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NAS BRUNSWICK
5090.3a

U.S. DEPARTMENT OF THE NAVY
INSTALLATION RESTORATION PROGRAM

NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

SITE INSPECTION REPORT

SWAMPY ROAD DEBRIS SITE
MERRICONEAG EXTENSION DEBRIS SITE

OCTOBER 1993

SITE INSPECTION REPORT

SWAMPY ROAD DEBRIS SITE
AND
MERRICONEAG EXTENSION DEBRIS SITE

NAVAL AIR STATION BRUNSWICK, MAINE
INSTALLATION RESTORATION PROGRAM

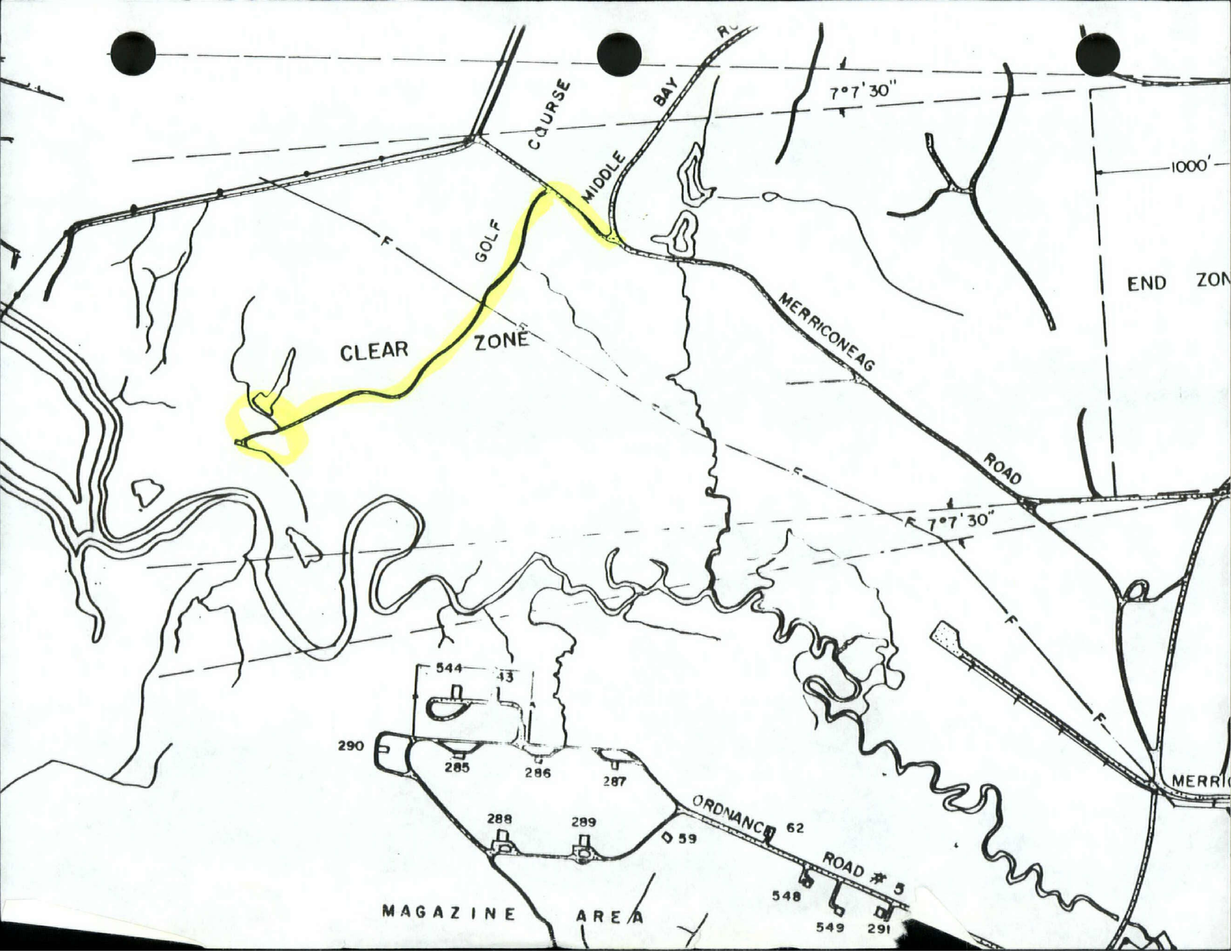
Prepared for:

