUST04B with grout. Topped off LYUST04A and LYUST04C. A hand level will be used to determine the slope of the bedrock. If neither LYAST12A or LYAST12B is in down slope direction from the tank location, a third boring will be constructed with a hand auger. This will be done during the next mobilization.

PROJECT: Lyndonville Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 5 September 1996

<p>Took near surface samples in the operations area LYGRASSA: Removed the initial 4 inches (debris only), sample taken from 4 - 12 inches due to refusal, groundwater was not encountered. No odor or visual signs of contamination were present. Two samples were collected for offsite analysis: 4-12 in. as LYGRASSANSX1 4-12 in. as LYGRASSAMSMD (for MS/MSD)</p>
<p>LYRDTWRA: sample taken from 0 - 8 inches due to refusal, groundwater was not encountered. No odor or visual signs of contamination were present. Two samples were collected for offsite analysis: 0-8 in. as LYRDTWRANSX1 0-8 in. as LYRDTWRANSQA (QA sample)</p>
<p>LYRDTWRB: Removed the first 4 inches of debris, sample taken from 4 - 12 inches due to refusal, groundwater was not encountered. No odor or visual signs of contamination were present. One sample was collected for offsite analysis: 4-12 in. as LYRDTWRBNSX1</p>
<p>LYPLATEA: This sample was intended to be grab sample of the contents of a sand filter in this area as collected through a clay vent pipe. Because the auger (6 feet tall) used for the sampling could not reach the bottom of the deepest vent pipe (approximately 7 feet below ground surface) and debris blocked the second deepest vent pipe (approximately 5 feet below ground surface), a near surface hole was constructed through the sand filter. A sample of the filter material was collected between 5.5 and 6 feet. No odor or visual signs of contamination were present. Two samples were collected for offsite analysis: 5.5 - 6 ft as LYPLATEANSX1 5.5 - 6 ft as LYPLATEANSMSMD (for MS/MSD, VOCs)</p>
<p>LYLEACHA: sample was taken from 3 -3.5 feet due to refusal. No odor or visual signs of contamination were present. Two samples were collected for offsite analysis: 3-3.5 ft as LYLEACHANSX1 3-3.5 ft as LYLEACHANSMSMD (for MS/MSD, SVOCs, RCRA8, Pest/PCBs)</p>
<p>LYLEACHB: sample was taken from 2-2.5 feet due to refusal. No odor or visual signs of contamination were present. Two samples were collected for offsite analysis: 2-2.5 ft as LYLEACHBNSX1 2-2.5 ft as LYLEACHBNSQA (QA sample)</p>
<p>LYLEACHC: sample was taken from 1-1.5 feet due to refusal. No odor or visual signs of contamination were present. One sample was collected for offsite analysis: 1-1.5 ft as LYLEACHCNSX1</p>
<p>Packed the samples and drove to St. Albans.</p>

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST04BSBX2	LYUST04BSBDS2	LYUST04CSBX1	LYUST04CSBX2	LYSEPTICASBX1
Lab Sample Number:	C0921-01	C0921-02	C0921-03	C0921-04	C0920-09
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/13/96	9/12/96
Date Analyzed:	9/19/96	9/19/96	9/17/96	9/17/96	9/14/96
Percent Moisture:	12	12	14	13	15
Phenol	370 U	380 U	380 U	380 U	380 U
bis(2-Chloroethyl) ether	370 U	380 U	380 U	380 U	380 U
2-Chlorophenol	370 U	380 U	380 U	380 U	380 U
1,3-Dichlorobenzene	370 U	380 U	380 U	380 U	380 U
1,4-Dichlorobenzene	370 U	380 U	380 U	380 U	380 U
1,2-Dichlorobenzene	370 U	380 U	380 U	380 U	380 U
2-Methylphenol	370 U	380 U	380 U	380 U	380 U
2,2'-oxybis(1-Chloropropane)	370 U	380 U	380 U	380 U	380 U
4-Methylphenol	370 U	380 U	380 U	380 U	380 U
n-Nitroso-di-n-propylamine	370 U	380 U	380 U	380 U	380 U
Hexachloroethane	370 U	380 U	380 U	380 U	380 U
Nitrobenzene	370 U	380 U	380 U	380 U	380 U
Isophorone	370 U	380 U	380 U	380 U	380 U
2-Nitrophenol	370 U	380 U	380 U	380 U	380 U
2,4-Dimethylphenol	370 U	380 U	380 U	380 U	380 U
bis(2-Chloroethoxy) methane	370 U	380 U	380 U	380 U	380 U
2,4-Dichlorophenol	370 U	380 U	380 U	380 U	380 U
1,2,4-Trichlorobenzene	370 U	380 U	380 U	380 U	380 U
Naphthalene	370 U	380 U	380 U	380 U	380 U
4-Chloroaniline	370 U	380 U	380 U	380 U	380 U
Hexachlorobutadiene	370 U	380 U	380 U	380 U	380 U
4-Chloro-3-methylphenol	370 U	380 U	380 U	380 U	380 U
2-methylnaphthalene	370 U	380 U	380 U	380 U	380 U
Hexachlorocyclopentadiene	370 U	380 U	380 U	380 U	380 U
2,4,6-Trichlorophenol	370 U	380 U	380 U	380 U	380 U
2,4,5-Trichlorophenol	920 U	940 U	960 U	950 U	950 U
2-Chloronaphthalene	370 U	380 U	380 U	380 U	380 U
2-Nitroaniline	920 U	940 U	960 U	950 U	950 U
Dimethylphthalate	370 U	380 U	380 U	380 U	380 U
Acenaphthylene	370 U	380 U	380 U	380 U	380 U
2,6-Dinitrotoluene	370 U	380 U	380 U	380 U	380 U
3-Nitroaniline	920 U	940 U	960 U	950 U	950 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

DAILY QUALITY CONTROL REPORT

DATE 6 September 1996

REPORT NUMBER: _____

COE ENGINEERING MANAGER: Robert Meader

PROJECT: St. Albans Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-D-0007

Day	S	M	T	W	T	F	S
						X	

Weather	Bright Sun	Clear X	Overcast	Rain	Snow
Temperature	T°32	32-80	50-70	70-85	85 Up
Wind	Calm	Moderate	High	Report No.	
Humidity	Dry	Moderate	High		

SUB-CONTRACTORS ON SITE:												
American Drilling												
EQUIPMENT ON SITE:												
HNu PID: Model PI 101, Mini Ram Dust Monitor, Micro Max LEL and oxygen / hydrogen sulfide meter, CME - 75 hollow stem auger rig												
WORK PERFORMED (INCLUDING SAMPLING)												
<p>Drilled in the vicinity of the former locations of UST-02 and UST-03</p> <p>SAUST02A: final depth of boring was 4.75 feet below ground surface, boring ended at refusal, groundwater was not encountered. Sampled at two foot intervals. HNu will not hold battery charge. Samples were collected from 0-2 ft, 2-4 ft, and 4-4.75 ft. No odor or visual signs of contamination were present. Three samples were collected for offsite analysis:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">0-2 ft</td> <td style="width: 10%;">as</td> <td style="width: 40%;">SAUST02ASBX1</td> <td style="width: 35%;"></td> </tr> <tr> <td>4-4.75 ft</td> <td>as</td> <td>SAUST02ASBX2</td> <td>(bottom of boring)</td> </tr> <tr> <td>4-4.75 ft</td> <td>as</td> <td>SAUST02ASBDS</td> <td>(duplicate sample)</td> </tr> </table>	0-2 ft	as	SAUST02ASBX1		4-4.75 ft	as	SAUST02ASBX2	(bottom of boring)	4-4.75 ft	as	SAUST02ASBDS	(duplicate sample)
0-2 ft	as	SAUST02ASBX1										
4-4.75 ft	as	SAUST02ASBX2	(bottom of boring)									
4-4.75 ft	as	SAUST02ASBDS	(duplicate sample)									
<p>SAUST03A: final depth of boring was 14 feet below ground surface, groundwater was not encountered. Sampled at two foot intervals. Samples were collected from 0-2 ft, 2-4 ft, 4-6 ft, 6-8 ft, 8-10 ft, 10-12 ft, and 12-14 ft. A faint odor of petroleum was detected in the samples taken between 4 and 14 feet. No staining was observed. Two samples were collected for offsite analysis:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">4-6 ft</td> <td style="width: 10%;">as</td> <td style="width: 40%;">SAUST03ASBX1</td> <td style="width: 35%;">(first depth where odor was detected)</td> </tr> <tr> <td>12-14 ft</td> <td>as</td> <td>SAUST03ASBX2</td> <td>(bottom of boring)</td> </tr> </table>	4-6 ft	as	SAUST03ASBX1	(first depth where odor was detected)	12-14 ft	as	SAUST03ASBX2	(bottom of boring)				
4-6 ft	as	SAUST03ASBX1	(first depth where odor was detected)									
12-14 ft	as	SAUST03ASBX2	(bottom of boring)									
<p>SAUST03B: final depth of boring was 14 feet below ground surface, groundwater was not encountered. Sampled at two foot intervals. Samples were collected from 0-2 ft, 2-4 ft, 4-6 ft, and 6-7 ft. An odor similar to the odor noted at SAUST03A was detected in the sample from 4-6 ft. No staining was observed. Two samples were collected for offsite analysis:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">4-6 ft</td> <td style="width: 10%;">as</td> <td style="width: 40%;">SAUST03BSBX1</td> <td style="width: 35%;">(odor detected)</td> </tr> <tr> <td>6-7 ft</td> <td>as</td> <td>SAUST03BSBX2</td> <td>(bottom of boring)</td> </tr> </table>	4-6 ft	as	SAUST03BSBX1	(odor detected)	6-7 ft	as	SAUST03BSBX2	(bottom of boring)				
4-6 ft	as	SAUST03BSBX1	(odor detected)									
6-7 ft	as	SAUST03BSBX2	(bottom of boring)									

PROJECT: St. Albans Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 6 September 1996

SAUST02B: final depth of boring was 5.25 ft below ground surface, boring ended at refusal, groundwater was not encountered. Sampled at two foot intervals. Samples were collected from 0-2 ft, 2-4 ft, and 4-5.25 ft. No odor was noted between 0 and 4 feet. A strong petroleum odor was detected in the sample from 4-5.25 ft. No staining was observed. Four samples were collected for offsite analysis:

0-2 ft	as	SAUST02BSBX1	
0-2 ft	as	SAUST02BSBDS	(duplicate sample)
4-5.25 ft	as	SAUST02BSBX2	(odor detected)
4-5.25 ft	as	SAUST02BSBQA	(QA sample)

Backfilled SAUST02A, SAUST03A, SAUST03B, and SAUST02B with grout.

Drilled near the location of the former auto hobby shop

SAAUTOHA: final depth of boring 10 feet below ground surface, boring ended with refusal, groundwater encountered at 7 feet below ground surface. Sampled at two foot intervals. Samples were collected from 0-2 ft, 2-4 ft, 4-6 ft, 6-8 ft, and 8-10 ft. No odor or visual signs of contamination were detected at this location. Four samples were collected for offsite analysis:

6-8 ft	as	SAAUTOHASBX1	(top of water table)
6-8 ft	as	SAAUTOHASBMSMD	(for MS/MSD)
8-10 ft	as	SAAUTOHASBX2	(bottom of boring)
8-10 ft	as	SAAUTOHASBQA	(QA sample)

Backfilled SAAUTOHA with grout and decontaminated and moved the drill rig off of the FAA property.

Took near surface soil samples:

SADBRISA: depth of sample 0-10 inches due to refusal, groundwater not encountered. No odor or visual signs of contamination were present. Two samples were collected for offsite analysis:

0-10 in.	as	SADBRISANSX1	
0-10 in.	as	SADBRISANSQA	(QA sample)

SAFILTRA: depth of sample 0-5 inches due to refusal, groundwater not encountered. No odor or visual signs of contamination were present. Two samples were collected for offsite analysis:

0-5 in.	as	SAFILTRANSX1	
0-5 in.	as	SAFILTRANSDS	(duplicate sample)

SAFILTRB: depth of sample 0-8 inches due to refusal, groundwater not encountered. No odor or visual signs of contamination were present. One sample was collected for offsite analysis:

0-8 in.	as	SAFILTRBNSX1	
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SASEPTICA: this hole was converted from a boring to a near surface hole due to access problems. Refusal was encountered at 4 feet below ground surface. The sample from the maximum depth (3-4 ft) was collected. No odor or visual signs of contamination were present. A sample from a more shallow depth will be collected on Saturday (7 Sept). Three samples were collected for offsite analysis:

3-4 ft	as	SASEPTICANSX2	(bottom of boring)
3-4 ft	as	SASEPTICANSQA	(QA sample for Pest/PCBs)
3-4 ft	as	SASEPTICANSMSMD	(for MS/MSD)

The decontamination pad and soil cuttings were removed from the FAA portion of the site.

PROJECT: St. Albans Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 6 September 1996

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)
Calibrated HNu to 100.0 ppm isobutylene
HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)
No health and safety issues to report
PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:
HNu battery will not hold a charge. Battery was charged during the afternoon and will be charged overnight. All borings were backfilled with grout.
SPECIAL NOTES
Because augers were not used and cuttings were not generated, the entire drill rig was decontaminated after the four borings at the former location of UST02 and UST03 were completed. Clean drill rods were used for each boring.
TOMORROW'S EXPECTATIONS
Construct the three remaining soil borings at the former location of AST05 Collect shallow sample from septic tank area.



DAILY QUALITY CONTROL REPORT

REPORT NUMBER: _____

DATE 7 September 1996

COE ENGINEERING MANAGER: Robert Mender

PROJECT: St. Albans Air Force Station

JOB NUMBER: Delivery order 04

CONTRACT NUMBER: DACW33-94-D-0007

Day	S	M	T	W	T	F	S
							X

Weather	Bright Sun	Clear X	Overcast	Rain	Snow
Temperature	T°32	32-60	50-70	70-85	85 Up
Wind	Calm	Moderate	High	Report No.	
Humidity	Dry	Moderate	High		

SUB-CONTRACTORS ON SITE:

American Drilling

EQUIPMENT ON SITE:

HNu PID: Model PI 101, Mini Ram Dust Monitor, Micro Max LEL and oxygen / hydrogen sulfide meter, CME - 75 hollow stem auger rig

WORK PERFORMED (INCLUDING SAMPLING)

Drilled at the former location of AST05

SAAST05A: final depth of borins was 7 feet below ground surface, boring ended at refusal, groundwater was not encountered. HNu battery still will not hold a charge after one night of recharging. Samples were collected from 0-2 ft, 2-4 ft, 4-6 ft, and 6-7 ft. No odor or visual signs of contamination were observed. Two samples were collected for offsite analysis:

4-6 ft	as	SAAST05ASBX1	
6-7 ft	as	SAAST05ASBX2	(bottom of boring)

SAASAT05B: final depth of boring was 2.5 feet below ground surface, boring ended at refusal, groundwater was not encountered. Samples were collected from 0-2 ft and 2-2.5 ft. No odor or visual signs of contamination were observed. Two samples were collected for offsite analysis:

0-2 ft	as	SAAST05BSBX1	
2-2.5 ft	as	SAAST05BSBX2	(bottom of boring)

SAAST05C: final depth of boring was 2.5 feet below ground surface, boring ended at refusal, groundwater was not encountered. Samples were collected from 0-2 ft and 2-2.5 ft. No odor or visual signs of contamination were observed. Three samples were collected for offsite analysis:

0-2 ft	as	SAAST05CSBX1	
0-2 ft	as	SAAST05CSBMSMD	(for MS/MSD)
2-2.5 ft	as	SAAST05CSBX2	(bottom of boring)

Backfilled SAAST05A, SAAST05B, and SAAST05C with grout.

Took shallow sample from septic tank area from 1-2 ft. No odor or visual signs of contamination were observed. Two samples were collected for offsite analysis:

1-2 ft	as	SASEPTICANSX1	
1-2 ft	as	SASEPTICANSDS	(duplicate sample)

Demobilized from the site.

PROJECT: St. Albans Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 7 September 1996

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)
Decontaminated drill rig, augers, and rods at the end of the day. Decontaminated all other sampling equipment after each sample. Calibrated dust monitor.
HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)
No health and safety issues to report
PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:
HNu battery will not hold a charge. Field screening was conducted with visual and olfactory indicators, all three borings were backfilled with grout. LEL and oxygen/hydrogen sulfide meter will not calibrate. A new regulator will be used for the remainder of the field program
SPECIAL NOTES
Because augers were not used and cuttings were not generated, the entire drill rig was decontaminated after the three borings at the former location of AST-05 were completed. Clean drill rods were used for each boring.
TOMORROW'S EXPECTATIONS



DAILY QUALITY CONTROL REPORT

REPORT NUMBER: _____

DATE 17 September 1996

COE ENGINEERING MANAGER: Robert Meader

PROJECT: Lyndonville Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-0007

Day	S	M	T	W	T	F	S
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Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	T [°] 32	32-50	50-70	70-85	85 Up
Wind	Calm	Moderate	High	Report No.	
Humidity	Dry	Moderate	High		

SUB-CONTRACTORS ON SITE:
Pinkham Engineering (surveyor)
EQUIPMENT ON SITE: HNu PID Model PI 101, Mini Ram Dust Monitor, Micro Max LEL and oxygen / hydrogen sulfide meter, peristaltic pump
WORK PERFORMED (INCLUDING SAMPLING)
Showed Larry Young of Pinkham Engineering the sampling locations
Took surface soil samples in the former washbay area.
<p>LYWSHBYA: Removed the top inch of debris, removed soil from between 1 and 5 inches below ground surface. Two samples were collected for offsite analysis:</p> <p>1-5 in as LYWSHBYASSX1</p> <p>1-5 in as LYWSHBYASSQA (QA sample)</p>
Took water supply well samples.
<p>LYWTRSPA: Depth to water was 10.4 feet measured from well house floor. Took sample using peristaltic pump and 0.25 inch diameter teflon tubing. Flushed tubing with deionized water and drained before sampling. Water from the well was initially opaque with rust and was purged until it was clear. Approximately 0.5 gallon of well water was purged before sampling. Three samples were collected for offsite analysis:</p> <p>LYWTRSPAWSX1</p> <p>LYWTRSPAWSMSMD (for MS/MSD)</p> <p>LYWTRSPAWSQA (QA sample)</p>
<p>LYWTRSPB: Depth to water is unknown, although estimated from the tubing used to be approximately 15 feet measured from the well house floor. Took sample using peristaltic pump and 0.25 inch diameter teflon tubing. Flushed tubing with deionized water and drained before sampling. Water from the well was initially full of an unknown black debris. Approximately 0.25 gallon was purged before sampling. The sample produced two distinct phases and a strong odor, later identified as of a kerosine like odor. Air and product bubbles formed during the sample collection, making the collection of the sample VOC difficult. Two samples were collected for offsite analysis:</p> <p>LYWTRSPBWSX1</p> <p>LYWTRSPBWSDS (duplicate sample)</p>

PROJECT: Lyndonville Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 17 September 1996

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

Calibrated HNu PID to 57 ppm isobutylene
Calibrated LEL with hydrogen sulfide gas mixture
Zeroed the Mini Ram
Decontaminated hand trowels before and after sampling.
Discarded and drummed tubing used in water supply well sampling after each well

HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)

No health and safety issues to report

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:

PID will not draw air. Unit was calibrated in the office before leaving and in the field using pressurized isobutylene. Unit appears to be clogged or not have a working fan. Will have a new PID delivered on Wednesday (18 Sept.).

SPECIAL NOTES

None

TOMORROW'S EXPECTATIONS

Mobilize at the St. Alban's site.
Collect the remaining surface soil samples and water supply samples



DAILY QUALITY CONTROL REPORT

DATE 18 September 1996

REPORT NUMBER: _____

COE ENGINEERING MANAGER: Robert Meader

PROJECT: St. Albans Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-007

Day	S	M	T	W	T	F	S
				X			

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	T*32	32-50	50-70	70-85	85 Up
Wind	Calm	Moderate	High	Report No.	
Humidity	Dry	Moderate	High		

SUB-CONTRACTORS ON SITE:	
Pinkham Engineering (surveyor)	
EQUIPMENT ON SITE: Mini Rae PID, Mini Ram Dust Monitor, Micro Max LEL and oxygen / hydrogen sulfide meter, peristaltic pump	
WORK PERFORMED (INCLUDING SAMPLING)	
Took surface soil samples in the former gas pump area.	
SAGSPMPB: Soil removed from 0 to 5 inches below ground surface. Two samples were collected for offsite analysis:	
0-5 in	as SAGSPMPBSSX1
0-5 in	as SAGSPMPBSSDS (duplicate sample)
SAGSPMPA: Soil removed from 0 to 5 inches below ground surface. Three samples were collected for offsite analysis:	
0-5 in	as SAGSPMPASSX1
0-5 in	as SAGSPMPASSMSMD (for MS/MSD)
0-5 in	as SAGSPMPASSQA (QA sample)
Took surface soil samples from the former vehicle maintenance building area.	
SAVHCMTA: Soil removed from 0 to 5 inches below ground surface. Three samples were collected for offsite analysis:	
0-5 in	as SAVHCMTASSX1
0-5 in	as SAVHCMTASSMSMD (for MS/MSD)
0-5 in	as SAVHCMTASSQA (QA sample)
Showed Larry Young of Pinkham Engineering the sampling locations.	
Took water supply well sample samples from the Marcott property. Tried to collect water directly from each of the two wells. Access to the water was blocked by the pump assembly. Although we were able to use the water level indicator in the wells, sampling via bailer was not possible. Water was collected from spigots located in former Building No. 140, currently used to house the plumbing that controls the water distribution from each well.	

PROJECT: St. Albans Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 18 September 1996

SAWTRSPB: This well was in use at the time of sampling. Depth to water in this location was over 100 feet below ground surface. The bottom of the well was reported by the owner to be approximately 750 feet below ground surface. Because the well was in use at the time of sampling, it was not purged. Three samples were collected for offsite analysis:

SAWTRSPBWSX1
SAWTRSPBWSMSMD (for MS/MSD)
SAWTRSPBWSQA (QA sample)

SAWTRSPA: Depth to water table before purging was 21.24 feet below the top of the well casing. The bottom of the well was reported by the owner to be approximately 750 feet below ground surface. This well was on stand-by status on the day of sampling. The owner placed well B on standby and used well A for approximately 1 hour. Approximately 120 gallons were purged (used) before sampling. Two samples were collected for offsite analysis:

SAWTRSPAWSX1
SAWTRSPAWSDS (duplicate sample)

Showed R. Skryness the FAA property, met with D. Hugar. Determined that the road box near Building No. 1020 was not a water supply well, but a water shut off (gate valve) for Building No. 1020.

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

Calibrated Mini Rae PID to with isobutylene
Calibrated LEL with hydrogen sulfide gas mixture
Zeroed the Mini Ram

HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)

No health and safety issues to report.

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:

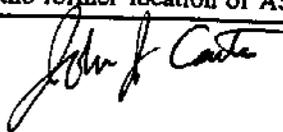
None

SPECIAL NOTES

None

TOMORROW'S EXPECTATIONS

Mobilize at the Lyndonville site.
Collect the surface water sample at the former dry well
Locate the bedrock surface at the former location of AST12 and take a down slope sample if required.



DAILY QUALITY CONTROL REPORT

DATE 19 September 1996

REPORT NUMBER: _____

COE ENGINEERING MANAGER: Robert Meader

PROJECT: Lyndonville Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-007

Day	S	M	T	W	T X	F	S
-----	---	---	---	---	--------	---	---

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	T°32	32-50	50-70	70-85	85 Lp
Wind	Calm	Moderate	High	Report No.	
Humidity	Dry	Moderate	High		

SUB-CONTRACTORS ON SITE:
EQUIPMENT ON SITE: Mini Rae PID, Mini Ram Dust Monitor, Micro Max LEL and oxygen / hydrogen sulfide meter, peristaltic pump
WORK PERFORMED (INCLUDING SAMPLING)
Took surface water samples at the location of the former dry well:
LYDRYWLA: Depth to water was approximately 6 feet below ground surface. Water was collected using a bailer and string. Four samples were collected for offsite analysis:
LYDRYWLASWX1
LYDRYWLASWDS (duplicate sample)
LYDRYWLASWMSMD (for MS/MSD)
LYDRYWLASWQA (QA sample)
Probed the bottom of the dry well with a section of 0.5 inch diameter steel rebar. Depth of water was approximately one foot. Bottom appeared to be concrete, overlain by 4 inches of coarse gravel and sand.
Measured the headspace inside of the water supply wells:
LYWTRSPA 1.7 ppm
LYWTRSPB 86 ppm

PROJECT: Lyndonville Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 19 September 1996

Surveyed the bedrock at the former location of AST12. Determined the elevation of the rock outcropping at the tank location, and the elevation of the bedrock at the location of borings LYAST12A and LYAST12B using the depth to refusal and an arbitrary datum for ground surface. Measured the distances between the tank location and the two borings. Using this information, the strike direction was determined and the down slope direction from the tank was determined. A third boring was constructed using a hand auger at the down slope direction from the tank to refusal at 22 inches. The depth to refusal coincided with the predicted elevation of the bedrock. The PID was used to measure the headspace of each sample. Samples were taken from 2 to 12 inches and 12 to 22 inches. Headspace for the 2-12 inch sample was 5.5 ppm, and the headspace of the 12 to 22 inch sample was 0.5 ppm. Three samples were collected for offsite analysis:

2-12 in	as	LYAST12CNSX1	
12-22 in	as	LYAST12CNSX2	(bottom of boring)
12-22 in	as	LYAST12CNSMSMD	(for MS/MSD)

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

Calibrated Mini Rae with isobutylene
Calibrated LEL with hydrogen sulfide gas mixture
Zeroed the Mini Ram

HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)

No health and safety issues to report.

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:

None

SPECIAL NOTES

TOMORROW'S EXPECTATIONS



DAILY QUALITY CONTROL REPORT

REPORT NUMBER: _____

DATE 7 November 1996

COE ENGINEERING MANAGER: Robert Meader

PROJECT: St. Albans Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-D-0007

Day	S	M	T	W	T	F	S
-----	---	---	---	---	----------	---	---

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	T ³²	<u>33-69</u>	50-70	70-85	85 Up
Wind	Calm	<u>Moderate</u>	High	Report No.	
Humidity	Dry	Moderate	<u>High</u>		

SUB-CONTRACTORS ON SITE:
Laidlaw Environmental
EQUIPMENT ON SITE:
WORK PERFORMED (INCLUDING SAMPLING)
Removed three IDW drums (1 Soil, 1 Water, and 1 PPE). Manifest No. MA J 591221
QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)
None
HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)
Conducted health and safety briefing. In attendance were: J. Carter - Stone & Webster R. Pelley - Laidlaw Environmental
PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:
None
SPECIAL NOTES
None
TOMORROW'S EXPECTATIONS
Off site

John Carter

DAILY QUALITY CONTROL REPORT

DATE 7 November 1996

REPORT NUMBER: _____

COE ENGINEERING MANAGER: Robert Meader

PROJECT: Lyndonville Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-D-0007

Day	S	M	T	W	<u>T</u>	F	S
-----	---	---	---	---	----------	---	---

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temperature	T*32	<u>32-50</u>	50-70	70-85	85 Up
Wind	Calm	<u>Moderate</u>	High	Report No.	
Humidity	Dry	Moderate	<u>High</u>		

SUB-CONTRACTORS ON SITE:

L.G. Cushing & Sons (Cushing)

EQUIPMENT ON SITE:

Bacharach Sentinel LEL and oxygen meter, Thermo Environmental PID: OVM Model 580B, peristaltic pump, crane truck, Enviro Products PetroTrap.

WORK PERFORMED (INCLUDING SAMPLING)

Cushing gained access to well house containing Water Supply Well B (LYWTRSPB). Cushing raised the well pump motor base from the well to allow Stone & Webster access to the water. Stone & Webster pumped approximately 2 gallons of water and free product (previously identified as kerosene) from the well. Headspace of this water was measured with the PID at 107 ppm.

Cushing removed approximately 200 feet of pump shaft and a 2.5 foot section of impeller. John Gould of Cushing stated that the pump shaft and impeller were obsolete and did not have any salvage value. Because the pump shaft was determined to have no salvage value a reciprocating saw was used to speed the shaft disassembly. When the pump shaft was completely removed, Stone & Webster pumped an additional 0.5 gallons from the well. Total recovered product was estimated to be 0.75 gallons. During this operation, breathing zone PID measurements reached 12 ppm, LEL measurements reached 1%.

Cushing steam cleaned the pump equipment and stockpiled it in the well house.

The PetroTrap was installed in the well to remove free product from the top of the water. The trap was periodically emptied and the amount of product recovered was estimated.

The following volumes were recovered :

30 minutes - approximately 15 mL	(12:20 to 12:50)
25 minutes - approximately 15 mL	(12:50 to 13:15)
35 minutes - approximately 15 mL	(13:20 to 13:55)
20 minutes - approximately 15 mL	(13:57 to 14:18)
57 minutes - approximately 15 mL	(14:18 to 15:15)

The PetroTrap was left in the well overnight.

Containerized the IDW - one drum containing water and kerosene, one drum containing PPE and disposable product recovery materials.

Drove to operations area to reexamine a potential water supply well location. No evidence of a well was found.

PROJECT: Lyndonville Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 7 November 1996

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)
Calibrated PID with isobutylene
HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)
Conducted health and safety briefing In attendance were: R. Skryness - S&W D. Zilinskas - S&W J. Gould - Cushing P. Kininy - Cushing
PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:
3 IDW drums left on site in September were found vandalized (bullet holes in all three drums, lids removed from PPE and soil drums)
Called waste hauler (Laidlaw) to arrange for overpacking
SPECIAL NOTES
None
TOMORROW'S EXPECTATIONS
Remove PetroTrap for overnight reading Overpack vandalized drums Oversee waste removal Demobilize



DAILY QUALITY CONTROL REPORT

DATE 8 November 1996

REPORT NUMBER: _____

COE ENGINEERING MANAGER: Robert Meader

PROJECT: Lyndonville Air Force Station

JOB NUMBER: Delivery Order 04

CONTRACT NUMBER: DACW33-94-D-0007

Day	S	M	T	W	T	F	S
						X	

Weather	Bright Sun	Clear	Overcast	Rain	Snow
			X		
Temperature	T°32	32-50	58-70	70-85	85 Up
Wind	Calm	Moderate	High	Report No.	
Humidity	Dry	Moderate	High		

SUB-CONTRACTORS ON SITE:

Pollution Solution of Vermont
Laidlaw Environmental

EQUIPMENT ON SITE:

Bacharach Sentinel LEL and oxygen meter, Thermo Environmental PID: OVM Model 580B, peristaltic pump, Enviro Products PetroTrap.

WORK PERFORMED (INCLUDING SAMPLING)

Removed PetroTrap after 15.5 hours. Recovered approximately 30 mL of product. Because only 30 mL were collected over a 15 hour period as compared to the 75 mL collected over 2.25 hours during the previous day, it was concluded that the free product was not recharging into the well, indicating that the free product did not exist in the formation. Because product was collected, it was assumed that product still existed in the well and the PetroTrap was reinstalled in the well to remain over the winter to collect any remaining product.

Pollution Solution of Vermont overpacked the three vandalized drums
Oversaw drum removal (1 Soil, 1 Water, 2 PPE, 1 Water & Kerosene) by Laidlaw Environmental
Manifest Nos. MA J 591219
MA J 591220

QUALITY CONTROL ACTIVITIES (INCLUDING FIELD CALIBRATIONS)

Calibrated PID with isobutylene

HEALTH AND SAFETY LEVELS AND ACTIVITIES (DAILY HEALTH AND SAFETY AUDIT ATTACHED)

Conducted two health and safety briefings. In attendance were:
D. Zilinskas - Stone & Webster
S. Lamonda - Pollution solutions of Vermont
and
J. Carter - Stone & Webster
C. Vitti - Laidlaw Environmental

PROJECT: Lyndonville Air Force Station

REPORT NUMBER: _____

JOB NUMBER: Delivery Order 04

DATE: 8 November 1996

PROBLEMS ENCOUNTERED/CORRECTION ACTION TAKEN:
None
SPECIAL NOTES
None
TOMORROW'S EXPECTATIONS
Off site



CALIBRATION DATA SHEET

Project LYNDONVILLE AIR FORCE STATION

Job No. _____

Date 3 SEPT 1996

Field Instrumentation Calibration Data

Equipment Type/I.D.	Battery Condition	Calibration Information
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	Cond. Std. _____/_____ Cond. Std. _____/_____
_____	_____	Cond. Std. _____/_____ Cond. Std. _____/_____
_____	_____	Cond. Std. _____/_____ Cond. Std. _____/_____
Dissolved Oxygen	_____	Avg. Winkler Value _____ ppm Meter Value _____ ppm
Redox	_____	Zorbell Sol. Value _____ Meter Value _____
Photoionization Meter	_____	Zero/Zero Air? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<u>OVA OVM mod 580B</u>	<u>Normal</u>	Span Gas Value ^{Isometry} <u>100</u> ppm Equiv. Meter Value <u>98</u> ppm Equiv.
_____	_____	Zero/Zero Air? <input type="checkbox"/> Yes <input type="checkbox"/> No
_____	_____	Span Gas Value _____ ppm Equiv. Meter Value _____ ppm Equiv.
Other	_____	_____

Fluids/Materials Record

Deionized Water Source: Staging [] Portable System [] Other _____

Trip Blank Water Source: [] Lab; Lot No. _____ [] Other; ID _____

Decontamination Fluids: [] Methyl Hydrate; Lot No. _____ Other METHANOL Lot No. _____

Sampler Blank Water Source: [] Staging [] Port. System [] Other _____

HNO₃/DI Rinse Solution: Staging; I.D. No. _____

Preservation Chemical Lot I.D.s: Chemicals Used:

- HNO₃ Lot No. _____
- H²SO₄ Lot No. _____
- HCL Lot No. _____
- NaOH Lot No. _____
- ZnAOC Lot No. _____

Filtration Paper ID: _____

Manuf/Type _____

Lot No. _____

Sampler Signature _____

Standards

Manuf. _____

Lot No. _____

**FIGURE 5-1
CALIBRATION DATA SHEET**

CALIBRATION DATA SHEET

Project LYNDONVILLE AIR FORCE STATION

Job No. _____

Date 4 SEPT 1996

Field Instrumentation Calibration Data

Equipment Type/I.D.	Battery Condition	Calibration Information	
_____	_____	pH 4 _____	pH 7 _____
_____	_____	pH 4 _____	pH 7 _____
_____	_____	pH 4 _____	pH 7 _____
_____	_____	Cond. Std. _____/_____	Cond. Std. _____/_____
_____	_____	Cond. Std. _____/_____	Cond. Std. _____/_____
_____	_____	Cond. Std. _____/_____	Cond. Std. _____/_____
Dissolved Oxygen	_____	Avg. Winkler Value _____ ppm	Meter Value _____ ppm
Redox	_____	Zorbell Sol. Value _____	Meter Value _____
Photoionization Meter	_____	Zero/Zero Air? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Span Gas Value _____ ppm Equiv.
<u>OVM MOD 570B</u>	<u>NORMAL</u>		<i>Isobutylene</i> Meter Value <u>104</u> ppm Equiv.
_____	_____	Zero/Zero Air? <input type="checkbox"/> Yes <input type="checkbox"/> No	Span Gas Value _____ ppm Equiv.
_____	_____		Meter Value _____ ppm Equiv.
Other	_____	_____	
<u>MIM RAM</u>	<u>NORMAL</u>	<u>ZEROED</u>	
<u>MICRO MAX LELK02</u>	<u>NORMAL</u>	<u>CALIBRATED WITH SUPPLIED GAS</u>	

Fluids/Materials Record

Deionized Water Source: Staging [] Portable System [] Other _____

Trip Blank Water Source: [] Lab; Lot No. _____ [] Other: ID _____

Decontamination Fluids: [] Methyl Hydrate; Lot No. _____ Other METHANOL Lot No. _____

Sampler Blank Water Source: [] Staging [] Port. System [] Other _____

HNO₃/DI Rinse Solution: Staging; I.D. No. _____

Preservation Chemical Lot I.D.s: Chemicals Used: HNO₃ Lot No. _____

H₂SO₄ Lot No. _____

HCL Lot No. _____

NaOH Lot No. _____

ZnAOC Lot No. _____

Filtration Paper ID:
Manuf./Type _____
Lot No. _____

Sampler Signature _____

Standards
Manuf. _____
Lot No. _____

**FIGURE 5-1
CALIBRATION DATA SHEET**

CALIBRATION DATA SHEET

Project ST ALBANS AIR FORCE STATION

Job No. _____

Date 7 SEPT 1996

Field Instrumentation Calibration Data

Equipment Type/I.D.	Battery Condition	Calibration Information
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	Cond. Std. _____/_____ Cond. Std. _____/_____
_____	_____	Cond. Std. _____/_____ Cond. Std. _____/_____
_____	_____	Cond. Std. _____/_____ Cond. Std. _____/_____
Dissolved Oxygen	_____	Avg. Winkler Value _____ ppm Meter Value _____ ppm
Redox	_____	Zorbell Sol. Value _____ Meter Value _____
Photoionization Meter	_____	Zero/Zero Air? <input type="checkbox"/> Yes <input type="checkbox"/> No Span Gas Value _____ ppm Equiv. Meter Value _____ ppm Equiv.
_____	_____	Zero/Zero Air? <input type="checkbox"/> Yes <input type="checkbox"/> No Span Gas Value _____ ppm Equiv. Meter Value _____ ppm Equiv.
Other	_____	_____
<u>MINIRAM DUST MONITOR</u>	<u>NORMAL</u>	<u>ZEROED</u>

Fluids/Materials Record

Deionized Water Source: Staging [] Portable System [] Other _____

Trip Blank Water Source: [] Lab: Lot No. _____ [] Other: ID _____

Decontamination Fluids: [] Methyl Hydrate: Lot No. _____ [X] Other METHANOL Lot No. _____

Sampler Blank Water Source: [] Staging [] Port. System [] Other _____

HNO₃/DI Rinse Solution: Staging; I.D. No. _____

Preservation Chemical Lot I.D.s: Chemicals Used: HNO₃ Lot No. _____
 H₂SO₄ Lot No. _____
 HCL Lot No. _____
 NaOH Lot No. _____
 ZnAOC Lot No. _____

Filtration Paper ID:
 Manuf./Type _____
 Lot No. _____

Sampler Signature _____

Standards
 Manuf. _____
 Lot No. _____

**FIGURE 5-1
CALIBRATION DATA SHEET**

CALIBRATION DATA SHEET

Project LYNDONVILLE AIR FORCE STATION

Job No. _____

Date 17 SEPT 1996

Field Instrumentation Calibration Data

Equipment Type/I.D.	Battery Condition	Calibration Information
Micro Max LEL	Normal	pH 4 _____ pH 7 _____ pH 10 _____
Mini RAM Dust Monitor	Normal	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	Cond. Std. _____ / _____ Cond. Std. _____ / _____
_____	_____	Cond. Std. _____ / _____ Cond. Std. _____ / _____
_____	_____	Cond. Std. _____ / _____ Cond. Std. _____ / _____
Dissolved Oxygen	_____	Avg. Winkler Value _____ ppm Meter Value _____ ppm
Redox	_____	Zorbell Sol. Value _____ Meter Value _____
Photoionization Meter	_____	Zero/Zero Air? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Span Gas Value _____ ppm Equiv.
<u>HN-PI 101</u>	<u>Normal</u>	<u>Insulation</u> Meter Value <u>57</u> ppm Equiv.
_____	_____	Zero/Zero Air? <input type="checkbox"/> Yes <input type="checkbox"/> No Span Gas Value _____ ppm Equiv.
_____	_____	Meter Value _____ ppm Equiv.
Other	_____	_____
<u>Micro Max LEL</u>	<u>Normal</u>	<u>O₂ = 21, LEL = 45, CO = 42, H₂S = 22</u>
<u>Mini RAM Dust Monitor</u>	<u>Normal</u>	<u>ZERUED</u>

Fluids/Materials Record

Deionized Water Source: Staging [] Portable System [] Other _____

Trip Blank Water Source: [] Lab; Lot No. _____ [] Other; ID _____

Decontamination Fluids: [] Methyl Hydrate; Lot No. _____ Other METHANOL Lot No. _____

Sampler Blank Water Source: [] Staging [] Port. System [] Other _____

HNO₃/DI Rinse Solution: Staging; I.D. No. _____

Preservation Chemical Lot I.D.s: Chemicals Used:

- HNO₃ Lot No. _____
- H₂SO₄ Lot No. _____
- HCL Lot No. _____
- NaOH Lot No. _____
- ZnAOC Lot No. _____

Filtration Paper ID: _____

Manuf/Type _____

Lot No. _____

Sampler Signature _____

Standards

Manuf. _____

Lot No. _____

**FIGURE 5-1
CALIBRATION DATA SHEET**

CALIBRATION DATA SHEET

Project LYNDONVILLE AIR FORCE STATION

Job No. _____

Date 19 SEPT 1996

Field Instrumentation Calibration Data

Equipment Type/I.D.	Battery Condition	Calibration Information
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	Cond. Std. _____ / _____ Cond. Std. _____ / _____
_____	_____	Cond. Std. _____ / _____ Cond. Std. _____ / _____
_____	_____	Cond. Std. _____ / _____ Cond. Std. _____ / _____
Dissolved Oxygen	_____	Avg. Winkler Value _____ ppm Meter Value _____ ppm
Redox	_____	Zorbell Sol. Value _____ Meter Value _____
Photoionization Meter	_____	Zero/Zero Air? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Span Gas Value _____ ppm Equiv.
<u>MINI RAY</u>	<u>NORMAL</u>	<u>150 BUTYLENE</u> Meter Value <u>100</u> ppm Equiv.
_____	_____	Zero/Zero Air? <input type="checkbox"/> Yes <input type="checkbox"/> No Span Gas Value _____ ppm Equiv.
_____	_____	Meter Value _____ ppm Equiv.
Other	_____	_____
<u>MICRO MAX LEL</u>	<u>NORMAL</u>	<u>O₂ = 21, CO = 50, LEL = 50, H₂S = 25</u>
<u>MINI RAM DUST MONITOR</u>	<u>NORMAL</u>	<u>ZERO = 0</u>

Fluids/Materials Record

Deionized Water Source: Staging [] Portable System [] Other _____

Trip Blank Water Source: [] Lab; Lot No. _____ [] Other; ID _____

Decontamination Fluids: [] Methyl Hydrate; Lot No. _____ Other METHANOL Lot No. _____

Sampler Blank Water Source: [] Staging [] Port. System [] Other _____

HNO³/DI Rinse Solution: Staging; i.D. No. _____

Preservation Chemical Lot I.D.s: Chemicals Used: HNO³ Lot No. _____
 H²SO⁴ Lot No. _____
 HCL Lot No. _____
 NaOH Lot No. _____
 ZnAOC Lot No. _____

Filtration Paper ID: _____
 Manuf./Type _____
 Lot No. _____

Sampler Signature _____

Standards
 Manuf. _____
 Lot No. _____

**FIGURE 5-1
CALIBRATION DATA SHEET**

CALIBRATION DATA SHEET

Project ST ALBANS AIR FORCE STATION

Job No. _____

Date 20 SEPT 1996

Field Instrumentation Calibration Data

Equipment Type/I.D.	Battery Condition	Calibration Information
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	pH 4 _____ pH 7 _____ pH 10 _____
_____	_____	Cond. Std. _____/_____ Cond. Std. _____/_____
_____	_____	Cond. Std. _____/_____ Cond. Std. _____/_____
_____	_____	Cond. Std. _____/_____ Cond. Std. _____/_____
Dissolved Oxygen	_____	Avg. Winkler Value _____ ppm Meter Value _____ ppm
Redox	_____	Zorbell Sol. Value _____ Meter Value _____
Photoionization Meter	_____	Zero/Zero Air? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Span Gas Value _____ ppm Equiv. Meter Value _____ ppm Equiv.
<u>MINI RAY</u>	<u>NORMAL</u>	<u>ISOBUYLENE</u> <u>100</u> <u>~100</u>
_____	_____	Zero/Zero Air? <input type="checkbox"/> Yes <input type="checkbox"/> No Span Gas Value _____ ppm Equiv. Meter Value _____ ppm Equiv.
Other	_____	(NORMAL) O ₂ ≈ 21, CO ≈ 50, LEL ≈ 50, H ₂ S ≈ 25 ZEROED
<u>MICRO MAX LEL</u>	<u>NORMAL</u>	
<u>MINI RAM DUST MONITOR</u>	<u>NORMAL</u>	

Fluids/Materials Record

Deionized Water Source: Staging [] Portable System [] Other _____

Trip Blank Water Source: [] Lab; Lot No. _____ [] Other; ID _____

Decontamination Fluids: [] Methyl Hydrate; Lot No. _____ Other METHANOL Lot No. _____

Sampler Blank Water Source: [] Staging [] Port. System [] Other _____

HNO₃/DI Rinse Solution: Staging; I.D. No. _____

Preservation Chemical Lot I.D.s: Chemicals Used: HNO₃ Lot No. _____
 H₂SO₄ Lot No. _____
 HCL Lot No. _____
 NaOH Lot No. _____
 ZnAOC Lot No. _____

Filtration Paper ID:
 Manuf/Type _____
 Lot No. _____

 Standards
 Manuf. _____
 Lot No. _____

Sampler Signature _____

**FIGURE 5-1
CALIBRATION DATA SHEET**

**ANALYTICAL DATA AND QA/QC EVALUATION RESULTS
(DATA VALIDATION)**

Appendix B.1 and B.2 are included under separate cover. Appendix B.1 comprises the Data Validation Report and Laboratory Results. Appendix B.2 comprises the Total Ion Chromatograms. A copy of the Data Validation Report is included in this SIR for reference.



1 November 1996

Ms. Dawn Connelly
 Stone & Webster Environmental Technology & Services
 245 Summer Street
 Boston, MA 02210

RE: Contract/Work Assignment #: DACW33-94-D-0007
 Data Validation Letter Report, J.O.# 05000.0400
 Stone & Webster Subcontract #: PS-027759
 Lab Name: Mitkem Corporation
 Site Name: Lydonville & St. Albans Air Force Station

Inorganic Analysis

Samples Collected:

<i>LYSEPTICASBX1</i>	<i>LYRDTWRBNSX1</i>	<i>SAFILTRANSDS</i>	<i>SAGSPMPBSSX1</i>
<i>LYSEPTICASBDS</i>	<i>LYPLATEANSX1</i>	<i>SAFILTRBNSX1</i>	<i>SAGSPMPBSSDS</i>
<i>LYSEPTICASBX2</i>	<i>LYLEACHANSX1</i>	<i>SASEPTICANSX2</i>	<i>SAGSPMPASSX1</i>
<i>LYGSTNKANSDS</i>	<i>LYLEACHBNSX1</i>	<i>SASEPTICANSX1</i>	<i>SAVHCMTASSX1</i>
<i>LYGSTNKANSX1</i>	<i>LYLEACHCNSX1</i>	<i>SASEPTICANSDS</i>	<i>SAWTRSPBWSX1</i>
<i>LYGSTNKBNSDS</i>	<i>SAAUTOHASBX1</i>	<i>LYWSHBYASSX1</i>	<i>SAWTRSPAWSX1</i>
<i>LYGSTNKBNSX1</i>	<i>SAAUTOHASBX2</i>	<i>LYWTRSPAWSX1</i>	<i>SAWTRSPAWSDS</i>
<i>LYGRASSANSX1</i>	<i>SADBRISANSX1</i>	<i>LYWTRSPBWSDS</i>	<i>LYDRYWLASWX1</i>
<i>LYRDTWRANSX1</i>	<i>SAFILTRANSX1</i>	<i>LYWTRSPBWSX1</i>	<i>LYDRYWLASWDS</i>

Dear Ms. Connelly:

A USEPA Level III validation was performed on the inorganic analytical data from samples collected by Stone and Webster at the Lydonville & St. Albans Air Force Station site. The laboratory, Mitkem Corporation, analyzed the samples in accordance with SW-846 methods 6010, 7471A, and USEPA waste water methods 245.1 and 200.7. The data were evaluated based on the following parameters in accordance with standard USEPA data validation guidelines and project specific guidelines.

- chain of custody documents
- *- sample log-in documents
- *- trip blanks and method blanks
 - MS/MSD results
- *- LCS/LCSD results
- *- laboratory duplicate results
 - field duplicate results
- *- holding times

* All criteria were met for this parameter.

Chain of Custody Records

Two problems are present in the chain of custody records. No indication of sample preservation is noted on the COC. Additionally, the samples with the root name : "LYGSTNK" were misread by Mitkem as "LYGSTNU". The validation reports use the "LYGSTNK" root name.

Sample Log-in Documents

Mitkem did not indicate if the samples were preserved according to methodology requirements.

Trip Blanks and Method Blanks

No trip blanks were sampled for this project.

The method blanks did not contain any target analyte contamination.

Matrix Spike / Matrix Spike Duplicate Results

Nine matrix spike sample analyses were performed. The silver recovery for one matrix spike sample (LYLEACHANSX1) was low (32%) and out of criteria. Since the other matrix spike sample in this sample set is acceptable, only sample LYLEACHANSX1 is affected and the silver non-detect of "0.6 U" is qualified as estimated "0.6 UJ" based on the low recovery. The non-detect for this sample should be considered biased low.

Laboratory Control Sample Results

All laboratory control samples results were within criteria.

Laboratory Duplicate Results

The following table provides detailed information on laboratory duplicate samples results that result in data qualifications. The result column indicates the data qualifications. For full detail of the laboratory duplicate results see the attached worksheet document. The units below are mg/Kg for soil samples.

Method	Original/Dup.	Analyte	Conc.	Dup. Conc	RPD	Result
6010	LYLEACHANSXI LYLEACHANSXI Dup	lead	3.9	1.8	74	J detects all lead results in C0985 set.

Field Duplicate Results

The following table provides detailed information on field duplicate samples results that result in data qualifications. The result column indicates the data qualification. For full detail of the field duplicate results see the attached worksheet document. The units below are mg/L for aqueous and mg/Kg for soil samples.