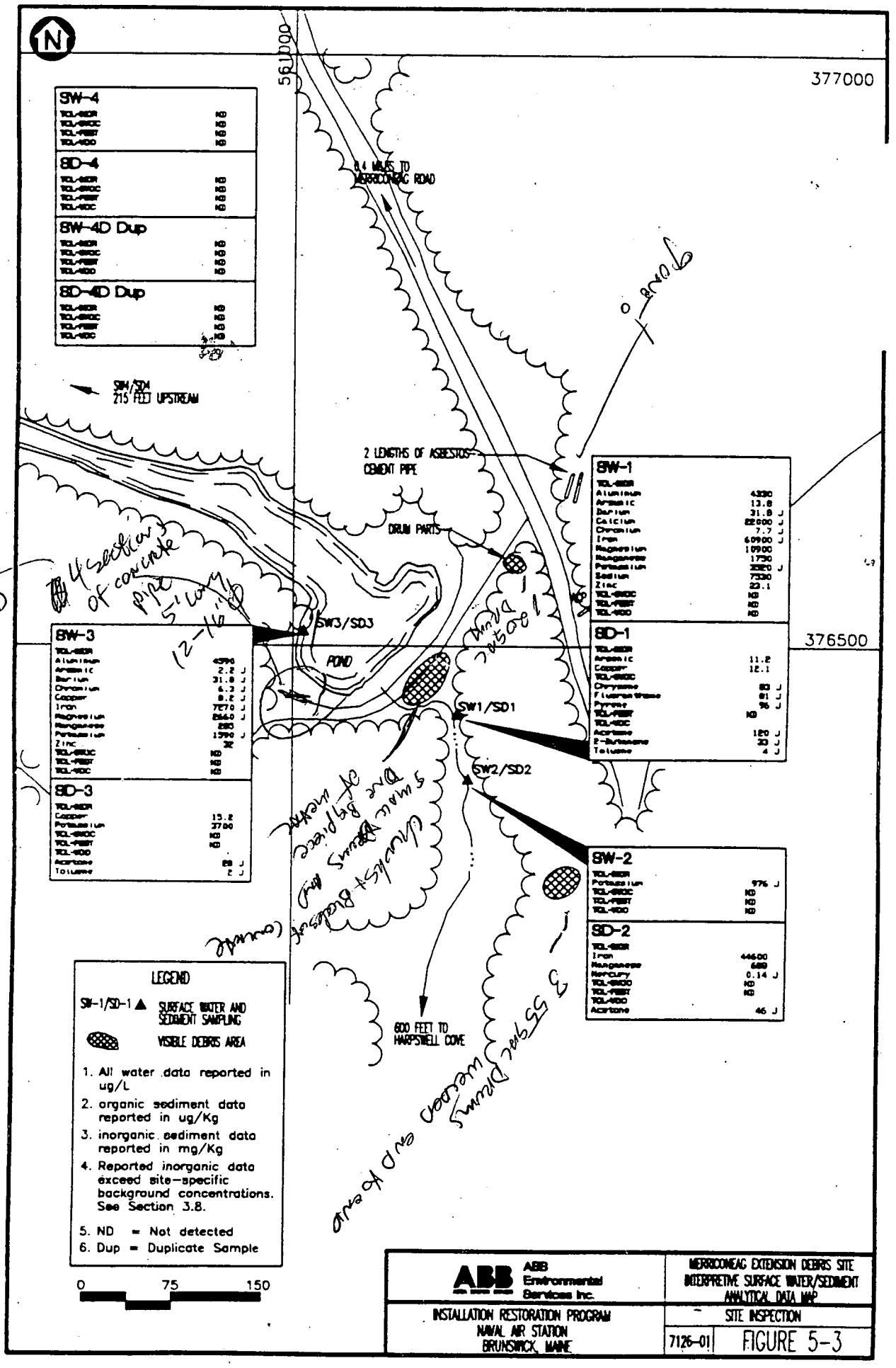
U.S. Department of the Navy
Northern Division
Naval Facilities Engineering Command
Contract N62472-84-C-1108

Prepared by:

ABB Environmental Services, Inc.
Portland, Maine
Project No. 7126-01

OCTOBER 1993


7°7'30"
1000'
END ZON
MIDDLE BAY COURSE
GOLF
CLEAR ZONE
MERRICONEAG ROAD
7°7'30"
544
43
290
285
286
287
288
289
59
ORDNANCE ROAD # 5
62
548
549
291
MAGAZINE AREA
MERRI