Method	Original/Dup.	Analyte	Conc.	Dup. Conc	RPD	Result
6010	LYGSTNKANSXI LYGSTNKANSXSDS	barium	60	190	104	J detects (these samples only)
6010	SAWTRSPBWSXI SAWTRSPBWSXSDS	lead	0.13	0.028	129	J detects (C0985 H2O set only)
6010	SAGSPMPBSSXI SAGSPMPBSSXSDS	cadmium	0.7	1.3	60	J detects (these two samples only)

Holding Times

There is no confirmation of sample preservation for metals analysis. Neither the COC noted metals preservation nor did the laboratory report the pH of the samples. Both parties must be notified of this requirement. The validator does have verbal confirmation of sample preservation from Stone & Webster. It is assumed that the samples are preserved for this validation.

Other Information

The chromium recovery for matrix spike sample LYGRASSANSXI is 55%. The laboratory only reported the post-digestion spike recovery of 130%. While this recovery information provides conflicting information of possible matrix interferences, the initial recovery of 55% is acceptable compared to the project required criteria of 54%-141% and therefore no data qualifications were made.

Summary

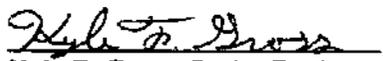
Field duplicate analysis indicates out of criteria events for barium resulting in the estimation (J) of barium in two soil samples; LYGSTNKANS and LYGSTNKANSDDS. Field duplicate analysis indicates out of criteria events for lead resulting in the estimation (J) of positive lead results for all aqueous samples in Mitkem sample set C0985. Field duplicate analysis indicates out of criteria events for cadmium resulting in the estimation (J) of the results for two soil samples; SAGSPMPBSSX1 and SAGSPMPBSSDS. Laboratory duplicate analysis indicates out of criteria events for lead for sample duplicate analyses of sample LYLEACHANSX1. All lead positive results for soil samples in Mitkem sample set C0921 are estimated (J) as a result. The silver recovery for one matrix spike sample (LYLEACHANSX1) was low (32%) and out of criteria. Since the other matrix spike sample in this sample set is acceptable, only sample LYLEACHANSX1 is affected and the silver non-detect of "0.6 U" is qualified as estimated "0.6 UJ" based on the low recovery. The silver non-detect for the should be considered biased low.

No other data qualifications are present in this inorganic analysis package.

Table I and II summarize the aqueous and soil sample validated results respectively. The data review worksheets are also appended to this memorandum.

Sincerely,

Kestrel Environmental Technologies, Inc.


Kyle F. Gross, Senior Reviewer

INORGANIC

VALIDATED DATA

TABLE I

Inorganic Aqueous Validated Results

Project #: PS-27759

J.O. #: 5000

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample ID		LYWTRSPAWSX1	LYWTRSPBWSXS	LYWTRSPBWSX1	SAWTRSPBWSX1	SAWTRSPAWSX1
Sample Type:		Routine	Field Duplicate	Field Duplicate	Routine	Field Duplicate
Lab Sample Number:		C0985-02	C0985-03	C0985-04	C0985-11	C0985-12
Matrix:		Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
Dilution Factor:		1	1	1	1	1
Dilution Factor:						
Dilution Factor:						
Dilution Factor:						
Date Sampled:		9/17/96	9/17/96	9/17/96	9/18/96	9/18/96
Percent Solids:		NA	NA	NA	NA	NA
Notes:						
Inorganic Analysis	Method	mg/L	mg/L	mg/L	mg/L	mg/L
Arsenic	P	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Barium	P	0.02	0.02	0.02	0.15	0.06
Cadmium	P	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium	P	0.01 U	0.01 U	0.03	0.01	0.01 U
Lead	P	0.005 U	0.028 J	0.13 J	0.005 U	0.006 J
Mercury	CV	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Selenium	P	0.02 U	0.02 U	0.02	0.02 U	0.02 U
Silver	P	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

Analytical Method:

F - Furnace AA

PM - ICP/Microwave Digestion

P - ICP

FM - Furnace AA/Microwave Digest.

CV - Manual Cold Vapor

Note:

J - Quantitation is approximate due to limitations identified in the quality control review (Date Review).

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UU - The compound was not detected. The compound quantitation limit is an estimated value.

R - Value is rejected.

TABLE I**Inorganic Aqueous Validated Results**

Project #: PS-27759

J.O. #: 5000

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample ID		SAWTRSPAWSDS	LYDRYWLASWXI	LYDRYWLASWDS
Sample Type:		Field Duplicate	Field Duplicate	Field Duplicate
Lab Sample Number:		C0985-14	C0985-15	C0985-16
Matrix:		Aqueous	Aqueous	Aqueous
Dilution Factor:		1	1	1
Dilution Factor:				
Dilution Factor:				
Dilution Factor:				
Date Sampled:		9/18/96	9/19/96	9/19/96
Percent Solids:		NA	NA	NA
Notes:				
Inorganic Analysis	Method	mg/L	mg/L	mg/L
Arsenic	P	0.01 U	0.01 U	0.01 U
Barium	P	0.08	0.05	0.04
Cadmium	P	0.001 U	0.001 U	0.001 U
Chromium	P	0.01 U	0.01 U	0.01 U
Lead	P	0.009 J	0.009 J	0.005 J
Mercury	CV	0.0005 U	0.0005 U	0.0005 U
Selenium	P	0.02 U	0.02 U	0.02 U
Silver	P	0.01 U	0.01 U	0.01 U

Analytical Method:

F - Furnace AA

PM - ICP/Microwave Digestion

P - ICP

FM - Furnace AA/Microwave Digest.

CV - Manual Cold Vapor

Note:

J - Quantitation is approximate due to limitations identified in the quality control review (Date Review).

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - Value is rejected.

TABLE II

Project #: PS-27759
 J.O. #: 5000
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample ID		LYSEPTICASBX1	LYSEPTICASBDS	LYSEPTICASBN2	LYGSTNKANSDS	LYGSTNKANSX1
Sample Type:		Field Duplicate	Field Duplicate	Routine	Field Duplicate	Field Duplicate
Lab Sample Number:		C0920-09	C0920-10	C0920-11	C0920-12	C0920-13
Matrix:		Soil	Soil	Soil	Soil	Soil
Dilution Factor:		1	1	1	1	1
Dilution Factor:						
Dilution Factor:						
Dilution Factor:						
Date Sampled:		9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Percent Solids:		85	83	83	82	81
Notes:						
Inorganic Analysis	Method	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Arsenic	P	7	6	5	4	5
Barium	P	78	93	88	190 J	60 J
Cadmium	P	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chromium	P	49	55	64	45	45
Lead	P	2.6	2.2	2.9	14	16
Mercury	CV	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Selenium	P	2	0.6 U	2	2 U	2
Silver	P	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U

Analytical Method:

F - Furnace AA PM - ICP/Microwave Digestion
 P - ICP FM - Furnace AA/Microwave Digest.
 CV - Manual Cold Vapor
 PM - ICP/Microwave Digestion

Note:

J - Quantitation is approximate due to limitations identified in the quality control review (Date Review).
 U - The compound was not detected. The associated numerical value is the compound quantitation limit.
 UJ - The compound was not detected. The compound quantitation limit is an estimated value.
 R - Value is rejected.

TABLE II

Project #: PS-27759

J.O. #: 5000

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample ID		LYGSTNKBNSDS	LYGSTNKBNSX1	LYGRASSANSX1	LYRDTWRANSX1	LYRDTWRBNSX1
Sample Type:		Field Duplicate	Field Duplicate	Routine	Routine	Routine
Lab Sample Number:		C0920-14	C0920-15	C0921-09	C0921-10	C0921-11
Matrix:		Soil	Soil	Soil	Soil	Soil
Dilution Factor:		1	1	1	1	1
Dilution Factor:						
Dilution Factor:						
Dilution Factor:						
Date Sampled:		9/4/96	9/4/96	9/5/96	9/5/96	9/5/96
Percent Solids:		90	89	63	91	68
Notes:						
Inorganic Analysis	Method	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Arsenic	P	4	4	5	5	5
Barium	P	51	60	60	57	51
Cadmium	P	0.2	0.4	0.1 U	0.1 U	0.3
Chromium	P	37	40	24	38	42
Lead	P	11	12	21 J	44 J	750 J
Mercury	CV	0.1 U	0.1 U	0.2 U	0.2 U	0.2 U
Selenium	P	2 U	0.6 U	3	0.6 U	0.6 U
Silver	P	0.6 U	0.6 U	0.6 U	0.6 U	4

Analytical Method:

F - Furnace AA

PM - ICP/Microwave Digestion

P - ICP

FM - Furnace AA/Microwave Digest.

CV - Manual Cold Vapor

PM - ICP/Microwave Digestion

Note:

J - Quantitation is approximate due to limitations identified in the quality control review (Date Review).

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - Value is rejected.

TABLE II

Project #: PS-27759

J.O. #: 5000

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample ID		LYPLATEANSX1	LYLEACHANSX1	LYLEACHBNSX1	LYLEACHCNSX1	SAAUTOHASBX1
Sample Type:		Routine	Routine	Routine	Routine	Routine
Lab Sample Number:		C0921-12	C0921-13	C0921-14	C0921-15	C0927-10
Matrix:		Soil	Soil	Soil	Soil	Soil
Dilution Factor:		1	1	1	1	1
Dilution Factor:						
Dilution Factor:						
Dilution Factor:						
Date Sampled:		9/5/96	9/5/96	9/5/96	9/5/96	9/6/96
Percent Solids:		94	93	91	89	86
Notes:						
Inorganic Analysis	Method	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Arsenic	P	4	4	5	5	4
Barium	P	51	55	48	70	32
Cadmium	P	0.1 U				
Chromium	P	22	38	46	49	12
Lead	P	4.1 J	3.9 J	2.9 J	2.4 J	6.5
Mercury	CV	0.2 U	0.2 U	0.2 U	0.2 U	0.1 U
Selenium	P	0.6 U	0.6 U	0.6 U	0.6 U	1.8
Silver	P	0.6 U	0.6 UJ	0.6 U	0.6 U	0.6 U

Analytical Method:

F - Furnace AA

PM - ICP/Microwave Digestion

P - ICP

FM - Furnace AA/Microwave Digest.

CV - Manual Cold Vapor

PM - ICP/Microwave Digestion

Note:

J - Quantitation is approximate due to limitations identified in the quality control review (Date Review).

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - Value is rejected.

TABLE II

Project #: PS-27759
 J.O. #: 5000
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample ID		SAAUTOHASBX2	SADBRISANSX1	SAFILTRANSX1	SAFILTRANSDS	SAFILTRBNSX1
Sample Type:		Routine	Routine	Field Duplicate	Field Duplicate	Routine
Lab Sample Number:		C0927-11	C0927-12	C0927-13	C0927-14	C0927-15
Matrix:		Soil	Soil	Soil	Soil	Soil
Dilution Factor:		1	1	1	1	1
Dilution Factor:						
Dilution Factor:						
Date Sampled:		9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Percent Solids:		88	95	89	87	96
Notes:						
Inorganic Analysis	Method	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Arsenic	P	5	4	5	5	5
Barium	P	43	28	57	60	38
Cadmium	P	0.1 U	0.3	0.1 U	0.1 U	1.6
Chromium	P	15	12	9	9	15
Lead	P	8.0	130	64	55	52
Mercury	CV	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Selenium	P	1.8	1.4	2.1	1.6	0.9
Silver	P	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U

Analytical Method:

F - Furnace AA PM - ICP/Microwave Digestion
 P - ICP FM - Furnace AA/Microwave Digest.
 CV - Manual Cold Vapor
 PM - ICP/Microwave Digestion

Note:

J - Quantitation is approximate due to limitations identified in the quality control review (Date Review).
 U - The compound was not detected. The associated numerical value is the compound quantitation limit.
 UJ - The compound was not detected. The compound quantitation limit is an estimated value.
 R - Value is rejected.

TABLE II

Project #: PS-27759
 J.O. #: 5000
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample ID		SASEPTICANSX2	SASEPTICANSX1	SASEPTICANSXS	LYWSHBYASSX1	SAGSPMPBSSX1
Sample Type:		Routine	Field Duplicate	Field Duplicate	Routine	Field Duplicate
Lab Sample Number:		C0927-16	C0927-19	C0927-20	C0985-01	C0985-07
Matrix:		Soil	Soil	Soil	Soil	Soil
Dilution Factor:		1	1	1	1	1
Dilution Factor:						
Dilution Factor:						
Dilution Factor:						
Date Sampled:		9/6/96	9/7/96	9/7/96	9/17/96	9/18/96
Percent Solids:		90	90	82	93	93
Notes:						
Inorganic Analysis	Method	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Arsenic	P	4	4	4	3.6	5.2
Barium	P	30	27	27	57	48
Cadmium	P	0.1 U	0.1 U	0.1 U	0.1 U	0.7 J
Chromium	P	12	11	12	34	21
Lead	P	5	3.5	4.2	99	270
Mercury	CV	0.3 U	0.1 U	0.1 U	0.33	0.2
Selenium	P	1.4	1.7	1.6	3.9	5.3
Silver	P	0.6 U	0.6 U	0.6 U	2 U	2 U

Analytical Method:

F - Furnace AA PM - ICP/Microwave Digestion
 P - ICP FM - Furnace AA/Microwave Digest.
 CV - Manual Cold Vapor
 PM - ICP/Microwave Digestion

Note:

J - Quantitation is approximate due to limitations identified in the quality control review (Date Review).
 U - The compound was not detected. The associated numerical value is the compound quantitation limit.
 UJ - The compound was not detected. The compound quantitation limit is an estimated value.
 R - Value is rejected.

TABLE II

Project #: PS-27759
 J.O. #: 5000
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample ID		SAGSPMPBSSDS	SAGSPMPASSX1	SAVHCMTASSX1
Sample Type:		Field Duplicate	Routine	Routine
Lab Sample Number:		C0985-08	C0985-09	C0985-10
Matrix:		Soil	Soil	Soil
Dilution Factor:		1	1	1
Dilution Factor:				
Dilution Factor:				
Dilution Factor:				
Date Sampled:		9/18/96	9/18/96	9/18/96
Percent Solids:		84	87	78
Notes:				
Inorganic Analysis	Method	mg/Kg	mg/Kg	mg/Kg
Arsenic	P	4.8	4.8	6.8
Barium	P	43	41	59
Cadmium	P	1.3 J	0.1 U	0.1 U
Chromium	P	23	15	21
Lead	P	200	48	180
Mercury	CV	0.2	0.3	0.8
Selenium	P	4.6	6.7	6.9
Silver	P	2 U	2 U	2 U

Analytical Method:

F - Furnace AA PM - ICP/Microwave Digestion
 P - ICP FM - Furnace AA/Microwave Digest.
 CV - Manual Cold Vapor
 PM - ICP/Microwave Digestion

Note:

J - Quantitation is approximate due to limitations identified in the quality control review (Date Review).
 U - The compound was not detected. The associated numerical value is the compound quantitation limit.
 UJ - The compound was not detected. The compound quantitation limit is an estimated value.
 R - Value is rejected.



1 November 1996

Ms. Dawn Connelly
 Stone & Webster Environmental Technology & Services
 245 Summer Street
 Boston, MA 02210

RE: Contract/Work Assignment #: DACW33-94-D-0007
 Data Validation Letter Report, J.O.# 05000.0400
 Stone & Webster Subcontract #: PS-027759
 Lab Names: Mitkem Corporation, Environmental Health Laboratory
 Site Name: Lydonville & St. Albans Air Force Station

Organic Analysis

Samples Collected:

LYUST08ASBX1	LYUST04ASBX2	SAUST03ASBX2	Trip Blank (9-9-96)
LYUST08ASBX2	LYUST04BSBX1	SAUST03BSBX1	LYWSHBYASSX1
LYUST08BSBX1	LYUST04BSBDS1	SAUST03BSBX2	LYWTRSPAWSX1
LYUST08BSBX2	Trip Blank (9-5-96)	SAUST02BSBX1	LYWTRSPBWSDS
LYUST08CSBX1	LYAST12ASBX1	SAUST02BSBX2	LYWTRSPBWSX1
LYUST08CSBX2	LYAST12ASBX2	SAAUTOHASBX1	Trip Blank (9-18-96)
LYUST08DSBX1	LYAST12BSBX1	SAAUTOHASBX2	SAGSPMPBSSX1
LYUST08DSBX2	LYAST12BSBX2	SADBRISANSX1	SAGSPMPBSSDS
LYSEPTICASBDS	LYGRASSANSX1	SAFILTRANSX1	SAGSPMPASSX1
LYSEPTICASBX2	LYRDTWRANSX1	SAFILTRANSDS	SAVHCMTASSX1
LYUST04BSBX2	LYRDTWRBNSX1	SAFILTRBNSX1	SAWTRSPBWSX1
LYUST04BSBDS2	LYPLATEANSX1	SASEPTICANSX2	SAWTRSPAWSX1
LYUST04CSBX1	LYLEACHANSX1	SAAST05ASBX1	Trip Blank (9-19-96)
LYUST04CSBX2	LYLEACHBNSX1	SAAST05ASBX2	SAWTRSPAWSDS
LYSEPTICASBX1	LYLEACHCNSX1	SASEPTICANSX1	LYDRYWLASWX1
LYGSTNKANSDS	Trip Blank (9-5-96)	SASEPTICANSDS	LYDRYWLASWDS
LYGSTNKANSX1	SAUST02ASBX1	SAAST05BSBX1	LYAST12CNSX1
LYGSTNKBNSDS	SAUST02ASBX2	SAAST05BSBX2	LYAST12CNSX2
LYGSTNKBNSX1	SAUST02ASBDS	SAAST05CSBX1	SAUST02ASBX3
LYUST04ASBX1	SAUST03ASBX1	SAAST05CSBX2	SAUST02ASBDS2

Dear Ms. Connelly:

A USEPA Level III validation was performed on the organic analytical data from samples collected by Stone and Webster at the Lydonville & St. Albans Air Force Station site. The laboratories, Mitkem Corporation and Environmental Health Laboratory, analyzed the samples in accordance with SW-846 methods 8015, 8081, 8260A, 8270B, and drinking water methods 524.2 and 525.2. The data were evaluated based on the following parameters in accordance with standard USEPA data validation guidelines.

- chain of custody documents
- sample log-in documents
- trip blanks and method blanks
- MS/MSD results
- LCS/LCSD results
- field duplicate results
- surrogate recoveries
- holding times

* All criteria were met for this parameter.

Chain of Custody Records

Two problems are present in the chain of custody records. No indication of sample preservation is noted on the COC. Additionally, the samples with the root name: "LYGSTNK" were misread by Mitkem as "LYGSTNU". The validation reports use the "LYGSTNK" root name.

Sample Log-in Documents

Mitkem did not indicate if the samples were preserved according to methodology requirements.

Trip Blanks and Method Blanks

For method 8260A, all positive methylene chloride and acetone results for non-trip blank samples are qualified as not detected "U" based on contamination in the blanks. The level of contamination is normal for methylene chloride and acetone for this analysis. Based on chloromethane contamination in the corresponding Trip Blank, samples LYDRYWLASWX1 and LYDRYWLASWDS results for chloromethane are qualified as not detected "5 U." Based on trichloroethene contamination in the corresponding Trip Blank, sample SAVHCMTASSX1 result for trichloroethene is qualified as not detected "5 U."

For method 524.2, methylene chloride for all four non-trip blank samples is qualified as not detected "0.5 U" based on contamination in the blanks. The level of contamination is normal for methylene chloride.

Matrix Spike / Matrix Spike Duplicate Results

For method 8015, the MSD recovery for diesel fuel is high (133%) and as a result sample LYAST12CNSX2 result of 32 is estimated "32 J". The criteria for recovery are 75% to 125%. This result should be considered biased high.

For method 525.2, two sets of MS/MSDs were performed. The samples that were spiked were LYWTRSPAWSX1 and SAWTRSPBWSX1. Several compounds had low recoveries and therefore several compounds are flagged as estimated non-detects. The table below provides detailed information. These estimated results should be considered biased low.

Compound	LYWTRSPAWSX1	SAWTRSPBWSX1
alachlor	0.1 UJ	
aldrin		0.1 UJ
atrazine	0.1 UJ	0.1 UJ
gamma-BHC	0.02 UJ	0.02 UJ
2-chlorobiphenyl	0.1 UJ	
heptachlor	0.04 UJ	0.04 UJ
heptachlor epoxide	0.02 UJ	0.02 UJ
hexachlorobenzene	0.1 UJ	
hexachlorocyclopentadiene	0.1 UJ	0.1 UJ
phenanthrene	0.1 UJ	0.1 UJ
simazine	0.07 UJ	0.07 UJ

Other MS/MSD samples had out of criteria events (see worksheets). However, the out of criteria events did not result in any required data qualifications.

Laboratory Control Sample/Laboratory Control Sample Duplicate Results

For method 525.2 analysis, two compounds (simazine and aldrin) have recoveries low and outside the control limits. The following table provides detailed information on LCS results that result in data qualifications. The result column indicates the data qualification. For full detail of the field duplicate results see the attached worksheet document.

Method	Sample ID	Compound	Recovery %	Criteria	Result
525.2	LYWTRSPAWSX1	simazine	58	60-129	UJ all samples
525.2	LYWTRSPAWSX1	aldrin	65	70-125	UJ all samples

Field Duplicate Results

The following table provides detailed information on field duplicate samples results that result in data qualifications. The result column indicates the data qualification. For full detail of the field duplicate results see the attached worksheet document.

Method	Original/Dup.	Compound	Conc.	Dup. Conc	Result
8270B	LYUST04BSBX2 LYUST04BSBDS2	bis(2-ethylhexyl)phthalate	390	380 U	Original 390 J Dup. 380 UJ
8260A	LYGSTNKANSX1 LYGSTNKANSDS	methylene chloride	6 U	19	Original 6 UJ Dup. 19 J
8270B	LYGSTNKANSX1 LYGSTNKANSDS	phenanthrene	1400	400 U	Original 1400 J Dup. 400 UJ
8270B	LYGSTNKANSX1 LYGSTNKANSDS	anthracene	420	400 U	Original 420 J Dup. 400 UJ
8270B	LYGSTNKANSX1 LYGSTNKANSDS	fluoranthene	2600	77 J	Original 2600 J
8270B	LYGSTNKANSX1 LYGSTNKANSDS	pyrene	1700	65 J	Original 1700 J
8270B	LYGSTNKANSX1 LYGSTNKANSDS	benzo(a)anthracene	1100	44 J	Original 1100 J
8270B	LYGSTNKANSX1 LYGSTNKANSDS	chrysene	910	64 J	Original 910 J
8270B	LYGSTNKANSX1 LYGSTNKANSDS	benzo(b)fluoranthene	900	71 J	Original 900 J
8270B	LYGSTNKANSX1 LYGSTNKANSDS	benzo(a)pyrene	760	49 J	Original 760 J
8260A	SAFILTRANSX1 SAFILTRANSDS	trichlorofluoromethane	6 U	6	Original 6 UJ Dup. 6 J
8260A	SAFILTRANSX1 SAFILTRANSDS	acetone	6 U	8	Original 6 UJ Dup. 8 J
8260A	SAFILTRANSX1 SAFILTRANSDS	toluene	6 U	9	Original 6 UJ Dup. 9 J
8260A	SAFILTRANSX1 SAFILTRANSDS	xylene, total	6 U	6	Original 6 UJ Dup. 6 J
8260A	SAFILTRANSX1 SAFILTRANSDS	1,2,4-trimethylbenzene	6 U	6	Original 6 UJ Dup. 6 J
8260A	SASEPTICANSX1 SASEPTICANSDS	acetone	5 U	10	Original 5 UJ Dup. 10 J
8260A	SAGSPMPBSSX1 SAGSPMPBSSDS	methylene chloride	6 U	14	Original 6 UJ Dup. 14 J
8260A	SAGSPMPBSSX1 SAGSPMPBSSDS	1,1,1-trichloroethane	24	96	Original 24 J Dup. 96 J
8260A	SAGSPMPBSSX1 SAGSPMPBSSDS	trichloroethene	6 U	20	Original 6 UJ Dup. 20 J
8260A	SAGSPMPBSSX1 SAGSPMPBSSDS	toluene	6 U	10	Original 6 UJ Dup. 10 J
8270B	SAGSPMPBSSX1 SAGSPMPBSSDS	butylbenzylphthalate	220 J	1100	Dup. 1100 J
524.2	SAWTRSPAWSX1 SAWTRSPAWSDS	methylene chloride	3	1	Original 3 J Dup. 1 J
524.2	SAWTRSPAWSX1 SAWTRSPAWSDS	trichloroethene	0.9	0.5 U	Original 0.9 J Dup. 0.5 UJ
8081	LYSEPTICASBX2 LYSEPTICASBDS	4,4'-DDT	4.1 U	4.1	Original 4.1 UJ Dup. 4.1 J

Surrogate Results

Several method 8270B samples and one method 8015 sample have surrogate recoveries out of the recovery windows (see worksheets). For method 8270B, Mitkem did not re-extract and reanalyze the samples as required by section 8.9.5 found in the method. Method 8270B specifies estimating the data in this case. However, the validation guidelines recommend only qualifying data when more than one surrogate in either the base/neutral or acid fraction exceed the control limits. The validator is using the validation guidelines for these data. Most of the surrogate deviations are the result of high surrogate recoveries for 2,4,6-tribromophenol. High (but in criteria) method blank data for this surrogate indicates that the laboratory is probably experiencing a deviation in the spiking concentration and should investigate the reason for the high recovery. One sample (LYUST08DSBX1) for method 8270B had two surrogates (2-fluorobiphenyl & p-terphenyl-d14) out of criteria (125%, 178% respectively). Since the only positive results for this sample are already estimated no data qualification was necessary. These results should be considered bias high based on the high surrogate recoveries. For method 8015, the surrogate (p-terphenyl) for sample SAUST03ASBX1 recovery is high and out of criteria. The result of 840 mg/Kg dry weight is qualified as estimated (840 J) for this sample. This result should be considered biased high.

The oil matrix samples were extracted using a modified medium level extraction. However, the surrogates were not spiked at the proper concentration for this dilution. Since all samples are already qualified due to holding time violations, no further action is taken.

Holding Times

There is no confirmation of sample preservation for volatile analysis. Neither the COC noted VOA preservation nor did the laboratory check the VOA samples after analysis. Both parties must be notified of this requirement. The validator does have verbal confirmation of sample preservation from Stone & Webster. It is assumed that the samples are preserved for this validation. All VOA samples were analyzed within the preserved hold time of 14 days. Many VOA samples were also analyzed within the non-preserved holding time of 7 days. If it is determined that the samples were not preserved, the aromatic compounds must be estimated on samples that were analyzed greater than 7 days after sample collection.

The oil matrix samples (LYWTRSPBWSX1 & LYWTRSPBWSDS) were extracted one day outside of the holding time for SVOA analysis. All positive results (none) for these samples are estimated (J) and non-detects are estimated (UJ).

For method 525.2 analysis, sample LYWTRSPAWSX1 was extracted eight days after sample collection. This violates the holding time requirement by one day. All results for this sample are qualified (UJ) based on this holding time violation.

Other Information

For method 8270B sample LYUST04BSBX2 did not report the surrogate result for the surrogate p-terphenyl-d14. Upon review of the raw data, it was determined that the correct recovery is 96% and within criteria.

Other Information (continued)

For method 8270B samples SAVHCMTASSXIMS and SAVHCMTASSXIMSD, the recovery of the spiked compound 2,4-dinitrotoluene was reported at 22% for the MS and 56% for the MSD with an RPD of 2%. This is obviously incorrect. Upon review of the raw data the error is the recovery of the MS that should be 55% instead of 22%.

Some sample results were reported by Mitkem below the reporting limit with no "J" flag. The validator corrected this on the validation tables.

For method 8270B the dilution factor for samples LYWTRSPBWSX1 and LYWTRSPBWSDS were incorrectly reported at 100 fold. The correct dilution factor is 300.

No tentatively identified compounds were detected for the four method 525.2 samples. For this reason, no 525.2 TIC Tables were prepared.

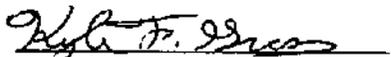
Summary

Limited laboratory contamination resulted in minor data qualifications for VOA analyses. Based on MS/MSD criteria deviations, minor data qualifications are required for one 8015 sample and two 525.2 samples. Field sample duplicate analysis resulted in 24 data estimates for several methods. Data for two samples (SVOA: LYUST08DSBX1) and (8015: SAUST03ASBX1) are estimated as a result of high surrogate recovery and should be considered biased high. Several typographical errors are present in the data reports from Mitkem that are corrected in the validated tables. No analytical data are rejected. For 525.2 analysis, sample LYWTRSPAWSX1 was extracted past the HT by one day and all results (non-detects) are estimated (UJ). Also, simazine and aldrin for the LCS have recoveries low and out of criteria resulting in estimates (UJ) for the non-detects for all four samples.

Tables I and II summarize the 8260A and 8260A tentatively identified compound findings, respectively. Tables III and IV display the qualified 8270B analytical results and 8270B tentatively identified compound findings, respectively. Table V is a summary of the qualified pesticide analytical results. Table VI is a summary of the qualified 8015 analytical results. Table VII is a summary of the qualified 524.2 analytical results. Table VIII is a summary of the qualified 525.2 analytical results. The data review worksheets are also appended to this memorandum.

Sincerely,

Kestrel Environmental Technologies, Inc.


Kyle F. Gross, Senior Reviewer

ORGANIC

VALIDATED DATA

Table I

Volatile (8260A) Validated Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYSEPTICASBDS	LYSEPTICASBN2	LYSEPTICASBX1	LYGSTNKANSDS	LYGSTNKANSX1
Lab Sample Number:	C0920-10	C0920-11	C0920-09	C0920-12	C0920-13
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Routine	Field Duplicate	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/11/96	9/11/96	9/11/96	9/11/96	9/11/96
Percent Moisture:	17	12	18	22	22
Dichlorodifluoromethane	6 U	6 U	6 U	6 U	6 U
Chloromethane	6 U	6 U	6 U	6 U	6 U
Vinyl chloride	6 U	6 U	6 U	6 U	6 U
Bromomethane	6 U	6 U	6 U	6 U	6 U
Chloroethane	6 U	6 U	6 U	6 U	6 U
Trichlorofluoromethane	6 U	6 U	6 U	6 U	6 U
1,1-Dichloroethene	6 U	6 U	6 U	6 U	6 U
Carbon disulfide	6 U	6 U	6 U	6 U	6 U
Iodomethane	6 U	6 U	6 U	6 U	6 U
Acetone	7 U	6 U	9 U	11 U	18 U
Methylene chloride	26 U	21 U	25 U	19 U	6 UJ
trans-1,2-Dichloroethene	6 U	6 U	6 U	6 U	6 U
1,1-Dichloroethane	6 U	6 U	6 U	6 U	6 U
Vinyl acetate	6 U	6 U	6 U	6 U	6 U
2,2-Dichloropropane	6 U	6 U	6 U	6 U	6 U
cis-1,2-Dichloroethene	6 U	6 U	6 U	6 U	6 U
Methyl ethyl ketone	6 U	6 U	6 U	6 U	6 U
Bromo-chloromethane	6 U	6 U	6 U	6 U	6 U
Chloroform	6 U	6 U	6 U	6 U	6 U
1,1,1-Trichloroethane	6 U	6 U	6 U	6 U	6 U
Carbon tetrachloride	6 U	6 U	6 U	6 U	6 U
1,1-Dichloropropene	6 U	6 U	6 U	6 U	6 U
Benzene	6 U	6 U	6 U	6 U	6 U
1,2-Dichloroethane	6 U	6 U	6 U	6 U	6 U
Trichloroethene	6 U	6 U	6 U	6 U	6 U
1,2-Dichloropropane	6 U	6 U	6 U	6 U	6 U
Dibromomethane	6 U	6 U	6 U	6 U	6 U
Bromodichloromethane	6 U	6 U	6 U	6 U	6 U
2-Chloroethyl vinyl ether	6 U	6 U	6 U	6 U	6 U
cis-1,3-Dichloropropene	6 U	6 U	6 U	6 U	6 U
4-Methyl-2-pentanone	6 U	6 U	6 U	6 U	6 U
Toluene	6 U	6 U	6 U	6 U	6 U
trans-1,3-Dichloropropene	6 U	6 U	6 U	6 U	6 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYSEPTICASBDS	LYSEPTICASBX2	LYSEPTICASBX1	LYGSTNKANSDS	LYGSTNKANSX1
Lab Sample Number:	C0920-10	C0920-11	C0920-09	C0920-12	C0920-13
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Routine	Field Duplicate	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/11/96	9/11/96	9/11/96	9/11/96	9/11/96
Percent Moisture:	17	12	18	22	22
1,1,2-Trichloroethane	6 U	6 U	6 U	6 U	6 U
Tetrachloroethene	6 U	6 U	6 U	6 U	6 U
1,3-Dichloropropane	6 U	6 U	6 U	6 U	6 U
2-Hexanone	6 U	6 U	6 U	6 U	6 U
Dibromochloromethane	6 U	6 U	6 U	6 U	6 U
1,2-Dibromoethane (EDB)	6 U	6 U	6 U	6 U	6 U
Chlorobenzene	6 U	6 U	6 U	6 U	6 U
1,1,1,2-Tetrachloroethane	6 U	6 U	6 U	6 U	6 U
Ethylbenzene	6 U	6 U	6 U	6 U	6 U
Xylenes, total	6 U	6 U	6 U	6 U	6 U
Styrene	6 U	6 U	6 U	6 U	6 U
Bromoform	6 U	6 U	6 U	6 U	6 U
Isopropylbenzene	6 U	6 U	6 U	6 U	6 U
Bromobenzene	6 U	6 U	6 U	6 U	6 U
1,1,2,2-Tetrachloroethane	6 U	6 U	6 U	6 U	6 U
1,2,3-Trichloropropane	6 U	6 U	6 U	6 U	6 U
n-Propylbenzene	6 U	6 U	6 U	6 U	6 U
2-Chlorotoluene	6 U	6 U	6 U	6 U	6 U
4-Chlorotoluene	6 U	6 U	6 U	6 U	6 U
1,3,5-Trimethylbenzene	6 U	6 U	6 U	6 U	6 U
tert-Butylbenzene	6 U	6 U	6 U	6 U	6 U
1,2,4-Trimethylbenzene	6 U	6 U	6 U	6 U	6 U
sec-Butylbenzene	6 U	6 U	6 U	6 U	6 U
1,3-Dichlorobenzene	6 U	6 U	6 U	6 U	6 U
4-Isopropyltoluene	6 U	6 U	6 U	6 U	6 U
1,4-Dichlorobenzene	6 U	6 U	6 U	6 U	6 U
1,2-Dichlorobenzene	6 U	6 U	6 U	6 U	6 U
n-Butylbenzene	6 U	6 U	6 U	6 U	6 U
1,2-Dibromo-3-chloropropane	6 U	6 U	6 U	6 U	6 U
1,2,4-Trichlorobenzene	6 U	6 U	6 U	6 U	6 U
Hexachlorobutadiene	6 U	6 U	6 U	6 U	6 U
1,2,3-Trichlorobenzene	6 U	6 U	6 U	6 U	6 U
MTBE	6 U	6 U	6 U	6 U	6 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYGSTNKBNSDS	LYGSTNKBSNXI	TRIP BLANK	LYGRASSANSXI	LYRDTWRANSXI
Lab Sample Number:	C0920-14	C0920-15	C0920-20	C0921-09	C0921-10
Matrix/Analysis:	Soil/Low	Soil/Low	Aqueous/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Trip Blank	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/5/96	9/5/96	9/5/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/11/96	9/11/96	9/13/96	9/11/96	9/11/96
Percent Moisture:	10	11	NA	31	14

Dichlorodifluoromethane	6 U	6 U	5 U	7 U	6 U
Chloromethane	6 U	6 U	5 U	7 U	6 U
Vinyl chloride	6 U	6 U	5 U	7 U	6 U
Bromomethane	6 U	6 U	5 U	7 U	6 U
Chloroethane	6 U	6 U	5 U	7 U	6 U
Trichlorofluoromethane	6 U	6 U	5 U	7 U	6 U
1,1-Dichloroethene	6 U	6 U	5 U	7 U	6 U
Carbon disulfide	6 U	6 U	5 U	7 U	6 U
Iodomethane	6 U	6 U	5 U	7 U	6 U
Acetone	13 U	17 U	5 U	7 U	6 U
Methylene chloride	6 U	6 U	5 U	23 U	15 U
trans-1,2-Dichloroethene	6 U	6 U	5 U	7 U	6 U
1,1-Dichloroethane	6 U	6 U	5 U	7 U	6 U
Vinyl acetate	6 U	6 U	5 U	7 U	6 U
2,2-Dichloropropane	6 U	6 U	5 U	7 U	6 U
cis-1,2-Dichloroethene	6 U	6 U	5 U	7 U	6 U
Methyl ethyl ketone	6 U	6 U	5 U	7 U	6 U
Bromochloromethane	6 U	6 U	5 U	7 U	6 U
Chloroform	6 U	6 U	5 U	7 U	6 U
1,1,1-Trichloroethane	6 U	6 U	5 U	7 U	6 U
Carbon tetrachloride	6 U	6 U	5 U	7 U	6 U
1,1-Dichloropropene	6 U	6 U	5 U	7 U	6 U
Benzene	6 U	6 U	5 U	7 U	6 U
1,2-Dichloroethane	6 U	6 U	5 U	7 U	6 U
Trichloroethene	6 U	6 U	5 U	7 U	6 U
1,2-Dichloropropane	6 U	6 U	5 U	7 U	6 U
Dibromomethane	6 U	6 U	5 U	7 U	6 U
Bromodichloromethane	6 U	6 U	5 U	7 U	6 U
2-Chloroethyl vinyl ether	6 U	6 U	5 U	7 U	6 U
cis-1,3-Dichloropropene	6 U	6 U	5 U	7 U	6 U
4-Methyl-2-pentanone	6 U	6 U	5 U	7 U	6 U
Toluene	6 U	6 U	5 U	7 U	6 U
trans-1,3-Dichloropropene	6 U	6 U	5 U	7 U	6 U

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYGSTNKBNSDS	LYGSTNKBNSX1	TRIP BLANK	LYGRASSANSX1	LYRDTWRANSX1
Lab Sample Number:	C0920-14	C0920-15	C0920-20	C0921-09	C0921-10
Matrix/Analysis:	Soil/Low	Soil/Low	Aqueous/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Trip Blank	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/5/96	9/5/96	9/5/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/11/96	9/11/96	9/13/96	9/11/96	9/11/96
Percent Moisture:	10	11	NA	31	14

1,1,2-Trichloroethane	6 U	6 U	5 U	7 U	6 U
Tetrachloroethene	6 U	6 U	5 U	7 U	6 U
1,3-Dichloropropane	6 U	6 U	5 U	7 U	6 U
2-Hexanone	6 U	6 U	5 U	7 U	6 U
Dibromochloromethane	6 U	6 U	5 U	7 U	6 U
1,2-Dibromoethane (EDB)	6 U	6 U	5 U	7 U	6 U
Chlorobenzene	6 U	6 U	5 U	7 U	6 U
1,1,1,2-Tetrachloroethane	6 U	6 U	5 U	7 U	6 U
Ethylbenzene	6 U	6 U	5 U	7 U	6 U
Xylenes, total	6 U	6 U	5 U	7 U	6 U
Styrene	6 U	6 U	5 U	7 U	6 U
Bromoform	6 U	6 U	5 U	7 U	6 U
Isopropylbenzene	6 U	6 U	5 U	7 U	6 U
Bromobenzene	6 U	6 U	5 U	7 U	6 U
1,1,2,2-Tetrachloroethane	6 U	6 U	5 U	7 U	6 U
1,2,3-Trichloropropane	6 U	6 U	5 U	7 U	6 U
n-Propylbenzene	6 U	6 U	5 U	7 U	6 U
2-Chlorotoluene	6 U	6 U	5 U	7 U	6 U
4-Chlorotoluene	6 U	6 U	5 U	7 U	6 U
1,3,5-Trimethylbenzene	6 U	6 U	5 U	7 U	6 U
tert-Butylbenzene	6 U	6 U	5 U	7 U	6 U
1,2,4-Trimethylbenzene	6 U	6 U	5 U	7 U	6 U
sec-Butylbenzene	6 U	6 U	5 U	7 U	6 U
1,3-Dichlorobenzene	6 U	6 U	5 U	7 U	6 U
4-Isopropyltoluene	6 U	6 U	5 U	7 U	6 U
1,4-Dichlorobenzene	6 U	6 U	5 U	7 U	6 U
1,2-Dichlorobenzene	6 U	6 U	5 U	7 U	6 U
n-Butylbenzene	6 U	6 U	5 U	7 U	6 U
1,2-Dibromo-3-chloropropane	6 U	6 U	5 U	7 U	6 U
1,2,4-Trichlorobenzene	6 U	6 U	5 U	7 U	6 U
Hexachlorobutadiene	6 U	6 U	5 U	7 U	6 U
1,2,3-Trichlorobenzene	6 U	6 U	5 U	7 U	6 U
MTBE	6 U	6 U	5 U	7 U	6 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYRDTWRBNSX1	LYPLATEANSX1	LYLEACHANSX1	LYLEACHBNSX1	LYLEACHCNSX1
Lab Sample Number:	C0921-11	C0921-12	C0921-13	C0921-14	C0921-15
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/5/96	9/5/96	9/5/96	9/5/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/11/96	9/12/96	9/12/96	9/12/96	9/12/96
Percent Moisture:	33	3	9	13	13

Dichlorodifluoromethane	7 U	5 U	5 U	6 U	6 U
Chloromethane	7 U	5 U	5 U	6 U	6 U
Vinyl chloride	7 U	5 U	5 U	6 U	6 U
Bromomethane	7 U	5 U	5 U	6 U	6 U
Chloroethane	7 U	5 U	5 U	6 U	6 U
Trichlorofluoromethane	7 U	5 U	5 U	6 U	6 U
1,1-Dichloroethene	7 U	5 U	5 U	6 U	6 U
Carbon disulfide	7 U	5 U	5 U	6 U	6 U
Iodomethane	7 U	5 U	5 U	6 U	6 U
Acetone	7 U	5 U	5 U	7 U	6 U
Methylene chloride	30 U	5 U	15 U	19 U	17 U
trans-1,2-Dichloroethene	7 U	5 U	5 U	6 U	6 U
1,1-Dichloroethane	7 U	5 U	5 U	6 U	6 U
Vinyl acetate	7 U	5 U	5 U	6 U	6 U
2,2-Dichloropropane	7 U	5 U	5 U	6 U	6 U
cis-1,2-Dichloroethene	7 U	5 U	5 U	6 U	6 U
Methyl ethyl ketone	7 U	5 U	5 U	6 U	6 U
Bromo-chloromethane	7 U	5 U	5 U	6 U	6 U
Chloroform	7 U	5 U	5 U	6 U	6 U
1,1,1-Trichloroethane	7 U	5 U	5 U	6 U	6 U
Carbon tetrachloride	7 U	5 U	5 U	6 U	6 U
1,1-Dichloropropene	7 U	5 U	5 U	6 U	6 U
Benzene	7 U	5 U	5 U	6 U	6 U
1,2-Dichloroethane	7 U	5 U	5 U	6 U	6 U
Trichloroethene	7 U	5 U	5 U	6 U	6 U
1,2-Dichloropropane	7 U	5 U	5 U	6 U	6 U
Dibromomethane	7 U	5 U	5 U	6 U	6 U
Bromodichloromethane	7 U	5 U	5 U	6 U	6 U
2-Chloroethyl vinyl ether	7 U	5 U	5 U	6 U	6 U
cis-1,3-Dichloropropene	7 U	5 U	5 U	6 U	6 U
4-Methyl-2-pentanone	7 U	5 U	5 U	6 U	6 U
Toluene	7 U	5 U	5 U	6	6 U
trans-1,3-Dichloropropene	7 U	5 U	5 U	6 U	6 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYRDTWRBNSX1	LYPLATEANSX1	LYLEACHANSX1	LYLEACHBNSX1	LYLEACHCNSX1
Lab Sample Number:	C0921-11	C0921-12	C0921-13	C0921-14	C0921-15
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/5/96	9/5/96	9/5/96	9/5/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/11/96	9/12/96	9/12/96	9/12/96	9/12/96
Percent Moisture:	33	3	9	13	13
1,1,2-Trichlorethane	7 U	5 U	5 U	6 U	6 U
Tetrachloroethene	7 U	5 U	5 U	6 U	6 U
1,3-Dichloropropane	7 U	5 U	5 U	6 U	6 U
2-Hexanone	7 U	5 U	5 U	6 U	6 U
Dibromochloromethane	7 U	5 U	5 U	6 U	6 U
1,2-Dibromoethane (EDB)	7 U	5 U	5 U	6 U	6 U
Chlorobenzene	7 U	5 U	5 U	6 U	6 U
1,1,1,2-Tetrachloroethane	7 U	5 U	5 U	6 U	6 U
Ethylbenzene	7 U	5 U	5 U	6 U	6 U
Xylenes, total	7 U	5 U	5 U	6 U	6 U
Styrene	7 U	5 U	5 U	6 U	6 U
Bromoform	7 U	5 U	5 U	6 U	6 U
Isopropylbenzene	7 U	5 U	5 U	6 U	6 U
Bromobenzene	7 U	5 U	5 U	6 U	6 U
1,1,2,2-Tetrachloroethane	7 U	5 U	5 U	6 U	6 U
1,2,3-Trichloropropane	7 U	5 U	5 U	6 U	6 U
n-Propylbenzene	7 U	5 U	5 U	6 U	6 U
2-Chlorotoluene	7 U	5 U	5 U	6 U	6 U
4-Chlorotoluene	7 U	5 U	5 U	6 U	6 U
1,3,5-Trimethylbenzene	7 U	5 U	5 U	6 U	6 U
tert-Butylbenzene	7 U	5 U	5 U	6 U	6 U
1,2,4-Trimethylbenzene	7 U	5 U	5 U	6 U	6 U
sec-Butylbenzene	7 U	5 U	5 U	6 U	6 U
1,3-Dichlorobenzene	7 U	5 U	5 U	6 U	6 U
4-Isopropyltoluene	7 U	5 U	5 U	6 U	6 U
1,4-Dichlorobenzene	7 U	5 U	5 U	6 U	6 U
1,2-Dichlorobenzene	7 U	5 U	5 U	6 U	6 U
n-Butylbenzene	7 U	5 U	5 U	6 U	6 U
1,2-Dibromo-3-chloropropane	7 U	5 U	5 U	6 U	6 U
1,2,4-Trichlorobenzene	7 U	5 U	5 U	6 U	6 U
Hexachlorobutadiene	7 U	5 U	5 U	6 U	6 U
1,2,3-Trichlorobenzene	7 U	5 U	5 U	6 U	6 U
MTBE	7 U	5 U	5 U	6 U	6 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	TRIP BLANK	SAAUTOHASBX1	SAAUTOHASBX2	SADBRISANSX1	SAFILTRANSX1
Lab Sample Number:	C0921-16	C0927-10	C0927-11	C0927-12	C0927-13
Matrix/Analysis:	Aqueous/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Trip Blank	Routine	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/16/96	9/17/96	9/17/96	9/17/96	9/17/96
Percent Moisture:	NA	11	14	6	23

1,1,2-Trichloroethane	5 U	6 U	6 U	5 U	6 U
Tetrachloroethene	5 U	6 U	6 U	5 U	6 U
1,3-Dichloropropane	5 U	6 U	6 U	5 U	6 U
2-Hexanone	5 U	6 U	6 U	5 U	6 U
Dibromochloromethane	5 U	6 U	6 U	5 U	6 U
1,2-Dibromoethane (EDB)	5 U	6 U	6 U	5 U	6 U
Chlorobenzene	5 U	6 U	6 U	5 U	6 U
1,1,1,2-Tetrachloroethane	5 U	6 U	6 U	5 U	6 U
Ethylbenzene	5 U	6 U	6 U	5 U	6 U
Xylenes, total	5 U	6 U	6 U	5 U	6 UJ
Styrene	5 U	6 U	6 U	5 U	6 U
Bromoform	5 U	6 U	6 U	5 U	6 U
Isopropylbenzene	5 U	6 U	6 U	5 U	6 U
Bromobenzene	5 U	6 U	6 U	5 U	6 U
1,1,2,2-Tetrachloroethane	5 U	6 U	6 U	5 U	6 U
1,2,3-Trichloropropane	5 U	6 U	6 U	5 U	6 U
n-Propylbenzene	5 U	6 U	6 U	5 U	6 U
2-Chlorotoluene	5 U	6 U	6 U	5 U	6 U
4-Chlorotoluene	5 U	6 U	6 U	5 U	6 U
1,3,5-Trimethylbenzene	5 U	6 U	6 U	5 U	6 U
tert-Butylbenzene	5 U	6 U	6 U	5 U	6 U
1,2,4-Trimethylbenzene	5 U	6 U	6 U	5 U	6 UJ
sec-Butylbenzene	5 U	6 U	6 U	5 U	6 U
1,3-Dichlorobenzene	5 U	6 U	6 U	5 U	6 U
4-Isopropyltoluene	5 U	6 U	6 U	5 U	6 U
1,4-Dichlorobenzene	5 U	6 U	6 U	5 U	6 U
1,2-Dichlorobenzene	5 U	6 U	6 U	5 U	6 U
n-Butylbenzene	5 U	6 U	6 U	5 U	6 U
1,2-Dibromo-3-chloropropane	5 U	6 U	6 U	5 U	6 U
1,2,4-Trichlorobenzene	5 U	6 U	6 U	5 U	6 U
Hexachlorobutadiene	5 U	6 U	6 U	5 U	6 U
1,2,3-Trichlorobenzene	5 U	6 U	6 U	5 U	6 U
MTBE	5 U	6 U	6 U	5 U	6 U

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UJ - The compound was not detected. The compound quantitation limit is an estimated value.

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	TRIP BLANK	SAAUTOHASBX1	SAAUTOHASBX2	SADBRISANSX1	SAFILTRANSX1
Lab Sample Number:	C0921-16	C0927-10	C0927-11	C0927-12	C0927-13
Matrix/Analysis:	Aqueous/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Trip Blank	Routine	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/16/96	9/17/96	9/17/96	9/17/96	9/17/96
Percent Moisture:	NA	11	14	6	23

Dichlorodifluoromethane	5 U	6 U	6 U	5 U	6 U
Chloromethane	5 U	6 U	6 U	5 U	6 U
Vinyl chloride	5 U	6 U	6 U	5 U	6 U
Bromomethane	5 U	6 U	6 U	5 U	6 U
Chloroethane	5 U	6 U	6 U	5 U	6 U
Trichlorofluoromethane	5 U	6 U	6 U	5 U	6 U
1,1-Dichloroethene	5 U	6 U	6 U	5 U	6 U
Carbon disulfide	5 U	6 U	6 U	5 U	6 U
Iodomethane	5 U	6 U	6 U	5 U	6 U
Acetone	5 U	10 U	15 U	8 U	6 U
Methylene chloride	5 U	9 U	9 U	8 U	6 U
trans-1,2-Dichloroethene	5 U	6 U	6 U	5 U	6 U
1,1-Dichloroethane	5 U	6 U	6 U	5 U	6 U
Vinyl acetate	5 U	6 U	6 U	5 U	6 U
2,2-Dichloropropane	5 U	6 U	6 U	5 U	6 U
cis-1,2-Dichloroethene	5 U	6 U	6 U	5 U	6 U
Methyl ethyl ketone	5 U	6 U	6 U	5 U	6 U
Bromo-chloromethane	5 U	6 U	6 U	5 U	6 U
Chloroform	5 U	6 U	6 U	5 U	6 U
1,1,1-Trichloroethane	5 U	6 U	6 U	5 U	6 U
Carbon tetrachloride	5 U	6 U	6 U	5 U	6 U
1,1-Dichloropropene	5 U	6 U	6 U	5 U	6 U
Benzene	5 U	6 U	6 U	5 U	6 U
1,2-Dichloroethane	5 U	6 U	6 U	5 U	6 U
Trichloroethene	5 U	6 U	6 U	5 U	6 U
1,2-Dichloropropane	5 U	6 U	6 U	5 U	6 U
Dibromomethane	5 U	6 U	6 U	5 U	6 U
Bromodichloromethane	5 U	6 U	6 U	5 U	6 U
2-Chloroethyl vinyl ether	5 U	6 U	6 U	5 U	6 U
cis-1,3-Dichloropropene	5 U	6 U	6 U	5 U	6 U
4-Methyl-2-pentanone	5 U	6 U	6 U	5 U	6 U
Toluene	5 U	6 U	6 U	5 U	6 U
trans-1,3-Dichloropropene	5 U	6 U	6 U	5 U	6 U

J - The associated numerical value is an estimated quantity.

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Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAFILTRANSDS	SAFILTRNSX1	SASEPTICANSX2	SASEPTICANSX1	SASEPTICANSDS
Lab Sample Number:	C0927-14	C0927-15	C0927-16	C0927-19	C0927-20
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Routine	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/7/96	9/7/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/17/96	9/17/96	9/17/96	9/17/96	9/17/96
Percent Moisture:	14	3	25	7	20
Dichlorodifluoromethane	6 U	5 U	7 U	5 U	6 U
Chloromethane	6 U	5 U	7 U	5 U	6 U
Vinyl chloride	6 U	5 U	7 U	5 U	6 U
Bromomethane	6 U	5 U	7 U	5 U	6 U
Chloroethane	6 U	5 U	7 U	5 U	6 U
Trichlorofluoromethane	6 J	5 U	7 U	5 U	6 U
1,1-Dichloroethene	6 U	5 U	7 U	5 U	6 U
Carbon disulfide	6 U	5 U	7 U	5 U	6 U
Iodomethane	6 U	5 U	7 U	5 U	6 U
Acetone	8 UJ	7 U	9 U	5 UJ	10 UJ
Methylene chloride	6 U	11 U	18 U	9 U	9 U
trans-1,2-Dichloroethene	6 U	5 U	7 U	5 U	6 U
1,1-Dichloroethane	6 U	5 U	7 U	5 U	6 U
Vinyl acetate	6 U	5 U	7 U	5 U	6 U
2,2-Dichloropropane	6 U	5 U	7 U	5 U	6 U
cis-1,2-Dichloroethene	6 U	5 U	7 U	5 U	6 U
Methyl ethyl ketone	6 U	5 U	7 U	5 U	6 U
Bromo-chloromethane	6 U	5 U	7 U	5 U	6 U
Chloroform	6 U	5 U	7 U	5 U	6 U
1,1,1-Trichloroethane	6 U	5 U	7 U	5 U	6 U
Carbon tetrachloride	6 U	5 U	7 U	5 U	6 U
1,1-Dichloropropene	6 U	5 U	7 U	5 U	6 U
Benzene	6 U	5 U	7 U	5 U	6 U
1,2-Dichloroethane	6 U	5 U	7 U	5 U	6 U
Trichloroethene	6 U	5 U	7 U	5 U	6 U
1,2-Dichloropropane	6 U	5 U	7 U	5 U	6 U
Dibromomethane	6 U	5 U	7 U	5 U	6 U
Bromodichloromethane	6 U	5 U	7 U	5 U	6 U
2-Chloroethyl vinyl ether	6 U	5 U	7 U	5 U	6 U
cis-1,3-Dichloropropene	6 U	5 U	7 U	5 U	6 U
4-Methyl-2-pentanone	6 U	5 U	7 U	5 U	6 U
Toluene	9 J	9	7 U	5 U	6 U
trans-1,3-Dichloropropene	6 U	5 U	7 U	5 U	6 U

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Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAFILTRANSDS	SAFILTRBNSX1	SASEPTICANSX2	SASEPTICANSX1	SASEPTICANSDS
Lab Sample Number:	C0927-14	C0927-15	C0927-16	C0927-19	C0927-20
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Routine	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/7/96	9/7/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/17/96	9/17/96	9/17/96	9/17/96	9/17/96
Percent Moisture:	14	3	25	7	20

1,1,2-Trichloroethane	6 U	5 U	7 U	5 U	6 U
Tetrachloroethene	6 U	5 U	7 U	5 U	6 U
1,3-Dichloropropane	6 U	5 U	7 U	5 U	6 U
2-Hexanone	6 U	5 U	7 U	5 U	6 U
Dibromochloromethane	6 U	5 U	7 U	5 U	6 U
1,2-Dibromoethane (EDB)	6 U	5 U	7 U	5 U	6 U
Chlorobenzene	6 U	5 U	7 U	5 U	6 U
1,1,1,2-Tetrachloroethane	6 U	5 U	7 U	5 U	6 U
Ethylbenzene	6 U	5 U	7 U	5 U	6 U
Xylenes, total	6 J	5 U	7 U	5 U	6 U
Styrene	6 U	5 U	7 U	5 U	6 U
Bromoform	6 U	5 U	7 U	5 U	6 U
Isopropylbenzene	6 U	5 U	7 U	5 U	6 U
Bromobenzene	6 U	5 U	7 U	5 U	6 U
1,1,2,2-Tetrachloroethane	6 U	5 U	7 U	5 U	6 U
1,2,3-Trichloropropane	6 U	5 U	7 U	5 U	6 U
n-Propylbenzene	6 U	5 U	7 U	5 U	6 U
2-Chlorotoluene	6 U	5 U	7 U	5 U	6 U
4-Chlorotoluene	6 U	5 U	7 U	5 U	6 U
1,3,5-Trimethylbenzene	6 U	5 U	7 U	5 U	6 U
tert-Butylbenzene	6 U	5 U	7 U	5 U	6 U
1,2,4-Trimethylbenzene	6 J	5 U	7 U	5 U	6 U
sec-Butylbenzene	6 U	5 U	7 U	5 U	6 U
1,3-Dichlorobenzene	6 U	5 U	7 U	5 U	6 U
4-Isopropyltoluene	6 U	5 U	7 U	5 U	6 U
1,4-Dichlorobenzene	6 U	5 U	7 U	5 U	6 U
1,2-Dichlorobenzene	6 U	5 U	7 U	5 U	6 U
n-Butylbenzene	6 U	5 U	7 U	5 U	6 U
1,2-Dibromo-3-chloropropane	6 U	5 U	7 U	5 U	6 U
1,2,4-Trichlorobenzene	6 U	5 U	7 U	5 U	6 U
Hexachlorobutadiene	6 U	5 U	7 U	5 U	6 U
1,2,3-Trichlorobenzene	6 U	5 U	7 U	5 U	6 U
MTBE	6 U	5 U	7 U	5 U	6 U

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Aqueous units are reported in µg/L.

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Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	TRIP BLANK	LYW'SHBY ASSXI	LYWTRSPBWSDS	LYWTRSPBWSXI	TRIP BLANK
Lab Sample Number:	C0927-25	C0985-01	C0985-03	C0985-04	C0985-05
Matrix/Analysis:	Aqueous/Low	Soil/Low	Oil/Low	Oil/Low	Aqueous/Low
Sample Type:	Trip Blank	Routine	Field Duplicate	Field Duplicate	Trip Blank
Dilution Factor:	1	1	10	10	1
Date Sampled:	9/9/96	9/17/96	9/17/96	9/17/96	9/18/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/16/96	9/26/96	9/30/96	9/30/96	9/30/96
Percent Moisture:	NA	8	NA	NA	NA

Dichlorodifluoromethane	5 U	5 U	50 U	50 U	5 U
Chloromethane	5 U	5 U	50 U	50 U	3 J
Vinyl chloride	5 U	5 U	50 U	50 U	5 U
Bromomethane	5 U	5 U	50 U	50 U	5 U
Chloroethane	5 U	5 U	50 U	50 U	5 U
Trichlorofluoromethane	5 U	5 U	50 U	50 U	5 U
1,1-Dichloroethene	5 U	5 U	50 U	50 U	5 U
Carbon disulfide	5 U	5 U	50 U	50 U	5 U
Iodomethane	5 U	5 U	50 U	50 U	5 U
Acetone	5 U	6 U	50 U	50 U	5 U
Methylene chloride	5 U	5 U	50 U	50 U	7
trans-1,2-Dichloroethene	5 U	5 U	50 U	50 U	5 U
1,1-Dichloroethane	5 U	5 U	50 U	50 U	5 U
Vinyl acetate	5 U	5 U	50 U	50 U	5 U
2,2-Dichloropropane	5 U	5 U	50 U	50 U	5 U
cis-1,2-Dichloroethene	5 U	5 U	50 U	50 U	5 U
Methyl ethyl ketone	5 U	5 U	50 U	50 U	5 U
Bromochloromethane	5 U	5 U	50 U	50 U	5 U
Chloroform	5 U	5 U	50 U	50 U	5 U
1,1,1-Trichloroethane	5 U	8	50 U	50 U	5 U
Carbon tetrachloride	5 U	5 U	50 U	50 U	5 U
1,1-Dichloropropene	5 U	5 U	50 U	50 U	5 U
Benzene	5 U	5 U	50 U	50 U	5 U
1,2-Dichloroethane	5 U	5 U	50 U	50 U	5 U
Trichloroethene	5 U	5 U	50 U	50 U	1 J
1,2-Dichloropropane	5 U	5 U	50 U	50 U	5 U
Dibromomethane	5 U	5 U	50 U	50 U	5 U
Bromodichloromethane	5 U	5 U	50 U	50 U	5 U
2-Chloroethyl vinyl ether	5 U	5 U	50 U	50 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	50 U	50 U	5 U
4-Methyl-2-pentanone	5 U	5 U	50 U	50 U	5 U
Toluene	5 U	5 U	50 U	50 U	5 U
trans-1,3-Dichloropropene	5 U	5 U	50 U	50 U	5 U

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	TRIP BLANK	LYWSHBY ASSX1	LYWTRSPBWSDS	LYWTRSPBWSX1	TRIP BLANK
Lab Sample Number:	C0927-25	C0985-01	C0985-03	C0985-04	C0985-05
Matrix/Analysis:	Aqueous/Low	Soil/Low	Oil/Low	Oil/Low	Aqueous/Low
Sample Type:	Trip Blank	Routine	Field Duplicate	Field Duplicate	Trip Blank
Dilution Factor:	1	1	10	10	1
Date Sampled:	9/9/96	9/17/96	9/17/96	9/17/96	9/18/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/16/96	9/26/96	9/30/96	9/30/96	9/30/96
Percent Moisture:	NA	8	NA	NA	NA

1,1,2-Trichloroethane	5 U	5 U	50 U	50 U	5 U
Tetrachloroethene	5 U	5 U	50 U	50 U	5 U
1,3-Dichloropropane	5 U	5 U	50 U	50 U	5 U
2-Hexanone	5 U	5 U	50 U	50 U	5 U
Dibromochloromethane	5 U	5 U	50 U	50 U	5 U
1,2-Dibromoethane (EDB)	5 U	5 U	50 U	50 U	5 U
Chlorobenzene	5 U	5 U	50 U	50 U	5 U
1,1,1,2-Tetrachloroethane	5 U	5 U	50 U	50 U	5 U
Ethylbenzene	5 U	5 U	50 U	50 U	5 U
Xylenes, total	5 U	5 U	50 U	50 U	5 U
Styrene	5 U	5 U	50 U	50 U	5 U
Bromoform	5 U	5 U	50 U	50 U	5 U
Isopropylbenzene	5 U	5 U	50 U	50 U	5 U
Bromobenzene	5 U	5 U	50 U	50 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	50 U	50 U	5 U
1,2,3-Trichloropropane	5 U	5 U	50 U	50 U	5 U
n-Propylbenzene	5 U	5 U	50 U	50 U	5 U
2-Chlorotoluene	5 U	5 U	50 U	50 U	5 U
4-Chlorotoluene	5 U	5 U	50 U	50 U	5 U
1,3,5-Trimethylbenzene	5 U	5 U	50 U	50 U	5 U
tert-Butylbenzene	5 U	5 U	50 U	50 U	5 U
1,2,4-Trimethylbenzene	5 U	5 U	50 U	50 U	5 U
sec-Butylbenzene	5 U	5 U	50 U	50 U	5 U
1,3-Dichlorobenzene	5 U	5 U	50 U	50 U	5 U
4-Isopropyltoluene	5 U	5 U	50 U	50 U	5 U
1,4-Dichlorobenzene	5 U	5 U	50 U	50 U	5 U
1,2-Dichlorobenzene	5 U	5 U	50 U	50 U	5 U
n-Butylbenzene	5 U	5 U	50 U	50 U	5 U
1,2-Dibromo-3-chloropropane	5 U	5 U	50 U	50 U	5 U
1,2,4-Trichlorobenzene	5 U	5 U	50 U	50 U	5 U
Hexachlorobutadiene	5 U	5 U	50 U	50 U	5 U
1,2,3-Trichlorobenzene	5 U	5 U	50 U	50 U	5 U
MTBE	5 U	5 U	50 U	50 U	5 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAGSPMPBSSX1	SAGSPMPBSSDS	SAGSPMPASSX1	SAVHCMTASSX1	TRIP BLANK
Lab Sample Number:	C0985-07	C0985-08	C0985-09	C0985-10	C0985-13
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Aqueous/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Trip Blank
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/18/96	9/18/96	9/18/96	9/18/96	9/19/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/26/96	9/27/96	9/27/96	9/27/96	9/30/96
Percent Moisture:	18	11	12	17	NA

Dichlorodifluoromethane	6 U	6 U	6 U	6 U	5 U
Chloromethane	6 U	6 U	6 U	6 U	4 J
Vinyl chloride	6 U	6 U	6 U	6 U	5 U
Bromomethane	6 U	6 U	6 U	6 U	5 U
Chloroethane	6 U	6 U	6 U	6 U	5 U
Trichlorofluoromethane	6 U	6 U	6 U	6 U	5 U
1,1-Dichloroethene	6 U	6 U	6 U	6 U	5 U
Carbon disulfide	6 U	6 U	6 U	6 U	5 U
Iodomethane	6 U	6 U	6 U	6 U	5 U
Acetone	6 U	8 U	7 U	6 U	5 U
Methylene chloride	6 UJ	14 J	12 U	9 U	7
trans-1,2-Dichloroethene	6 U	6 U	6 U	6 U	5 U
1,1-Dichloroethane	6 U	6 U	6 U	6 U	5 U
Vinyl acetate	6 U	6 U	6 U	6 U	5 U
2,2-Dichloropropane	6 U	6 U	6 U	6 U	5 U
cis-1,2-Dichloroethene	6 U	6 U	6 U	6 U	5 U
Methyl ethyl ketone	6 U	6 U	6 U	6 U	5 U
Bromo-chloromethane	6 U	6 U	6 U	6 U	5 U
Chloroform	6 U	6 U	6 U	6 U	5 U
1,1,1-Trichloroethane	24 J	96 J	78	46	5 U
Carbon tetrachloride	6 U	6 U	6 U	6 U	5 U
1,1-Dichloropropene	6 U	6 U	6 U	6 U	5 U
Benzene	6 U	6 U	6 U	6 U	5 U
1,2-Dichloroethane	6 U	6 U	6 U	6 U	5 U
Trichloroethene	6 UJ	20 J	24	7 U	2 J
1,2-Dichloropropane	6 U	6 U	6 U	6 U	5 U
Dibromomethane	6 U	6 U	6 U	6 U	5 U
Bromodichloromethane	6 U	6 U	6 U	6 U	5 U
2-Chloroethyl vinyl ether	6 U	6 U	6 U	6 U	5 U
cis-1,3-Dichloropropene	6 U	6 U	6 U	6 U	5 U
4-Methyl-2-pentanone	6 U	6 U	6 U	6 U	5 U
Toluene	6 UJ	10 J	9	6 U	5 U
trans-1,3-Dichloropropene	6 U	6 U	6 U	6 U	5 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I

Volatile (8260A) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAG8PMPBSSXI	SAGSPMPBSSDS	SAGSPMPASSXI	SAVHCMTASSXI	TRIP BLANK
Lab Sample Number:	C0985-07	C0985-08	C0985-09	C0985-10	C0985-13
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Aqueous/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Trip Blank
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/18/96	9/18/96	9/18/96	9/18/96	9/19/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/26/96	9/27/96	9/27/96	9/27/96	9/30/96
Percent Moisture:	18	11	12	17	NA

1,1,2-Trichlorethane	6 U	6 U	6 U	6 U	5 U
Tetrachloroethene	6 U	6	10	6 U	5 U
1,3-Dichloropropane	6 U	6 U	6 U	6 U	5 U
2-Hexanone	6 U	6 U	6 U	6 U	5 U
Dibromochloromethane	6 U	6 U	6 U	6 U	5 U
1,2-Dibromoethane (EDB)	6 U	6 U	6 U	6 U	5 U
Chlorobenzene	6 U	6 U	6 U	6 U	5 U
1,1,1,2-Tetrachloroethane	6 U	6 U	6 U	6 U	5 U
Ethylbenzene	6 U	6 U	6 U	6 U	5 U
Xylenes, total	6 U	6 U	6 U	6 U	5 U
Styrene	6 U	6 U	6 U	6 U	5 U
Bromoform	6 U	6 U	6 U	6 U	5 U
Isopropylbenzene	6 U	6 U	6 U	6 U	5 U
Bromobenzene	6 U	6 U	6 U	6 U	5 U
1,1,2,2-Tetrachloroethane	6 U	6 U	6 U	6 U	5 U
1,2,3-Trichloropropane	6 U	6 U	6 U	6 U	5 U
n-Propylbenzene	6 U	6 U	6 U	6 U	5 U
2-Chlorotoluene	6 U	6 U	6 U	6 U	5 U
4-Chlorotoluene	6 U	6 U	6 U	6 U	5 U
1,3,5-Trimethylbenzene	6 U	6 U	6 U	6 U	5 U
tert-Butylbenzene	6 U	6 U	6 U	6 U	5 U
1,2,4-Trimethylbenzene	6 U	6 U	6 U	6 U	5 U
sec-Butylbenzene	6 U	6 U	6 U	6 U	5 U
1,3-Dichlorobenzene	6 U	6 U	6 U	6 U	5 U
4-Isopropyltoluene	6 U	6 U	6 U	6 U	5 U
1,4-Dichlorobenzene	6 U	6 U	6 U	6 U	5 U
1,2-Dichlorobenzene	6 U	6 U	6 U	6 U	5 U
n-Butylbenzene	6 U	6 U	6 U	6 U	5 U
1,2-Dibromo-3-chloropropane	6 U	6 U	6 U	6 U	5 U
1,2,4-Trichlorobenzene	6 U	6 U	6 U	6 U	5 U
Hexachlorobutadiene	6 U	6 U	6 U	6 U	5 U
1,2,3-Trichlorobenzene	6 U	6 U	6 U	6 U	5 U
MTBE	6 U	6 U	6 U	6 U	5 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I**Volatile (8260A) Validated Results**

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYDRYWLASWX1	LYDRYWLASWDS
Lab Sample Number:	C0985-15	C0985-16
Matrix/Analysis:	Aqueous/Low	Aqueous/Low
Sample Type:	Field Duplicate	Field Duplicate
Dilution Factor:	1	1
Date Sampled:	9/19/96	9/19/96
Date Extracted:	NA	NA
Date Analyzed:	9/30/96	9/30/96
Percent Moisture:	NA	NA

Dichlorodifluoromethane	5 U	5 U
Chloromethane	5 U	5 U
Vinyl chloride	5 U	5 U
Bromomethane	5 U	5 U
Chloroethane	5 U	5 U
Trichlorofluoromethane	5 U	5 U
1,1-Dichloroethene	5 U	5 U
Carbon disulfide	5 U	5 U
Iodomethane	5 U	5 U
Acetone	6 U	5 U
Methylene chloride	5 U	7 U
trans-1,2-Dichloroethene	5 U	5 U
1,1-Dichloroethane	5 U	5 U
Vinyl acetate	5 U	5 U
2,2-Dichloropropane	5 U	5 U
cis-1,2-Dichloroethene	5 U	5 U
Methyl ethyl ketone	5 U	5 U
Bromo-chloromethane	5 U	5 U
Chloroform	5 U	5 U
1,1,1-Trichloroethane	1 J	5 U
Carbon tetrachloride	5 U	5 U
1,1-Dichloropropene	5 U	5 U
Benzene	5 U	5 U
1,2-Dichloroethane	5 U	5 U
Trichloroethene	5 U	5 U
1,2-Dichloropropane	5 U	5 U
Dibromomethane	5 U	5 U
Bromodichloromethane	5 U	5 U
2-Chloroethyl vinyl ether	5 U	5 U
cis-1,3-Dichloropropene	5 U	5 U
4-Methyl-2-pentanone	5 U	5 U
Toluene	5 U	5 U
trans-1,3-Dichloropropene	5 U	5 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table I**Volatile (8260A) Validated Results**

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYDRYWLASWXI	LYDRYWLASWDS
Lab Sample Number:	C0985-15	C0985-16
Matrix/Analysis:	Aqueous/Low	Aqueous/Low
Sample Type:	Field Duplicate	Field Duplicate
Dilution Factor:	1	1
Date Sampled:	9/19/96	9/19/96
Date Extracted:	NA	NA
Date Analyzed:	9/30/96	9/30/96
Percent Moisture:	NA	NA
1,1,2-Trichloroethane	5 U	5 U
Tetrachloroethene	5 U	5 U
1,3-Dichloropropane	5 U	5 U
2-Hexanone	5 U	5 U
Dibromochloromethane	5 U	5 U
1,2-Dibromoethane (EDB)	5 U	5 U
Chlorobenzene	5 U	5 U
1,1,1,2-Tetrachloroethane	5 U	5 U
Ethylbenzene	5 U	5 U
Xylenes, total	5 U	5 U
Styrene	5 U	5 U
Bromoform	5 U	5 U
Isopropylbenzene	5 U	5 U
Bromobenzene	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U
1,2,3-Trichloropropane	5 U	5 U
n-Propylbenzene	5 U	5 U
2-Chlorotoluene	5 U	5 U
4-Chlorotoluene	5 U	5 U
1,3,5-Trimethylbenzene	5 U	5 U
tert-Butylbenzene	5 U	5 U
1,2,4-Trimethylbenzene	5 U	5 U
sec-Butylbenzene	5 U	5 U
1,3-Dichlorobenzene	5 U	5 U
4-Isopropyltoluene	5 U	5 U
1,4-Dichlorobenzene	5 U	5 U
1,2-Dichlorobenzene	5 U	5 U
n-Butylbenzene	5 U	5 U
1,2-Dibromo-3-chloropropane	5 U	5 U
1,2,4-Trichlorobenzene	5 U	5 U
Hexachlorobutadiene	5 U	5 U
1,2,3-Trichlorobenzene	5 U	5 U
MTBE	5 U	5 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table II**Volatile (8260A) TIC Results**

Project #: PS-27759
 I.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYSEPTICASBDS	LYSEPTICASBN2	LYSEPTICASBN1	LYGSTNKANSDS	LYGSTNKANSN1
Lab Sample Number:	C0920-10	C0920-11	C0920-09	C0920-12	C0920-13
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Routine	Field Duplicate	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/11/96	9/11/96	9/11/96	9/11/96	9/11/96
Percent Moisture:	17	12	18	22	22
cyclotetrasiloxane, octamethyl				X	

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

Table II**Volatile (8260A) TIC Results**

Project #: PS-27759
 I.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYGSTNKBNSDS	LYGSTNKBNSX1	TRIP BLANK	LYGRASSANSX1	LYRDTWRANSX1
Lab Sample Number:	C0920-14	C0920-15	C0920-20	C0921-09	C0921-10
Matrix/Analysis:	Soil/Low	Soil/Low	Aqueous	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Trip Blank	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/5/96	9/5/96	9/5/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/11/96	9/11/96	9/13/96	9/11/96	9/11/96
Percent Moisture:	10	11	NA	31	14
hexane				X	X
octamethylcyclotetrasiloxane				X	
alpha-pinene					X
camphene					X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

Table II**Volatile (8260A) TIC Results**

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYRDTWRBNSX1	LYPLATEANSX1	LYLEACHANSX1	LYLEACHBNSX1	LYLEACHCNSX1
Lab Sample Number:	C0921-11	C0921-12	C0921-13	C0921-14	C0921-15
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/5/96	9/5/96	9/5/96	9/5/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/11/96	9/12/96	9/12/96	9/12/96	9/12/96
Percent Moisture:	33	3	9	13	13
hexane	X	X	X	X	X
aliphatic hydrocarbon	X				
unknown aromatic	X				
cyclotetrasiloxane, octamethyl		X		X	X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

Table II**Volatile (8260A) TIC Results**

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	TRIP BLANK	SAAC TOHASBN1	SAAC TOHASBN2	SADBRIS ANSN1	SAFILTRANSN1
Lab Sample Number:	C0921-16	C0927-10	C0927-11	C0927-12	C0927-13
Matrix/Analysis:	Aqueous/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Trip Blank	Routine	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/16/96	9/17/96	9/17/96	9/17/96	9/17/96
Percent Moisture:	NA	11	14	6	23
cyclotetrasiloxane, octamethyl					X
camphene					X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

Table II

Volatile (8260A) TIC Results

Project #: PS-27759
 I.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAFILTRANSDS	SAFILTRBNSX1	SASEPTICANSX2	SASEPTICANSX1	SASEPTICANSDS
Lab Sample Number:	C0927-14	C0927-15	C0927-16	C0927-19	C0927-20
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Routine	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/7/96	9/7/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/17/96	9/17/96	9/17/96	9/17/96	9/17/96
Percent Moisture:	14	3	25	7	20
hexane	X			X	
camphene	X				
cyclotetrasiloxane, octamethyl	X	X		X	
limonene					X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

Table II**Volatile (8260A) TIC Results**

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	TRIP BLANK	LYWSHBY ASSN1	LYWTRSPBWSDS	LYWTRSPBWSN1	TRIP BLANK
Lab Sample Number:	C0927-25	C0985-01	C0985-03	C0985-04	C0985-05
Matrix/Analysis:	Aqueous Low	Soil Low	Oil/Low	Oil/Low	Aqueous/Low
Sample Type:	Trip Blank	Routine	Field Duplicate	Field Duplicate	Trip Blank
Dilution Factor:	1	1	10	10	1
Date Sampled:	9/9/96	9/17/96	9/17/96	9/17/96	9/18/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/16/96	9/26/96	9/30/96	9/30/96	9/30/96
Percent Moisture:	NA	8	NA	NA	NA
C10H22			5X	5X	
C11H24			2X	2X	
naphthalene, decahydro			X	X	
C11H22			X	2X	
C12H26			2X		
aliphatic hydrocarbon			6X	6X	
naphthalene, decahydro-methyl			X	2X	
C5-cyclohexane			X	X	
C6-cyclohexane			X	X	

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

Table II**Volatile (8260A) TIC Results**

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAGSPMPBSSX1	SAGSPMPBSSDS	SAGSPMPASSX1	SAVHCMTASSX1	TRIP BLANK
Lab Sample Number:	C0985-07	C0985-08	C0985-09	C0985-10	C0985-13
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Aqueous/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Trip Blank
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/18/96	9/18/96	9/18/96	9/18/96	9/19/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/26/96	9/27/96	9/27/96	9/27/96	9/30/96
Percent Moisture:	18	11	12	17	NA
alpha-pinene			X		

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

Table II**Volatile (8260A) TIC Results**

Project #: PS-27759
I.O. #: 5000.04
Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYDRYWLASWX1	LYDRYWLASWDS
Lab Sample Number:	C0985-15	C0985-16
Matrix/Analysis:	Aqueous/Low	Aqueous/Low
Sample Type:	Field Duplicate	Field Duplicate
Dilution Factor:	1	1
Date Sampled:	9/19/96	9/19/96
Date Extracted:	NA	NA
Date Analyzed:	9/30/96	9/30/96
Percent Moisture:	NA	NA

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

I.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST08ASBX1	LYUST08ASBX2	LYUST08BSBX1	LYUST08BSBX2	LYUST08CSBX1
Lab Sample Number:	C0920-01	C0920-02	C0920-03	C0920-04	C0920-05
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1. ?*	1	1. ?*	1	1. ?*
Date Sampled:	9/3/96	9/3/96	9/3/96	9/3/96	9/3/96
Date Extracted:	9/12/96	9/12/96	9/12/96	9/12/96	9/12/96
Date Analyzed:	9/14/96	9/13/96	9/14/96	9/13/96	9/18/96
Percent Moisture:	8	15	7	9	8
Phenol	360 U	390 U	350 U	360 U	360 U
bis(2-Chloroethyl) ether	360 U	390 U	350 U	360 U	360 U
2-Chlorophenol	360 U	390 U	350 U	360 U	360 U
1,3-Dichlorobenzene	360 U	390 U	350 U	360 U	360 U
1,4-Dichlorobenzene	360 U	390 U	350 U	360 U	360 U
1,2-Dichlorobenzene	360 U	390 U	350 U	360 U	360 U
2-Methylphenol	360 U	390 U	350 U	360 U	360 U
2,2'-oxybis(1-Chloropropane)	360 U	390 U	350 U	360 U	360 U
4-Methylphenol	360 U	390 U	350 U	360 U	360 U
n-Nitroso-di-n-propylamine	360 U	390 U	350 U	360 U	360 U
Hexachloroethane	360 U	390 U	350 U	360 U	360 U
Nitrobenzene	360 U	390 U	350 U	360 U	360 U
Isophorone	360 U	390 U	350 U	360 U	360 U
2-Nitrophenol	360 U	390 U	350 U	360 U	360 U
2,4-Dimethylphenol	360 U	390 U	350 U	360 U	360 U
bis(2-Chloroethoxy) methane	360 U	390 U	350 U	360 U	360 U
2,4-Dichlorophenol	360 U	390 U	350 U	360 U	360 U
1,2,4-Trichlorobenzene	360 U	390 U	350 U	360 U	360 U
Naphthalene	52 J	390 U	110 J	360 U	100 J
4-Chloroaniline	360 U	390 U	350 U	360 U	360 U
Hexachlorobutadiene	360 U	390 U	350 U	360 U	360 U
4-Chloro-3-methylphenol	360 U	390 U	350 U	360 U	360 U
2-methylnaphthalene	360 U	390 U	54 J	360 U	60 J
Hexachlorocyclopentadiene	360 U	390 U	350 U	360 U	360 U
2,4,6-Trichlorophenol	360 U	390 U	350 U	360 U	360 U
2,4,5-Trichlorophenol	890 U	970 U	880 U	910 U	890 U
2-Chloronaphthalene	360 U	390 U	350 U	360 U	360 U
2-Nitroaniline	890 U	970 U	880 U	910 U	890 U
Dimethylphthalate	360 U	390 U	350 U	360 U	360 U
Acenaphthylene	54 J	390 U	490	360 U	360 U
2,6-Dinitrotoluene	360 U	390 U	350 U	360 U	360 U
3-Nitroaniline	890 U	970 U	880 U	910 U	890 U

* Several compounds diluted at an unknown dilution factor.

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

I.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST08ASBX1	LYUST08ASBX2	LYUST08BSBX1	LYUST08BSBX2	LYUST08CSBX1
Lab Sample Number:	C0920-01	C0920-02	C0920-03	C0920-04	C0920-05
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1. ?*	1	1. ?*	1	1. ?*
Date Sampled:	9/3/96	9/3/96	9/3/96	9/3/96	9/3/96
Date Extracted:	9/12/96	9/12/96	9/12/96	9/12/96	9/12/96
Date Analyzed:	9/14/96	9/13/96	9/14/96	9/13/96	9/18/96
Percent Moisture:	8	15	7	9	8
Acenaphthene	250 J	390 U	350 U	39 J	790
2,4-Dinitrophenol	890 U	970 U	880 U	910 U	890 U
4-Nitrophenol	890 U	970 U	880 U	910 U	890 U
Dibenzofuran	77 J	390 U	140 J	360 U	200 J
2,4-dinitrotoluene	360 U	390 U	350 U	360 U	360 U
Diethylphthalate	360 U	390 U	350 U	360 U	360 U
Fluorene	180 J	390 U	270 J	360 U	420
4-Chlorophenyl-phenyl ether	360 U	390 U	350 U	360 U	360 U
4-Nitroaniline	890 U	970 U	880 U	910 U	890 U
4,6-Dinitro-2-methylphenol	890 U	970 U	880 U	910 U	890 U
n-Nitrosodiphenylamine	360 U	390 U	350 U	360 U	360 U
4-Bromophenyl-phenylether	360 U	390 U	350 U	360 U	360 U
Hexachlorobenzene	360 U	390 U	350 U	360 U	360 U
Pentachlorophenol	890 U	970 U	880 U	910 U	890 U
Phenanthrene	1900	390 U	2100	210 J	3800
Anthracene	730	390 U	570	51 J	1000
Di-n-butylphthalate	360 U	390 U	350 U	360 U	360 U
Carbazole	1200	390 U	1600	140 J	2100
Fluoranthene	4600	390 U	3300	290 J	4200
Pyrene	3400	390 U	2700	240 J	5400
Butylbenzylphthalate	360 U	390 U	350 U	360 U	360 U
Benz(a)anthracene	1500	390 U	1500	130 J	2800
Chrysene	1600	390 U	1400	140 J	2600
3,3'-Dichlorobenzidine	360 U	390 U	350 U	360 U	360 U
bis(2-Ethylhexyl)phthalate	360 U	390 U	350 U	190 J	360 U
Di-n-octylphthalate	360 U	390 U	350 U	360 U	360 U
Benzo(b)fluoranthene	1700	390 U	1600	110 J	2500
Benzo(k)fluoranthene	720	390 U	770	56 J	900
Benzo(a)pyrene	260 J	390 U	1100	95 J	2000
Indeno(1,2,3-cd)pyrene	400	390 U	360	45 J	890
Dibenz(a,h)anthracene	110 J	390 U	92 J	360 U	270 J
Benzo(g,h,i)perylene	420	390 U	370	53 J	900

* Several compounds diluted at an unknown dilution factor.

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

I.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST08CSBX2	LYUST08DSBX1	LYUST08DSBX2	LYSETPICASBDS	LYSEPTICASBX2
Lab Sample Number:	C0920-06	C9020-07	C0920-08	C0920-10	C0920-11
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Field Duplicate	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/3/96	9/3/96	9/3/96	9/4/96	9/4/96
Date Extracted:	9/12/96	9/12/96	9/12/96	9/12/96	9/12/96
Date Analyzed:	9/17/96	9/18/96	9/17/96	9/14/96	9/14/96
Percent Moisture:	13	8	10	17	17
Phenol	380 U	350 U	360 U	400 U	400 U
bis(2-Chloroethyl) ether	380 U	350 U	360 U	400 U	400 U
2-Chlorophenol	380 U	350 U	360 U	400 U	400 U
1,3-Dichlorobenzene	380 U	350 U	360 U	400 U	400 U
1,4-Dichlorobenzene	380 U	350 U	360 U	400 U	400 U
1,2-Dichlorobenzene	380 U	350 U	360 U	400 U	400 U
2-Methylphenol	380 U	350 U	360 U	400 U	400 U
2,2'-oxybis(1-Chloropropane)	380 U	350 U	360 U	400 U	400 U
4-Methylphenol	380 U	350 U	360 U	400 U	400 U
n-Nitroso-di-n-propylamine	380 U	350 U	360 U	400 U	400 U
Hexachloroethane	380 U	350 U	360 U	400 U	400 U
Nitrobenzene	380 U	350 U	360 U	400 U	400 U
Isophorone	380 U	350 U	360 U	400 U	400 U
2-Nitrophenol	380 U	350 U	360 U	400 U	400 U
2,4-Dimethylphenol	380 U	350 U	360 U	400 U	400 U
bis(2-Chloroethoxy) methane	380 U	350 U	360 U	400 U	400 U
2,4-Dichlorophenol	380 U	350 U	360 U	400 U	400 U
1,2,4-Trichlorobenzene	380 U	350 U	360 U	400 U	400 U
Naphthalene	380 U	350 U	360 U	400 U	400 U
4-Chloroaniline	380 U	350 U	360 U	400 U	400 U
Hexachlorobutadiene	380 U	350 U	360 U	400 U	400 U
4-Chloro-3-methylphenol	380 U	350 U	360 U	400 U	400 U
2-methylnaphthalene	380 U	350 U	360 U	400 U	400 U
Hexachlorocyclopentadiene	380 U	350 U	360 U	400 U	400 U
2,4,6-Trichlorophenol	380 U	350 U	360 U	400 U	400 U
2,4,5-Trichlorophenol	950 U	880 U	900 U	990 U	990 U
2-Chloronaphthalene	380 U	350 U	360 U	400 U	400 U
2-Nitroaniline	950 U	880 U	900 U	990 U	990 U
Dimethylphthalate	380 U	350 U	360 U	400 U	400 U
Acenaphthylene	380 U	350 U	360 U	400 U	400 U
2,6-Dinitrotoluenc	380 U	350 U	360 U	400 U	400 U
3-Nitroaniline	950 U	880 U	900 U	990 U	990 U

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UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST08CSBX2	LYUST08DSBX1	LYUST08DSBX2	LYSETPICASBDS	LYSEPTICASBN2
Lab Sample Number:	C0920-06	C0920-07	C0920-08	C0920-10	C0920-11
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Field Duplicate	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/3/96	9/3/96	9/3/96	9/4/96	9/4/96
Date Extracted:	9/12/96	9/12/96	9/12/96	9/12/96	9/12/96
Date Analyzed:	9/17/96	9/18/96	9/17/96	9/14/96	9/14/96
Percent Moisture:	13	8	10	17	17
Acenaphthene	100 J	350 U	360 U	400 U	400 U
2,4-Dinitrophenol	950 U	880 U	900 U	990 U	990 U
4-Nitrophenol	950 U	880 U	900 U	990 U	990 U
Dibenzofuran	380 U	350 U	360 U	400 U	400 U
2,4-dinitrotoluene	380 U	350 U	360 U	400 U	400 U
Diethylphthalate	380 U	350 U	360 U	400 U	400 U
Fluorene	57 J	350 U	360 U	400 U	400 U
4-Chlorophenyl-phenyl ether	380 U	350 U	360 U	400 U	400 U
4-Nitroaniline	950 U	350 U	900 U	990 U	990 U
4,6-Dinitro-2-methylphenol	950 U	880 U	900 U	990 U	990 U
n-Nitrosodiphenylamine	380 U	880 U	360 U	400 U	400 U
4-Bromophenyl-phenylether	380 U	350 U	360 U	400 U	400 U
Hexachlorobenzene	380 U	350 U	360 U	400 U	400 U
Pentachlorophenol	950 U	880 U	900 U	990 U	990 U
Phenanthrene	460	41 J	360 U	400 U	400 U
Anthracene	110 J	350 U	360 U	400 U	400 U
Di-n-butylphthalate	380 U	350 U	360 U	400 U	400 U
Carbazole	310 J	350 U	360 U	400 U	400 U
Fluoranthene	460	71 J	360 U	400 U	400 U
Pyrene	590	120 J	50 J	400 U	400 U
Butylbenzylphthalate	380 U	350 U	360 U	400 U	400 U
Benz(a)anthracene	310 J	68 J	360 U	400 U	400 U
Chrysene	320 J	76 J	360 U	400 U	400 U
3,3'-Dichlorobenzidine	380 U	350 U	360 U	400 U	400 U
bis(2-Ethylhexyl)phthalate	120 J	350 U	420	400 U	400 U
Di-n-octylphthalate	380 U	350 U	360 U	400 U	400 U
Benzo(b)fluoranthene	280 J	100 J	360 U	400 U	400 U
Benzo(k)fluoranthene	79 J	350 U	360 U	400 U	400 U
Benzo(a)pyrene	220 J	88 J	360 U	400 U	400 U
Indeno(1,2,3-cd)pyrene	110 J	350 U	360 U	400 U	400 U
Dibenz(a,h)anthracene	380 U	350 U	360 U	400 U	400 U
Benzo(g,h,i)perylene	130 J	45 J	360 U	400 U	400 U

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Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST04BSBX2	LYUST04BSBDS2	LYUST04CSBX1	LYUST04CSBX2	LYSEPTICASBX1
Lab Sample Number:	C0921-01	C0921-02	C0921-03	C0921-04	C0920-09
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/13/96	9/12/96
Date Analyzed:	9/19/96	9/19/96	9/17/96	9/17/96	9/14/96
Percent Moisture:	12	12	14	13	15
Phenol	370 U	380 U	380 U	380 U	380 U
bis(2-Chloroethyl) ether	370 U	380 U	380 U	380 U	380 U
2-Chlorophenol	370 U	380 U	380 U	380 U	380 U
1,3-Dichlorobenzene	370 U	380 U	380 U	380 U	380 U
1,4-Dichlorobenzene	370 U	380 U	380 U	380 U	380 U
1,2-Dichlorobenzene	370 U	380 U	380 U	380 U	380 U
2-Methylphenol	370 U	380 U	380 U	380 U	380 U
2,2'-oxybis(1-Chloropropane)	370 U	380 U	380 U	380 U	380 U
4-Methylphenol	370 U	380 U	380 U	380 U	380 U
n-Nitroso-di-n-propylamine	370 U	380 U	380 U	380 U	380 U
Hexachloroethane	370 U	380 U	380 U	380 U	380 U
Nitrobenzene	370 U	380 U	380 U	380 U	380 U
Isophorone	370 U	380 U	380 U	380 U	380 U
2-Nitrophenol	370 U	380 U	380 U	380 U	380 U
2,4-Dimethylphenol	370 U	380 U	380 U	380 U	380 U
bis(2-Chloroethoxy) methane	370 U	380 U	380 U	380 U	380 U
2,4-Dichlorophenol	370 U	380 U	380 U	380 U	380 U
1,2,4-Trichlorobenzene	370 U	380 U	380 U	380 U	380 U
Naphthalene	370 U	380 U	380 U	380 U	380 U
4-Chloroaniline	370 U	380 U	380 U	380 U	380 U
Hexachlorobutadiene	370 U	380 U	380 U	380 U	380 U
4-Chloro-3-methylphenol	370 U	380 U	380 U	380 U	380 U
2-methylnaphthalene	370 U	380 U	380 U	380 U	380 U
Hexachlorocyclopentadiene	370 U	380 U	380 U	380 U	380 U
2,4,6-Trichlorophenol	370 U	380 U	380 U	380 U	380 U
2,4,5-Trichlorophenol	920 U	940 U	960 U	950 U	950 U
2-Chloronaphthalene	370 U	380 U	380 U	380 U	380 U
2-Nitroaniline	920 U	940 U	960 U	950 U	950 U
Dimethylphthalate	370 U	380 U	380 U	380 U	380 U
Acenaphthylene	370 U	380 U	380 U	380 U	380 U
2,6-Dinitrotoluene	370 U	380 U	380 U	380 U	380 U
3-Nitroaniline	920 U	940 U	960 U	950 U	950 U

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Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST04BSBX2	LYUST04BSBDS2	LYUST04CSBX1	LYUST04CSBX2	LYSEPTICASBX1
Lab Sample Number:	C0921-01	C0921-02	C0921-03	C0921-04	C0920-09
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/13/96	9/12/96
Date Analyzed	9/19/96	9/19/96	9/17/96	9/17/96	9/14/96
Percent Moisture:	12	12	14	13	15
Acenaphthene	370 U	380 U	380 U	380 U	380 U
2,4-Dinitrophenol	920 U	940 U	960 U	950 U	950 U
4-Nitrophenol	920 U	940 U	960 U	950 U	950 U
Dibenzofuran	370 U	380 U	380 U	380 U	380 U
2,4-dinitrotoluene	370 U	380 U	380 U	380 U	380 U
Diethylphthalate	370 U	380 U	380 U	380 U	380 U
Fluorene	370 U	380 U	380 U	380 U	380 U
4-Chlorophenyl-phenyl ether	370 U	380 U	380 U	380 U	380 U
4-Nitroaniline	920 U	940 U	960 U	950 U	950 U
4,6-Dinitro-2-methylphenol	920 U	940 U	960 U	950 U	950 U
n-Nitrosodiphenylamine	370 U	380 U	380 U	380 U	380 U
4-Bromophenyl-phenylether	370 U	380 U	380 U	380 U	380 U
Hexachlorobenzene	370 U	380 U	380 U	380 U	380 U
Pentachlorophenol	920 U	940 U	960 U	950 U	950 U
Phenanthrene	370 U	380 U	380 U	380 U	380 U
Anthracene	370 U	380 U	380 U	380 U	380 U
Di-n-butylphthalate	370 U	380 U	380 U	380 U	380 U
Carbazole	370 U	380 U	380 U	380 U	380 U
Fluoranthene	370 U	380 U	380 U	380 U	380 U
Pyrene	370 U	380 U	380 U	380 U	380 U
Butylbenzylphthalate	370 U	380 U	380 U	380 U	380 U
Benz(a)anthracene	370 U	380 U	380 U	380 U	380 U
Chrysene	370 U	380 U	380 U	380 U	380 U
3,3'-Dichlorobenzidine	370 U	380 U	380 U	380 U	380 U
bis(2-Ethylhexyl)phthalate	390 J	380 UJ	850	380 U	380 U
Di-n-octylphthalate	370 U	380 U	380 U	380 U	380 U
Benzo(b)fluoranthene	370 U	380 U	380 U	380 U	380 U
Benzo(k)fluoranthene	370 U	380 U	380 U	380 U	380 U
Benzo(a)pyrene	370 U	380 U	380 U	380 U	380 U
Indeno(1,2,3-cd)pyrene	370 U	380 U	380 U	380 U	380 U
Dibenz(a,h)anthracene	370 U	380 U	380 U	380 U	380 U
Benzo(g,h,i)perylene	370 U	380 U	380 U	380 U	380 U

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Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYGSTNKANSDS	LYGSTNKANSXI	LYGSTNKBNSDS	LYGSTNKBNSXI	LYUST04ASBN1
Lab Sample Number:	C0920-12	C0920-13	C0920-14	C0920-15	C0920-16
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Field Duplicate	Field Duplicate	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	9/12/96	9/12/96	9/12/96	9/13/96	9/13/96
Date Analyzed:	9/17/96	9/17/96	9/18/96	9/17/96	9/19/96
Percent Moisture:	18	19	10	11	12
Phenol	400 U	400 U	360 U	370 U	370 U
bis(2-Chloroethyl) ether	400 U	400 U	360 U	370 U	370 U
2-Chlorophenol	400 U	400 U	360 U	370 U	370 U
1,3-Dichlorobenzene	400 U	400 U	360 U	370 U	370 U
1,4-Dichlorobenzene	400 U	400 U	360 U	370 U	370 U
1,2-Dichlorobenzene	400 U	400 U	360 U	370 U	370 U
2-Methylphenol	400 U	400 U	360 U	370 U	370 U
2,2'-oxybis(1-Chloropropane)	400 U	400 U	360 U	370 U	370 U
4-Methylphenol	400 U	400 U	360 U	370 U	370 U
n-Nitroso-di-n-propylamine	400 U	400 U	360 U	370 U	370 U
Hexachloroethane	400 U	400 U	360 U	370 U	370 U
Nitrobenzene	400 U	400 U	360 U	370 U	370 U
Isophorone	400 U	400 U	360 U	370 U	370 U
2-Nitrophenol	400 U	400 U	360 U	370 U	370 U
2,4-Dimethylphenol	400 U	400 U	360 U	370 U	370 U
bis(2-Chloroethoxy) methane	400 U	400 U	360 U	370 U	370 U
2,4-Dichlorophenol	400 U	400 U	360 U	370 U	370 U
1,2,4-Trichlorobenzene	400 U	400 U	360 U	370 U	370 U
Naphthalene	400 U	400 U	360 U	370 U	370 U
4-Chloroaniline	400 U	400 U	360 U	370 U	370 U
Hexachlorobutadiene	400 U	400 U	360 U	370 U	370 U
4-Chloro-3-methylphenol	400 U	400 U	360 U	370 U	370 U
2-methylnaphthalene	400 U	400 U	360 U	370 U	370 U
Hexachlorocyclopentadiene	400 U	400 U	360 U	370 U	370 U
2,4,6-Trichlorophenol	400 U	400 U	360 U	370 U	370 U
2,4,5-Trichlorophenol	1000 U	1000 U	900 U	920 U	920 U
2-Chloronaphthalene	400 U	400 U	360 U	370 U	370 U
2-Nitroaniline	1000 U	1000 U	900 U	920 U	920 U
Dimethylphthalate	400 U	400 U	360 U	370 U	370 U
Acenaphthylene	400 U	400 U	360 U	370 U	370 U
2,6-Dinitrotoluene	400 U	400 U	360 U	370 U	370 U
3-Nitroaniline	1000 U	1000 U	900 U	920 U	920 U

J - The associated numerical value is an estimated quantity.

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UJ - The compound was not detected. The compound quantitation limit is an estimated value.

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYGSTNKANSDS	LYGSTNKANSXI	LYGSTNKBNSDS	LYGSTNKBNSXI	LYUST04ASBN1
Lab Sample Number:	C0920-12	C0920-13	C0920-14	C0920-15	C0920-16
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Field Duplicate	Field Duplicate	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	9/12/96	9/12/96	9/12/96	9/13/96	9/13/96
Date Analyzed:	9/17/96	9/17/96	9/18/96	9/17/96	9/19/96
Percent Moisture:	18	19	10	11	12
Acenaphthene	400 U	64 J	360 U	370 U	270 J
2,4-Dinitrophenol	1000 U	1000 U	900 U	920 U	920 U
4-Nitrophenol	1000 U	1000 U	900 U	920 U	920 U
Dibenzofuran	400 U	400 U	360 U	370 U	190 J
2,4-dinitrotoluene	400 U	400 U	360 U	370 U	370 U
Diethylphthalate	400 U	400 U	360 U	370 U	370 U
Fluorene	400 U	70 J	360 U	370 U	340 J
4-Chlorophenyl-phenyl ether	400 U	400 U	360 U	370 U	370 U
4-Nitroaniline	1000 U	1000 U	900 U	920 U	920 U
4,6-Dinitro-2-methylphenol	1000 U	1000 U	900 U	920 U	920 U
n-Nitrosodiphenylamine	400 U	400 U	360 U	370 U	370 U
4-Bromophenyl-phenylether	400 U	400 U	360 U	370 U	370 U
Hexachlorobenzene	400 U	400 U	360 U	370 U	370 U
Pentachlorophenol	1000 U	1000 U	900 U	920 U	920 U
Phenanthrene	400 UJ	1400 J	360 U	370 U	1300
Anthracene	400 UJ	420 J	360 U	370 U	170 J
Di-n-butylphthalate	400 U	400 U	360 U	370 U	370 U
Carbazole	400 U	250 J	360 U	370 U	370 U
Fluoranthene	77 J	2600 J	360 U	370 U	270 J
Pyrene	65 J	1700 J	360 U	370 U	270 J
Butylbenzylphthalate	400 U	400 U	360 U	370 U	370 U
Benzo(a)anthracene	44 J	1100 J	360 U	370 U	91 J
Chrysene	64 J	910 J	360 U	370 U	59 J
3,3'-Dichlorobenzidine	400 U	400 U	360 U	370 U	370 U
bis(2-Ethylhexyl)phthalate	400 U	400 U	360 U	370 U	370 U
Di-n-octylphthalate	400 U	400 U	360 U	370 U	370 U
Benzo(b)fluoranthene	71 J	900 J	360 U	370 U	47 J
Benzo(k)fluoranthene	400 U	310 J	360 U	370 U	370 U
Benzo(a)pyrene	49 J	760 J	360 U	370 U	42 J
Indeno(1,2,3-cd)pyrene	400 U	210 J	360 U	370 U	370 U
Dibenz(a,h)anthracene	400 U	65 J	360 U	370 U	370 U
Benzo(g,h,i)perylene	400 U	210 J	360 U	370 U	370 U

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U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST04ASBX2	LYUST04BSBX1	LYUST04BSBDS1	LYAST12ASBX1	LYAST12ASBX2
Lab Sample Number:	C0920-17	C0920-18	C0920-19	C0921-05	C0921-06
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/5/96	9/5/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/13/95	9/13/96
Date Analyzed:	9/19/96	9/17/96	9/17/96	9/20/96	9/20/96
Percent Moisture:	14	10	12	20	7
Phenol	380 U	50 J	380 U	410 U	350 U
bis(2-Chloroethyl) ether	380 U	360 U	380 U	410 U	350 U
2-Chlorophenol	380 U	360 U	380 U	410 U	350 U
1,3-Dichlorobenzene	380 U	360 U	380 U	410 U	350 U
1,4-Dichlorobenzene	380 U	360 U	380 U	410 U	350 U
1,2-Dichlorobenzene	380 U	360 U	380 U	410 U	350 U
2-Methylphenol	380 U	360 U	380 U	410 U	350 U
2,2'-oxybis(1-Chloropropane)	380 U	360 U	380 U	410 U	350 U
4-Methylphenol	380 U	360 U	380 U	410 U	350 U
n-Nitroso-di-n-propylamine	380 U	360 U	380 U	410 U	350 U
Hexachloroethane	380 U	360 U	380 U	410 U	350 U
Nitrobenzene	380 U	360 U	380 U	410 U	350 U
Isophorone	380 U	360 U	380 U	410 U	350 U
2-Nitrophenol	380 U	360 U	380 U	410 U	350 U
2,4-Dimethylphenol	380 U	360 U	380 U	410 U	350 U
bis(2-Chloroethoxy) methane	380 U	360 U	380 U	410 U	350 U
2,4-Dichlorophenol	380 U	360 U	380 U	410 U	350 U
1,2,4-Trichlorobenzene	380 U	360 U	380 U	410 U	350 U
Naphthalene	380 U	360 U	380 U	410 U	350 U
4-Chloroaniline	380 U	360 U	380 U	410 U	350 U
Hexachlorobutadiene	380 U	360 U	380 U	410 U	350 U
4-Chloro-3-methylphenol	380 U	64 J	380 U	410 U	350 U
2-methylnaphthalene	380 U	360 U	380 U	410 U	350 U
Hexachlorocyclopentadiene	380 U	360 U	380 U	410 U	350 U
2,4,6-Trichlorophenol	380 U	360 U	380 U	410 U	350 U
2,4,5-Trichlorophenol	960 U	900 U	940 U	1000 U	880 U
2-Chloronaphthalene	380 U	360 U	380 U	410 U	350 U
2-Nitroaniline	960 U	900 U	940 U	1000 U	880 U
Dimethylphthalate	380 U	360 U	380 U	410 U	350 U
Acenaphthylene	380 U	360 U	380 U	44 J	350 U
2,6-Dinitrotoluene	380 U	360 U	380 U	410 U	350 U
3-Nitroaniline	960 U	900 U	940 U	1000 U	880 U

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST04ASBX2	LYUST04DSBX1	LYUST04BSBDS1	LYAST12ASBX1	LYAST12ASBX2
Lab Sample Number:	C0920-17	C0920-18	C0920-19	C0921-05	C0921-06
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/5/96	9/5/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/13/95	9/13/96
Date Analyzed:	9/19/96	9/17/96	9/17/96	9/20/96	9/20/96
Percent Moisture:	14	10	12	20	7
Acenaphthene	380 U	360 U	380 U	43 J	350 U
2,4-Dinitrophenol	960 U	900 U	940 U	1000 U	880 U
4-Nitrophenol	960 U	900 U	940 U	1000 U	880 U
Dibenzofuran	380 U	360 U	380 U	410 U	350 U
2,4-dinitrotoluene	380 U	360 U	380 U	410 U	350 U
Diethylphthalate	380 U	360 U	380 U	410 U	350 U
Fluorene	380 U	360 U	380 U	60 J	350 U
4-Chlorophenyl-phenyl ether	380 U	360 U	380 U	410 U	350 U
4-Nitroaniline	960 U	900 U	940 U	1000 U	880 U
4,6-Dinitro-2-methylphenol	960 U	900 U	940 U	1000 U	880 U
n-Nitrosodiphenylamine	380 U	360 U	380 U	410 U	350 U
4-Bromophenyl-phenylether	380 U	360 U	380 U	410 U	350 U
Hexachlorobenzene	380 U	360 U	380 U	410 U	350 U
Pentachlorophenol	960 U	900 U	940 U	1000 U	880 U
Phenanthrene	380 U	360 U	380 U	880	410
Anthracene	380 U	360 U	380 U	230 J	88 J
Di-n-butylphthalate	380 U	360 U	380 U	410 U	350 U
Carbazole	380 U	360 U	380 U	110 J	90 J
Fluoranthene	380 U	360 U	380 U	1400	930
Pyrene	380 U	360 U	380 U	1300	880
Butylbenzylphthalate	380 U	360 U	380 U	410 U	350 U
Benz(a)anthracene	380 U	360 U	380 U	650	340 J
Chrysene	380 U	360 U	380 U	590	420
3,3'-Dichlorobenzidine	380 U	360 U	380 U	410 U	350 U
bis(2-Ethylhexyl)phthalate	380 U	360 U	380 U	410 U	80 J
Di-n-octylphthalate	380 U	360 U	380 U	410 U	350 U
Benzo(b)fluoranthene	380 U	360 U	380 U	600	410
Benzo(k)fluoranthene	380 U	360 U	380 U	180 J	120 J
Benzo(a)pyrene	380 U	360 U	380 U	510	300 J
Indeno(1,2,3-cd)pyrene	380 U	360 U	380 U	190 J	99 J
Dibenz(a,h)anthracene	380 U	360 U	380 U	55 J	350 U
Benzo(g,h,i)perylene	380 U	360 U	380 U	240 J	94 J

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

I.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYAST12BSBX1	LYAST12BSBX2	LYGRASSANSXI	LYRDTWRANSXI	LYRDTWRBNSXI
Lab Sample Number:	C0921-07	C0921-08	C0921-09	C0921-10	C0921-11
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1.7*	1
Date Sampled:	9/5/96	9/5/96	9/5/96	9/5/96	9/5/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/14/96	9/14/96
Date Analyzed:	9/20/96	9/20/96	9/21/96	9/21/96	9/20/96
Percent Moisture:	5	8	37	9	32
Phenol	350 U	360 U	520 U	360 U	490 U
bis(2-Chloroethyl) ether	350 U	360 U	520 U	360 U	490 U
2-Chlorophenol	350 U	360 U	520 U	360 U	490 U
1,3-Dichlorobenzene	350 U	360 U	520 U	360 U	490 U
1,4-Dichlorobenzene	350 U	360 U	520 U	360 U	490 U
1,2-Dichlorobenzene	350 U	360 U	520 U	360 U	490 U
2-Methylphenol	350 U	360 U	520 U	360 U	490 U
2,2'-oxybis(1-Chloropropane)	350 U	360 U	520 U	360 U	490 U
4-Methylphenol	350 U	360 U	520 U	360 U	490 U
n-Nitroso-di-n-propylamine	350 U	360 U	520 U	360 U	490 U
Hexachloroethane	350 U	360 U	520 U	360 U	490 U
Nitrobenzene	350 U	360 U	520 U	360 U	490 U
Isophorone	350 U	360 U	520 U	360 U	490 U
2-Nitrophenol	350 U	360 U	520 U	360 U	490 U
2,4-Dimethylphenol	350 U	360 U	520 U	360 U	490 U
bis(2-Chloroethoxy) methane	350 U	360 U	520 U	360 U	490 U
2,4-Dichlorophenol	350 U	360 U	520 U	360 U	490 U
1,2,4-Trichlorobenzene	350 U	360 U	520 U	360 U	490 U
Naphthalene	350 U	360 U	520 U	360 U	490 U
4-Chloroaniline	350 U	360 U	520 U	360 U	490 U
Hexachlorobutadiene	350 U	360 U	520 U	360 U	490 U
4-Chloro-3-methylphenol	350 U	360 U	520 U	360 U	490 U
2-methylnaphthalene	350 U	360 U	520 U	360 U	490 U
Hexachlorocyclopentadiene	350 U	360 U	520 U	360 U	490 U
2,4,6-Trichlorophenol	350 U	360 U	520 U	360 U	490 U
2,4,5-Trichlorophenol	860 U	900 U	1300 U	900 U	1200 U
2-Chloronaphthalene	350 U	360 U	520 U	360 U	490 U
2-Nitroaniline	860 U	900 U	1300 U	900 U	1200 U
Dimethylphthalate	350 U	360 U	520 U	360 U	490 U
Acenaphthylene	350 U	360 U	520 U	240 J	490 U
2,6-Dinitrotoluene	350 U	360 U	520 U	360 U	490 U
3-Nitroaniline	860 U	900 U	1300 U	900 U	1200 U

* Several compounds diluted at an unknown dilution factor.

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Aqueous units are reported in µg/L.

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Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYAST12BSBX1	LYAST12BSBX2	LYGRASSANSX1	LYRDTWRANSX1	LYRDTWRBNSX1
Lab Sample Number:	C0921-07	C0921-08	C0921-09	C0921-10	C0921-11
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1.7*	1
Date Sampled:	9/5/96	9/5/96	9/5/96	9/5/96	9/5/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/14/96	9/14/96
Date Analyzed:	9/20/96	9/20/96	9/21/96	9/21/96	9/20/96
Percent Moisture:	5	8	37	9	32
Acenaphthene	350 U	360 U	520 U	64 J	490 U
2,4-Dinitrophenol	860 U	900 U	1300 U	900 U	1200 U
4-Nitrophenol	860 U	900 U	1300 U	900 U	1200 U
Dibenzofuran	350 U	360 U	520 U	360 U	490 U
2,4-dinitrotoluene	350 U	360 U	520 U	360 U	490 U
Diethylphthalate	350 U	360 U	520 U	360 U	490 U
Fluorene	350 U	360 U	520 U	63 J	490 U
4-Chlorophenyl-phenyl ether	350 U	360 U	520 U	360 U	490 U
4-Nitroaniline	860 U	900 U	1300 U	900 U	1200 U
4,6-Dinitro-2-methylphenol	860 U	900 U	1300 U	900 U	1200 U
n-Nitrosodiphenylamine	350 U	360 U	520 U	360 U	490 U
4-Bromophenyl-phenylether	350 U	360 U	520 U	360 U	490 U
Hexachlorobenzene	350 U	360 U	520 U	360 U	490 U
Pentachlorophenol	860 U	900 U	1300 U	900 U	1200 U
Phenanthrene	38 J	360 U	520 U	1000	490 U
Anthracene	350 U	360 U	520 U	580	490 U
Di-n-butylphthalate	350 U	360 U	520 U	360 U	490 U
Carbazole	350 U	360 U	520 U	250 J	490 U
Fluoranthene	350 U	42 J	520 U	3600	150 J
Pyrene	36 J	49 J	520 U	3700	77 J
Butylbenzylphthalate	350 U	360 U	520 U	360 U	490 U
Benz(a)anthracene	350 U	360 U	520 U	2700	50 J
Chrysene	350 U	360 U	520 U	2100	110 J
3,3'-Dichlorobenzidine	350 U	360 U	520 U	360 U	490 U
bis(2-Ethylhexyl)phthalate	350 U	47 J	520 U	360 U	68 J
Di-n-octylphthalate	350 U	360 U	520 U	360 U	490 U
Benzo(b)fluoranthene	350 U	360 U	520 U	2300	160 J
Benzo(k)fluoranthene	350 U	360 U	520 U	1000	50 J
Benzo(a)pyrene	350 U	360 U	520 U	2200	69 J
Indeno(1,2,3-cd)pyrene	350 U	360 U	520 U	790	490 U
Dibenz(a,h)anthracene	350 U	360 U	520 U	220 J	490 U
Benzo(g,h,i)perylene	350 U	360 U	520 U	840	490 U

* Several compounds diluted at an unknown dilution factor.

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Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYPLATEANSX1	LYLEACHANSX1	LYLEACHBNSX1	LYLEACHCNSX1	SAUST02ASBX1
Lab Sample Number:	C0921-12	C0921-13	C0921-14	C0921-15	C0927-01
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/5/96	9/5/96	9/5/96	9/6/96
Date Extracted:	9/14/96	9/14/96	9/14/96	9/14/96	9/14/96
Date Analyzed:	9/19/96	9/21/96	9/20/96	9/20/96	9/22/96
Percent Moisture:	6	7	9	11	7
Phenol	350 U	350 U	360 U	370 U	350 U
bis(2-Chloroethyl) ether	350 U	350 U	360 U	370 U	350 U
2-Chlorophenol	350 U	350 U	360 U	370 U	350 U
1,3-Dichlorobenzene	350 U	350 U	360 U	370 U	350 U
1,4-Dichlorobenzene	350 U	350 U	360 U	370 U	350 U
1,2-Dichlorobenzene	350 U	350 U	360 U	370 U	350 U
2-Methylphenol	350 U	350 U	360 U	370 U	350 U
2,2'-oxybis(1-Chloropropane)	350 U	350 U	360 U	370 U	350 U
4-Methylphenol	350 U	350 U	360 U	370 U	350 U
n-Nitroso-di-n-propylamine	350 U	350 U	360 U	370 U	350 U
Hexachloroethane	350 U	350 U	360 U	370 U	350 U
Nitrobenzene	350 U	350 U	360 U	370 U	350 U
Isophorone	350 U	350 U	360 U	370 U	350 U
2-Nitrophenol	350 U	350 U	360 U	370 U	350 U
2,4-Dimethylphenol	350 U	350 U	360 U	370 U	350 U
bis(2-Chloroethoxy) methane	350 U	350 U	360 U	370 U	350 U
2,4-Dichlorophenol	350 U	350 U	360 U	370 U	350 U
1,2,4-Trichlorobenzene	350 U	350 U	360 U	370 U	350 U
Naphthalene	350 U	350 U	360 U	370 U	350 U
4-Chloroaniline	350 U	350 U	360 U	370 U	350 U
Hexachlorobutadiene	350 U	350 U	360 U	370 U	350 U
4-Chloro-3-methylphenol	350 U	350 U	360 U	370 U	350 U
2-methylnaphthalene	350 U	350 U	360 U	370 U	350 U
Hexachlorocyclopentadiene	350 U	350 U	360 U	370 U	350 U
2,4,6-Trichlorophenol	350 U	350 U	360 U	370 U	350 U
2,4,5-Trichlorophenol	860 U	880 U	890 U	920 U	870 U
2-Chloronaphthalene	350 U	350 U	360 U	370 U	350 U
2-Nitroaniline	860 U	880 U	890 U	920 U	870 U
Dimethylphthalate	350 U	350 U	360 U	370 U	350 U
Accnaphthylene	350 U	350 U	360 U	370 U	350 U
2,6-Dinitrotoluene	350 U	350 U	360 U	370 U	350 U
3-Nitroaniline	860 U	880 U	890 U	920 U	870 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYPLATEANSX1	LYLEACHANSX1	LYLEACHBNSX1	LYLEACHCNSX1	SAUST02ASBN1
Lab Sample Number:	C0921-12	C0921-13	C0921-14	C0921-15	C0927-01
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/5/96	9/5/96	9/5/96	9/6/96
Date Extracted:	9/14/96	9/14/96	9/14/96	9/14/96	9/14/96
Date Analyzed:	9/19/96	9/21/96	9/20/96	9/20/96	9/22/96
Percent Moisture:	6	7	9	11	7
Acenaphthene	350 U	350 U	360 U	370 U	350 U
2,4-Dinitrophenol	860 U	880 U	890 U	920 U	870 U
4-Nitrophenol	860 U	880 U	890 U	920 U	870 U
Dibenzofuran	350 U	350 U	360 U	370 U	350 U
2,4-dinitrotoluene	350 U	350 U	360 U	370 U	350 U
Diethylphthalate	350 U	350 U	360 U	370 U	350 U
Fluorene	350 U	350 U	360 U	370 U	350 U
4-Chlorophenyl-phenyl ether	350 U	350 U	360 U	370 U	350 U
4-Nitroaniline	860 U	880 U	890 U	920 U	870 U
4,6-Dinitro-2-methylphenol	860 U	880 U	890 U	920 U	870 U
n-Nitrosodiphenylamine	350 U	350 U	360 U	370 U	350 U
4-Bromophenyl-phenylether	350 U	350 U	360 U	370 U	350 U
Hexachlorobenzene	350 U	350 U	360 U	370 U	350 U
Pentachlorophenol	860 U	880 U	890 U	920 U	870 U
Phenanthrene	350 U	350 U	360 U	370 U	120 J
Anthracene	350 U	350 U	360 U	370 U	350 U
Di-n-butylphthalate	350 U	350 U	360 U	370 U	350 U
Carbazole	350 U	350 U	360 U	370 U	50 J
Fluoranthene	350 U	350 U	360 U	370 U	150 J
Pyrene	350 U	350 U	360 U	370 U	140 J
Butylbenzylphthalate	350 U	350 U	360 U	370 U	350 U
Benzo(a)anthracene	350 U	350 U	360 U	370 U	72 J
Chrysene	350 U	350 U	360 U	370 U	83 J
3,3'-Dichlorobenzidine	350 U	350 U	360 U	370 U	350 U
bis(2-Ethylhexyl)phthalate	350 U	350 U	360 U	370 U	180 J
Di-n-octylphthalate	350 U	350 U	360 U	370 U	350 U
Benzo(b)fluoranthene	350 U	350 U	360 U	370 U	63 J
Benzo(k)fluoranthene	350 U	350 U	360 U	370 U	350 U
Benzo(a)pyrene	350 U	350 U	360 U	370 U	63 J
Indeno(1,2,3-cd)pyrene	350 U	350 U	360 U	370 U	350 U
Dibenz(a,h)anthracene	350 U	350 U	360 U	370 U	350 U
Benzo(g,h,i)perylene	350 U	350 U	360 U	370 U	350 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

I.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAUST02ASBX2	SAUST02ASBDS	SAUST03ASBX1	SAUST03ASBX2	SAUST03BSBX1
Lab Sample Number:	C0927-02	C0927-03	C0927-04	C0927-05	C0927-06
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Routine
Dilution Factor:	1	1	1.2*	1.2*	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/14/96	9/14/96	9/14/96	9/14/96	9/14/96
Date Analyzed:	9/22/96	9/22/96	9/21/96	9/25/96	9/22/96
Percent Moisture:	Wet Weight	Wet Weight	8	8	12
Phenol	330 U	330 U	360 U	360 U	370 U
bis(2-Chloroethyl) ether	330 U	330 U	360 U	360 U	370 U
2-Chlorophenol	330 U	330 U	360 U	360 U	370 U
1,3-Dichlorobenzene	330 U	330 U	360 U	360 U	370 U
1,4-Dichlorobenzene	330 U	330 U	360 U	360 U	370 U
1,2-Dichlorobenzene	330 U	330 U	360 U	360 U	370 U
2-Methylphenol	330 U	330 U	360 U	360 U	370 U
2,2'-oxybis(1-Chloropropane)	330 U	330 U	360 U	360 U	370 U
4-Methylphenol	330 U	330 U	360 U	360 U	370 U
n-Nitroso-di-n-propylamine	330 U	330 U	360 U	360 U	370 U
Hexachloroethane	330 U	330 U	360 U	360 U	370 U
Nitrobenzene	330 U	330 U	360 U	360 U	370 U
Isophorone	330 U	330 U	360 U	360 U	370 U
2-Nitrophenol	330 U	330 U	360 U	360 U	370 U
2,4-Dimethylphenol	330 U	330 U	360 U	360 U	370 U
bis(2-Chloroethoxy) methane	330 U	330 U	360 U	360 U	370 U
2,4-Dichlorophenol	330 U	330 U	360 U	360 U	370 U
1,2,4-Trichlorobenzene	330 U	330 U	360 U	360 U	370 U
Naphthalene	330 U	330 U	180 J	56 J	370 U
4-Chloroaniline	330 U	330 U	360 U	360 U	370 U
Hexachlorobutadiene	330 U	330 U	360 U	360 U	370 U
4-Chloro-3-methylphenol	330 U	330 U	360 U	360 U	370 U
2-methylnaphthalene	330 U	330 U	270 J	360 U	370 U
Hexachlorocyclopentadiene	330 U	330 U	360 U	360 U	370 U
2,4,6-Trichlorophenol	330 U	330 U	360 U	360 U	370 U
2,4,5-Trichlorophenol	830 U	830 U	890 U	890 U	920 U
2-Chloronaphthalene	330 U	330 U	360 U	360 U	370 U
2-Nitroaniline	830 U	830 U	890 U	890 U	920 U
Dimethylphthalate	330 U	330 U	360 U	360 U	370 U
Acenaphthylene	330 U	330 U	110 J	81 J	370 U
2,6-Dinitrotoluene	330 U	330 U	360 U	360 U	370 U
3-Nitroaniline	830 U	830 U	890 U	890 U	920 U

* Several compounds diluted at an unknown dilution factor.

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

I.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAUST02ASBX2	SAUST02ASBDS	SAUST03ASBX1	SAUST03ASBX2	SAUST03BSBX1
Lab Sample Number:	C0927-02	C0927-03	C0927-04	C0927-05	C0927-06
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Routine
Dilution Factor:	1	1	1.2*	1.2*	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/14/96	9/14/96	9/14/96	9/14/96	9/14/96
Date Analyzed:	9/22/96	9/22/96	9/21/96	9/25/96	9/22/96
Percent Moisture:	Wet Weight	Wet Weight	8	8	12
Acenaphthene	330 U	330 U	230 J	130 J	370 U
2,4-Dinitrophenol	830 U	830 U	890 U	890 U	920 U
4-Nitrophenol	830 U	830 U	890 U	890 U	920 U
Dibenzofuran	330 U	330 U	140 J	62 J	370 U
2,4-dinitrotoluene	330 U	330 U	360 U	360 U	370 U
Diethylphthalate	330 U	330 U	360 U	360 U	370 U
Fluorene	330 U	330 U	440	240 J	370 U
4-Chlorophenyl-phenyl ether	330 U	330 U	360 U	360 U	370 U
4-Nitroaniline	830 U	830 U	890 U	890 U	920 U
4,6-Dinitro-2-methylphenol	830 U	830 U	890 U	890 U	920 U
n-Nitrosodiphenylamine	330 U	330 U	360 U	360 U	370 U
4-Bromophenyl-phenylether	330 U	330 U	360 U	360 U	370 U
Hexachlorobenzene	330 U	330 U	360 U	360 U	370 U
Pentachlorophenol	830 U	830 U	890 U	890 U	920 U
Phenanthrene	50 J	70 J	2400	2800	370 U
Anthracene	330 U	330 U	2400	2500	370 U
Di-n-butylphthalate	330 U	330 U	360 U	360 U	370 U
Carbazole	330 U	330 U	1200	1000	370 U
Fluoranthene	59 J	77 J	16000	20000	45 J
Pyrene	68 J	78 J	12000	29000	62 J
Butylbenzylphthalate	330 U	330 U	360 U	360 U	370 U
Benzo(a)anthracene	330 U	330 U	8100	13000	370 U
Chrysene	330 U	330 U	7200	11000	370 U
3,3'-Dichlorobenzidine	330 U	330 U	360 U	360 U	370 U
bis(2-Ethylhexyl)phthalate	330 U	330 U	360 U	360 U	370 U
Di-n-octylphthalate	330 U	330 U	360 U	360 U	370 U
Benzo(b)fluoranthene	330 U	330 U	5700	9300	370 U
Benzo(k)fluoranthene	330 U	330 U	2500	2500	370 U
Benzo(a)pyrene	330 U	330 U	5400	8000	370 U
Indeno(1,2,3-cd)pyrene	330 U	330 U	1700	3900	370 U
Dibenz(a,h)anthracene	330 U	330 U	760	1700	370 U
Benzo(g,h,i)perylene	330 U	330 U	1700	2900	370 U

* Several compounds diluted at an unknown dilution factor.

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAUST03BSBX2	SAUST02BSBX1	SAUST02BSBX2	SAAUTOHASBX1	SAAUTOHASBX2
Lab Sample Number:	C0927-07	C0927-08	C0927-09	C0927-10	C0927-11
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/14/96	9/15/96	9/14/96	9/19/96	9/15/96
Date Analyzed:	9/23/96	9/24/96	9/22/96	9/23/96	9/22/96
Percent Moisture:	20	5	Wet Weight	14	14
Phenol	410 U	340 U	330 U	380 U	370 U
bis(2-Chloroethyl) ether	410 U	340 U	330 U	380 U	370 U
2-Chlorophenol	410 U	340 U	330 U	380 U	370 U
1,3-Dichlorobenzene	410 U	340 U	330 U	380 U	370 U
1,4-Dichlorobenzene	410 U	340 U	330 U	380 U	370 U
1,2-Dichlorobenzene	410 U	340 U	330 U	380 U	370 U
2-Methylphenol	410 U	340 U	330 U	380 U	370 U
2,2'-oxybis(1-Chloropropane)	410 U	340 U	330 U	380 U	370 U
4-Methylphenol	410 U	340 U	330 U	380 U	370 U
n-Nitroso-di-n-propylamine	410 U	340 U	330 U	380 U	370 U
Hexachloroethane	410 U	340 U	330 U	380 U	370 U
Nitrobenzene	410 U	340 U	330 U	380 U	370 U
Isophorone	410 U	340 U	330 U	380 U	370 U
2-Nitrophenol	410 U	340 U	330 U	380 U	370 U
2,4-Dimethylphenol	410 U	340 U	330 U	380 U	370 U
bis(2-Chloroethoxy) methane	410 U	340 U	330 U	380 U	370 U
2,4-Dichlorophenol	410 U	340 U	330 U	380 U	370 U
1,2,4-Trichlorobenzene	410 U	340 U	330 U	380 U	370 U
Naphthalene	410 U	61 J	330 U	380 U	370 U
4-Chloroaniline	410 U	340 U	330 U	380 U	370 U
Hexachlorobutadiene	410 U	340 U	330 U	380 U	370 U
4-Chloro-3-methylphenol	410 U	340 U	330 U	380 U	370 U
2-methylnaphthalene	410 U	340 U	280 J	380 U	370 U
Hexachlorocyclopentadiene	410 U	340 U	330 U	380 U	370 U
2,4,6-Trichlorophenol	410 U	340 U	330 U	380 U	370 U
2,4,5-Trichlorophenol	1000 U	860 U	830 U	950 U	930 U
2-Chloronaphthalene	410 U	340 U	330 U	380 U	370 U
2-Nitroaniline	1000 U	860 U	830 U	950 U	930 U
Dimethylphthalate	410 U	340 U	330 U	380 U	370 U
Acenaphthylene	410 U	340 U	330 U	380 U	370 U
2,6-Dinitrotoluene	410 U	340 U	330 U	380 U	370 U
3-Nitroaniline	1000 U	860 U	830 U	950 U	930 U

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAUST03BSBX2	SAUST02BSBX1	SAUST02BSBX2	SAAUTOHASBX1	SAAUTOHASBX2
Lab Sample Number:	C0927-07	C0927-08	C0927-09	C0927-10	C0927-11
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/14/96	9/15/96	9/14/96	9/19/96	9/15/96
Date Analyzed:	9/23/96	9/24/96	9/22/96	9/23/96	9/22/96
Percent Moisture:	20	5	Wet Weight	14	14
Acenaphthene	410 U	73 J	330 U	380 U	370 U
2,4-Dinitrophenol	1000 U	860 U	830 U	950 U	930 U
4-Nitrophenol	1000 U	860 U	830 U	950 U	930 U
Dibenzofuran	410 U	36 J	330 U	380 U	370 U
2,4-dinitrotoluene	410 U	340 U	330 U	380 U	370 U
Diethylphthalate	410 U	340 U	330 U	380 U	370 U
Fluorene	410 U	54 J	540	380 U	370 U
4-Chlorophenyl-phenyl ether	410 U	340 U	330 U	380 U	370 U
4-Nitroaniline	1000 U	860 U	830 U	380 U	930 U
4,6-Dinitro-2-methylphenol	1000 U	860 U	830 U	950 U	930 U
n-Nitrosodiphenylamine	410 U	340 U	330 U	950 U	370 U
4-Bromophenyl-phenylether	410 U	340 U	330 U	380 U	370 U
Hexachlorobenzene	410 U	340 U	330 U	380 U	370 U
Pentachlorophenol	1000 U	860 U	830 U	950 U	930 U
Phenanthrene	220 J	550	610	380 U	370 U
Anthracene	410 U	97 J	330 U	380 U	370 U
Di-n-butylphthalate	410 U	340 U	330 U	380 U	370 U
Carbazole	70 J	160 J	330 U	380 U	370 U
Fluoranthene	250 J	660	86 J	380 U	370 U
Pyrene	320 J	560	260 J	380 U	370 U
Butylbenzylphthalate	47 J	340 U	330 U	380 U	370 U
Benz(a)anthracene	150 J	340	330 U	380 U	370 U
Chrysene	220 J	300 J	330 U	380 U	370 U
3,3'-Dichlorobenzidine	410 U	340 U	330 U	380 U	370 U
bis(2-Ethylhexyl)phthalate	52 J	340 U	330 U	48 J	72 J
Di-n-octylphthalate	410 U	340 U	330 U	380 U	370 U
Benzo(b)fluoranthene	160 J	290 J	330 U	380 U	370 U
Benzo(k)fluoranthene	56 J	88 J	330 U	380 U	370 U
Benzo(a)pyrene	140 J	250 J	330 U	380 U	370 U
Indeno(1,2,3-cd)pyrene	53 J	87 J	330 U	380 U	370 U
Dibenz(a,h)anthracene	410 U	340 U	330 U	380 U	370 U
Benzo(g,h,i)perylene	64 J	100 J	330 U	380 U	370 U

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Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SADBRISANSX1	SAFILTRANSX1	SAFILTRANSDS	SAFILTRBNSX1	SASEPTICANSX2
Lab Sample Number:	C0927-12	C0927-13	C0927-14	C0927-15	C0927-16
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	1	2	2	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/15/96	9/15/96	9/15/96	9/15/96	9/15/96
Date Analyzed:	9/24/96	9/26/96	9/24/96	9/24/96	9/22/96
Percent Moisture:	5	7	13	4	10
Phenol	350 U	700 U	750 U	340 U	360 U
bis(2-Chloroethyl) ether	350 U	700 U	750 U	340 U	360 U
2-Chlorophenol	350 U	700 U	750 U	340 U	360 U
1,3-Dichlorobenzene	350 U	700 U	750 U	340 U	360 U
1,4-Dichlorobenzene	350 U	700 U	750 U	340 U	360 U
1,2-Dichlorobenzene	350 U	700 U	750 U	340 U	360 U
2-Methylphenol	350 U	700 U	750 U	340 U	360 U
2,2'-oxybis(1-Chloropropane)	350 U	700 U	750 U	340 U	360 U
4-Methylphenol	350 U	700 U	750 U	340 U	360 U
n-Nitroso-di-n-propylamine	350 U	700 U	750 U	340 U	360 U
Hexachloroethane	350 U	700 U	750 U	340 U	360 U
Nitrobenzene	350 U	700 U	750 U	340 U	360 U
Isophorone	350 U	700 U	750 U	340 U	360 U
2-Nitrophenol	350 U	700 U	750 U	340 U	360 U
2,4-Dimethylphenol	350 U	700 U	750 U	340 U	360 U
bis(2-Chloroethoxy) methane	350 U	700 U	750 U	340 U	360 U
2,4-Dichlorophenol	350 U	700 U	750 U	340 U	360 U
1,2,4-Trichlorobenzene	350 U	700 U	750 U	340 U	360 U
Naphthalene	350 U	700 U	750 U	340 U	360 U
4-Chloroaniline	350 U	700 U	750 U	340 U	360 U
Hexachlorobutadiene	350 U	700 U	750 U	340 U	360 U
4-Chloro-3-methylphenol	350 U	700 U	750 U	340 U	360 U
2-methylnaphthalene	350 U	700 U	750 U	340 U	360 U
Hexachlorocyclopentadiene	350 U	700 U	750 U	340 U	360 U
2,4,6-Trichlorophenol	350 U	700 U	750 U	340 U	360 U
2,4,5-Trichlorophenol	860 U	1700 U	1900 U	850 U	910 U
2-Chloronaphthalene	350 U	700 U	750 U	340 U	360 U
2-Nitroaniline	860 U	1700 U	1900 U	850 U	910 U
Dimethylphthalate	350 U	700 U	750 U	340 U	360 U
Acenaphthylene	45 J	700 U	750 U	340 U	360 U
2,6-Dinitrotolucne	350 U	700 U	750 U	340 U	360 U
3-Nitroaniline	860 U	1700 U	1900 U	850 U	910 U

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Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SADBRISANSX1	SAFILTRANSX1	SAFILTRANSDS	SAFILTRBNSX1	SASEPTICANSX2
Lab Sample Number:	C0927-12	C0927-13	C0927-14	C0927-15	C0927-16
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	1	2	2	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/15/96	9/15/96	9/15/96	9/15/96	9/15/96
Date Analyzed	9/24/96	9/26/96	9/24/96	9/24/96	9/22/96
Percent Moisture:	5	7	13	4	10
Acenaphthene	66 J	700 U	750 U	340 U	360 U
2,4-Dinitrophenol	860 U	1700 U	1900 U	850 U	910 U
4-Nitrophenol	860 U	1700 U	1900 U	850 U	910 U
Dibenzofuran	36 J	700 U	750 U	340 U	360 U
2,4-dinitrotoluene	350 U	700 U	750 U	340 U	360 U
Diethylphthalate	350 U	700 U	750 U	340 U	360 U
Fluorene	94 J	700 U	750 U	340 U	360 U
4-Chlorophenyl-phenyl ether	350 U	700 U	750 U	340 U	360 U
4-Nitroaniline	860 U	1700 U	1900 U	850 U	910 U
4,6-Dinitro-2-methylphenol	860 U	1700 U	1900 U	850 U	910 U
n-Nitrosodiphenylamine	350 U	700 U	750 U	340 U	360 U
4-Bromophenyl-phenylether	350 U	700 U	750 U	340 U	360 U
Hexachlorobenzene	350 U	700 U	750 U	340 U	360 U
Pentachlorophenol	860 U	1700 U	1900 U	850 U	910 U
Phenanthrene	860	77 J	750 U	160 J	360 U
Anthracene	260 J	700 U	750 U	340 U	360 U
Di-n-butylphthalate	350 U	700 U	750 U	340 U	360 U
Carbazole	170 J	700 U	750 U	49 J	360 U
Fluoranthene	950	700 U	750 U	120 J	360 U
Pyrene	1300	90 J	42 J	170 J	360 U
Butylbenzylphthalate	56 J	700 U	750 U	340 U	360 U
Benz(a)anthracene	640	700 U	750 U	88 J	360 U
Chrysene	660	700 U	750 U	97 J	360 U
3,3'-Dichlorobenzidine	350 U	700 U	750 U	340 U	360 U
bis(2-Ethylhexyl)phthalate	350 U	140 J	750 U	34 J	140 J
Di-n-octylphthalate	350 U	700 U	750 U	340 U	360 U
Benzo(b)fluoranthene	460	700 U	750 U	82 J	360 U
Benzo(k)fluoranthene	160 J	700 U	750 U	37 J	360 U
Benzo(a)pyrene	400	700 U	750 U	73 J	360 U
Indeno(1,2,3-cd)pyrene	91 J	700 U	750 U	340 U	360 U
Dibenz(a,h)anthracene	350 U	700 U	750 U	340 U	360 U
Benzo(g,h,i)perylene	110 J	700 U	750 U	340 U	360 U

J - The associated numerical value is an estimated quantity.

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Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAAST05ASBX1	SAAST05ASBX2	SASEPTICANSXI	SASEPTICANSXS	SAAST05BSBX1
Lab Sample Number:	C0927-17	C0927-18	C0927-19	C0927-20	C0927-21
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Field Duplicate	Field Duplicate	Routine
Dilution Factor:	1	1/?*	1	1	1
Date Sampled:	9/7/96	9/7/96	9/7/96	9/7/96	9/7/96
Date Extracted:	9/15/96	9/15/96	9/15/96	9/15/96	9/15/96
Date Analyzed:	9/24/96	9/24/96	9/23/96	9/22/96	9/22/96
Percent Moisture:	2	8	10	8	4
Phenol	340 U	350 U	360 U	360 U	340 U
bis(2-Chloroethyl) ether	340 U	350 U	360 U	360 U	340 U
2-Chlorophenol	340 U	350 U	360 U	360 U	340 U
1,3-Dichlorobenzene	340 U	350 U	360 U	360 U	340 U
1,4-Dichlorobenzene	340 U	350 U	360 U	360 U	340 U
1,2-Dichlorobenzene	340 U	350 U	360 U	360 U	340 U
2-Methylphenol	340 U	350 U	360 U	360 U	340 U
2,2'-oxybis(1-Chloropropane)	340 U	350 U	360 U	360 U	340 U
4-Methylphenol	340 U	350 U	360 U	360 U	340 U
n-Nitroso-di-n-propylamine	340 U	350 U	360 U	360 U	340 U
Hexachloroethane	340 U	350 U	360 U	360 U	340 U
Nitrobenzene	340 U	350 U	360 U	360 U	340 U
Isophorone	340 U	350 U	360 U	360 U	340 U
2-Nitrophenol	340 U	350 U	360 U	360 U	340 U
2,4-Dimethylphenol	340 U	350 U	360 U	360 U	340 U
bis(2-Chloroethoxy) methane	340 U	350 U	360 U	360 U	340 U
2,4-Dichlorophenol	340 U	350 U	360 U	360 U	340 U
1,2,4-Trichlorobenzene	340 U	350 U	360 U	360 U	340 U
Naphthalene	190 J	1800	360 U	360 U	340 U
4-Chloroaniline	340 U	350 U	360 U	360 U	340 U
Hexachlorobutadiene	340 U	350 U	360 U	360 U	340 U
4-Chloro-3-methylphenol	340 U	350 U	360 U	360 U	340 U
2-methylnaphthalene	220 J	1600	360 U	360 U	340 U
Hexachlorocyclopentadiene	340 U	350 U	360 U	360 U	340 U
2,4,6-Trichlorophenol	340 U	350 U	360 U	360 U	340 U
2,4,5-Trichlorophenol	840 U	880 U	910 U	890 U	850 U
2-Chloronaphthalene	340 U	350 U	360 U	360 U	340 U
2-Nitroaniline	840 U	880 U	910 U	890 U	850 U
Dimethylphthalate	340 U	350 U	360 U	360 U	340 U
Acenaphthylene	340 U	350 U	360 U	360 U	340 U
2,6-Dinitrotoluene	340 U	350 U	360 U	360 U	340 U
3-Nitroaniline	840 U	880 U	910 U	890 U	850 U

* Several compounds diluted at an unknown dilution factor.

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

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Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAAST05ASBX1	SAAST05ASBX2	SASEPTICANSX1	SASEPTICANSXS	SAAST05BSBX1
Lab Sample Number:	C0927-17	C0927-18	C0927-19	C0927-20	C0927-21
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Field Duplicate	Field Duplicate	Routine
Dilution Factor:	1	1/7*	1	1	1
Date Sampled:	9/7/96	9/7/96	9/7/96	9/7/96	9/7/96
Date Extracted:	9/15/96	9/15/96	9/15/96	9/15/96	9/15/96
Date Analyzed:	9/24/96	9/24/96	9/23/96	9/22/96	9/22/96
Percent Moisture:	2	8	10	8	4
Acenaphthene	40 J	690	360 U	360 U	80 J
2,4-Dinitrophenol	840 U	880 U	910 U	890 U	850 U
4-Nitrophenol	840 J	880 U	910 U	890 U	850 U
Dibenzofuran	58 J	720	360 U	360 U	36 J
2,4-dinitrotoluene	340 U	350 U	360 U	360 U	340 U
Diethylphthalate	340 U	350 U	360 U	360 U	340 U
Fluorene	41 J	800	360 U	360 U	68 J
4-Chlorophenyl-phenyl ether	340 U	350 U	360 U	360 U	340 U
4-Nitroaniline	840 U	880 U	910 U	890 U	850 U
4,6-Dinitro-2-methylphenol	840 U	880 U	910 U	890 U	850 U
n-Nitrosodiphenylamine	340 U	350 U	360 U	360 U	340 U
4-Bromophenyl-phenylether	340 U	350 U	360 U	360 U	340 U
Hexachlorobenzene	340 U	350 U	360 U	360 U	340 U
Pentachlorophenol	840 U	880 U	910 U	890 U	850 U
Phenanthrene	460	6400	360 U	360 U	610
Anthracene	64 J	1200	360 U	360 U	130 J
Di-n-butylphthalate	340 U	350 U	360 U	360 U	340 U
Carbazole	120 J	1700	360 U	360 U	160 J
Fluoranthene	390	5600	360 U	360 U	490
Pyrene	400	3800	360 U	360 U	630
Butylbenzylphthalate	340 U	350 U	360 U	360 U	340 U
Benz(a)anthracene	200 J	2200	360 U	360 U	300 J
Chrysene	210 J	2500	360 U	360 U	280 J
3,3'-Dichlorobenzidine	340 U	350 U	360 U	360 U	340 U
bis(2-Ethylhexyl)phthalate	160 J	350 U	170 J	82 J	340 U
Di-n-octylphthalate	340 U	350 U	360 U	360 U	340 U
Benzo(b)fluoranthene	180 J	2800	360 U	360 U	230 J
Benzo(k)fluoranthene	65 J	450	360 U	360 U	95 J
Benzo(a)pyrene	180 J	2300	360 U	360 U	230 J
Indeno(1,2,3-cd)pyrene	73 J	590	360 U	360 U	93 J
Dibenz(a,h)anthracene	340 U	220 J	360 U	360 U	340 U
Benzo(g,h,i)perylene	120 J	720	360 U	360 U	130 J

* Several compounds diluted at an unknown dilution factor.

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

I.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAAST05BSBX2	SAAST05CSBX1	SAAST05CSBX2	LYWSHBY.ASSX1	LYWTRSPBWSDS
Lab Sample Number:	C0927-22	C0927-23	C0927-24	C0985-01	C0985-03
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Oil/Med.
Sample Type:	Routine	Routine	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1/?*	300
Date Sampled:	9/7/96	9/7/96	9/7/96	9/17/96	9/17/96
Date Extracted:	9/15/96	9/19/96	9/19/96	9/21/96	10/2/96
Date Analyzed:	9/22/96	9/21/96	9/21/96	10/8/96	10/3/96
Percent Moisture:	5	6	7	7	Wet Weight
Phenol	340 U	350 U	350 U	350 U	990000 UJ
bis(2-Chloroethyl) ether	340 U	350 U	350 U	350 U	990000 UJ
2-Chlorophenol	340 U	350 U	350 U	350 U	990000 UJ
1,3-Dichlorobenzene	340 U	350 U	350 U	350 U	990000 UJ
1,4-Dichlorobenzene	340 U	350 U	350 U	350 U	990000 UJ
1,2-Dichlorobenzene	340 U	350 U	350 U	350 U	990000 UJ
2-Methylphenol	340 U	350 U	350 U	350 U	990000 UJ
2,2'-oxybis(1-Chloropropane)	340 U	350 U	350 U	350 U	990000 UJ
4-Methylphenol	340 U	350 U	350 U	350 U	990000 UJ
n-Nitroso-di-n-propylamine	340 U	350 U	350 U	350 U	990000 UJ
Hexachloroethane	340 U	350 U	350 U	350 U	990000 UJ
Nitrobenzene	340 U	350 U	350 U	350 U	990000 UJ
Isophorone	340 U	350 U	350 U	350 U	990000 UJ
2-Nitrophenol	340 U	350 U	350 U	350 U	990000 UJ
2,4-Dimethylphenol	340 U	350 U	350 U	350 U	990000 UJ
bis(2-Chloroethoxy) methane	340 U	350 U	350 U	350 U	990000 UJ
2,4-Dichlorophenol	340 U	350 U	350 U	350 U	990000 UJ
1,2,4-Trichlorobenzene	340 U	350 U	350 U	350 U	990000 UJ
Naphthalene	340 U	350 U	350 U	190 J	990000 UJ
4-Chloroaniline	340 U	350 U	350 U	350 U	990000 UJ
Hexachlorobutadiene	340 U	350 U	350 U	350 U	990000 UJ
4-Chloro-3-methylphenol	340 U	350 U	350 U	350 U	990000 UJ
2-methylnaphthalene	340 U	350 U	350 U	350 U	990000 UJ
Hexachlorocyclopentadiene	340 U	350 U	350 U	350 U	990000 UJ
2,4,6-Trichlorophenol	340 U	350 U	350 U	350 U	990000 UJ
2,4,5-Trichlorophenol	860 U	880 U	880 U	870 U	2500000 UJ
2-Chloronaphthalene	340 U	350 U	350 U	350 U	990000 UJ
2-Nitroaniline	860 U	880 U	880 U	870 U	2500000 UJ
Dimethylphthalate	340 U	350 U	350 U	350 U	990000 UJ
Acenaphthylene	340 U	350 U	350 U	55 J	990000 UJ
2,6-Dinitrotoluene	340 U	350 U	350 U	350 U	990000 UJ
3-Nitroaniline	860 U	880 U	880 U	870 U	2500000 UJ

* Several compounds diluted at an unknown dilution factor.

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAAST05BSBX2	SAAST05CSBX1	SAAST05CSBX2	LYWSHBYASSX1	LYWTRSPBWSDS
Lab Sample Number:	C0927-22	C0927-23	C0927-24	C0985-01	C0985-03
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Oil/Med.
Sample Type:	Routine	Routine	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1/?*	300
Date Sampled:	9/7/96	9/7/96	9/7/96	9/17/96	9/17/96
Date Extracted:	9/15/96	9/19/96	9/19/96	9/21/96	10/2/96
Date Analyzed	9/22/96	9/21/96	9/21/96	10/8/96	10/3/96
Percent Moisture:	5	6	7	7	Wet Weight
Accnaphthene	340 U	350 U	350 U	530	990000 UJ
2,4-Dinitrophenol	860 U	880 U	880 U	870 U	2500000 UJ
4-Nitrophenol	860 U	880 U	880 U	870 U	2500000 UJ
Dibenzofuran	340 U	350 U	350 U	230 J	990000 UJ
2,4-dinitrotoluene	340 U	350 U	350 U	350 U	990000 UJ
Diethylphthalate	340 U	350 U	56 J	350 U	990000 UJ
Fluorene	340 U	350 U	350 U	330 J	990000 UJ
4-Chlorophenyl-phenyl ether	340 U	350 U	350 U	350 U	990000 UJ
4-Nitroaniline	860 U	880 U	880 U	870 U	2500000 UJ
4,6-Dinitro-2-methylphenol	860 U	880 U	880 U	870 U	2500000 UJ
n-Nitrosodiphenylamine	340 U	350 U	350 U	350 U	990000 UJ
4-Bromophenyl-phenylether	340 U	350 U	350 U	350 U	990000 UJ
Hexachlorobenzene	340 U	350 U	350 U	350 U	990000 UJ
Pentachlorophenol	860 U	880 U	880 U	870 U	2500000 UJ
Phenanthrene	170 J	350 U	350 U	2300	990000 UJ
Anthracene	37 J	350 U	350 U	460	990000 UJ
Di-n-butylphthalate	340 U	350 U	350 U	350 U	990000 UJ
Carbazole	55 J	350 U	350 U	490	990000 UJ
Fluoranthene	99 J	350 U	350 U	3100	990000 UJ
Pyrene	140 J	350 U	350 U	2800	990000 UJ
Butylbenzylphthalate	42 J	350 U	350 U	350 U	990000 UJ
Benz(a)anthracene	65 J	350 U	350 U	1500	990000 UJ
Chrysene	63 J	350 U	350 U	1700	990000 UJ
3,3'-Dichlorobenzidine	340 U	350 U	350 U	350 U	990000 UJ
bis(2-Ethylhexyl)phthalate	150 J	350 U	68 J	350 U	990000 UJ
Di-n-octylphthalate	340 U	350 U	350 U	350 U	990000 UJ
Benzo(b)fluoranthene	48 J	350 U	350 U	2200	990000 UJ
Benzo(k)fluoranthene	340 U	350 U	350 U	700	990000 UJ
Benzo(a)pyrene	46 J	350 U	350 U	1500	990000 UJ
Indeno(1,2,3-cd)pyrene	340 U	350 U	350 U	460	990000 UJ
Dibenz(a,h)anthracene	340 U	350 U	350 U	140 J	990000 UJ
Benzo(g,h,i)perylene	340 U	350 U	350 U	490	990000 UJ

* Several compounds diluted at an unknown dilution factor.

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

TABLE 4-4 VALIDATED SOIL SAMPLING ANALYTICAL RESULTS - FORMER ST. ALBANS AIR FORCE STATION

** Screening levels are EPA Region III Risk-Based Concentrations presented in memo, dated April 30, 1996, distributed by Roy L. Smith, EPA Senior Toxicologist.

These concentrations are residential, soil ingestion values. A blank space indicates no level was specified by the EPA.

DS in the sample designation indicates a field duplicate.

J = Quantitation is approximate due to limitations identified in the quality control review.

U = Value is the lowest achievable detection limit based on quality control review.

UJ = Detection limit is approximate due to limitations identified in the quality control review.

+ RBC for Trichloroethylene used for Trichloroethene

RBC for 1,2-Dibromoethane used for Dibromomethane

RBC for Tetrachloroethylene used for Tetrachloroethene

RBC for Chlorodibromomethane used for Dibromochloromethane

RBC for 1,2-Dichloroethylene (trans) used for Trans-1,2-Dichloroethene

RBC for 1,2-Dichloropropane used for 2,2-Dichloropropane

RBC for Cis-1,2-Dichloroethylene used for Cis-1,2-Dichloroethene

RBC for 1,3-Dichloropropene used for Cis-1,3-Dichloropropene

RBC for 1,3-Dichloropropene used for trans-1,3-Dichloropropene

RBC for 1,1-Dichloroethylene used for 1,1-Dichloroethene

RBC for Dibutyl Phthalate used for Di-n-Butyl Phthalate

RBC for DDD used for 4,4'-DDD

RBC for DDT used for 4,4'-DDT

RBC for DDE used for 4,4'-DDE

RBC for Endosulfan used for Alpha Endosulfan (Endosulfan I)

RBC for Endosulfan used for Beta Endosulfan (Endosulfan II)

TABLE 4-5 VALIDATED WATER SUPPLY WELL SAMPLING ANALYTICAL RESULTS - FORMER ST. ALBANS AIR FORCE STATION

SAMPLE ID			SAWTRSPAWS X1	SAWTRSPAWS DS	SAWTRSPBWS X1
	SCREENING LEVELS**	MDL			
ANALYTICAL PARAMETERS					
VOCs (Method 524.2) ug/L					
Dichlorodifluoromethane	390	0.113	0.5 U	0.5 U	0.5 U
Chloromethane	1.4	0.116	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.019	0.087	0.5 U	0.5 U	0.5 U
Bromomethane	8.7	0.148	0.5 U	0.5 U	0.5 U
Chloroethane	8600	0.086	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	1300	0.07	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane +	0.044	0.064	0.5 U	0.5 U	0.5 U
Methylene Chloride	4.1	0.081	3 UJ	1 UJ	2 U
trans-1,2-dichloroethene +	120	0.057	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	810	0.069	0.5 U	0.5 U	0.5 U
2,2-dichloropropane +		0.143	0.5 U	0.5 U	0.5 U
Cis-1,2-Dichloroethene +	61	0.059	0.5 U	0.5 U	0.5 U
Bromochloromethane		0.074	0.5 U	0.5 U	0.5 U
Chloroform	0.15	0.059	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	790	0.067	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.16	0.114	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene		0.094	0.5 U	0.5 U	0.5 U
Benzene	0.36	0.072	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.12	0.095	0.5 U	0.5 U	0.5 U
Trichloroethene +	1.6	0.084	0.9 J	0.3 UJ	0.8
1,2-Dichloropropane	0.16	0.077	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.17	0.081	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene +	0.077	0.094	0.5 U	0.5 U	0.5 U
Toluene	750	0.092	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene +	0.077	0.094	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.19	0.16	0.5 U	0.5 U	0.5 U
Tetrachloroethene +	1.1	0.11	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane		0.08	0.5 U	0.5 U	0.5 U
Chlorobenzene	39	0.082	0.5 U	0.5 U	0.5 U
1,1,1,2-Tetrachloroethane	0.41	0.1	0.5 U	0.5 U	0.5 U
Ethylbenzene	1300	0.105	0.5 U	0.5 U	0.5 U
p- & m-xylene	1400	0.251	0.5 U	0.5 U	0.5 U
o-xylene	1400	0.094	0.5 U	0.5 U	0.5 U
Styrene	1600	0.088	0.5 U	0.5 U	0.5 U
Bromoform	2.4	0.184	0.5 U	0.5 U	0.5 U
Isopropylbenzene		0.104	0.5 U	0.5 U	0.5 U
Bromobenzene		0.097	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.052	0.154	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	0.0015	0.152	0.5 U	0.5 U	0.5 U
n-Propylbenzene		0.121	0.5 U	0.5 U	0.5 U
2-Chlorotoluene		0.086	0.5 U	0.5 U	0.5 U
4-Chlorotoluene		0.101	0.5 U	0.5 U	0.5 U
1,3,5-trimethylbenzene	300	0.116	0.5 U	0.5 U	0.5 U
tert-butylbenzene	61	0.119	0.5 U	0.5 U	0.5 U
1,2,4-trimethylbenzene	300	0.138	0.5 U	0.5 U	0.5 U
Sec-Butylbenzene	61	0.138	0.5 U	0.5 U	0.5 U
1,3-dichlorobenzene	540	0.102	0.5 U	0.5 U	0.5 U
4-isopropyltoluene		0.117	0.5 U	0.5 U	0.5 U
1,4-dichlorobenzene	0.44	0.101	0.5 U	0.5 U	0.5 U
1,2-dichlorobenzene	270	0.133	0.5 U	0.5 U	0.5 U
n-butylbenzene		0.125	0.5 U	0.5 U	0.5 U
1,2-dibromo-3-chloropropane	0.048	0.193	0.5 U	0.5 U	0.5 U
1,2,4-trichlorobenzene	190	0.204	0.5 U	0.5 U	0.5 U
hexachlorobutadiene	0.14	0.145	0.5 U	0.5 U	0.5 U
Naphthene		0.229	0.5 U	0.5 U	0.5 U
1,2,3-trichlorobenzene		0.245	0.5 U	0.5 U	0.5 U
Total VOCs			0.9	0	0.8

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYWTRSPBWSX1	SAGSPMPBSSX1	SAGSPMPBSSDS	SAGSPMPASSX1	SAVHCMTASSX1
Lab Sample Number:	C0985-04	C0985-07	C0985-08	C0985-09	C0985-10
Matrix/Analysis:	Oil/Med.	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	300	4	1	1	1/*
Date Sampled:	9/17/96	9/18/96	9/18/96	9/18/96	9/18/96
Date Extracted:	10/2/96	9/21/96	9/21/96	9/21/96	9/23/96
Date Analyzed:	10/3/96	10/8/96	10/8/96	10/8/96	10/4/96
Percent Moisture:	Wet Weight	16	16	13	22
Phenol	990000 UJ	1500 U	390 U	380 U	420 U
bis(2-Chloroethyl) ether	990000 UJ	1500 U	390 U	380 U	420 U
2-Chlorophenol	990000 UJ	1500 U	390 U	380 U	420 U
1,3-Dichlorobenzene	990000 UJ	1500 U	390 U	380 U	420 U
1,4-Dichlorobenzene	990000 UJ	1500 U	390 U	380 U	420 U
1,2-Dichlorobenzene	990000 UJ	1500 U	390 U	380 U	420 U
2-Methylphenol	990000 UJ	1500 U	390 U	380 U	420 U
2,2'-oxybis(1-Chloropropane)	990000 UJ	1500 U	390 U	380 U	420 U
4-Methylphenol	990000 UJ	1500 U	390 U	380 U	420 U
n-Nitroso-di-n-propylamine	990000 UJ	1500 U	390 U	380 U	420 U
Hexachloroethane	990000 UJ	1500 U	390 U	380 U	420 U
Nitrobenzene	990000 UJ	1500 U	390 U	380 U	420 U
Isophorone	990000 UJ	1500 U	390 U	380 U	420 U
2-Nitrophenol	990000 UJ	1500 U	390 U	380 U	420 U
2,4-Dimethylphenol	990000 UJ	1500 U	390 U	380 U	420 U
bis(2-Chloroethoxy) methane	990000 UJ	1500 U	390 U	380 U	420 U
2,4-Dichlorophenol	990000 UJ	1500 U	390 U	380 U	420 U
1,2,4-Trichlorobenzene	990000 UJ	1500 U	390 U	380 U	420 U
Naphthalene	990000 UJ	780 J	600	110 J	410 J
4-Chloroaniline	990000 UJ	1500 U	390 U	380 U	420 U
Hexachlorobutadiene	990000 UJ	1500 U	390 U	380 U	420 U
4-Chloro-3-methylphenol	990000 UJ	1500 U	390 U	380 U	420 U
2-methylnaphthalene	990000 UJ	940 J	710	110 J	230 J
Hexachlorocyclopentadiene	990000 UJ	1500 U	390 U	380 U	420 U
2,4,6-Trichlorophenol	990000 UJ	1500 U	390 U	380 U	420 U
2,4,5-Trichlorophenol	2500000 UJ	3900 U	980 U	940 U	1000 U
2-Chloronaphthalene	990000 UJ	1500 U	390 U	380 U	420 U
2-Nitroaniline	2500000 UJ	3900 U	980 U	940 U	1000 U
Dimethylphthalate	990000 UJ	1500 U	390 U	380 U	420 U
Acenaphthylene	990000 UJ	1500 U	48 J	380 U	77 J
2,6-Dinitrotoluene	990000 UJ	1500 U	390 U	380 U	420 U
3-Nitroaniline	2500000 UJ	3900 U	980 U	940 U	1000 U

* Several compounds diluted at an unknown dilution factor.

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYWTRSPBWSX1	SAGSPMPBSSX1	SAGSPMPBSSDS	SAGSPMPASSX1	SAVHCNITASSX1
Lab Sample Number:	C0985-04	C0985-07	C0985-08	C0985-09	C0985-10
Matrix/Analysis:	Oil/Med.	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	300	4	1	1	1/?*
Date Sampled:	9/17/96	9/18/96	9/18/96	9/18/96	9/18/96
Date Extracted:	10/2/96	9/21/96	9/21/96	9/21/96	9/23/96
Date Analyzed:	10/3/96	10/8/96	10/8/96	10/8/96	10/4/96
Percent Moisture:	Wet Weight	16	16	13	22
Acenaphthene	990000 UJ	1500 U	390 U	48 J	350 J
2,4-Dinitrophenol	2500000 UJ	3900 U	980 U	940 U	1000 U
4-Nitrophenol	2500000 UJ	3900 U	980 U	940 U	1000 U
Dibenzofuran	990000 UJ	170 J	140 J	45 J	250 J
2,4-dinitrotoluene	990000 UJ	1500 U	390 U	380 U	420 U
Diethylphthalate	990000 UJ	1500 U	390 U	380 U	420 U
Fluorene	990000 UJ	1500 U	51 J	59 J	380 J
4-Chlorophenyl-phenyl ether	990000 UJ	1500 U	390 U	380 U	420 U
4-Nitroaniline	2500000 UJ	3900 U	980 U	940 U	1000 U
4,6-Dinitro-2-methylphenol	2500000 UJ	3900 U	980 U	940 U	1000 U
n-Nitrosodiphenylamine	990000 UJ	1500 U	390 U	380 U	420 U
4-Bromophenyl-phenylether	990000 UJ	1500 U	390 U	380 U	420 U
Hexachlorobenzene	990000 UJ	1500 U	390 U	380 U	420 U
Pentachlorophenol	2500000 UJ	3900 U	980 U	940 U	1000 U
Phenanthrene	990000 UJ	500 J	460	490	3300
Anthracene	990000 UJ	1500 U	80 J	100 J	540
Di-n-butylphthalate	990000 UJ	160 J	390 U	380 U	420 U
Carbazole	990000 UJ	1500 U	60 J	80 J	670
Fluoranthene	990000 UJ	400 J	390	530	4100
Pyrene	990000 UJ	450 J	480	660	3700
Butylbenzylphthalate	990000 UJ	220 J	1100 J	380 U	120 J
Benz(a)anthracene	990000 UJ	230 J	190 J	250 J	1600
Chrysene	990000 UJ	310 J	270 J	260 J	2000
3,3'-Dichlorobenzidine	990000 UJ	1500 U	390 U	380 U	420 U
bis(2-Ethylhexyl)phthalate	990000 UJ	370 J	180 J	57 J	420 U
Di-n-octylphthalate	990000 UJ	1500 U	390 U	380 U	420 U
Benzo(b)fluoranthene	990000 UJ	370 J	360 J	350 J	3000
Benzo(k)fluoranthene	990000 UJ	1500 U	92 J	87 J	580
Benzo(a)pyrene	990000 UJ	240 J	220 J	220 J	1600
Indeno(1,2,3-cd)pyrene	990000 UJ	1500 U	110 J	71 J	600
Dibenz(a,h)anthracene	990000 UJ	1500 U	390 U	380 U	160 J
Benzo(g,h,i)perylene	990000 UJ	200 J	170 J	80 J	680

* Several compounds diluted at an unknown dilution factor.

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U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYDRYWLASWX1	LYDRYWLASWDS	LYAST12CNSX1	LYAST12CNSX2	SAUST02ASBX3
Lab Sample Number:	C0985-15	C0985-16	C0985-17	C0985-18	C1013-01
Matrix/Analysis:	Aqueous/Low	Aqueous/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/19/96	9/19/96	9/19/96	9/19/96	9/20/96
Date Extracted:	9/23/96	9/23/96	9/21/96	9/21/96	9/25/96
Date Analyzed:	10/3/96	10/3/96	10/4/96	10/4/96	10/5/96
Percent Moisture:	NA	NA	12	12	16
Phenol	10 U	10 U	370 U	370 U	390 U
bis(2-Chloroethyl) ether	10 U	10 U	370 U	370 U	390 U
2-Chlorophenol	10 U	10 U	370 U	370 U	390 U
1,3-Dichlorobenzene	10 U	10 U	370 U	370 U	390 U
1,4-Dichlorobenzene	10 U	10 U	370 U	370 U	390 U
1,2-Dichlorobenzene	10 U	10 U	370 U	370 U	390 U
2-Methylphenol	10 U	10 U	370 U	370 U	390 U
2,2'-oxybis(1-Chloropropane)	10 U	10 U	370 U	370 U	390 U
4-Methylphenol	10 U	10 U	370 U	370 U	390 U
n-Nitroso-di-n-propylamine	10 U	10 U	370 U	370 U	390 U
Hexachloroethane	10 U	10 U	370 U	370 U	390 U
Nitrobenzene	10 U	10 U	370 U	370 U	390 U
Isophorone	10 U	10 U	370 U	370 U	390 U
2-Nitrophenol	10 U	10 U	370 U	370 U	390 U
2,4-Dimethylphenol	10 U	10 U	370 U	370 U	390 U
bis(2-Chloroethoxy) methane	10 U	10 U	370 U	370 U	390 U
2,4-Dichlorophenol	10 U	10 U	370 U	370 U	390 U
1,2,4-Trichlorobenzene	10 U	10 U	370 U	370 U	390 U
Naphthalene	10 U	10 U	370 U	370 U	390 U
4-Chloroaniline	10 U	10 U	370 U	370 U	390 U
Hexachlorobutadiene	10 U	10 U	370 U	370 U	390 U
4-Chloro-3-methylphenol	10 U	10 U	370 U	370 U	390 U
2-methylnaphthalene	10 U	10 U	370 U	370 U	390 U
Hexachlorocyclopentadiene	10 U	10 U	370 U	370 U	390 U
2,4,6-Trichlorophenol	10 U	10 U	370 U	370 U	390 U
2,4,5-Trichlorophenol	25 U	25 U	930 U	910 U	970 U
2-Chloronaphthalene	10 U	10 U	370 U	370 U	390 U
2-Nitroaniline	25 U	25 U	930 U	910 U	970 U
Dimethylphthalate	10 U	10 U	370 U	370 U	390 U
Acenaphthylene	10 U	10 U	370 U	370 U	390 U
2,6-Dinitrotoluene	10 U	10 U	370 U	370 U	390 U
3-Nitroaniline	25 U	25 U	930 U	910 U	970 U

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UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III

Semivolatile (8270B) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYDRYWLASWX1	LYDRYWLASWDS	LYAST12CNSX1	LYAST12CNSX2	S.AUST02.ASBX3
Lab Sample Number:	C0985-15	C0985-16	C0985-17	C0985-18	C1013-01
Matrix/Analysis:	Aqueous/Low	Aqueous/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/19/96	9/19/96	9/19/96	9/19/96	9/20/96
Date Extracted:	9/23/96	9/23/96	9/21/96	9/21/96	9/25/96
Date Analyzed:	10/3/96	10/3/96	10/4/96	10/4/96	10/5/96
Percent Moisture:	NA	NA	12	12	16
Acenaphthene	10 U	10 U	370 U	370 U	390 U
2,4-Dinitrophenol	25 U	25 U	930 U	910 U	970 U
4-Nitrophenol	25 U	25 U	930 U	910 U	970 U
Dibenzofuran	10 U	10 U	370 U	370 U	390 U
2,4-dinitrotoluene	10 U	10 U	370 U	370 U	390 U
Diethylphthalate	10 U	10 U	370 U	370 U	390 U
Fluorene	10 U	10 U	370 U	370 U	390 U
4-Chlorophenyl-phenyl ether	10 U	10 U	370 U	370 U	390 U
4-Nitroaniline	25 U	25 U	930 U	910 U	970 U
4,6-Dinitro-2-methylphenol	25 U	25 U	930 U	910 U	970 U
n-Nitrosodiphenylamine	10 U	10 U	370 U	370 U	390 U
4-Bromophenyl-phenylether	10 U	10 U	370 U	370 U	390 U
Hexachlorobenzene	10 U	10 U	370 U	370 U	390 U
Pentachlorophenol	25 U	25 U	930 U	910 U	970 U
Phenanthrene	10 U	1 J	370 U	68 J	390 U
Anthracene	10 U	10 U	370 U	370 U	390 U
Di-n-butylphthalate	10 U	10 U	370 U	370 U	390 U
Carbazole	10 U	10 U	370 U	370 U	390 U
Fluoranthene	10 U	1 J	81 J	130 J	95 J
Pyrene	10 U	10 U	75 J	120 J	82 J
Butylbenzylphthalate	10 U	10 U	370 U	370 U	390 U
Benz(a)anthracene	10 U	10 U	45 J	79 J	43 J
Chrysene	10 U	10 U	44 J	80 J	44 J
3,3'-Dichlorobenzidine	10 U	10 U	370 U	370 U	390 U
bis(2-Ethylhexyl)phthalate	10 U	10 U	370 U	370 U	390 U
Di-n-octylphthalate	10 U	10 U	370 U	370 U	390 U
Benzo(b)fluoranthene	10 U	10 U	42 J	75 J	50 J
Benzo(k)fluoranthene	10 U	10 U	370 U	370 U	39 J
Benzo(a)pyrene	10 U	10 U	370 U	50 J	390 U
Indeno(1,2,3-cd)pyrene	10 U	10 U	370 U	370 U	390 U
Dibenz(a,h)anthracene	10 U	10 U	370 U	370 U	390 U
Benzo(g,h,i)perylene	10 U	10 U	370 U	370 U	390 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III**Semivolatile (8270B) Validated Results**

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAUST02.ASBDS2
Lab Sample Number:	C1013-2
Matrix/Analysis:	Soil/Low
Sample Type:	Field Duplicate
Dilution Factor:	1
Date Sampled:	9/20/96
Date Extracted:	9/25/96
Date Analyzed:	10/5/96
Percent Moisture:	13
Phenol	380 U
bis(2-Chloroethyl) ether	380 U
2-Chlorophenol	380 U
1,3-Dichlorobenzene	380 U
1,4-Dichlorobenzene	380 U
1,2-Dichlorobenzene	380 U
2-Methylphenol	380 U
2,2'-oxybis(1-Chloropropane)	380 U
4-Methylphenol	380 U
n-Nitroso-di-n-propylamine	380 U
Hexachloroethane	380 U
Nitrobenzene	380 U
Isophorone	380 U
2-Nitrophenol	380 U
2,4-Dimethylphenol	380 U
bis(2-Chloroethoxy) methane	380 U
2,4-Dichlorophenol	380 U
1,2,4-Trichlorobenzene	380 U
Naphthalene	380 U
4-Chloroaniline	380 U
Hexachlorobutadiene	380 U
4-Chloro-3-methylphenol	380 U
2-methylnaphthalene	380 U
Hexachlorocyclopentadiene	380 U
2,4,6-Trichlorophenol	380 U
2,4,5-Trichlorophenol	940 U
2-Chloronaphthalene	380 U
2-Nitroaniline	940 U
Dimethylphthalate	380 U
Acenaphthylene	380 U
2,6-Dinitrotoluene	380 U
3-Nitroaniline	940 U

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UU - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table III**Semivolatile (8270B) Validated Results**

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAUST02ASBDS2
Lab Sample Number:	C1013-2
Matrix/Analysis:	Soil/Low
Sample Type:	Field Duplicate
Dilution Factor:	1
Date Sampled:	9/20/96
Date Extracted:	9/25/96
Date Analyzed	10/5/96
Percent Moisture:	13
Acenaphthene	380 U
2,4-Dinitrophenol	940 U
4-Nitrophenol	940 U
Dibenzofuran	380 U
2,4-dinitrotoluene	380 U
Diethylphthalate	380 U
Fluorene	380 U
4-Chlorophenyl-phenyl ether	380 U
4-Nitroaniline	940 U
4,6-Dinitro-2-methylphenol	940 U
n-Nitrosodiphenylamine	380 U
4-Bromophenyl-phenylether	380 U
Hexachlorobenzene	380 U
Pentachlorophenol	940 U
Phenanthrene	85 J
Anthracene	380 U
Di-n-butylphthalate	380 U
Carbazole	380 U
Fluoranthene	110 J
Pyrene	97 J
Butylbenzylphthalate	380 U
Benz(a)anthracene	42 J
Chrysene	49 J
3,3'-Dichlorobenzidine	380 U
bis(2-Ethylhexyl)phthalate	380 U
Di-n-octylphthalate	380 U
Benzo(b)fluoranthene	49 J
Benzo(k)fluoranthene	380 U
Benzo(a)pyrene	380 U
Indeno(1,2,3-cd)pyrene	380 U
Dibenz(a,h)anthracene	380 U
Benzo(g,h,i)perylene	380 U

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U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST08ASBN1	LYUST08ASBN2	LYUST08BSBN1	LYUST08BSBN2	LYUST08CSBN1
Lab Sample Number:	C0920-01	C0920-02	C0920-03	C0920-04	C0920-05
Matrix/Analysis:	Soil Low				
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1.2*
Date Sampled:	9/3/96	9/3/96	9/3/96	9/3/96	9/3/96
Date Extracted:	9/12/96	9/12/96	9/12/96	9/12/96	9/12/96
Date Analyzed:	9/14/96	9/13/96	9/14/96	9/13/96	9/18/96
Percent Moisture:	1/8/00	15	7	9	8
unknown ester	X				
unknown fatty ester	X				
unknown	7X	3X	7X	9X	5X
hexadecanoic acid	X		X	X	
2-phenylnaphthalene	X				
unknown alcohol/alkene	2X		2X	X	
aliphatic hydrocarbon	3X		4X	3X	X
unknown alcohol	X	X	X	3X	
unknown PAH	X				7X
unknown aldehyde	X		3X	2X	X
hexadecyl oxirane		X			
4H-cyclopenta(Def)phenanthrene					X
oleic acid			X	X	
anthracene phenanthrene, methyl isomer					X
unknown fatty acid					X
9,10-anthracenedione					X
5,12-naphthalenedione					X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST08CSBN2	LYUST08DSBN1	LYUST08DSBN2	LYSETPICASBDS	LYSEPTICASBN2
Lab Sample Number:	C0920-06	C0920-07	C0920-08	C0920-10	C0920-11
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Field Duplicate	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/3/96	9/3/96	9/3/96	9/4/96	9/4/96
Date Extracted:	9/12/96	9/12/96	9/12/96	9/12/96	9/12/96
Date Analyzed:	9/17/96	9/18/96	9/17/96	9/14/96	9/14/96
Percent Moisture:	13	8	10	17	17
unknown fatty ester		X			
unknown	13X	10X	12X		
hexadecanoic acid	X	X	X		
unknown alcohol alkene		X			
aliphatic hydrocarbon	X	4X	3X		
unknown PAH	X				
unknown aldehyde	X	2X			
unknown fatty acid	X	X			
hexanoic acid, 2-ethyl			X		
2,4-decadienal			X		
unknown alkene			X		
phosphoric acid, tris(2-ethylhexyl)			X		

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.
 B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST04BSBX2	LYUST04BSBDS2	LYUST04CSBX1	LYUST04CSBX2	LYSEPTICASBX1
Lab Sample Number:	C0921-01	C0921-02	C0921-03	C0921-04	C0920-09
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/13/96	9/12/96
Date Analyzed:	9/19/96	9/19/96	9/17/96	9/17/96	9/14/96
Percent Moisture:	12	12	14	13	15
unknown				X	X
hexadecanoic acid					
sulfur		X			
aliphatic hydrocarbon					X
unknown aldehyde					2X
aliphatic hydrocarbon			3X	2X	5X
unknown PAH		2X			
unknown aldehyde				2X	
methyl dibenzothiophene					X
naphthalene, trimethyl isomer					X
azulene, 7-ethyl-1,4-dimethyl					X
anthracene/phenanthrene, methyl isomer		X			3X
unknown fatty acid	X	X			
11 H-benzo fluorene isomer		X			
phenanthrene, dimethyl isomer					2X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.
 B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYGSTNKANSDS	LYGSTNKANSXI	LYGSTNKBNSDS	LYGSTNKBNSXI	LYUST04ASBN1
Lab Sample Number:	C0920-12	C0920-13	C0920-14	C0920-15	C0920-16
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Field Duplicate	Field Duplicate	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	9/12/96	9/12/96	9/12/96	9/13/96	9/13/96
Date Analyzed:	9/17/96	9/17/96	9/18/96	9/17/96	9/19/96
Percent Moisture:	18	19	10	11	12
unknown	7X	11X	15X	14X	7X
hexadecanoic acid					
2-phenynaphthalene		X			
maltol					X
aliphatic hydrocarbon					2X
unknown alcohol				X	
unknown PAH				X	
unknown aldehyde					X
octadecanoic acid					X
1-phenanthrene carboxylic acid, 1,4					X
docosanoic acid				X	X
unknown fatty acid				X	X
1-phenanthrene carboxylic acid				X	
unknown phthalate	X				
hydroquinone	X				

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.
 B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST04ASBN2	LYUST04BSBN1	LYUST04BSBDS1	LYAST12ASBN1	LYAST12ASBN2
Lab Sample Number:	C0920-17	C0920-18	C0920-19	C0921-05	C0921-06
Matrix/Analysis:	Soil/Low	Soil/Low	Soil Low	Soil Low	Soil Low
Sample Type:	Routine	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/4/96	9/4/96	9/4/96	9/5/96	9/5/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/13/95	9/13/96
Date Analyzed:	9/19/96	9/17/96	9/17/96	9/20/96	9/20/96
Percent Moisture:	14	10	12	20	7
alpha-pirene					X
3-carene					X
unknown				13X	9X
hexadecanoic acid					X
1,4-methanoazulene, decahydro-4,8,8				X	
bicyclo(2.2.2)heptan-2-ol isomer				2X	
aliphatic hydrocarbon	2X	2X			X
unknown alcohol	X		X		
unknown PAH				2X	
unknown aldehyde		X			
anthracene/phenanthrene methyl isomer				X	
4H-cyclopenta(def)phenanthrene				X	
2-phenylnaphthalene				X	
docosanoic acid			X		X
unknown fatty acid			2X	X	X
2-pentanol, 4-methyl					X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.
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Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYAST12BSBX1	LYAST12BSBX2	LYGRASSANSX1	LYRDTWRANSX1	LYRDTWRBNSX1
Lab Sample Number:	C0921-07	C0921-08	C0921-09	C0921-10	C0921-11
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/5/96	9/5/96	9/5/96	9/5/96
Date Extracted:	9/13/96	9/13/96	9/13/96	9/14/96	9/14/96
Date Analyzed:	9/20/96	9/20/96	9/21/96	9/21/96	9/20/96
Percent Moisture:	5	8	37	9	32
alpha-pirene				X	
camphene				X	
unknown	14X	6X	13X	8X	16X
hexadecanoic acid	X		X	X	
indene				X	
1-phenanthrene carboxylic acid, 1,2		X			
aliphatic hydrocarbon	2X	7X			3X
unknown alkene/alcohol			X		
unknown aldehyde					2X
unknown alcohol					X
unknown fatty acid					2X
hexanoic acid, 2 ethyl		X			
unknown alkene	X		X		

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.
 B - The compound was associated with the blank.

Table IV**Semivolatile (8270B) TIC Results**

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYPLATEANSX1	LYLEACHANSX1	LYLEACHBNSX1	LYLEACHCNSX1	S.AU'ST02.ASBX1
Lab Sample Number:	C0921-12	C0921-13	C0921-14	C0921-15	C0927-01
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/5/96	9/5/96	9/5/96	9/5/96	9/6/96
Date Extracted:	9/14/96	9/14/96	9/14/96	9/14/96	9/14/96
Date Analyzed:	9/19/96	9/21/96	9/20/96	9/20/96	9/22/96
Percent Moisture:	6	7	9	11	7
camphene		X			
unknown	5X	8X	8X	8X	10X
hexadecanoic acid		X			X
sulfur (S8)		X			
aliphatic hydrocarbon	3X	3X	14X		2X
unknown PAH			X	10X	
unknown aldehyde	2X	4X			2X
unknown alcohol	6X	4X			X
docosanoic acid	X	X			
unknown fatty acid	2X	2X			
1,4-methanoazulene, decahydro		X			

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

B - The compound was associated with the blank.

Table IV**Semivolatile (8270B) TIC Results**

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAUST02ASBX2	SAUST02ASBDS	SAUST03ASBX1	SAUST03ASBX2	SAUST03BSBX1
Lab Sample Number:	C0927-02	C0927-03	C0927-04	C0927-05	C0927-06
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/14/96	9/14/96	9/14/96	9/14/96	9/14/96
Date Analyzed:	9/22/96	9/22/96	9/21/96	9/25/96	9/22/96
Percent Moisture:	Wet Weight	Wet Weight	8	8	12
unknown	4X	5X	3X	10X	6X
hexadecanoic acid	X	X			
sulfur (S8)	X				X
aliphatic hydrocarbon	5X	4X	9X	5X	
unknown alkene/alcohol			X		
unknown PAH		X			
unknown aldehyde	3X				
unknown alcohol	X	X	X		
naphthalene, dimethyl isomer			X		
naphthalene, trimethyl isomer			X		
docosanoic acid	X				
unknown fatty acid	2X				X
naphthalene, dimethyl isomer			2X		

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAUST03BSBN2	SAUST02BSBX1	SAUST02BSBX2	SAAUTOHASBN1	SAAUTOHASBN2
Lab Sample Number:	C0927-07	C0927-08	C0927-09	C0927-10	C0927-11
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/14/96	9/15/96	9/14/96	9/19/96	9/15/96
Date Analyzed:	9/23/96	9/24/96	9/22/96	9/23/96	9/22/96
Percent Moisture:	20	5	Wet Weight	14	14
unknown	6X	10X	5X	7X	2X
hexadecanoic acid	X	X			
aliphatic hydrocarbon		2X	3X		
unknown aldehyde		X	2X		
unknown alcohol		3X	3X		
anthracene/phenanthrene methyl isomer	X				
docosanoic acid		X	X		
unknown fatty acid		3X	2X	X	X
benzene, C9-alkyl isomer			2X		

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.
 B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SADBRISANSX1	SAFILTRANSX1	SAFILTRANSDS	SAFILTRENSX1	SASEPTICANSX2
Lab Sample Number:	C0927-12	C0927-13	C0927-14	C0927-15	C0927-16
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil Low
Sample Type:	Routine	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	1	2	2	1	1
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/15/96	9/15/96	9/15/96	9/15/96	9/15/96
Date Analyzed:	9/24/96	9/26/96	9/24/96	9/24/96	9/22/96
Percent Moisture:	5	7	13	4	10
1H-indene, phenyl isomer	X				
benzoic acid		X			
unknown	5X	7X	8X	X	3X
hexadecanoic acid	X	X	X	X	X
octadecanoic acid		X			
trimethyl benzene isomer		2X			
aliphatic hydrocarbon	13X	6X			
unknown PAH		X			
unknown alcohol	2X	X			
C3-alkyl benzene		X			
naphthalene, dimethyl isomer		4X			
unknown fatty acid			X		
benzene ethanol, hydroxy			X		

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.
 B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAAST05ASEBX1	SAAST05ASEBX2	SASEPTICANSX1	SASEPTICANSX2	SAAST05BSBX1
Lab Sample Number:	C0927-17	C0927-18	C0927-19	C0927-20	C0927-21
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Field Duplicate	Field Duplicate	Routine
Dilution Factor:	1	1/?*	1	1	1
Date Sampled:	9/7/96	9/7/96	9/7/96	9/7/96	9/7/96
Date Extracted:	9/15/96	9/15/96	9/15/96	9/15/96	9/15/96
Date Analyzed:	9/24/96	9/24/96	9/23/96	9/22/96	9/22/96
Percent Moisture:	2	8	10	8	4
unknown	5X			4X	5X
hexadecanoic acid					X
dibenzothiophene				X	
aliphatic hydrocarbon	X		X	X	16X
phenanthrene/anthracene, methyl isomer				3X	
unknown PAH				3X	
naphthalene, decahydro isomer					X
4H-cyclopenta(def)phenanthrene				X	
2-phenylnaphthalene				X	
9,10-anthracenedione				X	
unknown fatty acid	X				
11H-benzo fluorene isomer				2X	
naphthalene, trimethyl isomer		2X			
naphthalene, 1-methyl		X			

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.
 B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAAST05BSEBX2	SAAST05CSBX1	SAAST05CSBX2	LYWSHBYASSX1	LYWTRSPBWSDS
Lab Sample Number:	C0927-22	C0927-23	C0927-24	C0985-01	C0985-03
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Oil/Med.
Sample Type:	Routine	Routine	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1/?*	300
Date Sampled:	9/7/96	9/7/96	9/7/96	9/17/96	9/17/96
Date Extracted:	9/15/96	9/19/96	9/19/96	9/21/96	10/2/96
Date Analyzed:	9/22/96	9/21/96	9/21/96	10/8/96	10/3/96
Percent Moisture:	5	6	7	7	Wet Weight
benzaldehyde, hydroxy isomer	X				
benzoic acid	X				
unknown	7X	9X	6X	6X	2X
hexadecanoic acid	X				
9F-fluoren-9-one				X	
alpha-pinene				X	
aliphatic hydrocarbon	15X	7X	4X	4X	X
phthalic anhydride		X	X		
unknown PAH					X
naphthalene, decahydro isomer	X				
unknown alcohol		3X	X	2X	
ethanone, 1-(2-hydroxy-4-methoxyphenyl)				X	
ethanone, 1-(2-hydroxyphenyl)				X	
unknown alcohol/alkene				X	
2-pentanone, 4-hydroxy-4-methyl					X
anthracene/phenanthrene, methyl isomer					2X
9,10-anthracenedione					X
naphthalene, trimethyl isomer					X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.
 B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYWTRSPBWSX1	SAGSPMPBSSX1	SAGSPMPBSSDS	SAGSPMPASSX1	SAYICMTASSX1
Lab Sample Number:	C0985-04	C0985-07	C0985-08	C0985-09	C0985-10
Matrix/Analysis:	Oil/Med.	Soil Low	Soil Low	Soil Low	Soil Low
Sample Type:	Field Duplicate	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	300	4	1	1	1*
Date Sampled:	9/17/96	9/18/96	9/18/96	9/18/96	9/18/96
Date Extracted:	10/2/96	9/21/96	9/21/96	9/21/96	9/23/96
Date Analyzed:	10/3/96	10/8/96	10/8/96	10/8/96	10/4/96
Percent Moisture:	Wet Weight	16	16	13	22
benzene, ethyl methyl isomer		X	X		
benzene, trimethyl isomer		X	X		
unknown	4X	3X	8X	6X	14X
hexadecanoic acid			X	X	
benzene, 1-isocyanate-2-methoxy		X			
alpha-bis alcohol	X				
aliphatic hydrocarbon	3X	5X	2X		7X
unknown alcohol/alkene		X	X	X	
unknown alkene					X
oleic acid			X		
unknown alcohol		2X	3X	3X	3X
cinnamyl cinnamate	X				
1-phenanthrene carboxylic acid			X		
unknown ketone					X
octadecanoic acid	X			X	
unknown aldehyde				3X	
naphthalene, 1-methyl		X	X		

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

B - The compound was associated with the blank.

Table IV

Semivolatile (8270B) TIC Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYDRYWLASWX1	LYDRYWLASWDS	LYAST12CNSX1	LYAST12CNSX2	SAUST02ASBX3
Lab Sample Number:	C0985-15	C0985-16	C0985-17	C0985-18	C1013-01
Matrix/Analysis:	Aqueous/Low	Aqueous/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Field Duplicate	Routine	Routine	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/19/96	9/19/96	9/19/96	9/19/96	9/20/96
Date Extracted:	9/23/96	9/23/96	9/21/96	9/21/96	9/25/96
Date Analyzed:	10/3/96	10/3/96	10/4/96	10/4/96	10/5/96
Percent Moisture:	NA	NA	12	12	16
unknown	10X	10X	9X	13X	5X
hexadecanoic acid	X	X	X	X	
dodecanoic acid	X				
aliphatic hydrocarbon	5X				
unknown alcohol/alkene	2X				
unknown alkene	X				
unknown alcohol	2X				
unknown ketone	X				
2-propene-1-one,1-(2,6-dihydroxy)	X				
unknown aldehyde			2X	X	3X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

B - The compound was associated with the blank.

Table IV**Semivolatile (8270B) TIC Results**

Project #: PS-27759
J.O. #: 5000.04
Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAUST02ASBDS2
Lab Sample Number:	C1013-2
Matrix/Analysis:	Soil/Low
Sample Type:	Field Duplicate
Dilution Factor:	1
Date Sampled:	9/20/96
Date Extracted:	9/25/96
Date Analyzed:	10/5/96
Percent Moisture:	13
unknown	4X
hexadecanoic acid	X
ethanol, 2-(2-methoxyethoxy)	X
unknown aldehyde	3X
aliphatic hydrocarbon	5X
unknown alcohol	2X
unknown alcohol/alkene	2X
unknown alkene	X
unknown ketone	X

X - The compound was detected in the sample; the numerical label indicates the number detected, if more than one.

B - The compound was associated with the blank.

Table V

Pesticide (8081) Validated Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYSEPTICASBN2	LYSEPTICASBN1	LYSEPTICASBDS	LYLEACHANSX1	LYLEACHBNSX1
Lab Sample Number:	C0920-11	C0920-09	C0920-10	C0921-13	C0921-14
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Field Duplicate	Field Duplicate	Routine	Routine
Dilution Factor:	1.0	1.0	1.0	1.0	1.0
Date Sampled:	9/4/96	9/4/96	9/4/96	9/5/96	9/5/96
Date Extracted:	9/11/96	9/11/96	9/11/96	9/11/96	9/11/96
Date Analyzed:	9/17/96	9/17/96	9/17/96	9/17/96	9/17/96
Percent Moisture:	17	15	17	7	9
alpha-BHC	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
beta-BHC	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
delta-BHC	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
gamma-BHC (Lindane)	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
Heptachlor	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
Aldrin	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
Heptachlor epoxide	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
Endosulfan I	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
Dieldrin	4.1 U	4.0 U	4.0 U	3.7 U	3.8 U
4,4' -DDE	4.1 U	4.0 U	4.0 U	3.7 U	3.8 U
Endrin	4.1 U	4.0 U	4.0 U	3.7 U	3.8 U
Endosulfan II	4.1 U	4.0 U	4.0 U	3.7 U	3.8 U
4,4' -DDD	4.1 U	4.0 U	4.0 U	3.7 U	3.8 U
Endosulfan sulfate	4.1 U	4.0 U	4.0 U	3.7 U	3.8 U
4,4' -DDT	4.1 U	4.0 UJ	4.1 J	3.7 U	3.8 U
Methoxychlor	21 U	20 U	20 U	18 U	19 U
Endrin ketone	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
Endrin aldehyde	4.1 U	4.0 U	4.0 U	3.7 U	3.8 U
alpha-Chlordane	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
gamma-Chlordane	2.1 U	2.0 U	2.0 U	1.8 U	1.9 U
Technical chlordane	100 U	100 U	100 U	93 U	94 U
Toxaphene	210 U	200 U	200 U	180 U	190 U
Aroclor-1016	41 U	40 U	40 U	37 U	38 U
Aroclor-1221	82 U	80 U	80 U	74 U	75 U
Aroclor-1232	41 U	40 U	40 U	37 U	38 U
Aroclor-1242	41 U	40 U	40 U	37 U	38 U
Aroclor-1248	41 U	40 U	40 U	37 U	38 U
Aroclor-1254	41 U	40 U	40 U	37 U	38 U
Aroclor-1260	41 U	40 U	40 U	37 U	38 U

J - The associated numerical value is an estimated quantity.
 U - The compound was not detected. The associated numerical value is the compound quantitation limit.
 UJ - The compound was not detected. The compound quantitation limit is an estimated value.
 R - The datum was rejected.

Aqueous units are reported in µg/L.
 Soil units are reported in µg/Kg (dry weight).

Table V

Pesticide (8081) Validated Results

Project #: PS-27759

I.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYLEACHCNSX1	SASEPTICANSX2	SASEPTICANSX1	SASEPTICANSXS
Lab Sample Number:	C0921-15	C0927-16	C0927-19	C0927-20
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1.0	1.0	1.0	1.0
Date Sampled:	9/5/96	9/6/96	9/7/96	9/7/96
Date Extracted:	9/11/96	9/11/96	9/11/96	9/11/96
Date Analyzed:	9/17/96	9/17/96	9/17/96	9/17/96
Percent Moisture:	9	10	10	8
alpha-BHC	1.9 U	1.9 U	1.9 U	1.8 U
beta-BHC	1.9 U	1.9 U	1.9 U	1.8 U
delta-BHC	1.9 U	1.9 U	1.9 U	1.8 U
gamma-BHC (Lindane)	1.9 U	1.9 U	1.9 U	1.8 U
Heptachlor	1.9 U	1.9 U	1.9 U	1.8 U
Aldrin	1.9 U	1.9 U	1.9 U	1.8 U
Heptachlor epoxide	1.9 U	1.9 U	1.9 U	1.8 U
Endosulfan I	1.9 U	1.9 U	1.9 U	1.8 U
Dieldrin	3.9 U	3.8 U	3.8 U	3.7 U
4,4' -DDE	3.9 U	3.8 U	3.8 U	3.7 U
Endrin	3.9 U	3.8 U	3.8 U	3.7 U
Endosulfan II	3.9 U	3.8 U	3.8 U	3.7 U
4,4' -DDD	3.9 U	3.8 U	3.8 U	3.7 U
Endosulfan sulfate	3.9 U	3.8 U	3.8 U	3.7 U
4,4' -DDT	3.9 U	3.8 U	3.8 U	3.7 U
Methoxychlor	19 U	19 U	19 U	18 U
Endrin ketone	1.9 U	1.9 U	1.9 U	1.8 U
Endrin aldehyde	3.9 U	3.8 U	3.8 U	3.7 U
alpha-Chlordane	1.9 U	1.9 U	1.9 U	1.8 U
gamma-Chlordane	1.9 U	1.9 U	1.9 U	1.8 U
Technical chlordane	97 U	95 U	95 U	93 U
Toxaphene	190 U	190 U	190 U	180 U
Aroclor-1016	39 U	38 U	38 U	37 U
Aroclor-1221	77 U	76 U	76 U	74 U
Aroclor-1232	39 U	38 U	38 U	37 U
Aroclor-1242	39 U	38 U	38 U	37 U
Aroclor-1248	39 U	38 U	38 U	37 U
Aroclor-1254	39 U	38 U	38 U	37 U
Aroclor-1260	39 U	38 U	38 U	37 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Aqueous units are reported in µg/L.

Soil units are reported in µg/Kg (dry weight).

Table VI

TRPH (8015) Validated Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST08ASBX1	LYUST08ASBX2	LYUST08BSBX1	LYUST08BSBX2	LYUST08CSBX1
Lab Sample Number:	C0920-01	C0920-02	C0920-03	C0920-04	C920-05
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1.0	1.0	1.0	1.0	1.0
Date Sampled:	9/3/96	9/3/96	9/3/96	9/3/96	9/3/96
Date Extracted:	9/17/96	9/17/96	9/17/96	9/17/96	9/17/96
Date Analyzed:	9/18/96	9/18/96	9/18/96	9/18/96	9/18/96
Percent Moisture:	8	15	7	9	8
Result:	190	20 U	130	37	93

S&W Sample Number:	LYUST08CSBX2	LYUST08DSBX1	LYUST08DSBX2	LYUST04BSBX2	LYUST04BSBDS2
Lab Sample Number:	C0920-06	C0920-07	C0920-08	C0921-01	C0921-02
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1.0	1.0	1.0	1.0	1.0
Date Sampled:	9/3/96	9/3/96	9/3/96	9/4/96	9/4/96
Date Extracted:	9/17/96	9/17/96	9/17/96	9/17/96	9/17/96
Date Analyzed:	9/19/96	9/19/96	9/19/96	9/19/96	9/19/96
Percent Moisture:	3	8	10	12	12
Result:	31	150	68	19 U	19 U

S&W Sample Number:	LYUST04CSBX1	LYUST04CSBX2	LYUST04ASBX1	LYUST04ASBX2	LYUST04BSBX1
Lab Sample Number:	C0921-03	C0921-04	C0920-16	C0920-17	C0920-18
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Field Duplicate
Dilution Factor:	1.0	1.0	1.0	1.0	1.0
Date Sampled:	9/4/96	9/4/96	9/4/96	9/4/96	9/4/96
Date Extracted:	9/17/96	9/17/96	9/17/96	9/17/96	9/17/96
Date Analyzed:	9/19/96	9/19/96	9/19/96	9/19/96	9/19/96
Percent Moisture:	14	13	16	12	14
Result:	20 U	19 U	410	19 U	19 U

- J - The associated numerical value is an estimated quantity.
- U - The compound was not detected. The associated numerical value is the compound quantitation limit.
- UJ - The compound was not detected. The compound quantitation limit is an estimated value.
- R - The datum was rejected.

Aqueous units are reported in mg/L.

Soil units are reported in mg/Kg (dry weight).

Table VI

TRPH (8015) Validated Results

Project #: PS-27759
 I.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYUST04BSBDS1	LYAST12ASBN1	LYAST12ASBN2	LYAST12BSBN1	LYAST12BSBN2
Lab Sample Number:	C0920-19	C0921-05	C0921-06	C0921-07	C0921-08
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Field Duplicate	Routine	Routine	Routine	Routine
Dilution Factor:	1.0	1.0	1.0	1.0	1.0
Date Sampled:	9/4/96	9/5/96	9/5/96	9/5/96	9/5/96
Date Extracted:	9/17/96	9/18/96	9/18/96	9/18/96	9/18/96
Date Analyzed:	9/19/96	9/19/96	9/19/96	9/19/96	9/19/96
Percent Moisture:	10	20	7	5	8
Result:	19 U	210	160	49	18 U

S&W Sample Number:	SAUST02ASBN1	SAUST03ASBN1	SAUST03ASBN2	SAUST03BSBN1	SAUST03BSBN2
Lab Sample Number:	C0927-01	C0927-04	C0927-05	C0927-06	C0927-07
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1.0	1.0	1.0	1.0	1.0
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/18/96	9/18/96	9/18/96	9/18/96	9/18/96
Date Analyzed:	9/19/96	9/19/96	9/20/96	9/20/96	9/20/96
Percent Moisture:	7	8	8	12	20
Result:	94	840 J	69	19 U	67

S&W Sample Number:	SAUST02BSBN1	SAUST02BSBN2	SAAST05ASBN1	SAAST05ASBN2	SAAST05BSBN1
Lab Sample Number:	C0927-08	C0927-09	C0927-17	C0927-18	C0927-21
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1.0	1.0	1.0	1.0	1.0
Date Sampled:	9/6/96	9/6/96	9/6/96	9/6/96	9/6/96
Date Extracted:	9/18/96	9/18/96	9/18/96	9/18/96	9/18/96
Date Analyzed:	9/20/96	9/20/96	9/20/96	9/20/96	9/20/96
Percent Moisture:	5	Wet Weight	2	8	4
Result:	50	1200	79	180	46

J - The associated numerical value is an estimated quantity.
 U - The compound was not detected. The associated numerical value is the compound quantitation limit.
 UJ - The compound was not detected. The compound quantitation limit is an estimated value.
 R - The datum was rejected.

Aqueous units are reported in mg/L.
 Soil units are reported in mg/Kg (dry weight).

Table VI

TRPH (8015) Validated Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	SAAST05BSBX2	SAAST05CSBX1	SAAST05CSBX2	LYWTRSPBWSX1	LYAST12CNSX1
Lab Sample Number:	C0927-22	C0927-23	C0927-24	C0985-04	C0985-17
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low	Oil	Soil/Low
Sample Type:	Routine	Routine	Routine	Routine	Routine
Dilution Factor:	1.0	?	1.0	?	1.0
Date Sampled:	9/7/96	9/7/96	9/7/96	9/17/96	9/19/96
Date Extracted:	9/18/96	9/19/96	9/18/96	10/2/96	9/25/96
Date Analyzed:	9/20/96	9/20/96	9/20/96	10/2/96	9/27/96
Percent Moisture:	5	?	7	Wet Weight	12

Result:	18 U	110 U	18 U	860000	56
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S&W Sample Number:	LYAST12CNSX2	SAUST02ASBX3	SAUST02ASBDS2
Lab Sample Number:	C0985-18	C1013-01	C1013-02
Matrix/Analysis:	Soil/Low	Soil/Low	Soil/Low
Sample Type:	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1.0	1.0	1.0
Date Sampled:	9/19/96	9/20/96	9/20/96
Date Extracted:	9/25/96	9/25/96	9/25/96
Date Analyzed:	9/27/96	9/27/96	9/27/96
Percent Moisture:	11	16	13

Result:	32 J	280	200
---------	------	-----	-----

J - The associated numerical value is an estimated quantity.
 U - The compound was not detected. The associated numerical value is the compound quantitation limit.
 UJ - The compound was not detected. The compound quantitation limit is an estimated value.
 R - The datum was rejected.

Aqueous units are reported in mg/L.
Soil units are reported in mg/Kg (dry weight).

Table VII

Volatile (524.2) Validated Results

Project #: PS-27759

J.O. #: 5000.04

Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYWTRSPAWSX1	Trip Blank	SAWTRSPBWSX1	SAWTRSPAWSX1	SAWTRSPAWSX1
Lab Sample Number:	C0985-02	C0985-06	C0985-11	C0985-12	C0985-14
Matrix/Analysis:	Aqueous/Low	Aqueous/Low	Aqueous/Low	Aqueous/Low	Aqueous/Low
Sample Type:	Routine	Trip Blank	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/17/96	9/18/96	9/18/96	9/18/96	9/19/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/26/96	9/26/96	9/26/96	9/26/96	9/26/96
Percent Moisture:	NA	NA	NA	NA	NA
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	3 U	4	2 U	3 UJ	1 UJ
trans-1,2-Dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-dichloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	0.5 U	0.5 U	0.8	0.9 J	0.5 UJ
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.5 U	0.5	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Units are reported as µg/L.

Table VII

Volatile (524.2) Validated Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYWTRSPAWSX1	Trip Blank	SAWTRSPBWSX1	SAWTRSPAWSX1	SAWTRSPAWSDS
Lab Sample Number:	C0985-02	C0985-06	C0985-11	C0985-12	C0985-14
Matrix/Analysis:	Aqueous/Low	Aqueous/Low	Aqueous/Low	Aqueous/Low	Aqueous/Low
Sample Type:	Routine	Trip Blank	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1	1
Date Sampled:	9/17/96	9/18/96	9/18/96	9/18/96	9/19/96
Date Extracted:	NA	NA	NA	NA	NA
Date Analyzed:	9/26/96	9/26/96	9/26/96	9/26/96	9/26/96
Percent Moisture:	NA	NA	NA	NA	NA
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylenes (total)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Isopropyltoluene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

- J - The associated numerical value is an estimated quantity.
- U - The compound was not detected. The associated numerical value is the compound quantitation limit.
- UJ - The compound was not detected. The compound quantitation limit is an estimated value.
- R - The datum was rejected.

Table VII**Volatile (524.2) Validated Results**

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	Trip Blank
Lab Sample Number:	C0985-13
Matrix/Analysis:	Aqueous/Low
Sample Type:	Trip Blank
Dilution Factor:	1
Date Sampled:	9/19/96
Date Extracted:	NA
Date Analyzed:	9/26/96
Percent Moisture:	NA

Dichlorodifluoromethane	0.5 U
Chloromethane	0.5 U
Vinyl chloride	0.5 U
Bromomethane	0.5 U
Chloroethane	0.5 U
Trichlorofluoromethane	0.5 U
1,1-Dichloroethene	0.5 U
Methylene chloride	4
trans-1,2-Dichloroethene	0.5 U
1,1-Dichloroethane	0.5 U
2,2-Dichloropropane	0.5 U
cis-1,2-dichloroethene	0.5 U
Bromochloromethane	0.5 U
Chloroform	0.5 U
1,1,1-Trichloroethane	0.5 U
Carbon tetrachloride	0.5 U
1,1-Dichloropropene	0.5 U
Benzene	0.5 U
1,2-Dichloroethane	0.5 U
Trichloroethene	0.5 U
1,2-Dichloropropane	0.5 U
Dibromomethane	0.5 U
Bromodichloromethane	0.5 U
cis-1,3-Dichloropropene	0.5 U
Toluene	0.5 U
trans-1,3-Dichloropropene	0.5 U
1,1,2-Trichloroethane	0.5 U
Tetrachloroethene	0.5 U
1,3-Dichloropropane	0.5 U
Dibromochloromethane	0.5 U
1,2-Dibromoethane	0.5 U
Chlorobenzene	0.5 U
1,1,1,2-Tetrachloroethane	0.5 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

Units are reported as µg/L.

Table VII**Volatile (524.2) Validated Results**

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	Trip Blank
Lab Sample Number:	C0985-13
Matrix/Analysis:	Aqueous/Low
Sample Type:	Trip Blank
Dilution Factor:	1
Date Sampled:	9/19/96
Date Extracted:	NA
Date Analyzed:	9/26/96
Percent Moisture:	NA

Ethylbenzene	0.5 U
Xylenes (total)	0.5 U
Styrene	0.5 U
Bromoform	0.5 U
Isopropylbenzene	0.5 U
Bromobenzene	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U
1,2,3-Trichloropropane	0.5 U
n-Propylbenzene	0.5 U
2-Chlorotoluene	0.5 U
4-Chlorotoluene	0.5 U
1,3,5-Trimethylbenzene	0.5 U
tert-Butylbenzene	0.5 U
1,2,4-Trimethylbenzene	0.5 U
sec-Butylbenzene	0.5 U
1,3-Dichlorobenzene	0.5 U
4-Isopropyltoluene	0.5 U
1,4-Dichlorobenzene	0.5 U
1,2-Dichlorobenzene	0.5 U
n-Butylbenzene	0.5 U
1,2-Dibromo-3-chloropropane	0.5 U
1,2,4-Trichlorobenzene	0.5 U
Hexachlorobutadiene	0.5 U
1,2,3-Trichlorobenzene	0.5 U
Naphthalene	0.5 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

TABLE VIII

Semivolatile (525.2) Validated Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYWTRSPAWSX1	SAWTRSPBWSX1	SAWTRSPAWSX1	SAWTRSPAWSX1
Lab Sample Number:	C0985-02	C0985-11	C0985-12	C0985-14
Matrix/Analysis:	Aqueous/Low	Aqueous/Low	Aqueous/Low	Aqueous/Low
Sample Type:	Routine	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1
Date Sampled:	9/17/96	9/18/96	9/18/96	9/19/96
Date Extracted:	9/25/96	9/25/96	9/25/96	9/25/96
Date Analyzed	9/25/96	9/25/96	9/26/96	9/26/96
Percent Moisture:	NA	NA	NA	NA

Acenaphthylene	0.1 UJ	0.1 U	0.1 U	0.1 U
Alachlor	0.1 UJ	0.1 U	0.1 U	0.1 U
Aldrin	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
Anthracene	0.1 UJ	0.1 U	0.1 U	0.1 U
Atrazine	0.1 UJ	0.1 UJ	0.1 U	0.1 U
Benzo[a]anthracene	0.1 UJ	0.1 U	0.1 U	0.1 U
Benzo[b]fluoranthene	0.1 UJ	0.1 U	0.1 U	0.1 U
Benzo[k]fluoranthene	0.1 UJ	0.1 U	0.1 U	0.1 U
Benzo[g,h,i]perylene	0.1 UJ	0.1 U	0.1 U	0.1 U
Benzo[a]pyrene	0.1 UJ	0.1 U	0.1 U	0.1 U
gamma-BHC	0.02 UJ	0.02 UJ	0.02 U	0.02 U
Butylbenzylphthalate	1.0 UJ	1.0 U	1.0 U	1.0 U
alpha-Chlordane	0.1 UJ	0.1 U	0.1 U	0.1 U
gamma-Chlordane	0.1 UJ	0.1 U	0.1 U	0.1 U
2-Chlorobiphenyl	0.1 UJ	0.1 U	0.1 U	0.1 U
Chrysene	0.1 UJ	0.1 U	0.1 U	0.1 U
Dibenzo[a,h]anthracene	0.1 UJ	0.1 U	0.1 U	0.1 U
Di-n-butylphthalate	1.0 UJ	1.0 U	1.0 U	1.0 U
2,3-Dichlorobiphenyl	0.1 UJ	0.1 U	0.1 U	0.1 U
Di(2-ethylhexyl)adipate	0.6 UJ	0.6 U	0.6 U	0.6 U
Di(2-ethylhexyl)phthalate	0.6 UJ	0.6 U	0.6 U	0.6 U
Diethylphthalate	1.0 UJ	1.0 U	1.0 U	1.0 U
Dimethylphthalate	1.0 UJ	1.0 U	1.0 U	1.0 U
2,4-Dinitrotoluene	0.1 UJ	0.1 U	0.1 U	0.1 U
2,6-Dinitrotoluene	0.1 UJ	0.1 U	0.1 U	0.1 U
Di-n-octylphthalate	1.0 UJ	1.0 U	1.0 U	1.0 U
Endrin	0.01 UJ	0.01 U	0.01 U	0.01 U
Fluorene	0.1 UJ	0.1 U	0.1 U	0.1 U
Heptachlor	0.04 UJ	0.04 UJ	0.04 U	0.04 U
Heptachlor epoxide	0.02 UJ	0.02 UJ	0.02 U	0.02 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.

TABLE VIII

Semivolatile (525.2) Validated Results

Project #: PS-27759
 J.O. #: 5000.04
 Site: Lyndonville Air Force Station & St. Albans Air Force Station

S&W Sample Number:	LYWTRSPAWSX1	SAWTRSPBWSX1	SAWTRSPAWSX1	SAWTRSPAWSXS
Lab Sample Number:	C0985-02	C0985-11	C0985-12	C0985-14
Matrix/Analysis:	Aqueous/Low	Aqueous/Low	Aqueous/Low	Aqueous/Low
Sample Type:	Routine	Routine	Field Duplicate	Field Duplicate
Dilution Factor:	1	1	1	1
Date Sampled:	9/17/96	9/18/96	9/18/96	9/19/96
Date Extracted:	9/25/96	9/25/96	9/25/96	9/25/96
Date Analyzed:	9/25/96	9/25/96	9/26/96	9/26/96
Percent Moisture:	NA	NA	NA	NA

2,2',3,3',4,4',6-Heptachlorobiphenyl	0.1 UJ	0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.1 UJ	0.1 U	0.1 U	0.1 U
2,2',4,4',5,6'-Hexachlorobiphenyl	0.1 UJ	0.1 U	0.1 U	0.1 U
Hexachlorocyclopentadiene	0.1 UJ	0.1 UJ	0.1 U	0.1 U
Indeno[1,2,3-cd]pyrene	0.1 UJ	0.1 U	0.1 U	0.1 U
Isophorone	0.1 UJ	0.1 U	0.1 U	0.1 U
Methoxychlor	0.1 UJ	0.1 U	0.1 U	0.1 U
2,2',3,3',4,5',6,6'-Octachlorobiphenyl	0.1 UJ	0.1 U	0.1 U	0.1 U
2,2',3',4,6-Pentachlorobiphenyl	0.1 UJ	0.1 U	0.1 U	0.1 U
Pentachlorophenol	0.1 UJ	0.1 U	0.1 U	0.1 U
Phenanthrene	0.1 UJ	0.1 UJ	0.1 U	0.1 U
Pyrene	0.1 UJ	0.1 U	0.1 U	0.1 U
Simazine	0.07 UJ	0.07 UJ	0.07 UJ	0.07 UJ
2,2',4,4',Tetrachlorobiphenyl	0.1 UJ	0.1 U	0.1 U	0.1 U
Toxaphene	25 UJ	25 U	25 U	25 U
2,4,5-Trichlorobiphenyl	0.1 UJ	0.1 U	0.1 U	0.1 U

J - The associated numerical value is an estimated quantity.

U - The compound was not detected. The associated numerical value is the compound quantitation limit.

UJ - The compound was not detected. The compound quantitation limit is an estimated value.

R - The datum was rejected.



*Environmental
Health Laboratories*

110 S Hill Street
South Bend, IN 46617
(219) 233-4777
FAX (219) 233-8207

FAX TRANSMITTAL SHEET

To: John Carter

Date: Fri Dec 13 15:18:38 EST 1996

Pages (including cover): 3

From: Paul Bowers

Comments: A hard copy of this letter along with a statement of qualifications will follow by mail.

- pb

NOTED DEC 13 1996

DAWN M.
CONNELLY

NOTED DEC 13 1996

DAWN M.
CONNELLY

December 13, 1996

John Carter
Stone & Webster Environmental Technology & Services
245 Summer St
Boston, MA 02210

Dear Mr. Carter,

This letter is in follow-up to our phone conversation of earlier today. I want to address your specific questions and also take this opportunity to present you with some additional information about Environmental Health Laboratories (EHL).

The report you received (EHL #234204-11) lists an "MDL" column. This number is the lowest number EHL routinely reports. All values below this number are reported as less than this number. EHL runs method 525.2 analysis on several instruments and performs method detection limit studies on each of these instruments. The MDL listed on the report is set so that data may be reported regardless of which instrument the samples were run on.

Toxaphene must be run by method 505 to achieve a reporting MDL that meets the Federal Register required method detection limit for drinking water. EHL can report Toxaphene by method 525.2 using reporting MDL of 25 µg/L. Toxaphene was reported by method 525.2 using a reporting MDL of 25 µg/L for your samples based on historical data demonstrating our ability to see this compound down to a level of 25 µg/L by method 525.2.

EHL offers comprehensive inorganic and organic analytical services and seeks to compliment your capabilities toward the goal of mutual benefit for both of our organizations. EHL is staffed and equipped to cover most types of aqueous samples your organization may encounter and is unique among environmental laboratories in that the laboratory's principle mission is to provide trace level analyses of environmental contaminants.

EHL can provide analytical services for samples from both national and international sites and is certified in 46 different states and Puerto Rico for drinking water analysis. This national presence allows our laboratory to service your account, with very few exceptions, for your clients across the country. EHL has the experience necessary to assist you with the most complex and the most routine types of projects and is willing to evaluate any project your organization may need to subcontract.

I look forward to working with you on this and future projects. Please feel free to contact me if you have any questions or comments regarding this matter.

Sincerely,

Paul Bowers
Senior Project Manager

NOTED DEC 13 1996

DAWN M.
CONNELLY

FIELD SAMPLING DATA SHEETS

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____

Sample ID: LYSEPTICASBX1 Date: 4 SEPT 1996

Circle One: Soil Surface Water
 Groundwater Sediment

Project Activity: SPLIT SPOON SAMPLING

Other: _____

Field Duplicate Collected Duplicate ID No. LYSEPTICASBDS

SAMPLE OBSERVATIONS

Color: DARK BROWN Odor? NONE

Grain Size: SANDY SILT PID Reading: 9.5 ppm (HEADSPACE)

Saturated? No Other: _____

WATER LEVELWELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____

B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. DIM Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

PID Dust Monitor Explosimeter Other: _____

SAMPLING

Bottle Trowel Other: JAR & PAN

DECONTAMINATION FLUIDS USED

Liquinox ALCONOX Distilled Water Lab Provided Blank Water Potable Water Methanol Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input checked="" type="checkbox"/> Pest/PCB				<u>ICE</u>
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? No

ID: _____

QC Sample Taken? No

ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:

2-4 FT

Signature: [Signature]

Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____
 Sample ID: LYSEPTICASBX2 Date: 4 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: SPLIT SPOON SAMPLING
 Other: _____
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: GRAY Odor? NONE
 Grain Size: GRAVELY SAND (WEATHERED ROCK) PID Reading: 9.5 ppm (HEADSPACE)
 Saturated? YES Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

- PID
 Dust Monitor
 Explosimeter
 Other: _____

SAMPLING

- Bottle
 Trowel
 Other: JAR & PAN

DECONTAMINATION FLUIDS USED

- ~~Acetone~~ ALCONOX
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input checked="" type="checkbox"/> Pest/PCB				<u>ICE</u>
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES
 ID: LYSEPTICASBQA (Pest/PCB)
 QC Sample Taken? YES
 ID: LYSEPTICASB(MSD)

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond.			
Turb			

NOTES:

10-12 FT
 Signature: [Signature]
 Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____
 Sample ID: LYGSTUKANS XI Date: 4 SEPT 1996
 Circle One: Soil Surface Water Project Activity: _____
 Groundwater Sediment
 Other: _____
 Field Duplicate Collected Duplicate ID No. LYGSTUKANS DS

SAMPLE OBSERVATIONS

Color: BROWN Odor? NONE
 Grain Size: SAND PID Reading: 9.5 PPM (HEADSPACE)
 Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING <input checked="" type="checkbox"/> PID <input type="checkbox"/> Dust Monitor <input type="checkbox"/> Explosimeter <input type="checkbox"/> Other: _____	SAMPLING <input type="checkbox"/> Bottle <input type="checkbox"/> Trowel <input checked="" type="checkbox"/> Other: <u>JAR & PAN</u>	DECONTAMINATION FLUIDS USED <input checked="" type="checkbox"/> Equinox <u>ALCONOX</u> <input checked="" type="checkbox"/> Distilled Water <input type="checkbox"/> Lab Provided Blank Water <input type="checkbox"/> Potable Water <input checked="" type="checkbox"/> Methanol <input type="checkbox"/> Other: _____
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ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? NO
 ID: _____
 QC Sample Taken? NO
 ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond.			
Turb.			

NOTES:

4" - 12"

Signature: John J. Carter
 Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS IO No: _____

Sample ID: LYGSTNK BNS XI Date: 4 SEPT 1996

Circle One: Soil Surface Water Groundwater Sediment

Project Activity: _____

Other: _____

Field Duplicate Collected Duplicate ID No. LYGSTNK BNS DS

SAMPLE OBSERVATIONS

Color: BROWN Odor? NONE

Grain Size: SAND PID Reading: 9.5 ppm [HEADSPACE]

Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____

B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

- PID
- Dust Monitor
- Explosimeter
- Other: _____

SAMPLING

- Bottle
- Trowel
- Other: JAR & PAN

DECONTAMINATION FLUIDS USED

- Liquinox ALCONOX
- Distilled Water
- Lab Provided Blank Water
- Potable Water
- Methanol
- Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? NO

ID: _____

QC Sample Taken? NO

ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond.			
Turb			

Photograph taken of Well Water after Final Well Development? _____

NOTES:

4 - 12 INCHES

Signature: [Signature]

Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS JO. No.: _____
 Sample ID: LY GRASSAMS XI Date: 5 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: Auger Sampling
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: GRAY BROWN Odor? NONE
 Grain Size: SANDY SILT PID Reading: _____
 Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

PID
 Dust Monitor
 Explosimeter
 Other: _____

SAMPLING

Bottle
 Trowel
 Other: JAR & PAN

DECONTAMINATION FLUIDS USED

Liquinox ALCONOX
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES PC NO
 ID: LY GRASS
 QC Sample Taken? YES
 ID: LY GRASSAMS MSMD

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

Photograph taken of Well Water after Final Well Development? _____

NOTES:

4 - 12 INCHES

Signature: [Signature]
 Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____
 Sample ID: LYRDTWRANS XI Date: 5 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: AUGER SAMPLING
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: Brown Odor? NONE
 Grain Size: SILTY SAND PID Reading: _____
 Saturated? No Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: _____ Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. DIW Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

PID
 Dust Monitor
 Explosimeter
 Other: _____

SAMPLING

Bottle
 Trowel
 Other: JAR & PAN

DECONTAMINATION FLUIDS USED

Liquid ALCOHOL
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES
 ID: LYRDTWRAQA
 QC Sample Taken? NO
 ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

Photograph taken of Well Water after Final Well Development? _____

NOTES:

0-8 INCHES

Signature: John J. Korte
 Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS I.O. No.: _____
 Sample ID: LY RDTWR B MX1 Date: 5 SEPT 1996
 Circle One: Soil Surface Water Project Activity: Auger Sampling
 Groundwater Sediment
 Other: _____
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: Brown Odor? NONE
 Grain Size: SILTY SAND PID Reading: _____
 Saturated? No Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Drill Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

- PID
 Dust Monitor
 Explosimeter
 Other: _____

SAMPLING

- Bottle
 Trowel
 Other: JAR & PAN

DECONTAMINATION FLUIDS USED

- Etiprox Alconox
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? No
 ID: _____
 QC Sample Taken? No
 ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

Photograph taken of Well Water after Final Well Development? _____

NOTES:

4-12 INCHES

Signature: [Signature]

Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____

Sample ID: LY PLATEANSKI Date: 5 SEPT 1996

Circle One: Soil Surface Water Groundwater Sediment

Project Activity: AUGER SAMPLING

Other: _____

Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: BROWN Odor? NONE

Grain Size: SAND PID Reading: _____

Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____

B. Depth To Water (FT): _____ G. Measured From: _____ Riser / Casing _____ L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

<p>MONITORING</p> <p><input type="checkbox"/> PID</p> <p><input type="checkbox"/> Dust Monitor</p> <p><input type="checkbox"/> Explosimeter</p> <p><input type="checkbox"/> Other: _____</p>	<p>SAMPLING</p> <p><input type="checkbox"/> Bottle</p> <p><input type="checkbox"/> Trowel</p> <p><input checked="" type="checkbox"/> Other: <u>JAR & PAN</u></p>	<p>DECONTAMINATION FLUIDS USED</p> <p><input checked="" type="checkbox"/> LIQUID <u>ALCONIX</u></p> <p><input checked="" type="checkbox"/> Distilled Water</p> <p><input type="checkbox"/> Lab Provided Blank Water</p> <p><input type="checkbox"/> Potable Water</p> <p><input checked="" type="checkbox"/> Methanol</p> <p><input type="checkbox"/> Other: _____</p>
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ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? NO

ID: _____

QC Sample Taken? YES

ID: LY PLATEANS MSMD
(VOC ONLY)

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond.			
Turb			

NOTES:

5.5 - 6 FT

Signature: John Carter

Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____

Sample ID: LYLEACHANSX1 Date: 5 SEPT 1996

Circle One: Soil Surface Water _____
 Groundwater _____ Sediment _____

Project Activity: Auger Sampling

Other: _____

Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: GRAY-BROWN Odor? NONE

Grain Size: SANDY GRAVEL PID Reading: _____

Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____

B. Depth To Water (FT): _____ G. Measured From: _____ Riser / Casing _____ L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

PID
 Dust Monitor
 Explosimeter
 Other: _____

SAMPLING

Bottle
 Trowel
 Other: JAR & PAN

DECONTAMINATION FLUIDS USED

Equinox - AL CONOX
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input checked="" type="checkbox"/> Pest/PCB				<u>ICE</u>
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? NO

ID: _____

QC Sample Taken? YES

ID: LYLEACHANSMSMD
 (NOT ANALYSED FOR VOC)

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond.			
Turb			

NOTES:

3 - 3.5 FT

Signature: [Signature]

Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____

Sample ID: LYLEACHBNS XI Date: 5 SEPT 1996

Circle One: Soil Surface Water _____
 Groundwater _____ Sediment _____

Project Activity: AUGER SAMPLING

Other: _____

Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: BROWN Odor? NO ODOR

Grain Size: GRAVELLY SAND PID Reading: _____

Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____

B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

- PID
- Dust Monitor
- Explosimeter
- Other: _____

SAMPLING

- Bottle
- Trowel
- Other: JAR & PAN

DECONTAMINATION FLUIDS USED

- Equines- ALCOHOL
- Distilled Water
- Lab Provided Blank Water
- Potable Water
- Methanol
- Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				ICE
<input checked="" type="checkbox"/> VOCs				ICE
<input checked="" type="checkbox"/> SVOCs				ICE
<input checked="" type="checkbox"/> Metals				ICE
<input checked="" type="checkbox"/> Pest/PCB				ICE
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES

ID: LYLEACHBNS QA (No. 10)

QC Sample Taken? NO

ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond.			
Turb			

NOTES:

2-2.5 FT

Signature: [Signature]

Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____
 Sample ID: LY LEACH CMS XI Date: 5 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: AUGER SAMPLING
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS
 Color: BROWN Odor? NONE
 Grain Size: GRAVELLY SAND PID Reading: _____
 Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT):	F. Historical Well Depth (FT):	K. Well Locked?
B. Depth To Water (FT):	G. Measured From: <u>Riser / Casing</u>	L. Protective Casing Secure?
C. Height of Water (FT):	H. Casing Stick-up (FT):	M. Gravel Pad Intact?
D. Well ID:	I. DIM Well and Casing (FT):	N. Well Markings Readable?
E. Volume (GAL):	J. Purge Volume (GAL):	

EQUIPMENT DOCUMENTATION

MONITORING <input type="checkbox"/> PID <input type="checkbox"/> Dust Monitor <input type="checkbox"/> Explosimeter <input type="checkbox"/> Other: _____	SAMPLING <input type="checkbox"/> Bottle <input type="checkbox"/> Trowel <input checked="" type="checkbox"/> Other: <u>JAR & PAN</u>	DECONTAMINATION FLUIDS USED <input checked="" type="checkbox"/> Bleachox <u>ALCONOX</u> <input checked="" type="checkbox"/> Distilled Water <input type="checkbox"/> Lab Provided Blank Water <input type="checkbox"/> Potable Water <input checked="" type="checkbox"/> Methanol <input type="checkbox"/> Other: _____
--	--	--

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input checked="" type="checkbox"/> Pests/PCB				<u>ICE</u>
<input type="checkbox"/> Other:				

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

Photograph taken of Well Water after Final Well Development? _____

QA/QC DATA

QA Sample Taken? NO
 ID: _____
 QC Sample Taken? NO
 ID: _____

NOTES:
1 - 1.5 FT
 Signature: [Signature]
 Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES FIELD DATA RECORD

Project: ST ALBANS J.O. No.: _____
 Sample ID: SAAUTOHASBX1 Date: 5 SEPT 1996
 Circle One: Soil Surface Water _____
 Groundwater _____ Sediment _____
 Project Activity: SPLIT SPIN SAMPLING
 Other: _____
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: BROWN Odor? NO
 Grain Size: SAND PID Reading: _____
 Saturated? YES Other: _____

WATER LEVEL/ WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

- PID
 Dust Monitor
 Explosimeter
 Other: _____

SAMPLING

- Bottle
 Trowel
 Other: JAR & PAN

DECONTAMINATION FLUIDS USED

- Liquinox ALCOADEX
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input checked="" type="checkbox"/> TPH				<u>ICE</u>
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? NO
 ID: _____
 QC Sample Taken? YES
 ID: ALTA SAAUTOHASBMSMD

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond.			
Turb			

Photograph taken of Well Water after Final Well Development? _____

NOTES:

8-8 FT
 Signature: [Signature]
 Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: ST ALBANS AFS J.O. No.: _____
 Sample ID: SAAUTOHASBX2 Date: 6 SEPT 1996
 Circle One: Soil Surface Water Project Activity: _____
 Groundwater Sediment
 Other: _____
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS
 Color: BROWN Odor? NONE
 Grain Size: SAND PID Reading: _____
 Saturated? YES Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Off Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING
 PID
 Dust Monitor
 Explosimeter
 Other: _____

SAMPLING
 Bottle
 Trowel
 Other: JAR & PAN

DECONTAMINATION FLUIDS USED
 Liquor - ALCOHOL
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input checked="" type="checkbox"/> TPH				<u>ICE</u>
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA
 QA Sample Taken? YES
 ID: SAAUTOHASBQA
 QC Sample Taken? NO
 ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond.			
Turb			

NOTES:
8-10 FT
 Signature: John Carter
 Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: ST ALBANS AFS IO No.: _____
 Sample ID: SADBRISANSKI Date: 6 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: AUGER SAMPLING
 Other: _____
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: BROWN Odor? NONE
 Grain Size: GRAVELLY SAND PID Reading: _____
 Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING <input type="checkbox"/> PID <input type="checkbox"/> Dust Monitor <input type="checkbox"/> Explosimeter <input type="checkbox"/> Other: _____	SAMPLING <input type="checkbox"/> Bottle <input type="checkbox"/> Trowel <input checked="" type="checkbox"/> Other: <u>PAN & JAR</u>	DECONTAMINATION FLUIDS USED <input checked="" type="checkbox"/> Liquor: <u>ALCOVOR</u> <input checked="" type="checkbox"/> Distilled Water <input type="checkbox"/> Lab Provided Blank Water <input type="checkbox"/> Potable Water <input checked="" type="checkbox"/> Methanol <input type="checkbox"/> Other: _____
--	--	---

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES
 ID: SADBRISANSKI QA
 QC Sample Taken? NO
 ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

Photograph taken of Well Water after Final Well Development? _____

NOTES:

0-10 INCHES
 Signature: [Signature]
 Received By: _____

**STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES
FIELD DATA RECORD**

Project: ST ALBANS AFS J.O. No. _____
 Sample ID: SA FILTRANS XI Date: 6 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: AUGER SAMPLING
 Other: _____
 Field Duplicate Collected Duplicate ID No. SA FILTRANS DS

SAMPLE OBSERVATIONS
 Color: DARK BROWN Odor? NO ODOR
 Grain Size: SILTY SAND PID Reading: _____
 Saturated? No Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Logged? _____
 B. Depth To Water (FT): _____ G. Measured From: _____ Riser / Casing _____ L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. DW Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING: PID Dust Monitor Explosimeter Other: _____
 SAMPLING: Bottle Trowel Other: JAR & PAN
 DECONTAMINATION FLUIDS USED: Isopropyl Alcohol Distilled Water Lab Provided Blank Water Potable Water Methanol Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? No
 ID: _____
 QC Sample Taken? No
 ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:

0-5 INCHES

Signature: [Signature]
 Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES
FIELD DATA RECORD

Project: ST ALBANS AFS JO No: _____
 Sample ID: SA FILTERBNS XI Date: 6 SEPT 1996
 Circle One: Soil Surface Water Project Activity: Auger Sampling
 Groundwater Sediment
 Other: _____
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS
 Color: Brown Odor? NONE
 Grain Size: GRAVELLY SAND PID Reading: _____
 Saturated? _____ Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING
 PID
 Dust Monitor
 Explosimeter
 Other: _____

SAMPLING
 Bottle
 Trowel
 Other: JAR & PAN

DECONTAMINATION FLUIDS USED
 GEORGE ALCONOX
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA
 QA Sample Taken? NO
 ID: _____
 QC Sample Taken? NO
 ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:
0-8 INCHES
 Signature: [Signature]
 Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES
FIELD DATA RECORD

Project: ST ALBANS AFS IO No: _____
 Sample ID: SA SEPTICANS X2 Date: 6 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: AUGER SAMPLING
 Other: _____
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: Brown Odor? NONE
 Grain Size: SAND PID Reading: _____
 Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Off Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING PID Dust Monitor Explosimeter Other: _____
SAMPLING Bottle Trowel Other: JAR & PAN
DECONTAMINATION FLUIDS USED
 Equinox ALCONOX
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input checked="" type="checkbox"/> Pest/PCB				<u>ICE</u>
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES
 ID: SA SEPTICANS QA (PEST)
 QC Sample Taken? YES
 ID: SA SEPTICANS MSMID (PEST/PCB on)

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:

3-4 FT
 Signature: [Signature]
 Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: ST ALBANS AFS IO No.: _____
 Sample ID: SA SEPTICANS XI Date: 7 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: Auger Sampling
 Other: _____
 Field Duplicates Collected Duplicate ID No. SA SEPTICANS DS

SAMPLE OBSERVATIONS
 Color: Brown Odor? NONE
 Grain Size: SAND PID Reading: _____
 Saturated? No Other: _____

WATER LEVEL/WELL DATA
 A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: _____ Floor / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION
 MONITORING: PID Dust Monitor Explosimeter Other: _____
 SAMPLING: Bottle Trowel Other: JAR & PAN
 DECONTAMINATION FLUIDS USED:
 Mopnox Alconox
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				ICE
<input checked="" type="checkbox"/> SVOCs				ICE
<input checked="" type="checkbox"/> Metals				ICE
<input checked="" type="checkbox"/> Pest/PCB				ICE
<input type="checkbox"/> Other:				

QA/QC DATA
 QA Sample Taken? No
 ID: _____
 QC Sample Taken? No
 ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES: 1-2 FT
 Signature: [Signature]
 Received By: _____

Photograph taken of Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____

Sample ID: LYWSHBYA-SSX1 Date: 17 SEPT 1996

Circle One: Soil Surface Water Groundwater Sediment

Protect Activity: SURFACE SOIL SAMPLING

Other: _____

Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: BROWN Odor? NONE

Grain Size: SANDY SILT PID Reading: NO HEADSPACE TALKER

Saturated? NO. Other: BREATHING SPACE 0.0 ppm

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____

B. Depth To Water (FT): _____ G. Measured From: _____ Riser / Casing _____ L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

PID Dust Monitor Explosimeter Other: _____

SAMPLING

Bottle Trowel Other: JAR & PAN

DECONTAMINATION FLUIDS USED

Liquinon- ALCONOX Distilled Water Lab Provided Blank Water Potable Water Methanol Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

QA/QC DATA

QA Sample Taken? YES

ID: LYWSHBYA-SS0A

QC Sample Taken? _____

ID: _____

NOTES:

1-5 in

Signature: [Signature]

Received BY: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No: _____
 Sample ID: LYWTRSPAX1 Date: 17 SEPT 1996
 Circle One: Soil _____ Surface Water _____
 Groundwater _____ Sediment _____
 Other: _____
 Field Duplicate Collected Duplicate ID No: _____

SAMPLE OBSERVATIONS
 Color: CLEAR Odor? NONE
 Grain Size: _____ PID Reading: 1.7 ppm (HEADSPACE)
 Saturated? _____ Other: _____

WATER LEVELWELL DATA

A. Well Depth (FT): _____	F. Historical Well Depth (FT): _____	K. Well Locked? _____
B. Depth To Water (FT): <u>10.4</u>	G. Measured From: <u>FLOOR</u> Riser / Casing	L. Protective Casing Secure? _____
C. Height of Water (FT): _____	H. Casing Stick-up (FT): _____	M. Gravel Pad Intact? _____
D. Well ID: _____	I. DIH Well and Casing (FT): _____	N. Well Markings Readable? _____
E. Volume (GAL): _____	J. Purge Volume (GAL): <u>~0.5</u>	

EQUIPMENT DOCUMENTATION

MONITORING <input checked="" type="checkbox"/> PID <input type="checkbox"/> Dust Monitor <input type="checkbox"/> Explosimeter <input type="checkbox"/> Other: _____	SAMPLING <input checked="" type="checkbox"/> Bottle <input type="checkbox"/> Trowel <input checked="" type="checkbox"/> Other: <u>PERISTALTIC PUMP</u> <u>w/ DEDICATED TUBING</u>	DECONTAMINATION FLUIDS USED <input type="checkbox"/> Liquinox <input type="checkbox"/> Distilled Water <input type="checkbox"/> Lab Provided Blank Water <input type="checkbox"/> Potable Water <input type="checkbox"/> Methanol <input type="checkbox"/> Other: _____
---	--	--

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>HCR</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>HNO₃</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES
 ID: LYWTRSPAWSQA

QC Sample Taken? YES
 ID: LYWTRSPAWSMSMD

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Conc			
Turb			

NOTES:

Signature: John F. Carter
 Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES FIELD DATA RECORD

Project: LYNDONVILLE AFS JO No: _____
 Sample ID: LYWTRSPBWS XI Date: 17 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: WATER SUPPLY WELL SAMPLING
 Other: _____
 Field Duplicate Collected Duplicate ID No. LYWTRSPBWS DS

SAMPLE OBSERVATIONS

Color: CLEAR Odor? KEROSENE
 Grain Size: _____ PID Reading: 86 ppm (HEADSPACE)
 Saturated? _____ Other: TWO PHASES

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): 15 FT (EST) G. Measured From: FLUR Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. DI# Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): ~0.25

EQUIPMENT DOCUMENTATION

MONITORING <input checked="" type="checkbox"/> PID <input type="checkbox"/> Dust Monitor <input type="checkbox"/> Explosimeter <input type="checkbox"/> Other: _____	SAMPLING <input checked="" type="checkbox"/> Bottle <input type="checkbox"/> Trowel <input checked="" type="checkbox"/> Other: <u>PERISTALTIC PUMP w/ DEDICATED TUBING</u>	DECONTAMINATION FLUIDS USED <input type="checkbox"/> Liquinox <input type="checkbox"/> Distilled Water <input type="checkbox"/> Lab Provided Blank Water <input type="checkbox"/> Potable Water <input type="checkbox"/> Methanol <input type="checkbox"/> Other: _____
---	--	--

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>HCL</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>HNO₃</u>
<input type="checkbox"/> Pesti/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? No
 ID: _____
 QC Sample Taken? No
 ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:

Signature: John Carter
 Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: ST ALBANS AFS J.O. No: _____

Sample ID: SAGSPMPBSSXI Date: 18 SEPT 1996

Circle One: Soil Surface Water Groundwater Sediment

Project Activity: SURFACE SOIL SAMPLING

Other: _____

Field Duplicate Collected Duplicate ID No. SAGSPMPBSSDS

SAMPLE OBSERVATIONS

Color: BROWN Odor? None

Grain Size: SAND PID Reading: 0.0 (BREATHING SPACE)

Saturated? NO Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____

B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

PID Dust Monitor Explosimeter Other: _____

SAMPLING

Bottle Trowel Other: JAR & PAN

DECONTAMINATION FLUIDS USED

~~Alconex~~ ALCONEX

Distilled Water

Lab Provided Blank Water

Potable Water

Methanol

Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? NO

ID: _____

QC Sample Taken? NO

ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:

0-5 in

Signature: [Signature]

Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: ST ALBANS AFS J.O. No.: _____

Sample ID: SAGSPMPASSXI Date: 18 SEPT 1996

Circle One: Soil Surface Water Groundwater Sediment

Project Activity: SURFACE SOIL SAMPLING

Other: _____

Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: BROWN Odor? NONE

Grain Size: SAND PID Reading: 0.0 ppm (BREATHING SPACE)

Saturated? NO Other: _____

WATER LEVELWELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____

B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Off Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING

PID Dust Monitor Explosimeter Other: _____

SAMPLING

Bottle Trowel Other: JAR & PAN

DECONTAMINATION FLUIDS USED

Equipment ALCONOX

Distilled Water

Lab Provided Blank Water

Potable Water

Methanol

Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES

ID: SAGSPMPASSQA

QC Sample Taken? YES

ID: SAGSPMPASSMSMD

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:

0-5 in

Signature: [Signature]

Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES FIELD DATA RECORD

Project: ST ALBANS AFS J.O. No.: _____
 Sample ID: SAVHCMTASSXI Date: 18 SEPT 1996
 Circle One: Soil Surface Water Groundwater Sediment
 Project Activity: SURFACE SOIL SAMPLING
 Other: _____
 Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS
 Color: Brown Odor? NONE
 Grain Size: SILTY SAND PID Reading: 0.0 (BREATHING SPACE)
 Saturated? No Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): _____ K. Well Locked? _____
 B. Depth To Water (FT): _____ G. Measured From: Riser / Casing L. Protective Casing Secure? _____
 C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____
 D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____
 E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

MONITORING: PID Dust Monitor Explosimeter Other: _____
 SAMPLING: Bottle Trowel Other: JAR & PAN
 DECONTAMINATION FLUIDS USED:
 Equinox ALCONOX
 Distilled Water
 Lab Provided Blank Water
 Potable Water
 Methanol
 Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>ICE</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>ICE</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA
 QA Sample Taken? YES
 ID: SAVHCMTASSOA
 QC Sample Taken? YES
 ID: SAVHCMTASSMSMD

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:
0-5 in
 Signature: [Signature]
 Received By: _____

Sample taken at Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: ST ALBANS AFS JO No: _____

Sample ID: SAWTRSPBWSX1 Date: 18 SEPT 1996

Circle One: Soil _____ Surface Water _____
Groundwater _____ Sediment _____
 Other: _____

Project Activity: WATER SUPPLY WELL SAMPLING

Field Duplicate Collected Duplicate ID No. _____

SAMPLE OBSERVATIONS

Color: CLEAR Odor? NONE

Grain Size: _____ PID Reading: _____

Saturated? _____ Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): 750 K. Well Locked? _____

B. Depth To Water (FT): OVER 100 G. Measured From: Riser / Casing L. Protective Casing Secure? _____
(DUE TO DRAIN DOWN)

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): N/A

EQUIPMENT DOCUMENTATION

<p>MONITORING</p> <p><input type="checkbox"/> PID</p> <p><input type="checkbox"/> Dust Monitor</p> <p><input type="checkbox"/> Explosimeter</p> <p><input type="checkbox"/> Other: _____</p>	<p>SAMPLING</p> <p><input checked="" type="checkbox"/> Bottle</p> <p><input type="checkbox"/> Trowel</p> <p><input type="checkbox"/> Other: _____</p>	<p>DECONTAMINATION FLUIDS USED</p> <p><input type="checkbox"/> Liquinox</p> <p><input type="checkbox"/> Distilled Water</p> <p><input type="checkbox"/> Lab Provided Blank Water</p> <p><input type="checkbox"/> Potable Water</p> <p><input type="checkbox"/> Methanol</p> <p><input type="checkbox"/> Other: _____</p>
---	--	---

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>HCR</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>HNO₃</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES

ID: SAWTRSPBWS QA

QC Sample Taken? YES

ID: SAWTRSPBWS MSMJ

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:

SAMPLED DIRECTLY FROM SPIGOT

Signature: [Signature]

Received By: _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: ST ALBANS AFS JO. No.: _____

Sample ID: SAWTRSPAWS XI Date: 18 SEPT 1996

Circle One: Soil _____ Surface Water _____
Groundwater _____ Sediment _____

Other: _____ Project Activity: WATER SUPPLY WELL SAMPLING

Field Duplicate Collected Duplicate ID No. SAWTRSPAWS DS

SAMPLE OBSERVATIONS

Color: CLEAR Odor? NONE

Grain Size: _____ PID Reading: _____

Saturated? _____ Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): _____ F. Historical Well Depth (FT): 750 K. Well Locked? _____

B. Depth To Water (FT): 21.24 G. Measured From: Riser / Casing L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Diff Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): 120

EQUIPMENT DOCUMENTATION

MONITORING: PID, Dust Monitor, Explosimeter, Other: _____

SAMPLING: Bottle, Trowel, Other: _____

DECONTAMINATION FLUIDS USED: Liquinox, Distilled Water, Lab Provided Blank Water, Potable Water, Methanol, Other: _____

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>HCR</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>HNO₃</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? NO

ID: _____

QC Sample Taken? NO

ID: _____

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:

SAMPLED DIRECTLY FROM SPIGOT

Signature: [Signature]

Received By: _____

Approach taken for Well Water after Final Well Development? _____

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

FIELD DATA RECORD

Project: LYNDONVILLE AFS J.O. No.: _____

Sample ID: LYDRYWLASWXI Date: 19 SEPT 1996

Circle One: Soil Surface Water Project Activity: SURFACE WATER SAMPLING

Groundwater Sediment

Other: _____

Field Duplicate Collected Duplicate ID No. LYDRYWLASWDS

SAMPLE OBSERVATIONS

Color: CLEAR Odor? _____

Grain Size: _____ PID Reading: 1.1 BREATHING SPACE

Saturated? _____ Other: _____

WATER LEVEL/WELL DATA

A. Well Depth (FT): ~7 F. Historical Well Depth (FT): _____ K. Well Locked? _____

B. Depth To Water (FT): 6 G. Measured From: Ground Riser / Casing L. Protective Casing Secure? _____

C. Height of Water (FT): _____ H. Casing Stick-up (FT): _____ M. Gravel Pad Intact? _____

D. Well ID: _____ I. Off Well and Casing (FT): _____ N. Well Markings Readable? _____

E. Volume (GAL): _____ J. Purge Volume (GAL): _____

EQUIPMENT DOCUMENTATION

<p>MONITORING</p> <p><input type="checkbox"/> PID</p> <p><input type="checkbox"/> Dust Monitor</p> <p><input type="checkbox"/> Explosimeter</p> <p><input type="checkbox"/> Other: _____</p>	<p>SAMPLING</p> <p><input checked="" type="checkbox"/> Bottle</p> <p><input type="checkbox"/> Trowel</p> <p><input checked="" type="checkbox"/> Other: <u>BAILER</u></p>	<p>DECONTAMINATION FLUIDS USED</p> <p><input type="checkbox"/> Liquinox</p> <p><input type="checkbox"/> Distilled Water</p> <p><input type="checkbox"/> Lab Provided Blank Water</p> <p><input type="checkbox"/> Potable Water</p> <p><input type="checkbox"/> Methanol</p> <p><input type="checkbox"/> Other: _____</p>
---	---	---

ANALYTICAL PARAMETERS

TYPE	METHOD	FILTERED?	VOLUME	PRESERVED
<input type="checkbox"/> TRPH				
<input checked="" type="checkbox"/> VOCs				<u>HCL</u>
<input checked="" type="checkbox"/> SVOCs				<u>ICE</u>
<input checked="" type="checkbox"/> Metals				<u>HNO₃</u>
<input type="checkbox"/> Pest/PCB				
<input type="checkbox"/> Other:				

QA/QC DATA

QA Sample Taken? YES

ID: LYDRYWLASWQA

QC Sample Taken? YES

ID: LYDRYWLASWMSMD

PURGE DATA

	FIRST VOLUME	SECOND VOLUME	THIRD VOLUME
Volume			
Temp (C)			
pH			
Cond			
Turb			

NOTES:

Signature: [Signature]

Received By: _____

Does this type of Well Water alter Final Well Development? _____

BORING LOGS

Site: Lyndonville Air Force Station
Client: U.S. Army Corps of Engineers
Coordinates:
Groundwater Depth/Date: 4'
Contractor: American Drilling

Logged by: T. Sponseller
Date Start - Finish: 09/04/96 - 09/04/96
Ground Elevation: ft
Total Depth Drilled: 12 ft
Rig Type: CME-75

Methods:
Drilling Soil: 4" ID Hollow Stem Auger
Sampling Soil: Split Spoons
Drilling Rock: N.A.

Casing Used:

Comments: Automatic Hammer used with 140-lb weight, 30-inch drop.

Elev (ft)	Depth (ft)	Sample		Blows or Recovery RQD	SPT N Value	USC Symbol	Sample Description
		Type	No.				
0.0	0			2-2 8-8 (7")*	**		Sandy Silt, slightly plastic, 10%-20% fine-medium sand, very moist, dark brown, pieces of 'live' wood, 3" disk of rock. (Headspace = 9.5)
				8-7 5-7 (11")	**		Sandy Silt, similar to above, with 15% angular gravel. (Headspace = 9.5)
-5	5			3-7 12-46 (18")	**		Sandy Silt, similar to above, with 20% angular gravel, oriented so as to appear "steeply dipping" within soil. (Headspace = 9.5)
				24-30 26-35 (19")	**		Fractured Rock, fine sandstone or siltstone, highly fractured, wet, gray, silt-sized gouge. (Headspace = 4.5)
-10	10			4-6 28-31 (17")	**		Silty Sand, mostly fine, appears to be disintegrated rock, 30% gravel, rock, 25% sil. plastic fines, wet, brown. (Headspace = 9.5)
				7-12 48-59/4" (20")	**		Weathered Rock, fractured & weathered sand-siltstone, 20% 30% fine sand, 20% 30% slightly plastic fines, moist, gray-brown (Headspace = 9.5)
							EWD OF BORING @ 11' 10"

Legend/Notes

** NO SPT N-VALUES
SINCE 3" SPOONS WERE USED

- Datum is
- ▽ indicates groundwater level.
- ■ indicates location of samples.
- Blows = number of blows required to drive 2" O.D. sample spoon 6" or distance shown using 140 pound hammer falling 30".
- ★() = inches of sample recovery.
- Recovery = % rock core recovery.
- RQD = Rock Quality Designation.
- SPT N = Standard Penetration Test resistance to driving, blows/ft.
- USC = Unified Soil Classification system.
- * indicates use of 300 pound hammer.

• Sample Type:

Approved
JES

Date
09/13/96

Site: St. Albans Air Force Station
Client: U.S. Army Corps of Engineers
Coordinates:
Groundwater Depth/Date: 7'

Logged by: T. Sponseller
Date Start - Finish: 09/06/96 - 09/06/96
Ground Elevation: ft
Total Depth Drilled: 10 ft
Rig Type: CME-75

Methods:
Drilling Soil: 4" ID Hollow Stem Auger
Sampling Soil: Split Spoons
Drilling Rock: N.A.

Casing Used:

Comments: Automatic Hammer used with 140-lb weight, 30-inch drop.

Elev (ft)	Depth (ft)	Sample		Blows or Recovery RQD	SPT N Value	USC Symbol	Sample-Description
		Type	No.				
0.0	0			3-3 6-2 (15")*	9	SP	Gravelly Sand, fine to medium, 10%-15% rounded gravel, 5%-10% non-plastic fines, damp, brown, 2" roots @ top.
				6-9 8-5 (12")	17	SP	Gravelly Sand, similar to above.
-5	5			8-10 10-16 (18")	20	ML	Gravelly Silt, non-plastic, 20% gravel up to 1" size, 10% -15% fine sand, moist, gray.
				7-6 8-8 (22")	14	SP	Sand, fine, 10% subrounded fine gravel, trace fines, wet, brown.
-10	10			6-6 8-10 (21")	14	SP-SM	Sand, similar to above, except 10-15% non-plastic fines
							END OF BORING @ 10 FT

Legend/Notes

- Datum is
- ▽ indicates groundwater level.
- ■ indicates location of samples.
- Blows = number of blows required to drive 2" O.D. sample spoon 6" or distance shown using 140 pound hammer falling 30".
- ★ () = inches of sample recovery.
- Recovery = % rock core recovery.
- RQD = Rock Quality Designation.
- SPT N = Standard Penetration Test resistance to driving, blows/ft.
- USC = Unified Soil Classification system.
- * indicates use of 300 pound hammer.

· Sample Type:

Approved
JES

Date
09/13/96

DOCUMENTATION REGARDING SCREENING/CLEANUP LEVELS

024 27A
COPY

State of Vermont
Department of Environmental Conservation
Hazardous Materials Management Division
103 South Main Street, West Bldg
Waterbury, Vermont 05676

January 19, 1996

J.O. 05000.04
COE-04-0416

ATTN: Michael Young

CONTRACT DACW33-94-D-0007
DELIVERY ORDER NO. 0004

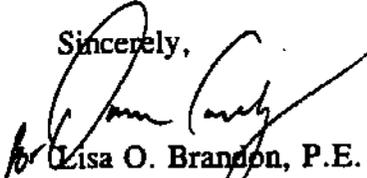
**RESPONSE TO RESPONSE TO COMMENTS ON SITE INVESTIGATION REPORTS FOR
FORMER LYNDONVILLE AIR FORCE STATION, EAST HAVEN, VERMONT
& FORMER ST. ALBANS AIR FORCE STATION, ST. ALBANS, VERMONT**

This letter is in response to your letter dated January 5, 1996 regarding the Army's December 28, 1995 response to your comments on the Draft Site Investigation Reports for the above referenced projects dated October 19, 1995 and October 18, 1995 respectively. The Army acknowledges your support of the use of EPA Region III Risk-Based Concentrations as cleanup goals for this project. As previously stated, the Army will use the Region III Risk-Based Concentrations (residential, soil ingestion values) presented in a March 7, 1995 memo to Roy L. Smith, EPA Senior Toxicologist. A copy of the memo was included with the December 28, 1995 letter. Also, as you recommended, the Army will use the TPH cleanup level of 200 ppm for this project as established by the Vermont Department of Environmental Conservation.

As for your other comments regarding the additional work planned for the site, the Army will respond to those comments directly in the near future. At this time, efforts pertaining to the remediation of the former storage tank locations recommended for further action in the Draft Site Investigation Reports for the above referenced projects will proceed forward independent of the additional work planned.

If you have any questions regarding this letter, please call me at (617) 589-8323 at your convenience.

Sincerely,



Lisa O. Brandon, P.E.
Project Manager

Copy to: Chuck Schwer (VTDEC)
 Chuck Wener (USACOE-NED)



State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
RELAY SERVICE FOR THE HEARING IMPAIRED
1-800-253-0191 TDD>Voice
1-800-253-0195 Voice>TDD

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation

Waste Management Division
103 South Main Street West Office Building
Waterbury, VT 05671-0404
Phone (802) 241-3888
Fax: (802) 241-3296

January 5, 1996

RWD 1/10/96 LBS

Lisa Brandon
Stone & Webster
245 Summer Street
Boston, MA 02210

RE: Former Lyndonville Air Force Station, East Haven, Vermont
Site # 91-1152

Former ST Albans Air Force Station, ST Albans, Vermont
Site # 91-1109

Dear Ms. Brandon:

The Sites Management Section (SMS) has received and reviewed your letter dated December 28, 1995. The SMS has previously used EPA Region III Risk-Based Concentration (RRBC) for site remediation work and will continue to do so in the future.

The SMS has established risk based TPH cleanup levels for fuel oil (#1, 2, 4, 6) contaminated soils of 200 parts per million (ppm) for residential areas and 1,000 ppm for industrial areas. To be protective of human health and the environment, and consistent with Stone & Webster's use of the residential soil ingestion RRBC levels, the SMS recommends the 200 ppm TPH concentration be employed for both sites for remediation purposes.

The SMS is supportive phased investigations at sites. However, by including the investigation of other potentially contaminated areas of the property with the remediation of the former underground storage tanks (USTs), the opportunity to reduce overall site investigation/remediation costs (mobilization, travel, etc.) through consolidation will be lost.

Work plans should be prepared and forwarded to the SMS for review when the remaining areas of concern that are outlined in my letters of October 18 and 19, 1995 (former landfill, drywells, leachfields, maintenance garage, water supply wells) are to be investigated. Please provide an approximate time frame of when the investigation of these areas is likely to commence.

Copies of the Site Investigation and Letter Inventory reports should also be forwarded to the respective site owners.

If you have any questions or need further information please feel free to contact me at the phone/fax number or address identified above.

Sincerely,



Michael W. Young
Asst. Hazardous Materials Specialist
Sites Management Section

cc: Chuck Wener, USACOE, NED
Ed Sawyer
Bob Marcotte

COPY

State of Vermont
Department of Environmental Conservation
Hazardous Materials Management Division
103 South Main Street, West Bldg
Waterbury, Vermont 05676

December 28, 1995

J.O. 05000.04
COE-04-0262

ATTN: Michael Young

CONTRACT DACW33-94-D-0007

DELIVERY ORDER NO. 0004

**RESPONSE TO COMMENTS ON SITE INVESTIGATION REPORTS FOR
FORMER LYNDONVILLE AIR FORCE STATION, EAST HAVEN, VERMONT
& FORMER ST. ALBANS AIR FORCE STATION, ST. ALBANS, VERMONT**

This letter is in response to your comments on the Draft Site Investigation Reports for the above referenced projects dated October 19, 1995 and October 18, 1995 respectively. The Army acknowledges your support of the recommendations contained in each report. One question arises from your comments. You made reference to a Region III Risk-Based Concentration (RRBC) for Total Recoverable Petroleum Hydrocarbons (TRPH) in the comments for the St. Albans site report. Stone & Webster is not aware of any RRBC for TRPH and therefore requests clarification of this statement.

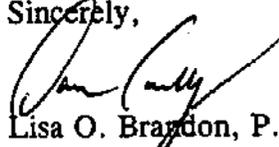
As stated in a previous letter, dated March 30, 1995, a phased approach is being taken for these sites. This approach was approved in your letter to Stone & Webster dated April 14, 1995. One project will address the former UST locations and a separate project will focus on the other areas of concern that you raise in your letter. Your recommendations will be taken into consideration for this additional work. At this point, the Army would like to focus only on the former UST locations.

The next phase of work for the former UST locations will be to address the need to define the extent of contamination at each of the locations where additional work has been recommended in the Draft Site Investigation Reports. There is a need to know at what point the locations will be considered "clean" enough to declare them closed. Without these stopping points, any remediation

efforts will remain unfocussed and potentially inefficient. Because the State of Vermont does not have formal soil remediation thresholds, the Army proposes using the EPA Region III Risk-Based Concentrations, (residential, soil ingestion values) presented in a March 7, 1995 memo to Roy L. Smith, EPA Senior Toxicologist . The memo is included with this letter. These concentrations have been accepted by EPA Region I (see page 2 of the attached *EPA New England Risk Updates*). The attached table summarizes the RRBCs for each of the parameters detected at the site during the sampling for the above mentioned project. For other possible contaminants not listed in this table, you should refer back to the March 7, 1995 memo previously mentioned and included with this letter. The Army would like to tailor its future work at these locations towards meeting these clean up goals where possible. If there are other standards that the State of Vermont prefers to use, please inform us of this as soon as possible. We will call you in two weeks to discuss this issue.

If you have any questions regarding this letter, please call me at (617) 589-8323 at your convenience.

Sincerely,


for Lisa O. Brandon, P.E.
Project Manager

Enclosures

Copy to: Chuck Schwer (VTDEC)
 Chuck Wener (USACOE-NED)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region III

841 Chestnut Street

Philadelphia, Pennsylvania 19107

April 30, 1996

SUBJECT: Risk-Based Concentration Table, January-June 1996

FROM: Roy L. Smith, Ph.D.
Office of RCRA
Technical & Program Support Branch (3HW70)

TO: RBC Table mailing list

Attached is the EPA Region III risk-based concentration (RBC) table, which we distribute semiannually to all interested parties.

Important Message

EPA Region III's Internet website now includes two versions of the RBC Table. (These can be found at <http://www.epa.gov/reg3hwmd/riskmenu.htm?=&Risk+Guidance>. Once there, I suggest you set a bookmark to ease future access.) One version can be browsed on-line, and a second (identical) version in .ZIP format can be quickly downloaded. The cover memo and background information are also included in both formats.

We strongly encourage all RBC table users having Internet access to obtain the table electronically rather than on paper. In this way, users can access the most current RBC table immediately in a form that can be used directly for comparisons with data or risk estimates. This distribution method will also save hundreds of pounds of paper per year and cost substantially less.

Contents, Uses, and Limitations of the RBC Table

The table contains reference doses and carcinogenic potency slopes (obtained from IRIS through April 1, 1996, HEAST through May 1995, the EPA-NCEA Superfund Health Risk Technical Support Center, and other EPA sources) for nearly 600 chemicals. These toxicity constants have been combined with "standard" exposure scenarios to calculate RBCs--chemical concentrations corresponding to fixed levels of risk (*i.e.*, a hazard quotient of one, or lifetime cancer risk of 10^{-6} , whichever occurs at a lower concentration) in water, air, fish tissue, and soil.

The RBC table also includes soil screening levels (SSLs) for protection of groundwater and air. Most SSLs were obtained directly from EPA/OSWER's proposed SSL guidance document, to which we have added some additional SSLs based on the same methodology. Sources of SSLs are noted in the table. SSLs incorporate the same exposure assumptions as RBCs, plus additional assumptions needed for

inter-media extrapolation. SSLs are therefore distinct from RBCs, and should be used only in the framework proposed in the OSWER document (available from NTIS as document numbers 9355.4-1, PB95-965530, or EPA540/R-94/105).

The Region III toxicologists use RBCs to screen sites not yet on the NPL, respond rapidly to citizen inquiries, and spot-check formal baseline risk assessments. The background materials provide the complete basis for all the calculations, with the intent of showing users exactly how the RBCs were developed. Simply put, RBCs are risk assessments run in reverse. For a single contaminant in a single medium, under standard default exposure assumptions, the RBC corresponds to the target risk or hazard quotient.

RBCs also have several important limitations. Specifically excluded from consideration are (1) transfers from soil to air and groundwater, and (2) cumulative risk from multiple contaminants or media. Also, the toxicity information in the table has been assembled by hand, and (despite extensive checking and years of use) may contain errors. It's advisable to cross-check before relying on any RfDs or CPSs in the table. If you find any errors, please send me a note.

Many users want to know if the risk-based concentrations can be used as valid no-action levels or cleanup levels, especially for soils. The answer is a bit complex. First, it is important to realize that the RBC table does not constitute regulation or guidance, and should not be viewed as a substitute for a site-specific risk assessment. For sites where:

1. A single medium is contaminated;
2. A single contaminant contributes nearly all of the health risk;
3. Volatilization or leaching of that contaminant from soil is expected not to be significant;
4. The exposure scenarios used in the RBC table are appropriate for the site;
5. The fixed risk levels used in the RBC table are appropriate for the site; and
6. Risk to ecological receptors is expected not to be significant;

the risk-based concentrations would probably be protective as no-action levels or cleanup goals. However, to the extent that a site deviates from this description, as most do, the RBCs would not necessarily be appropriate.

To summarize, the table should generally not be used to (1) set cleanup or no-action levels at CERCLA sites or RCRA Corrective Action sites, (2) substitute for EPA guidance for preparing baseline risk assessments, or (3) determine if a waste is hazardous under RCRA.

Answers to Frequently Asked Questions

To help you better understand the RBC table, here are answers to our most often-asked questions:

1. *How can the age-adjusted inhalation factor (11.66) be less than the inhalation rate for either a child (12) or an adult (20)?*

Age-adjusted factors are not intake rates, but rather partial calculations which have different units than intake rates do. The fact that these partial calculations have values similar to intake rates is really coincidental, an artifact of the similar magnitude of years of exposure and time-averaged body weight.

2. Why does arsenic appear in the RBC table separately as a carcinogen and a non-carcinogen, while other contaminants do not?

Arsenic is double-entered to ensure that the risk assessor realizes that non-carcinogenic concerns are significant for arsenic. Otherwise, one might be tempted to accept a $1e-4$ risk (43 ppm in residential soil), when the oral reference dose would be exceeded at 23 ppm.

Also, EPA has a little-known risk management policy for arsenic (dating from 1988) that suggests that arsenic-related cancer risks of up to $1e-3$ can be accepted because the cancers are squamous cell carcinomas with a low mortality rate. Thus, non-carcinogenic RBCs represent an important limitation on acceptable arsenic concentrations.

3. Many contaminants have no inhaled reference dose or carcinogenic potency slope in IRIS, yet these numbers appear in the RBC table with IRIS given as the source. Where did the numbers come from?

Most inhaled reference doses and potency slopes in the RBC table are converted from reference concentrations and unit risk values which do appear in IRIS. These conversions assume 70-kg persons inhaling $20\text{ m}^3/\text{d}$. For example, the inhalation unit risk for arsenic ($4.3e-3$ risk per $\mu\text{g}/\text{m}^3$) is divided by $20\text{ m}^3/\text{d}$ and multiplied by 70 kg times 1000 $\mu\text{g}/\text{mg}$, yielding a CPSi of 15.1 risk per $\text{mg}/\text{kg}/\text{d}$.

4. Why does the RBC table base soil RBCs for cadmium and manganese on reference doses that apply only to drinking water?

The RBC table's use of the drinking water RfDs for cadmium and manganese reflects (1) the limited space available in the already-crowded table, and (2) the intended use of the table as a screening tool rather than a source of cleanup levels (thereby making false positives acceptable). For a formal risk assessment, Region III would use the food RfDs for soil ingestion.

At this time, only two substances (as far as we know) have distinct oral RfDs for water and food--cadmium and manganese. Adding the two food RfDs to the table would require an entire column, which would be about 99.9% blank. The table has become so crowded that it would be difficult to accommodate another column. Also, we've given this problem a relatively low priority because the table's primary purpose is to identify environmental problems needing further study. RBCs were never intended for uncritical use as cleanup levels, merely to identify potential problems which need a closer look.

5. What is the source of the child's inhalation rate of $12\text{ m}^3/\text{d}$?

The calculation comes from basic physiology. It's a scaling of the mass-specific $20\text{ m}^3/\text{d}$ rate for adults from a body mass of 70 kg to 15 kg, using the two-thirds power of mass, as follows:

Let: IR_{cm} = mass-specific child inhalation rate ($\text{m}^3/\text{kg}/\text{d}$)

IR_{c} = child inhalation rate (m^3/d)

$20\text{ m}^3/\text{d}\ 70\text{kg} = 0.286\text{ m}^3/\text{kg}/\text{d}$ (mass-specific adult inhalation rate)

$$0.286 \text{ m}^3/\text{kg}/\text{d} \times (70^{**}.67) = (\text{IRcm}) \times (15^{**}.67)$$

$$\text{IRcm} = (0.286) \times (70^{**}.67) / (15^{**}.67) = 0.286 \times 2.807 = 0.803 \text{ m}^3/\text{kg}/\text{d}$$

$$\text{IRc} = \text{IRcm} \times 15\text{kg} = 0.803 \text{ m}^3/\text{kg}/\text{d} \times 15\text{kg} = 12.04 \text{ m}^3/\text{d}$$

A short (but algebraically equivalent) way to do the conversion:

$20 \times (15/70)^{**}.333 = 11.97$ (different from, but actually more correct than, 12.04 because of rounding error in calculating by the long form).

6. Can the oral RfDs in the RBC table be applied to dermal exposure?

Not directly. EPA's Office of Research and Development is working on dermal RfDs for some substances, but has not yet produced any final values. When dermal RfDs do appear, they will undoubtedly be based on absorbed dose rather than administered dose. Oral RfDs are (usually) based on administered dose and therefore tacitly include a GI absorption factor. Thus, any use of oral RfDs in dermal risk calculations would have to involve removing this absorption factor.

*7. The exposure variables table in the RBC background document lists the averaging time for non-carcinogens as "ED*365". What does that mean?*

ED is exposure duration, in years, and "*" is the computer-ese symbol for multiplication. Multiplying ED by 365 simply converts the duration to days. In fact, the ED term is included in both the numerator and denominator of the RBC algorithms for non-cancer risk, canceling it altogether. We expressed the algorithm this way to allow users to realize this. The total exposure is really adjusted only by EF (days exposed per year) divided by 365. (Note that this explanation applies to non-carcinogenic risk only; for carcinogens, exposure is pro-rated over the number of days in a 70-year life span.)

8. Why is inorganic lead not included in the RBC table?

The reason that lead is missing from the RBC table is simple, and fundamental: EPA has no reference dose or potency slope for inorganic lead, so it wasn't possible to calculate risk-based concentrations. EPA considers lead a special case because:

(1) Lead is ubiquitous in all media, so human exposure comes from multiple sources. Comparing single-medium exposures with a reference dose would be misleading.

(2) If EPA did develop a reference dose for lead by the same methods other reference doses, we would probably find that most people already exceed it. Since EPA already knows this and is moving aggressively to lower lead releases nationally, such findings at individual sites would be irrelevant and unduly alarming.

(3) EPA decided to take a new approach to distinguish important lead exposures from trivial ones. EPA developed a computer model (the IEUBK model) which predicts children's blood lead concentrations using lead levels in various media as inputs. The idea is to evaluate a child's entire environment, and reduce lead exposures in the most cost-effective way.

On the practical side, there are several EPA policies on lead which effectively substitute for RBCs. The EPA Office of Solid Waste has released a detailed directive on risk assessment and cleanup of residential soil lead. The directive recommends that soil lead levels less than 400 ppm be considered safe for residential use. Above that level, the document suggests collecting certain types of data and modeling children's blood lead wit>

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EPA Region III Risk-Based Concentration Table

Background Information

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Development of Risk-Based Concentrations

General

Separate carcinogenic and non-carcinogenic risk-based concentrations were calculated for each compound for each pathway. The concentration in the table is the lower of the two, rounded to two significant figures. The following terms and values were used in the calculations:

Exposure variables	Value	Symbol
<i>General:</i>		
Carcinogenic potency slope oral (risk per mg/kg/d):	*	CPSo
Carcinogenic potency slope inhaled (risk per mg/kg/d):	*	CPSi
Reference dose oral (mg/kg/d):	*	RfDo
Reference dose inhaled (mg/kg/d):	*	RfDi
Target cancer risk:	1e-06	TR
Target hazard quotient:	1	THQ
Body weight, adult (kg):	70	BWa
Body weight, age 1-6 (kg):	15	BWc
Averaging time carcinogens (d):	25550	Atc
Averaging time non-carcinogens (d):	ED*365	ATn
Inhalation, adult (m3/d):	20	IRAA
Inhalation, child (m3/d):	12	IRAC
Inhalation factor, age-adjusted (m3-y/kg-d):	11.66	IFAadj
Tap water ingestion, adult (L/d):	2	IRWa
Tap water ingestion, age 1-6 (L/d):	1	IRWc
Tap water ingestion factor, age-adjusted (L-y/kg-d):	1.09	IFWadj
Fish ingestion (g/d):	54	IRF
Soil ingestion, adult (mg/d):	100	IRSa
Soil ingestion, age 1-6 (mg/d):	200	IRSc
Soil ingestion factor, age adjusted (mg-y/kg-d):	114.29	IFSadj
<i>Residential:</i>		
Exposure frequency (d/y):	350	EFr
Exposure duration, total (y):	30	EDtot
Exposure duration, age 1-6 (y):	6	EDc
Volatilization factor (L/m3):	0.5	K
<i>Occupational:</i>		
Exposure frequency (d/y):	250	EFO
Exposure duration (y):	25	EDo
Fraction of contaminated soil ingested (unitless):	0.5	FC

*: Contaminant-specific toxicological constants. The priority among sources of toxicological constants was as follows: (1) IRIS, (2) HEAST, (3) HEAST alternative method, (4) EPA Superfund Health Risk Technical Support Center, (5) withdrawn from IRIS or HEAST, and (6) other EPA documents. Each source was used only if numbers from higher-priority sources were unavailable. The EPA Superfund Health Risk Technical Support Center, part of the Chemical Mixtures Branch of ECAO-Cincinnati,

develops provisional RfDs and CPSs on request for contaminants not in IRIS or HEAST. These provisional values are labeled "E = EPA-ECAO provisional" in the table. It is possible they may be obsolete. If one of the "E" constants is important to a Superfund risk assessment, consider requesting, through a Regional risk assessor, a new provisional value.

Age-adjusted factors

Because contact rates with tap water, ambient air, and residential soil are different for children and adults, carcinogenic risks during the first 30 years of life were calculated using age-adjusted factors. These factors approximated the integrated exposure from birth until age 30 by combining contact rates, body weights, and exposure durations for two age groups - small children and adults. The age-adjusted factor for soil was obtained from RAGS IB; the others were developed by analogy.

Sources: I=IRIS H=HEAST A=HEAST alternate W=Withdrawn from IRIS or HEAST
E=EPA-NCEA Regional Support provisional value O=Other EPA documents

Base: C=carcinogenic effects N=noncarcinogenic effects E=EPA draft Soil Screening Level
S=sol saturation concentration M=EPA MCL

Risk-Based Concentrations

Contaminant	CAS	Risk-Based Concentrations				V O C	Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Soil Screening Levels	
		RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSI kg d/mg							Transfers from Soil to Air mg/kg	Groundwater mg/kg
Acetate	30560191	4.00E-03 I		8.70E-03 I		7.7 C	0.72 C	0.36 C	660 C	73 C	0	0	
Acetaldehyde	75070		2.57E-03 I		7.70E-03 I	94 N	0.81 C	0	0	0	0	0	
Acetochlor	34256821	2.00E-02 I				730 N	73 N	27 N	41000 N	1600 N	0	0	
Acetone	67641	1.00E-01 I				3700 N	370 N	140 N	200000 N	7800 N	62000 E	8 E	
Acetone cyanohydrin	75865	7.00E-02 H	4.00E-02 A			2600 N	150 N	95 N	140000 N	5500 N	0	0	
Acetonitrile	75078	6.00E-03 I	1.43E-02 A			220 N	52 N	8.1 N	12000 N	470 N	0	0	
Acetophenone	98862	1.00E-01 I	5.71E-06 W			x	0.042 N	0.021 N	200000 N	7800 N	0	0	
Acifluorfen	62476599	1.30E-02 I				470 N	47 N	18 N	27000 N	1000 N	0	0	
Acrolein	107028	2.00E-02 H	5.71E-06 I			730 N	0.021 N	27 N	41000 N	1600 N	0	0	
Acrylamide	79061	2.00E-04 I		4.50E+00 I 4.55E+00 I		0.016 C	0.0014 C	0.0007 C	1.3 C	0.14 C	0	0	
Acrylic acid	79107	5.00E-01 I	2.86E-04 I			18000 N	1 N	680 N	1000000 N	39000 N	0	0	
Acrylonitrile	107131	1.00E-03 H	5.71E-04 I	5.40E-01 I 2.38E-01 I		0.12 C	0.026 C	0.0058 C	11 C	1.2 C	0	0	
Alachlor	15972608	1.00E-02 I		8.00E-02 H		0.84 C	0.078 C	0.039 C	72 C	8 C	0	0	
Alar	1596845	1.50E-01 I				5500 N	550 N	200 N	310000 N	12000 N	0	0	
Aldicarb	116063	1.00E-03 I				37 N	3.7 N	1.4 N	2000 N	76 N	570 S	0.036 M	
Aldicarb sulfone	1646884	1.00E-03 I				37 N	3.7 N	1.4 N	2000 N	76 N	0	0	
Aldrin	309002	3.00E-05 I		1.70E+01 I 1.71E+01 I		0.004 C	0.00037 C	0.00018 C	0.34 C	0.038 C	0.5 E	0.005 E	
Allyl	74223846	2.50E-01 I				9100 N	910 N	340 N	510000 N	20000 N	0	0	
Allyl alcohol	107186	5.00E-03 I				180 N	18 N	6.8 N	10000 N	390 N	0	0	
Allyl chloride	107051	5.00E-02 W	2.86E-04 I			1800 N	1 N	68 N	100000 N	3900 N	0	0	
Aluminum	7429905	1.00E+00 E				37000 N	3700 N	1400 N	1000000 N	78000 N	0	0	
Aluminum phosphide	20859738	4.00E-04 I				15 N	1.5 N	0.54 N	820 N	31 N	0	0	
Amdro	67485294	3.00E-04 I				11 N	1.1 N	0.41 N	810 N	23 N	0	0	
Ametryn	834128	9.00E-03 I				330 N	33 N	12 N	18000 N	700 N	0	0	
m-Aminophenol	591275	7.00E-02 H				2600 N	260 N	95 N	140000 N	5500 N	0	0	
4-Aminopyridine	504245	2.00E-05 H				0.73 N	0.073 N	0.027 N	41 N	1.6 N	0	0	
Amitraz	33089611	2.50E-03 I				91 N	9.1 N	3.4 N	5100 N	200 N	0	0	
Ammonia	7664417		2.86E-02 I			1000 N	100 N	0	0	0	0	0	
Ammonium sulfate	7773060	2.00E-01 I				7300 N	730 N	270 N	410000 N	16000 N	0	0	
Aniline	62533		2.86E-04 I 5.70E-03 I			10 N	1 N	0.55 C	1000 C	110 C	45 N	0.031 N	
Antimony and compounds	7440360	4.00E-04 I				15 N	1.5 N	0.54 N	820 N	31 N	0	0	
Antimony pentoxide	1314609	5.00E-04 H				18 N	1.8 N	0.68 N	1000 N	39 N	0	0	
Antimony potassium tartrate	304610	9.00E-04 H				33 N	3.3 N	1.2 N	1800 N	70 N	0	0	
Antimony tetroxide	1332318	4.00E-04 H				15 N	1.5 N	0.54 N	820 N	31 N	0	0	
Antimony trioxide	1309644	4.00E-04 H				15 N	1.5 N	0.54 N	820 N	31 N	0	0	
Apollo	74115245	1.30E-02 I				470 N	47 N	18 N	27000 N	1000 N	0	0	
Aramite	140578	5.00E-02 H		2.50E-02 I 2.49E-02 I		2.7 C	0.25 C	0.13 C	230 C	26 C	0	0	
Arsenic	7440382	3.00E-04 I				11 N	1.1 N	0.41 N	610 N	23 N	380 E	15 E	
Arsenic (as carcinogen)	7440382		1.43E-05 I	1.50E+00 I 1.51E+01 I		0.045 C	0.00041 C	0.0021 C	3.8 C	0.43 C	380 E	15 E	
Arsine	7784421					0.52 N	0.052 N	0	0	0	0	0	
Assure	76578148	9.00E-03 I				330 N	33 N	12 N	18000 N	700 N	0	0	
Asulam	3337711	5.00E-02 I				1800 N	180 N	68 N	100000 N	3900 N	0	0	
Atrazine	1912249	3.50E-02 I		2.22E-01 H		0.3 C	0.028 C	0.014 C	26 C	2.9 C	0	0	
Avermectin B1	65195553	4.00E-04 I				15 N	1.5 N	0.54 N	820 N	31 N	0	0	
Azobenzene	103333			1.10E-01 I 1.08E-01 I		0.61 C	0.058 C	0.029 C	52 C	5.8 C	0	0	
Barium and compounds	7440393	7.00E-02 I	1.43E-04 A			2600 N	0.52 N	95 N	140000 N	5500 N	350000 E	32 E	
Baygon	114261	4.00E-03 I				150 N	15 N	5.4 N	8200 N	310 N	0	0	
Bayleton	43121433	3.00E-02 I				1100 N	110 N	41 N	61000 N	2300 N	0	0	
Baythroid	68359375	2.50E-02 I				910 N	91 N	34 N	51000 N	2000 N	0	0	
Benefin	1861401	3.00E-01 I				11000 N	1100 N	410 N	610000 N	23000 N	0	0	
Benomyl	17804352	5.00E-02 I				1800 N	180 N	68 N	100000 N	3900 N	0	0	

Sources: IRIS H=HEAST A=HEAST alternate W=Withdrawn from IRIS or HEAST
 E=EPA/CEA Regional Support provisional value O=Other EPA documents

Class: C=carcinogenic effects N=noncarcinogenic effects E=EPA draft Soil Screening Level
 S=soil saturation concentration M=EPA MCL

Contaminant	CAS	RIDo mg/kg/d	RfDi mg/kg/d	CPSo kg/d/mg	CPSi kg/d/mg	V C	Tap Water µg/L	Ambient Air µg/m ³	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Soil Screening Levels	
												Transfers from Soil to Air mg/kg	Groundwater mg/kg
Bentazon	25057890	2.50E-03 I					91 N	8.1 N	3.4 N	5100 N	200 N	0	0
Benzaldehyde	100527	1.00E-01 I					610 N	370 N	140 N	20000 N	7800 N	0	0
Benzene	71432		1.71E-03 E	2.90E-02 I	2.90E-02 I	x	0.36 C	0.22 C	0.11 C	200 C	22 C	0.5 E	0.02 E
Benzenethiol	108985	1.00E-05 H					0.37 N	0.037 N	0.014 N	20 N	0.78 N	0	0
Benzidine	92875	3.00E-03 I		2.30E+02 I	2.35E+02 I		0.00029 C	0.00027 C	0.00014 C	0.025 C	0.0028 C	1.3 C	1.10E-06 C
Benzoic acid	85850	4.00E+00 I					150000 N	15000 N	5400 N	1000000 N	310000 N	320 S	280 E
Benzotrifluoride	88077			1.30E+01 I			0.0052 C	0.00048 C	0.00024 C	0.44 C	0.049 C	0.012 C	0.000073 C
Benzyl alcohol	100516	3.00E-01 H					11000 N	1100 N	410 N	61000 N	23000 N	0	0
Benzyl chloride	100447			1.70E-01 I		x	0.062 C	0.037 C	0.019 C	34 C	3.8 C	0.5 C	0.00036 C
Beryllium and compounds	7440417	5.00E-03 I		4.30E+00 I	8.40E+00 I		0.016 C	0.00075 C	0.00073 C	1.3 C	0.15 C	690 E	180 E
Bidrin	141662	1.00E-04 I					3.7 N	0.37 N	0.14 N	200 N	7.8 N	0	0
Biphenylrin (Talstar)	82657043	1.50E-02 I					550 N	55 N	20 N	31000 N	1200 N	0	0
1,1-Biphenyl	92524	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	9000 S	110 N
Bis(2-chloroethyl)ether	111444			1.10E+00 I	1.16E+00 I	x	0.0092 C	0.0054 C	0.0029 C	5.2 C	0.58 C	0.3 E	0.0003 E
Bis(2-chloroisopropyl)ether	39638329	4.00E-02 I		7.00E-02 H	3.50E-02 H	x	0.26 C	0.18 C	0.045 C	82 C	9.1 C	0	0
Bis(chloromethyl)ether	542881			2.20E+02 I	2.17E+02 I	x	0.00049 C	0.00029 C	0.00014 C	0.026 C	0.0029 C	0.000037 C	1.00E-07 C
Bis(2-chloro-1-methylethyl)ether	0			7.00E-02 W	7.00E-02 W		0.96 C	0.089 C	0.045 C	82 C	9.1 C	0	0
Bis(2-ethylhexyl)phthalate (DEHP)	117817	2.00E-02 I		1.40E-02 I			4.8 C	0.45 C	0.23 C	410 C	46 C	210 E	11 E
Bisphenol A	80057	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
Boron (and borates)	7440428	9.00E-02 I	5.71E-03 H				3300 N	21 N	120 N	180000 N	7000 N	0	0
Boron trifluoride	7837072		2.00E-04 H				7.3 N	0.73 N	0	0	0	0	0
Bromodichloromethane	75274	2.00E-02 I		6.20E-02 I		x	0.17 C	0.1 C	0.051 C	92 C	10 C	1800 E	0.3 E
Bromoethane	593602				1.10E-01 H	x	0.096 C	0.057 C	0	0	0	0	0
Bromoform (tribromomethane)	75252	2.00E-02 I		7.90E-03 I	3.85E-03 I	x	2.4 C	1.6 C	0.4 C	720 C	81 C	46 E	0.5 E
Bromomethane	74839	1.40E-03 I	1.43E-03 I			x	8.7 N	5.2 N	1.9 N	2900 N	110 N	2 E	0.1 E
4-Bromophenyl phenyl ether	101553	5.80E-02 O					2100 N	210 N	78 N	120000 N	4500 N	0	0
Bromophos	2104963	5.00E-03 H					180 N	18 N	6.8 N	10000 N	390 N	0	0
Bromoxynil	1689845	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Bromoxynil octanoate	1689992	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
1,3-Butadiene	106990			9.80E-01 I		x	0.011 C	0.0064 C	0	0	0	0.0013 C	0.000072 C
1-Butanol	71363	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	9700 E	8 E
Butyl benzyl phthalate	85687	2.00E-01 I					7300 N	730 N	270 N	410000 N	16000 N	530 E	68 E
Butylate	2008415	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
sec-Butylbenzene	135988	1.00E-02 E				x	81 N	37 N	14 N	20000 N	780 N	80 S	0.27 M
tert-Butylbenzene	104518	1.00E-02 E				x	61 N	37 N	14 N	20000 N	780 N	0	0.27 M
Butylphthalyl butylglycolate	85701	1.00E+00 I					37000 N	3700 N	1400 N	1000000 N	78000 N	0	0
Cacodylic acid	75605	3.00E-03 H					110 N	11 N	4.1 N	6100 N	230 N	0	0
Cadmium and compounds	7440439	5.00E-04 I	5.71E-05 W		6.30E+00 I		18 N	0.00099 C	0.68 N	1000 N	39 N	920 E	6 E
Caprolactam	105602	5.00E-01 I					18000 N	1800 N	680 N	1000000 N	39000 N	0	0
Captafol	2425061	2.00E-03 I		8.60E-03 H			7.8 C	0.73 C	0.37 C	670 C	74 C	0	0
Captan	133062	1.30E-01 I		3.50E-03 H			19 C	1.8 C	0.9 C	1600 C	180 C	0	0
Carbaryl	63252	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	0.34 S	23 N
Carbofuran	1563682	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Carbon disulfide	75150	1.00E-01 I	2.00E-01 I			x	1000 N	730 N	140 N	200000 N	7800 N	11 E	14 E
Carbon tetrachloride	56235	7.00E-04 I	5.71E-04 E	1.30E-01 I	5.25E-02 I	x	0.16 C	0.12 C	0.024 C	44 C	4.9 C	0.2 E	0.03 E
Carbosulfan	55285148	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0
Carboxin	5234684	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	0	0
Chloral	75876	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
Chloramben	133904	1.50E-02 I					550 N	55 N	20 N	31000 N	1200 N	0	0
Chloranil	118752			4.03E-01 H			0.17 C	0.016 C	0.0078 C	14 C	1.6 C	0	0
Chlordane	57749	6.00E-05 I		1.30E+00 I	1.29E+00 I		0.052 C	0.0049 C	0.0024 C	4.4 C	0.49 C	10 E	2 E

Sources: I=IRIS H=HEAST A=HEAST alternate W=Withdrawn from IRIS or HEAST
 E=EPANCEA Regional Support provisional value O=Other EPA documents
 B= Carcinogenic effects N=Noncarcinogenic effects E=EPA dref Soil Screening Level
 S=Soil saturation concentration M=EPA MCL

Risk-Based Concentrations

Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg-d/mg	CPSI kg-d/mg	V O C	Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion		Soil Screening Levels	
										Industrial mg/kg	Residential mg/kg	Transfers from Soil to Air mg/kg	Groundwater mg/kg
Chlorfuron-ethyl	90982324	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Chlorine	7782505	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	0	0
Chlorine dioxide	10049044		5.71E-05 I				2.1 N	0.21 N	0	0	0	0	0
Chloroacetaldehyde	107200	6.90E-03 O					250 N	25 N	9.3 N	14000 N	540 N	0	0
Chloroacetic acid	79118	2.00E-03 H					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
2-Chloroacetophenone	532274		8.57E-06 I				0.31 N	0.031 N	0	0	0	0	0
4-Chloroaniline	106478	4.00E-03 I					150 N	15 N	5.4 N	8200 N	310 N	1200 S	0.3 E
Chlorobenzene	108907	2.00E-02 I	5.71E-03 A			x	39 N	21 N	27 N	41000 N	1600 N	94 E	0.6 E
Chlorobenzilate	510156	2.00E-02 I		2.70E-01 H	2.70E-01 H		0.25 C	0.023 C	0.012 C	21 C	2.4 C	0	0
p-Chlorobenzoic acid	74113	2.00E-01 H					7300 N	730 N	270 N	410000 N	16000 N	0	0
4-Chlorobenzotrifluoride	98566	2.00E-02 H					730 N	73 N	27 N	41000 N	1600 N	86 N	7.5 N
2-Chloro-1,3-butadiene	126998	2.00E-02 A	2.00E-03 H			x	14 N	7.3 N	27 N	41000 N	1600 N	0	0
1-Chlorobutane	109693	4.00E-01 H				x	2400 N	1500 N	540 N	820000 N	31000 N	0	0
Chlorodibromomethane	124481	2.00E-02 I		8.40E-02 I		x	0.13 C	0.075 C	0.036 C	68 C	7.6 C	1900 E	0.2 E
1-Chloro-1,1-difluoroethane	75683		1.43E+01 I			x	87000 N	52000 N	0	0	0	0	0
Chlorodifluoromethane	75456		1.43E+01 I			x	87000 N	52000 N	0	0	0	0	0
Chloroethane	75003	4.00E-01 E	2.86E+00 I			x	8600 N	10000 N	540 N	820000 N	31000 N	2600 S	33 N
2-Chloroethyl vinyl ether	110758	2.50E-02 O				x	150 N	91 N	34 N	51000 N	2000 N	0	0
Chloroform	67663	1.00E-02 I		6.10E-03 I	8.05E-02 I	x	0.15 C	0.078 C	0.52 C	940 C	100 C	0.2 E	0.3 E
Chloromethane	74873			1.30E-02 H	6.30E-03 H	x	1.4 C	0.99 C	0.24 C	440 C	49 C	0.063 C	0.0066 C
4-Chloro-2,2-methylaniiline hydrochloride	3165933			4.60E-01 H			0.15 C	0.014 C	0.0069 C	12 C	1.4 C	0	0
4-Chloro-2-methylaniiline	95692			5.80E-01 H			0.12 C	0.011 C	0.0054 C	9.9 C	1.1 C	0	0
beta-Chloronaphthalene	91587	8.00E-02 I					2900 N	290 N	110 N	160000 N	6300 N	2.8 S	140 N
o-Chloronitrobenzene	88733			2.50E-02 H		x	0.42 C	0.25 C	0.13 C	230 C	26 C	0	0
p-Chloronitrobenzene	100005			1.80E-02 H		x	0.59 C	0.35 C	0.18 C	320 C	35 C	0	0
2-Chlorophenol	95578	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	53000 E	2 E
2-Chloropropane	75296		2.86E-02 H			x	170 N	100 N	0	0	0	22 N	0.64 N
Chlorothalonil	1897456	1.50E-02 I		1.10E-02 H			6.1 C	0.57 C	0.29 C	520 C	58 C	0	0
o-Chlorotoluene	95498	2.00E-02 I				x	120 N	73 N	27 N	41000 N	1600 N	1200 N	5.6 N
Chlorpropham	101213	2.00E-01 I					7300 N	730 N	270 N	410000 N	16000 N	0	0
Chlorpyrifos	2921882	3.00E-03 I					110 N	11 N	4.1 N	6100 N	230 N	0	0
Chlorpyrifos-methyl	5598130	1.00E-02 H					370 N	37 N	14 N	20000 N	780 N	0	0
Chlorosulfuron	64902723	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
Chlorthiophos	60238564	8.00E-04 H					29 N	2.9 N	1.1 N	1600 N	63 N	0	0
Chromium III and compounds	18065831	1.00E+00 I	5.71E-07W				37000 N	0.0021 N	1400 N	1000000 N	78000 N	0	0
Chromium VI and compounds	18540299	5.00E-03 I					180 N	0.00015 C	6.8 N	10000 N	390 N	140 E	19 E
Coal tar	8001589				2.20E+00W		0	0.0028 C	0	0	0	0	0
Cobalt	7440484	6.00E-02 E					2200 N	220 N	81 N	120000 N	4700 N	0	0
Coke Oven Emissions	8007452				2.17E+00 I		0	0.0029 C	0	0	0	0	0
Copper and compounds	7440508	4.00E-02 E					1500 N	150 N	54 N	82000 N	3100 N	0	0
Crotonaldehyde	123739	1.00E-02W		1.90E+00 H	1.90E+00W		0.035 C	0.0033 C	0.0017 C	3 C	0.34 C	0	0
Cumene	98828	4.00E-02 I	2.57E-03 H				1500 N	9.4 N	54 N	82000 N	3100 N	81 N	65 N
Cyanides:	0						0	0	0	0	0	0	0
Barium cyanide	542621	1.00E-01W					3700 N	370 N	140 N	200000 N	7800 N	0	0
Calcium cyanide	592018	4.00E-02 I					1500 N	150 N	54 N	82000 N	3100 N	0	0
**Chlorine cyanide	506774	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
Copper cyanide	544923	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Cyanazine	21725462	2.00E-03 H		8.40E-01 H			0.08 C	0.0075 C	0.0038 C	6.8 C	0.76 C	0	0
Cyanogen	460195	4.00E-02 I					1500 N	150 N	54 N	82000 N	3100 N	0	0
Cyanogen bromide	506683	9.00E-02 I					3300 N	330 N	120 N	180000 N	7000 N	0	0
Cyanogen chloride	506774	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0

Sources: M=IRIS H=HEAST A=HEAST alternate W=Withdrawn from IRIS or HEAST
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Class: C=carcinogenic effects N=noncarcinogenic effects E=EPA draft Soil Screening Level
 S=soil saturation concentration M=EPA MCL

Contaminant	CAS	Risk-Based Concentrations										Soil Screening Levels	
		RfDa mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg	V C	Tap Water µg/L	Ambient Air µg/m ³	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Transfers from Soil to Air mg/kg	Groundwater mg/kg
Free cyanide	57125	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Hydrogen cyanide	74908	2.00E-02 I	8.57E-04 I				730 N	3.1 N	27 N	41000 N	1600 N	0	0
Potassium cyanide	151508	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
Potassium silver cyanide	506616	2.00E-01 I					7300 N	730 N	270 N	410000 N	16000 N	0	0
Silver cyanide	506649	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	0	0
Sodium cyanide	143339	4.00E-02 I					1500 N	150 N	54 N	82000 N	3100 N	0	0
Thiocyanate	0	2.00E-02 E					730 N	73 N	27 N	41000 N	1600 N	0	0
Zinc cyanide	557211	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
Cyclohexanone	108941	5.00E+00 I				x	30000 N	18000 N	6800 N	1000000 N	390000 N	0	0
Cyclohexamine	108918	2.00E-01 I					7300 N	730 N	270 N	410000 N	16000 N	0	0
Cyhalothrin/Karate	68085858	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Cypermethrin	52315078	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0
Cyromazine	66215278	7.50E-03 I					270 N	27 N	10 N	15000 N	590 N	0	0
Dacthal	1861321	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0
Dalapon	75990	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N	0	0
Danilol	39515418	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N	0	0
DDD	72548			2.40E-01 I			0.28 C	0.028 C	0.013 C	24 C	2.7 C	37 S	0.7 E
DOE	72559			3.40E-01 I			0.2 C	0.018 C	0.0093 C	17 C	1.9 C	10 S	0.5 E
DDT	50293	5.00E-04 I		3.40E-01 I	3.40E-01 I		0.2 C	0.018 C	0.0093 C	17 C	1.9 C	80 E	1 E
Decabromodiphenyl ether	1163195	1.00E-02 I				x	61 N	37 N	14 N	20000 N	780 N	0	0
Demeton	8065483	4.00E-05 I					1.5 N	0.15 N	0.054 N	82 N	3.1 N	0	0
Diallate	2303164			6.10E-02 H		x	0.17 C	0.1 C	0.052 C	84 C	10 C	0	0
Diazinon	333415	9.00E-04 H					33 N	3.3 N	1.2 N	1800 N	70 N	5400 S	2.8 N
Dibenzofuran	132649	4.00E-03 E					150 N	15 N	5.4 N	8200 N	310 N	120 S	120 N
1,4-Dibromobenzene	106376	1.00E-02 I				x	61 N	37 N	14 N	20000 N	780 N	0	0
1,2-Dibromo-3-chloropropane	96128		5.71E-05 I	1.40E+00 H	2.42E-03 H	x	0.048 C	0.21 N	0.0023 C	4.1 C	0.46 C	1.9 N	0.00061 M
1,2-Dibromoethane	106934		5.71E-05 H	8.50E+01 I	7.70E-01 I	x	0.00075 C	0.0081 C	0.00037 C	0.067 C	0.0075 C	0.0058 C	0.00018 M
Dibutyl phthalate	84742	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	100 E	120 E
Dicamba	1918009	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N	0	0
1,2-Dichlorobenzene	95501	9.00E-02 I	4.00E-02 A			x	270 N	150 N	120 N	180000 N	7000 N	300 E	6 E
1,3-Dichlorobenzene	541731	8.90E-02 O				x	540 N	320 N	120 N	180000 N	7000 N	0	0
1,4-Dichlorobenzene	106467		2.29E-01 I	2.40E-02 H		x	0.44 C	0.26 C	0.13 C	240 C	27 C	7700 E	1 E
3,3'-Dichlorobenzidine	91941			4.50E-01 I			0.15 C	0.014 C	0.007 C	13 C	1.4 C	52 S	0.01 E
1,4-Dichloro-2-butene	784410				9.30E+00 H	x	0.0811 C	0.00067 C	0	0	0	0	0
Dichlorodifluoromethane	75718	2.00E-01 I	5.71E-02 A			x	390 N	210 N	270 N	410000 N	16000 N	37 N	7.5 N
1,1-Dichloroethane	75343	1.00E-01 H	1.43E-01 A			x	810 N	520 N	140 N	200000 N	7800 N	980 E	11 E
1,2-Dichloroethane (EDC)	187062		2.86E-03 E	9.10E-02 I	9.10E-02 I	x	0.12 C	0.069 C	0.035 C	63 C	7 C	0.3 E	0.01 E
1,1-Dichloroethylene	75354	9.00E-03 I		6.00E-01 I	1.75E-01 I	x	0.044 C	0.036 C	0.0053 C	9.5 C	1.1 C	0.04 E	0.03 E
1,2-Dichloroethylene (cis)	156592	1.00E-02 H				x	61 N	37 N	14 N	20000 N	780 N	1500 E	0.2 E
1,2-Dichloroethylene (trans)	156605	2.00E-02 I				x	120 N	73 N	27 N	41000 N	1600 N	3600 E	0.3 E
1,2-Dichloroethylene (mixture)	540590	9.00E-03 H				x	55 N	33 N	12 N	18000 N	700 N	0	0
2,4-Dichlorophenol	120832	3.00E-03 I					110 N	11 N	4.1 N	6100 N	230 N	4800 S	0.5 E
2,4-Dichlorophenoxyacetic Acid (2,4-D)	94757	1.00E-02 I				x	61 N	37 N	14 N	20000 N	780 N	7000 S	1.7 M
4-(2,4-Dichlorophenoxy)butyric Acid	94826	8.00E-03 I					290 N	29 N	11 N	16000 N	630 N	0	0
1,2-Dichloropropane	78875		1.14E-03 I	6.80E-02 H		x	0.16 C	0.092 C	0.046 C	84 C	9.4 C	11 E	0.02 E
2,3-Dichloropropanol	616239	3.00E-03 I					110 N	11 N	4.1 N	6100 N	230 N	0	0
1,3-Dichloropropene	542756	3.00E-04 I	5.71E-03 I	1.75E-01 H	1.30E-01 H	x	0.077 C	0.048 C	0.018 C	33 C	3.7 C	0.1 E	0.001 E
Dichlorvos	62737	5.00E-04 I	1.43E-04 I	2.90E-01 I			0.23 C	0.022 C	0.011 C	20 C	2.2 C	3.5 C	0.00072 C
Dicofol	115322			4.40E-01 W			0.15 C	0.014 C	0.0072 C	13 C	1.5 C	0	0
Dicyclopentadiene	77736	3.00E-02 H	5.71E-05 A			x	0.42 N	0.21 N	41 N	61000 N	2300 N	0	0
Dieldrin	60571	5.00E-05 I		1.60E+01 I	1.61E+01 I		0.0042 C	0.00039 C	0.0002 C	0.36 C	0.04 C	2 E	0.001 E

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S=sol saturation concentration M=EPA MCL

Contaminant	CAS	Risk-Based Concentrations					Soil Screening Levels						
		RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg	V O C	Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Transfers from Soil to Air mg/kg	Groundwater mg/kg
Diesel emissions	0		1.43E-03 I				52 N	52 N	0	0	0	0	0
Diethyl phthalate	84652	8.00E-01 I					29000 N	2900 N	1100 N	100000 N	63000 N	520 E	110 E
Diethylene glycol, monobutyl ether	112345		5.71E-03 H				210 N	21 N	0	0	0	0	0
Diethylene glycol, monoethyl ether	111800	2.00E+00 H					73000 N	7300 N	2700 N	100000 N	160000 N	0	0
Diethylformamide	617845	1.10E-02 H					400 N	40 N	15 N	22000 N	860 N	0	0
Di(2-ethylhexyl)adipate	103231	6.00E-01 I		1.20E-03 I			56 C	5.2 C	2.6 C	4800 C	530 C	0	0
Diethylstilbestrol	56531			4.70E+03 H			0.000014 C	1.3000E-06 C	7.00E-07 C	0.0012 C	0.00014 C	0	0
Difenoquat (Average)	43222486	8.00E-02 I					2900 N	290 N	110 N	16000 N	6300 N	0	0
Diflubenzuron	35367385	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
1,1-Difluoroethane	75376		1.14E+01 I				69000 N	42000 N	0	0	0	0	0
Diisopropyl methylphosphonate (DIMP)	1445756	8.00E-02 I				x	2900 N	290 N	110 N	16000 N	6300 N	0	0
Dimethipin	55290647	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Dimethoate	60515	2.00E-04 I					7.3 N	0.73 N	0.27 N	410 N	16 N	0	0
3,3'-Dimethoxybenzidine	119904			1.40E-02 H			4.8 C	0.45 C	0.23 C	410 C	46 C	0	0
Dimethylamine	124403		5.71E-06 W				0.21 N	0.021 N	0	0	0	0	0
2,4-Dimethylaniline hydrochloride	21436964			5.80E-01 H			0.12 C	0.011 C	0.0054 C	9.9 C	1.1 C	0	0
2,4-Dimethylaniline	95681			7.50E-01 H			0.09 C	0.0083 C	0.0042 C	7.6 C	0.85 C	0	0
N,N-Dimethylaniline	121697	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
3,3'-Dimethylbenzidine	119937			9.20E+00 H			0.0073 C	0.00068 C	0.00034 C	0.62 C	0.069 C	29 C	0.00039 C
N,N-Dimethylformamide	68122	1.00E-01 H	8.57E-03 I				3700 N	31 N	140 N	20000 N	7800 N	0	0
1,1-Dimethylhydrazine	57147			2.60E+00 W	3.50E+00 W		0.026 C	0.0018 C	0.0012 C	2.2 C	0.25 C	0	0
1,2-Dimethylhydrazine	540738			3.70E+01 W	3.70E+01 W		0.0018 C	0.0017 C	0.00085 C	0.15 C	0.017 C	0	0
2,4-Dimethylphenol	105678	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	5400 S	3 E
2,6-Dimethylphenol	576261	6.00E-04 I					22 N	2.2 N	0.81 N	1200 N	47 N	0	0
3,4-Dimethylphenol	95658	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N	0	0
Dimethyl phthalate	131113	1.00E+01 H					370000 N	37000 N	14000 N	100000 N	780000 N	1600 E	1200 E
Dimethyl terephthalate	120616	1.00E-01 I					3700 N	370 N	140 N	20000 N	7800 N	0	0
1,2-Dinitrobenzene	528290	4.00E-04 H					15 N	1.5 N	0.54 N	820 N	31 N	0	0
1,3-Dinitrobenzene	99650	1.00E-04 I					3.7 N	0.37 N	0.14 N	200 N	7.8 N	0	0
1,4-Dinitrobenzene	100254	4.00E-04 H					15 N	1.5 N	0.54 N	820 N	31 N	0	0
4,6-Dinitro-o-cyclohexyl phenol	131895	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
2,4-Dinitrophenol	51285	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	360 N	0.1 E
Dinitrotoluene mixture	0		6.80E-01 I				0.099 C	0.0092 C	0.0046 C	8.4 C	0.94 C	0	0
2,4-Dinitrotoluene	121142	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	120 S	0.2 E
2,6-Dinitrotoluene	606202	1.00E-03 H					37 N	3.7 N	1.4 N	2000 N	78 N	370 S	0.1 E
Dinoseb	88857	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N	0	0
di-n-Octyl phthalate	117840	2.00E-02 H					730 N	73 N	27 N	41000 N	1600 N	100000 S	100000 E
1,4-Dioxane	123911		1.10E-02 I				6.1 C	0.57 C	0.29 C	520 C	58 C	0	0
Diphenamid	957517	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N	0	0
Diphenylamine	122394	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N	0	0
1,2-Diphenylhydrazine	122667		8.00E-01 I	7.70E-01 I			0.084 C	0.0081 C	0.0039 C	7.2 C	0.8 C	0	0
Diquat	85007	2.20E-03 I					80 N	8 N	3 N	4500 N	170 N	0	0
Direct black 38	1937377		8.50E+00 H				0.0078 C	0.00073 C	0.00037 C	0.67 C	0.074 C	0	0
Direct blue 6	2602462		8.10E+00 H				0.0083 C	0.00077 C	0.00039 C	0.71 C	0.079 C	0	0
Direct brown 95	16071866		9.30E+00 H				0.0072 C	0.00067 C	0.00034 C	0.62 C	0.069 C	0	0
Disulfoton	298044	4.00E-05 I					1.5 N	0.15 N	0.054 N	82 N	3.1 N	0	0
1,4-Dithiane	505293	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0
Diuron	330541	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
Dodine	2439103	4.00E-03 I					150 N	15 N	5.4 N	8200 N	310 N	0	0
Endosulfan	115297	6.00E-03 I					220 N	22 N	8.1 N	12000 N	470 N	1 S	3 E
Endosulfat	145733	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0

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Basics: C=carcinogenic effects N=noncarcinogenic effects E=EPA draft Soil Screening Level
S=soil saturation concentration M=EPA MCL

Contaminant	CAS	Risk-Based Concentrations					Soil Screening Levels						
		RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg	V C	Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Transfers from Soil to Air mg/kg	Groundwater mg/kg
Endrin	72208	3.00E-04 I					11 N	1.1 N	0.41 N	610 N	23 N	16 S	0.4 E
Epichlorohydrin	106898	2.00E-03 H	2.86E-04 I	9.90E-03 I	4.20E-03 I		6.8 C	1 N	0.32 C	580 C	65 C	0	0
1,2-Epoxybutane	106887		5.71E-03 I				210 N	21 N	0	0	0	0	0
Ethephon (2-chloroethyl phosphonic acid)	16672670	5.00E-03 I					180 N	18 N	6.8 N	1000 N	390 N	0	0
Ethion	563122	5.00E-04 I					18 N	1.8 N	0.68 N	1000 N	39 N	0	0
2-Ethoxyethanol acetate	111159	3.00E-01 A					11000 N	1100 N	410 N	61000 N	23000 N	0	0
2-Ethoxyethanol	110805	4.00E-01 H	5.71E-02 I				15000 N	210 N	540 N	82000 N	31000 N	0	0
Ethyl acrylate	140885			4.80E-02 H			1.4 C	0.13 C	0.068 C	120 C	13 C	0	0
EPTC (S-Ethyl dipropylthiocarbamate)	759944	2.50E-02 I					810 N	81 N	34 N	51000 N	2000 N	0	0
Ethyl acetate	141786	9.00E-01 I					33000 N	3300 N	1200 N	100000 N	70000 N	0	0
Ethylbenzene	100414	1.00E-01 I	2.86E-01 I			x	1300 N	1000 N	140 N	20000 N	7800 N	260 E	5 E
Ethylene cyanohydrin	109784	3.00E-01 H					11000 N	1100 N	410 N	61000 N	23000 N	0	0
Ethylene diamine	107153	2.00E-02 H					730 N	73 N	27 N	41000 N	1600 N	0	0
Ethylene glycol	107211	2.00E+00 I					73000 N	7300 N	2700 N	100000 N	16000 N	0	0
Ethylene glycol, monobutyl ether	111762		5.71E-03 H				210 N	21 N	0	0	0	0	0
Ethylene oxide	75218			1.02E+00 H	3.50E-01 H		0.068 C	0.018 C	0.0031 C	5.6 C	0.63 C	0	0
Ethylene thiourea (ETU)	96457	8.00E-05 I		1.19E-01 H			0.57 C	0.053 C	0.027 C	48 C	5.4 C	0	0
Ethyl ether	60297	2.00E-01 I				x	1200 N	730 N	270 N	41000 N	16000 N	0	0
Ethyl methacrylate	97632	9.00E-02 H					3300 N	330 N	120 N	18000 N	7000 N	0	0
Ethyl p-nitrophenyl phenylphosphorothioate	2104645	1.00E-05 I					0.37 N	0.037 N	0.014 N	20 N	0.78 N	0	0
Ethyl nitrosourea	759739			1.40E+02 W			0.00048 C	0.00045 C	0.00023 C	0.041 C	0.0046 C	0	0
Ethylphthalyl ethyl glycolate	84720	3.00E+00 I					110000 N	11000 N	4100 N	100000 N	23000 N	0	0
Express	10120	8.00E-03 I					290 N	29 N	11 N	16000 N	630 N	0	0
Fenamiphos	22224926	2.50E-04 I					9.1 N	0.91 N	0.34 N	510 N	20 N	0	0
Fluometuron	2164172	1.30E-02 I					470 N	47 N	18 N	27000 N	1000 N	0	0
Fluoride	7782414	6.00E-02 I					2200 N	220 N	81 N	12000 N	4700 N	0	0
Fluoridone	59756604	8.00E-02 I					2900 N	290 N	110 N	16000 N	6300 N	0	0
Flurprimidol	56425913	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Flutolanil	66332965	6.00E-02 I					2200 N	220 N	81 N	12000 N	4700 N	0	0
Fluralinate	69409945	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0
Folpal	133073	1.00E-01 I		3.50E-03 I			19 C	1.8 C	0.9 C	1600 C	180 C	0	0
Fomesafen	72178020			1.90E-01 I			0.35 C	0.033 C	0.017 C	30 C	3.4 C	0	0
Fonolox	944229	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
Formaldehyde	50000	2.00E-01 I			4.55E-02 I		7300 N	0.14 C	270 N	41000 N	16000 N	0	0
Formic Acid	64186	2.00E+00 H					73000 N	7300 N	2700 N	100000 N	16000 N	0	0
Fosetyl-al	39148248	3.00E+00 I					110000 N	11000 N	4100 N	100000 N	23000 N	0	0
Furan	110009	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N	0	0
Furazolidone	67456			3.80E+00 H			0.018 C	0.0016 C	0.00083 C	1.5 C	0.17 C	0	0
Furfural	98011	3.00E-03 I	1.43E-02 A				110 N	52 N	4.1 N	6100 N	230 N	0	0
Furium	531828			5.00E+01 H			0.0013 C	0.00013 C	0.000063 C	0.11 C	0.013 C	0	0
Furmecyclox	80568050			3.00E-02 I			2.2 C	0.21 C	0.11 C	190 C	21 C	0	0
Glufosinate-ammonium	77182822	4.00E-04 I					15 N	1.5 N	0.54 N	820 N	31 N	0	0
Glycidaldehyde	765344	4.00E-04 I	2.88E-04 H				15 N	1 N	0.54 N	820 N	31 N	0	0
Glyphosate	1071836	1.00E-01 I					3700 N	370 N	140 N	20000 N	7800 N	0	0
Haloxypol-methyl	69806402	5.00E-05 I					1.8 N	0.18 N	0.068 N	100 N	3.9 N	0	0
Harmony	79272723	1.30E-02 I					470 N	47 N	18 N	27000 N	1000 N	0	0
HCH (alpha)	319848			6.30E+00 I	6.30E+00 I		0.011 C	0.00099 C	0.0005 C	0.91 C	0.1 C	0.9 E	0.0004 E
HCH (beta)	319857			1.80E+00 I	1.80E+00 I		0.037 C	0.0035 C	0.0018 C	3.2 C	0.35 C	16 E	0.002 E
HCH (gamma) Lindane	58899	3.00E-04 I		1.30E+00 H			0.052 C	0.0048 C	0.0024 C	4.4 C	0.49 C	4.2 C	0.006 E
HCH technical	608731			1.80E+00 I	1.79E+00 I		0.037 C	0.0035 C	0.0018 C	3.2 C	0.35 C	0	0
Heptachlor	76448	5.00E-04 I		4.50E+00 I	4.55E+00 I	x	0.0023 C	0.0014 C	0.0007 C	1.3 C	0.14 C	0.3 E	0.06 E

Sources: (R)RIS H=HEAST A=HEAST alternate W=Withdrawn from RIS or HEAST
E=EPA-NCEA Regional Support provisional value O=Other EPA documents

Base: C=carcinogenic effects H=noncarcinogenic effects E=EPA draft Soil Screening Level
S=Soil saturation concentration M=EPA MCL

Risk-Based Concentrations

Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSI kg d/mg	V C	Tap Water µg/L	Ambient Air µg/m ³	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Soil Screening Levels	
												Transfers from Soil to Air mg/kg	Groundwater mg/kg
Heptachlor epoxide	1024573	1.30E-05 I		9.10E+00 I	9.10E+00 I	x	0.0012 C	0.00069 C	0.00035 C	0.63 C	0.07 C	1 E	0.03 E
Hexabromobenzene	87821	2.00E-03 I				x	12 N	7.3 N	2.7 N	4100 N	160 N	0	0
Hexachlorobenzene	118741	8.00E-04 I		1.60E+00 I	1.61E+00 I	x	0.0066 C	0.0039 C	0.002 C	3.6 C	0.4 C	1 E	0.8 E
Hexachlorobutadiene	87683	2.00E-04 H		7.80E-02 I	7.70E-02 I	x	0.14 C	0.081 C	0.04 C	73 C	8.2 C	1 E	0.1 E
Hexachlorocyclopentadiene	77474	7.00E-03 I	2.00E-05 H			x	0.15 N	0.073 N	9.5 N	14000 N	550 N	2 E	10 E
Hexachlorodibenzo-p-dioxin mixture	19408743			6.20E+03 I	4.55E+03 I		0.000011 C	1.4000E-06 C	5.00E-07 C	0.00092 C	0.0001 C	0	0
Hexachloroethane	67721	1.00E-03 I		1.40E-02 I	1.40E-02 I	x	0.75 C	0.45 C	0.23 C	410 C	46 C	49 E	0.2 E
Hexachlorophene	70304	3.00E-04 I					11 N	1.1 N	0.41 N	610 N	23 N	0	0
Hexahydro-1,3,5-trinitro-1,3,5-triazine	121824	3.00E-03 I		1.10E-01 I			0.81 C	0.057 C	0.029 C	52 C	5.8 C	0	0
1,6-Hexamethylene diisocyanate	822060		2.86E-06 I				0.1 N	0.01 N	0	0	0	0	0
n-Hexane	110543	6.00E-02 H	5.71E-02 I			x	350 N	210 N	81 N	12000 N	4700 N	32 N	13 N
Hexazinone	51235042	3.30E-02 I					1200 N	120 N	45 N	67000 N	2600 N	0	0
Hydrazine, hydrazine sulfate	302012			3.00E+00 I	1.71E+01 I		0.022 C	0.00037 C	0.0011 C	1.9 C	0.21 C	0	0
Hydrogen chloride	7647010		5.71E-03 I				210 N	21 N	0	0	0	0	0
Hydrogen sulfide	7783064	3.00E-03 I	2.85E-04 I				110 N	1 N	4.1 N	6100 N	230 N	0	0
Hydroquinone	123319	4.00E-02 H					1500 N	150 N	54 N	82000 N	3100 N	0	0
Imazalil	35554440	1.30E-02 I					470 N	47 N	18 N	27000 N	1000 N	0	0
Imazaquin	81335377	2.50E-01 I					9100 N	910 N	340 N	510000 N	20000 N	0	0
Iprodione	36734197	4.00E-02 I					1500 N	150 N	54 N	82000 N	3100 N	0	0
Iron	7439896	3.00E-01 E					11000 N	1100 N	410 N	610000 N	23000 N	0	0
Isobutanol	78831	3.00E-01 I					1800 N	1100 N	410 N	610000 N	23000 N	0	0
Isophorone	78591	2.00E-01 I	9.50E-04 I			x	71 C	6.6 C	3.3 C	6000 C	670 C	3400 E	0.2 E
Isopropalin	33820530	1.50E-02 I					550 N	55 N	20 N	31000 N	1200 N	0	0
isopropyl methyl phosphonic acid	1832548	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	0	0
Isosaben	82558507	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
Kepone	143500			1.80E+01 E			0.0037 C	0.00035 C	0.00018 C	0.32 C	0.035 C	0	0
Lactofen	77501634	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
Linuron	330552	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
Lithium	7439932	2.00E-02 E					730 N	73 N	27 N	41000 N	1600 N	0	0
Londax	83056996	2.00E-01 I					7300 N	730 N	270 N	410000 N	16000 N	0	0
Malathion	121755	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Maleic anhydride	108316	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	0	0
Maleic hydrazide	123331	5.00E-01 I					18000 N	1800 N	680 N	1000000 N	39000 N	0	0
Malononitrile	109773	2.00E-05 H					0.73 N	0.073 N	0.027 N	41 N	1.6 N	0	0
Mancozeb	8018017	3.00E-02 H					1100 N	110 N	41 N	61000 N	2300 N	0	0
Maneb	12427382	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
**Manganese and compounds	7439965	2.30E-02 I	1.43E-05 I				840 N	0.052 N	31 N	47000 N	1800 N	0	0
Mephsololan	950107	8.00E-05 H					3.3 N	0.33 N	0.12 N	180 N	7 N	0	0
Mepiquat chloride	24307264	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N	0	0
Mercuric chloride	7487947	3.00E-04 I					11 N	1.1 N	0.41 N	610 N	23 N	0	0
Mercury (inorganic)	7439976	3.00E-04 H	8.57E-05 H				11 N	0.31 N	0.41 N	610 N	23 N	7 E	3 E
Mercury (methyl)	22967926	1.00E-04 I					3.7 N	0.37 N	0.14 N	200 N	7.8 N	0	0
Merphos	150505	3.00E-05 I					1.1 N	0.11 N	0.041 N	61 N	2.3 N	0	0
Merphos oxide	78488	3.00E-05 I					1.1 N	0.11 N	0.041 N	61 N	2.3 N	0	0
Metalaxyl	57837191	6.00E-02 I					2200 N	220 N	81 N	120000 N	4700 N	0	0
Methacrylonitrile	126987	1.00E-04 I	2.00E-04 A				3.7 N	0.73 N	0.14 N	200 N	7.8 N	0	0
Methamidophos	10285926	5.00E-05 I					1.8 N	0.18 N	0.068 N	100 N	3.9 N	0	0
Methanol	67561	5.00E-01 I					18000 N	1800 N	680 N	1000000 N	39000 N	0	0
Methidathion	950378	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N	0	0
Methomyl	16752775	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N	0	0
Methoxychlor	72435	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	41 S	62 E

Sources: I=IRIS H=HEAST A=HEAST alternate W=Withdrawn from IRIS or HEAST
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Ends: C=Carcinogenic effects N=Noncarcinogenic effects E=EPA desk Soil Screening Level
S=Soil saturation concentration M=EPA MCL.

Risk-Based Concentrations

Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg	V O C	Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion		Soil Screening Levels	
										Industrial mg/kg	Residential mg/kg	Transfers from Soil to Air mg/kg	Groundwater mg/kg
2-Methoxyethanol acetate	110496	2.00E-03 A					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
2-Methoxyethanol	109864	1.00E-03 H	5.71E-03 I				37 N	21 N	1.4 N	2000 N	78 N	0	0
2-Methoxy-5-nitroaniline	99592			4.60E-02 H			1.5 C	0.14 C	0.069 C	120 C	14 C	0	0
Methyl acetate	79209	1.00E+00 H					37000 N	3700 N	1400 N	100000 N	78000 N	0	0
Methyl acrylate	96333	3.00E-02 A					1100 N	110 N	41 N	61000 N	2300 N	0	0
2-Methylaniline hydrochloride	636215			1.80E-01 H			0.37 C	0.035 C	0.018 C	32 C	3.5 C	0	0
2-Methylaniline	95534			2.40E-01 H			0.26 C	0.026 C	0.013 C	24 C	2.7 C	0	0
Methyl chloroacetate	79221	1.00E+00 W					37000 N	3700 N	1400 N	100000 N	78000 N	0	0
4-(2-Methyl-4-chlorophenoxy) butyric acid	84815	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0
2-Methyl-4-chlorophenoxyacetic acid	84748	5.00E-04 I					18 N	1.8 N	0.68 N	1000 N	39 N	0	0
2-(2-Methyl-14-chlorophenoxy)propionic acid	83652	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N	0	0
Methylcyclohexane	108872		8.57E-01 H				31000 N	3100 N	D	D	D	50 S	1500 N
Methylene bromide	74953	1.00E-02 A				x	61 N	37 N	14 N	20000 N	780 N	0	0
Methylene chloride	75092	8.00E-02 I	8.57E-01 H	7.50E-03 I	1.64E-03 I	x	4.1 C	3.8 C	0.42 C	760 C	85 C	7 E	0.01 E
4,4'-Methylene bis(2-chloroaniline)	101144	7.00E-04 H		1.30E-01 H	1.30E-01 H		0.52 C	0.048 C	0.024 C	44 C	4.9 C	0	0
4,4'-Methylenebisbenzенаamine	101779			2.50E-01 W			0.27 C	0.025 C	0.013 C	23 C	2.6 C	0	0
4,4'-Methylene bis(N,N'-dimethyl)aniline	101611			4.60E-02 I			1.5 C	0.14 C	0.069 C	120 C	14 C	0	0
4,4'-Methylenediphenyl isocyanate	101688		5.71E-06 I			x	0.035 N	0.021 N	0	0	0	0	0
Methyl ethyl ketone	78933	8.00E-01 I	2.86E-01 I			x	1900 N	1000 N	810 N	100000 N	47000 N	0	0
Methyl hydrazine	60344			1.10E+00 W			0.061 C	0.0057 C	0.0029 C	5.2 C	0.58 C	0	0
Methyl isobutyl ketone	108101	8.00E-02 H	2.29E-02 A				2900 N	290 N	110 N	16000 N	6300 N	0	0
Methyl methacrylate	80626	8.00E-02 H					2900 N	290 N	110 N	16000 N	6300 N	0	0
2-Methyl-5-nitroaniline	99558			3.30E-02 H			2 C	0.19 C	0.086 C	170 C	19 C	0	0
Methyl parathion	298000	2.50E-04 I					9.1 N	0.91 N	0.34 N	510 N	20 N	28 S	0.041 N
2-Methylphenol (o-cresol)	95487	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	12000 S	6 E
3-Methylphenol (m-cresol)	103394	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
4-Methylphenol (p-cresol)	106445	5.00E-03 H					180 N	18 N	6.8 N	10000 N	390 N	0	0
Methyl styrene (mixture)	25013154	6.00E-03 A	1.14E-02 A			x	80 N	42 N	8.1 N	12000 N	470 N	100 N	1 N
Methyl styrene (alpha)	88839	7.00E-02 A				x	430 N	260 N	95 N	140000 N	5500 N	8.8 S	7.5 N
Methyl tertbutyl ether (MTBE)	1634044	5.00E-03 E	8.57E-01 I			x	180 N	3100 N	6.8 N	10000 N	390 N	0	0
Melolactol (Dual)	51218452	1.50E-01 H					5500 N	560 N	200 N	31000 N	12000 N	0	0
Mefribuzin	21087649	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N	0	0
Mirex	2385855	2.00E-04 I		1.80E+00 W			0.037 C	0.0035 C	0.0018 C	3.2 C	0.35 C	0	0
Molinate	2212671	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
Molybdenum	7439987	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Monochloramine	10599903	1.00E-01 I					3700 N	370 N	140 N	20000 N	7800 N	0	0
Naled	300765	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
2-Naphthylamine	91598			1.30E+02 E			0.00052 C	0.000048 C	0.000024 C	0.044 C	0.0049 C	0	0
Napropamide	15299997	1.00E-01 I					3700 N	370 N	140 N	20000 N	7800 N	0	0
Nickel refinery dust	0				8.40E-01 I		0	0.0075 C	0	0	0	0	0
Nickel and compounds	7440020	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	6900 E	21 E
Nickel subsulfide	12035722				1.70E+00 I		0	0.0037 C	0	0	0	0	0
Nitrapyrin	1929824	1.50E-03 W					55 N	5.5 N	2 N	3100 N	120 N	0	0
Nitrate	14797558	1.60E+00 I					58000 N	5800 N	2200 N	100000 N	130000 N	0	0
Nitric oxide	10102439	1.00E-01 W					3700 N	370 N	140 N	20000 N	7800 N	0	0
Nitrite	14797650	1.00E-01 I					3700 N	370 N	140 N	20000 N	7800 N	0	0
2-Nitroaniline	88744	8.00E-05 W	5.71E-05 H				2.2 N	0.21 N	0.081 N	120 N	4.7 N	0	0
3-Nitroaniline	99092	3.00E-03 O					110 N	11 N	4.1 N	6100 N	230 N	0	0
4-Nitroaniline	100016	3.00E-03 O					110 N	11 N	4.1 N	6100 N	230 N	0	0
Nitrobenzene	98953	5.00E-04 I	5.71E-04 A			x	3.4 N	2.1 N	0.68 N	1000 N	39 N	110 E	0.09 E
Nitrofurantoin	67209	7.00E-02 H					2600 N	260 N	95 N	140000 N	5500 N	0	0

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 Risk: C=carcinogenic effects N=noncarcinogenic effects E=EPA dml Soil Screening Level
 S=soil saturation concentration M=EPA MCL

Risk-Based Concentrations

Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg	V C	Tap Water µg/L	Ambient Air µg/m ³	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Soil Screening Levels	
												Transfers from Soil to Air mg/kg	Groundwater mg/kg
Nitrofurazone	59870			1.50E+00 H	9.40E+00 H		0.045 C	0.00067 C	0.0021 C	3.8 C	0.43 C	0	0
Nitrogen dioxide	10102440	1.00E+00 W					37000 N	3700 N	1400 N	100000 N	7800 N	0	0
Nitroguanidine	556887	1.00E-01 I					3700 N	370 N	140 N	20000 N	7800 N	0	0
4-Nitrophenol	100027	6.20E-02 O					2300 N	230 N	84 N	130000 N	4800 N	0	0
2-Nitropropane	78469		5.71E-03 I		9.40E+00 H		210 N	0.00067 C	0	0	0	0	0
N-Nitrosodi-n-butylamine	924163			5.40E+00 I	5.60E+00 I		0.012 C	0.0011 C	0.00058 C	1.1 C	0.12 C	0	0
N-Nitrosodiethanolamine	1116547			2.80E+00 I			0.024 C	0.0022 C	0.0011 C	2 C	0.23 C	0	0
N-Nitrosodimethylamine	55185			1.50E+02 I	1.51E+02 I		0.00045 C	0.000041 C	0.000021 C	0.038 C	0.0043 C	0	0
N-Nitrosodiphenylamine	62759			5.10E+01 I	4.90E+01 I		0.0013 C	0.00013 C	0.000062 C	0.11 C	0.013 C	0	0
N-Nitroso di-n-propylamine	86306			4.80E-03 I			14 C	1.3 C	0.64 C	1200 C	130 C	29 C	0.2 E
N-Nitroso-N-methylethylamine	621647			7.00E+00 I			0.0096 C	0.00089 C	0.00045 C	0.82 C	0.091 C	0.014 C	0.00002 E
N-Nitrosopyrrolidine	10595956			2.20E+01 I			0.0031 C	0.00028 C	0.00014 C	0.26 C	0.028 C	0	0
N-Nitrosopyrrolidine	930552			2.10E+00 I	2.13E+00 I		0.032 C	0.0029 C	0.0015 C	2.7 C	0.3 C	0	0
m-Nitrotoluene	99081	1.00E-02 H				x	61 N	37 N	14 N	20000 N	780 N	480 S	0.42 N
o-Nitrotoluene	88722	1.00E-02 H				x	61 N	37 N	14 N	20000 N	780 N	460 S	0.42 N
p-Nitrotoluene	99990	1.00E-02 H				x	61 N	37 N	14 N	20000 N	780 N	460 S	0.42 N
Norflurazon	27314132	4.00E-02 I					1500 N	150 N	54 N	82000 N	3100 N	0	0
NuStar	85509189	7.00E-04 I					26 N	2.6 N	0.95 N	1400 N	55 N	0	0
Octabromodiphenyl ether	32536520	3.00E-03 I					110 N	11 N	4.1 N	6100 N	230 N	0	0
Octahydro-1,3,5,7-tetraazabicyclo-1,3,5,7-tetrazocine	2691410	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
Octamethylpyrophosphoramide	152169	2.00E-03 H					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
Oryzalin	19044883	5.00E-02 I					1890 N	180 N	68 N	100000 N	3900 N	0	0
Oxadiazon	19668309	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Oxamyl	23135220	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N	0	0
Oxyfluorfen	42874033	3.00E-03 I					110 N	11 N	4.1 N	6100 N	230 N	0	0
Paclobutrazol	76738620	1.30E-02 I					470 N	47 N	16 N	27000 N	1000 N	0	0
Paraquat	1910425	4.50E-03 I					160 N	16 N	6.1 N	9200 N	350 N	0	0
Parathion	56382	8.00E-03 H					220 N	22 N	8.1 N	12000 N	470 N	110 S	3.9 N
Pebulate	1114712	5.00E-02 H					1800 N	180 N	68 N	100000 N	3900 N	0	0
Pendimethalin	40487421	4.00E-02 I					1500 N	150 N	54 N	82000 N	3100 N	0	0
Pentabromo-6-chloro cyclohexane	87843			2.30E-02 H			2.9 C	0.27 C	0.14 C	250 C	28 C	0	0
Pentabromodiphenyl ether	32534819	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
Pentachlorobenzene	608935	8.00E-04 I				x	4.9 N	2.9 N	1.1 N	1600 N	63 N	570 N	48 N
Pentachloronitrobenzene	82688	3.00E-03 I		2.60E-01 H		x	0.041 C	0.024 C	0.012 C	22 C	2.5 C	0	0
Pentachlorophenol	87865	3.00E-02 I		1.20E-01 I			0.58 C	0.052 C	0.028 C	48 C	5.3 C	7.9 C	0.2 E
Permethrin	52645531	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0
Phenmedipham	13684534	2.50E-01 I					9100 N	910 N	340 N	510000 N	20000 N	0	0
Phenol	108852	6.00E-01 I					22000 N	2200 N	810 N	1000000 N	47000 N	21000 S	49 E
m-Phenylenediamine	108452	6.00E-03 I					220 N	22 N	8.1 N	12000 N	470 N	0	0
p-Phenylenediamine	106503	1.90E-01 H					6900 N	690 N	260 N	390000 N	15000 N	0	0
Phenylmercuric acetate	62384	8.00E-05 I					2.9 N	0.29 N	0.11 N	160 N	6.3 N	0	0
2-Phenylphenol	90437			1.94E-03 H			35 C	3.2 C	1.6 C	3000 C	330 C	0	0
Phorate	298022	2.00E-04 H					7.3 N	0.73 N	0.27 N	410 N	16 N	0	0
Phosmet	732116	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Phosphine	7803512	3.00E-04 I	6.57E-05 I				11 N	0.31 N	0.41 N	610 N	23 N	0	0
Phosphoric acid	7664382		2.86E-03 I				100 N	10 N	0	0	0	0	0
Phosphorus (white)	7723140	2.00E-05 I					0.73 N	0.073 N	0.027 N	41 N	1.6 N	0	0
p-Phthalic acid	100210	1.00E+00 H					37000 N	3700 N	1400 N	1000000 N	78000 N	0	0
Phthalic anhydride	85449	2.00E+00 I	3.43E-02 H				73000 N	7300 N	2700 N	1000000 N	160000 N	0	0
Picloram	1918021	7.00E-02 I					2600 N	260 N	95 N	140000 N	5500 N	0	0
Pirimiphos-methyl	29232937	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0

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Basal: C=carcinogenic effects N=noncarcinogenic effects E=EPA draft Soil Screening Level
S=saturation concentration M=EPA MCL

Risk-Based Concentrations

Contaminant	CAS	Risk-Based Concentrations				Soil Screening Levels							
		RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg	V O C	Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Transfers from Soil to Air mg/kg	Groundwater mg/kg
Polychlorinated biphenyls	0	7.00E-06 H		8.90E+00 H			0.0078 C	0.0007 C	0.00035 C	0.64 C	0.072 C	0	0
Polychlorinated biphenyls (PCBs)	1336363			7.70E+00 I			0.0087 C	0.00081 C	0.00041 C	0.74 C	0.083 C	0	0
Aroclor 1016	12674112	7.00E-05 I					2.6 N	0.26 N	0.095 N	140 N	5.5 N	0	0
Aroclor 1254	11097691	2.00E-05 I					0.73 N	0.073 N	0.027 N	41 N	1.6 N	0	0
Polychlorinated terphenyls (PCTs)	0			4.50E+00 E			0.015 C	0.0014 C	0.0007 C	1.3 C	0.14 C	0	0
Polynuclear aromatic hydrocarbons	0						0	0	0	0	0	0	0
Acenaphthene	83329	6.00E-02 I					220 N	220 N	81 N	120000 N	4700 N	120 S	200 E
Anthracene	120127	3.00E-01 I					1100 N	1100 N	410 N	610000 N	23000 N	6.8 S	4300 E
Benz[a]anthracene	56553			7.30E-01 E	6.10E-01 E		0.092 C	0.01 C	0.0043 C	7.8 C	0.88 C	27 S	0.7 E
Benzo[b]fluoranthene	205992			7.30E-01 E	6.10E-01 E		0.092 C	0.01 C	0.0043 C	7.8 C	0.88 C	23 S	4 E
Benzo[k]fluoranthene	207089			7.30E-02 E	6.10E-02 E		0.92 C	0.1 C	0.043 C	76 C	8.8 C	0	4 E
Benzo[a]pyrene	50328			7.30E+00 I	6.10E+00 W		0.0092 C	0.001 C	0.00043 C	0.78 C	0.088 C	11 S	4 E
Carbazole	86748			2.00E-02 H			3.4 C	0.31 C	0.16 C	290 C	32 C	11 S	0.5 E
Chrysene	218019			7.30E-03 E	6.10E-03 E		9.2 C	1 C	0.43 C	780 C	88 C	3.6 S	1 E
Dibenz[ah]anthracene	53703			7.30E+00 E	6.10E+00 E		0.0092 C	0.001 C	0.00043 C	0.78 C	0.088 C	7.2 S	11 E
Fluoranthene	206440	4.00E-02 I					1500 N	150 N	54 N	82000 N	3100 N	56 S	980 E
Fluorene	86737	4.00E-02 I					1500 N	150 N	54 N	82000 N	3100 N	89 S	160 E
Indeno[1,2,3-cd]pyrene	193395			7.30E-01 E	6.10E-01 E		0.092 C	0.01 C	0.0043 C	7.8 C	0.88 C	280 S	35 E
Naphthalene	91203	4.00E-02 W					1500 N	150 N	54 N	82000 N	3100 N	180 S	30 E
Pyrene	129000	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N	56 S	1400 E
Prochloraz	67747095	9.00E-03 I		1.50E-01 I			0.45 C	0.042 C	0.021 C	38 C	4.3 C	0	0
Profluralin	26399380	6.00E-03 H					220 N	22 N	8.1 N	12000 N	470 N	0	0
Prometon	1610180	1.50E-02 I					550 N	55 N	20 N	31000 N	1200 N	0	0
Prometryn	7287196	4.00E-03 I					150 N	15 N	5.4 N	8200 N	310 N	0	0
Pronamide	23950585	7.50E-02 I					2700 N	270 N	100 N	150000 N	5900 N	0	0
Propachlor	1918167	1.30E-02 I					470 N	47 N	18 N	27000 N	1000 N	0	0
Propanil	709988	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Propargite	2312358	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Propargyl alcohol	107197	2.00E-03 I					73 N	7.3 N	2.7 N	4100 N	160 N	0	0
Propazine	139402	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Propham	122429	2.00E-02 I					730 N	73 N	27 N	41000 N	1600 N	0	0
Propiconazole	60207901	1.30E-02 I					470 N	47 N	18 N	27000 N	1000 N	0	0
Propylene glycol	57556	2.00E+01 H					730000 N	73000 N	27000 N	1000000 N	1000000 N	0	0
Propylene glycol, monoethyl ether	52125538	7.00E-01 H					26000 N	2600 N	850 N	1000000 N	55000 N	0	0
Propylene glycol, monomethyl ether	107982	7.00E-01 H	5.71E-01 I				26000 N	2100 N	850 N	1000000 N	55000 N	0	0
Propylene oxide	75569		8.57E-03 I	2.40E-01 I	1.29E-02 I		0.28 C	0.49 C	0.013 C	24 C	2.7 C	0	0
Pursulf	61335775	2.50E-01 I					9100 N	910 N	340 N	51000 N	20000 N	0	0
Pydin	51630581	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N	0	0
Pyridine	110861	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N	0	0
Quinalphos	13593038	5.00E-04 I					18 N	1.8 N	0.68 N	1000 N	39 N	0	0
Quinoline	91225			1.20E+01 H			0.0056 C	0.00052 C	0.00026 C	0.48 C	0.053 C	0	0
Resmethrin	10463868	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N	0	0
Ronnel	299643	5.00E-02 H					1600 N	160 N	68 N	100000 N	3900 N	0	0
Rotenone	83794	4.00E-03 I					150 N	15 N	5.4 N	8200 N	310 N	0	0
Savey	78587050	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N	0	0
Selenious Acid	7783008	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Selenium	7782492	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Selenourea	630104	5.00E-03 H					180 N	18 N	6.8 N	10000 N	390 N	0	3 E
Selthoxydim	74051802	9.00E-02 I					3300 N	330 N	120 N	180000 N	7000 N	0	0
Silver and compounds	7440224	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Simazine	122349	5.00E-03 I		1.20E-01 H			0.56 C	0.052 C	0.026 C	48 C	5.3 C	0	0

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Recl: C=carcinogenic effects N=noncarcinogenic effects E=EPA oral Soil Screening Level
S=soil saturation concentration M=EPA MCL

Contaminant	CAS	RfDo mg/kg/d	RfDi mg/kg/d	CPSo kg/d/mg	CPSi kg/d/mg	V O C	Tap Water µg/L	Ambient Air µg/m3	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Soil Screening Levels	
												Transfers from Soil to Air mg/kg	Groundwater mg/kg
Sodium azide	26628228	4.00E-03 I					150 N	15 N	5.4 N	8200 N	310 N	0	0
Sodium diethyldithiocarbamate	148185	3.00E-02 I		2.70E-01 H			0.25 C	0.023 C	0.012 C	21 C	2.4 C	0	0
Sodium fluoroacetate	62748	2.00E-05 I					0.73 N	0.073 N	0.027 N	41 N	1.6 N	0	0
Sodium metavanadate	13718268	1.00E-03 H					37 N	3.7 N	1.4 N	2000 N	78 N	0	0
Strontium, stable	7440246	6.00E-01 I					22000 N	2200 N	810 N	1000000 N	47000 N	0	0
Strychnine	57249	3.00E-04 I					11 N	1.1 N	0.41 N	810 N	23 N	0	0
Styrene	100425	2.00E-01 I	2.86E-01 I			x	1600 N	1000 N	270 N	410000 N	16000 N	1400 E	2 E
Sylthane	88671890	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N	0	0
2,3,7,8-TCDD (dioxin)	1746018			1.56E+05 H	1.16E+05 H		4.300E-07 C	5.4000E-08 C	0 C	0.000037 C	4.10E-08 C	0	0
Tebuthiuron	34014181	7.00E-02 I					2800 N	260 N	95 N	140000 N	5500 N	0	0
Temephos	3383968	2.00E-02 H					730 N	73 N	27 N	41000 N	1600 N	0	0
Terbacil	5902512	1.30E-02 I					470 N	47 N	18 N	27000 N	1000 N	0	0
Terbufos	13071799	2.50E-05 H					0.91 N	0.091 N	0.034 N	51 N	2 N	0	0
Terbutym	886500	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N	0	0
1,2,4,5-Tetrachlorobenzene	95943	3.00E-04 I				x	1.8 N	1.1 N	0.41 N	810 N	23 N	91 N	0.69 N
1,1,1,2-Tetrachloroethane	630206	3.00E-02 I		2.60E-02 I	2.59E-02 I	x	0.41 C	0.24 C	0.12 C	220 C	25 C	0	0
1,1,2,2-Tetrachloroethane	79345			2.00E-01 I	2.03E-01 I	x	0.052 C	0.031 C	0.018 C	29 C	3.2 C	0.4 E	0.001 E
Tetrachloroethylene (PCE)	127184	1.00E-02 I		5.20E-02 E	2.03E-03 E	x	1.1 C	3.1 C	0.061 C	110 C	12 C	11 E	0.04 E
2,3,4,6-Tetrachlorophenol	58902	3.00E-02 I					1100 N	110 N	41 N	61000 N	2300 N	0	0
p,a,a,a-Tetrachlorololuene	5216251			2.00E+01 H		x	0.00053 C	0.00031 C	0.00016 C	0.29 C	0.032 C	0	0
Tetrachlorovinphos	961115	3.00E-02 I		2.40E-02 H			2.8 C	0.28 C	0.13 C	240 C	27 C	0	0
Tetraethylthiopyrophosphate	3688245	5.00E-04 I					18 N	1.8 N	0.68 N	1000 N	39 N	0	0
Tetraethyl lead	78002	1.00E-07 I					0.0037 N	0.00037 N	0.00014 N	0.2 N	0.0078 N	0.00068 N	0.000034 N
1,1,1,2-Tetrafluoroethane	811972		2.29E+01			x	140000 N	84000 N	0	0	0	0	0
Thallic oxide	1314325	7.00E-05W					2.6 N	0.26 N	0.095 N	140 N	5.5 N	0	0
Thallium	0						0	0	0	0	0	0	0.4 E
Thallium acetate	583688	9.00E-05 I					3.3 N	0.33 N	0.12 N	180 N	7 N	0	0
Thallium carbonate	6533739	8.00E-05 I					2.9 N	0.29 N	0.11 N	160 N	6.3 N	0	0
Thallium chloride	7791120	8.00E-05 I					2.9 N	0.29 N	0.11 N	160 N	6.3 N	0	0
Thallium nitrate	10102451	9.00E-05 I					3.3 N	0.33 N	0.12 N	180 N	7 N	0	0
Thallium selenite	12039520	9.00E-05W					3.3 N	0.33 N	0.12 N	180 N	7 N	0	0
Thallium sulfate	7446186	8.00E-05 I					2.9 N	0.29 N	0.11 N	160 N	6.3 N	0	0
Thiobencarb	28249778	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0
2-(Thiocyanomethylthio)-benzothiazole	21564170	3.00E-02 H					1100 N	110 N	41 N	61000 N	2300 N	0	0
Thiofanox	38196184	3.00E-04 H					11 N	1.1 N	0.41 N	610 N	23 N	0	0
Thiophanate-methyl	23564058	8.00E-02 I					2900 N	290 N	110 N	160000 N	6300 N	0	0
Thiram	137268	5.00E-03 I					180 N	18 N	6.8 N	10000 N	390 N	0	0
Tin and compounds	0	8.00E-01 H					22000 N	2200 N	810 N	1000000 N	47000 N	0	0
Toluene	108883	2.00E-01 I	1.14E-01 I			x	750 N	420 N	270 N	410000 N	16000 N	520 E	5 E
Toluene-2,4-diamine	95807			3.20E+00 H			0.021 C	0.002 C	0.00099 C	1.8 C	0.2 C	0	0
Toluene-2,5-diamine	95705	8.00E-01 H					22000 N	2200 N	810 N	1000000 N	47000 N	0	0
Toluene-2,6-diamine	823405	2.00E-01 H					7300 N	730 N	270 N	410000 N	16000 N	0	0
p-Toluidine	106490			1.90E-01 H			0.35 C	0.033 C	0.017 C	30 C	3.4 C	0	0
Toxaphene	8001352			1.10E+00 I	1.12E+00 I		0.081 C	0.0058 C	0.0028 C	5.2 C	0.58 C	5 E	0.04 E
Tralometrin	86841258	7.50E-03 I					270 N	27 N	10 N	15000 N	590 N	0	0
Triallate	2303175	1.30E-02 I					470 N	47 N	18 N	27000 N	1000 N	0	0
Triasulfuron	82097505	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0
1,2,4-Tribromobenzene	815543	5.00E-03 I				x	30 N	18 N	6.8 N	10000 N	390 N	0	0
Tributyltin oxide (TBTO)	56359	3.00E-05 I					1.1 N	0.11 N	0.041 N	61 N	2.3 N	0	0
2,4,6-Trichloroaniline hydrochloride	33663502			2.90E-02 H			2.3 C	0.22 C	0.11 C	200 C	22 C	0	0
2,4,6-Trichloroaniline	834935			3.40E-02 H			2 C	0.18 C	0.093 C	170 C	19 C	0	0

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Basis: C=carcinogenic effects N=noncarcinogenic effects E=EPA draft Soil Screening Level
S=soil saturation concentration M=EPA MCL

Contaminant	CAS	RIDo mg/kg/d	RIDi mg/kg/d	CPSo kg d/mg	CPSi kg d/mg	V O C	Tap Water µg/L	Ambient Air µg/m ³	Fish mg/kg	Soil Ingestion Industrial mg/kg	Residential mg/kg	Soil Screening Levels	
												Transfers from Soil to Air mg/kg	Groundwater mg/kg
1,2,4-Trichlorobenzene	120821	1.00E-02 I	5.71E-02 H			x	190 N	210 N	14 N	20000 N	780 N	240 E	2 E
1,1,1-Trichloroethane	71558	3.50E-02 E	2.86E-01 W			x	790 N	1000 N	47 N	72000 N	2700 N	980 E	0.9 E
1,1,2-Trichloroethane	79005	4.00E-03 I		5.70E-02 I	5.60E-02 I	x	0.19 C	0.11 C	0.955 C	100 C	11 C	9.8 E	0.01 E
Trichloroethylene (TCE)	79018	8.00E-03 E		1.10E-02 W	6.00E-03 E	x	1.6 C	1 C	0.29 C	520 C	58 C	3 E	0.02 E
Trichlorofluoromethane	75694	3.00E-01 I	2.00E-01 A			x	1300 N	730 N	410 N	610000 N	23000 N	790 N	13 N
2,4,5-Trichlorophenol	95954	1.00E-01 I					3700 N	370 N	140 N	200000 N	7800 N	8200 S	120 E
2,4,6-Trichlorophenol	88062			1.10E-02 I	1.09E-02 I		6.1 C	0.57 C	0.29 C	520 C	58 C	150 C	0.06 E
2,4,5-Trichlorophenoxyacetic acid	93765	1.00E-02 I					370 N	37 N	14 N	20000 N	780 N	0	0
2-(2,4,5-Trichlorophenoxy)propionic acid	83721	8.00E-03 I					290 N	29 N	11 N	16000 N	630 N	0	0
1,1,2-Trichloropropane	598776	5.00E-03 I				x	30 N	18 N	6.8 N	10000 N	390 N	13 N	0.14 N
1,2,3-Trichloropropane	96184	6.00E-03 I		7.00E+00 I		x	0.0015 C	0.00089 C	0.00045 C	0.82 C	0.991 C	0.000027 C	6.00E-06 C
1,2,3-Trichloropropene	96195	5.00E-03 H				x	30 N	16 N	6.8 N	10000 N	390 N	0	0
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	3.00E+01 I	8.57E+00 H			x	59000 N	31000 N	41000 N	1000000 N	1000000 N	2400 S	3100 N
Tridiphana	58138082	3.00E-03 I					110 N	11 N	4.1 N	6100 N	230 N	0	0
Triethylamine	121448		2.00E-03 I				73 N	7.3 N	0	0	0	0	0
Trifluralin	1582098	7.50E-03 I		7.70E-03 I			8.7 C	0.81 C	0.41 C	740 C	83 C	0	0
1,2,4-Trimethylbenzene	95636	5.00E-02 E				x	300 N	180 N	68 N	100000 N	3900 N	0	0
1,3,5-Trimethylbenzene	108678	5.00E-02 E				x	300 N	180 N	68 N	100000 N	3900 N	98 S	0.26 M
Trimethyl phosphate	512561			3.70E-02 H			1.8 C	0.17 C	0.085 C	150 C	17 C	0	0
1,3,5-Trinitrobenzene	99354	5.00E-05 I					1.8 N	0.18 N	0.068 N	100 N	3.9 N	0	0
Trinitrophenylmethylnitramine	479458	1.00E-02 H					370 N	37 N	14 N	20000 N	780 N	0	0
2,4,6-Trinitrotoluene	118967	5.00E-04 I		3.00E-02 I			2.2 C	0.21 C	0.11 C	190 C	21 C	0	0
Uranium (soluble salts)	7440611	3.00E-03 I					110 N	11 N	4.1 N	6100 N	230 N	0	0
Vanadium	7440822	7.00E-03 H					260 N	26 N	9.5 N	14000 N	550 N	0	0
Vanadium pentoxide	1314621	9.00E-03 I					330 N	33 N	12 N	18000 N	700 N	0	0
Vanadium sulfate	36907423	2.00E-02 H					730 N	73 N	27 N	41000 N	1600 N	0	0
Vernam	1929777	1.00E-03 I					37 N	3.7 N	1.4 N	2000 N	78 N	0	0
Vinclozolin	50471448	2.50E-02 I					910 N	91 N	34 N	51000 N	2000 N	0	0
Vinyl acetate	106054	1.00E+00 H	5.71E-02 I				37000 N	210 N	1400 N	1000000 N	78000 N	370 E	84 E
Vinyl bromide	593602		8.57E-04 I			x	5.2 N	3.1 N	0	0	0	2 N	0.016 N
Vinyl chloride	75014			1.90E+00 H	3.00E-01 H	x	0.019 C	0.021 C	0.0017 C	3 C	0.34 C	0.002 E	0.01 E
Warfarin	81612	3.00E-04 I					11 N	1.1 N	0.41 N	610 N	23 N	0.048 N	1800 N
m-Xylene	1.08E+05	2.00E+00 H	2.00E-01 W			x	1400 N	730 N	2700 N	1000000 N	160000 N	950 S	2.40E+02 M
o-Xylene	9.55E+04	2.00E+00 H	2.00E-01 W			x	1400 N	730 N	2700 N	1000000 N	160000 N	730 S	1.50E+02 M
p-Xylene	1.06E+05		8.57E-02 W			x	520 N	310 N	0	0	0	1000 S	2.20E+02 M
Xylene (mixed)	1.33E+06	2.00E+00 I				x	12000 N	7300 N	2700 N	1000000 N	160000 N	320 E	7.40E+01 E
Zinc	7.44E+06	3.00E-01 I					11000 N	1100 N	410 N	610000 N	23000 N	0	4.20E+04 E
Zinc phosphide	1.31E+06	3.00E-04 I					11 N	1.1 N	0.41 N	610 N	23 N	0	0.00E+00
Zineb	1.21E+07	5.00E-02 I					1800 N	180 N	68 N	100000 N	3900 N	0	0.00E+00