N
377000
376500
561000
SW-4
SD-4
SW-4D Dup
SD-4D Dup
SW4/SD4
215 FEET UPSTREAM
0.4 MILES TO
MERRICONEAG ROAD
2 LENGTHS OF ASBESTOS-
CEMENT PIPE
DRUM PARTS
SW-1
Aluminum 4330
Arsenic 13.8
Barium 31.8 J
Calcium 22000 J
Chromium 7.7 J
Iron 60900 J
Magnesium 10900
Manganese 1730
Potassium 3320 J
Sodium 7330
Zinc 23.1
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-1
Arsenic 11.2
Copper 12.1
Chrysene 81 J
Fluoranthene 81 J
Pyrene 96 J
TCL-PEST ND
TCL-VOC
Acetone 120 J
2-Butanone 33 J
Toluene 4 J
SW3/SD3
POND
SW-3
Aluminum 4596
Arsenic 2.2 J
Barium 31.8 J
Chromium 6.3 J
Copper 8.2 J
Iron 7270 J
Magnesium 2640 J
Manganese 285
Potassium 1390 J
Zinc 32
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-3
Copper 15.2
Potassium 2780
TCL-SVOC ND
TCL-PEST ND
TCL-VOC
Acetone 89 J
Toluene 2 J
SW1/SD1
SW2/SD2
SW-2
Potassium 976 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-2
Iron 44600
Manganese 689
Mercury 0.14 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC
Acetone 46 J
600 FEET TO
HARPSWELL COVE
LEGEND
SW-1/SD-1 ▲ SURFACE WATER AND SEDIMENT SAMPLING
VISIBLE DEBRIS AREA
1. All water data reported in ug/L
2. organic sediment data reported in ug/Kg
3. inorganic sediment data reported in mg/Kg
4. Reported inorganic data exceed site-specific background concentrations. See Section 3.8.
5. ND = Not detected
6. Dup = Duplicate Sample
0 75 150
ABB Environmental Services Inc.
MERRICONEAG EXTENSION DEBRIS SITE
INTERPRETIVE SURFACE WATER/SEDIMENT ANALYTICAL DATA MAP
INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
SITE INSPECTION
7126-01
FIGURE 5-3

7 AUG 11 2000

~~Ten~~

- 6 lengths of 55 gal Drums welded end 2 end
- 3 to 4 Drums per length
- Tops + bottoms cut out
- Look like homemade Drainage conduits Discarded
- No env consequence
  - No labeling visible

- on Backedge of Dam
  + Drainage ~~channel~~ Along foot of Dam
    (1 ~~segment~~ 3 20 gal Drum ~~se~~ segment)

SITE INSPECTION REPORT
SWAMPY ROAD DEBRIS SITE AND
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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

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This report describes the inspection of two potentially hazardous waste disposal sites at the Naval Air Station (NAS) Brunswick, in Brunswick, Maine (the Swampy Road Debris Site and Merriconeag Extension Debris Site).

The Swampy Road and Merriconeag Extension Debris Sites were brought to the Navy's attention in 1990 by an NAS Brunswick environmental employee who observed refuse in an unnamed stream and along its banks within the area of the base golf course. This site has been termed the Swampy Road Debris Site. The second site, located southeast of the golf course along a dirt road that joins Merriconeag Road, was found in a similar manner. Visible surface debris at this site included rusted drums and asbestos/cement piping. This area was named the Merriconeag Extension Debris Site. Navy records regarding historical dumping activities at these two sites do not exist.

Swampy Road Debris Site. Very little historic data is available for this site, which encompasses a gully and unnamed stream running through the NAS Brunswick golf course. Significant amounts of surface trash and debris are visible along approximately 1,700 feet of this stream. It appears that debris disposal began prior to the establishment of NAS Brunswick in 1942 and has continued sporadically since then.

The extent of surface and buried debris was established through a magnetometer survey and detailed surface inspection. In addition to visual surface inspections and the magnetometer surveys, a total of eight test pits for both debris sites were excavated at areas which showed anomalous magnetometer readings. Analysis of surface and subsurface soils indicated the presence of chemicals at concentrations similar to those representing background conditions for NAS Brunswick (see Subsection 4.4.2). Very few contaminants were detected in sediment and water samples, with values typically within ranges representative of background concentrations at NAS Brunswick. Only concentrations of inorganics iron and lead exceeded federal criteria for surface water designed to be protective of freshwater aquatic life. Based on these site inspection efforts, the site is recommended for cleanup of the debris; no additional characterization for hazardous substances is warranted.

Merriconeag Extension Debris Site. A concrete rubble and soil dam is located approximately 800 feet upstream of Harpswell Cove. Minor amounts of surface debris, including drum parts and asbestos/cement pipe, are located near the dam in an area that is otherwise wooded and apparently undisturbed. The presence of

rubble along the face of the dam and surface debris prompted the site inspection in this area, which included a magnetometer survey, surface and subsurface soil sampling, and surface water and sediment sampling. With the sole exception of the inorganic iron, laboratory analyses of samples failed to detect site-related contamination that exceeded federal criteria designed to protect human health and freshwater aquatic life. The site is therefore recommended for general cleanup of debris, including several lengths of asbestos-cement pipe, and disposal in accordance with all applicable laws. No further characterization for hazardous substances is warranted.

1.0 INTRODUCTION

This report describes the inspection of two potentially hazardous waste disposal sites at the Naval Air Station (NAS) Brunswick, in Brunswick, Maine (the Swampy Road Debris Site and Merriconeag Extension Debris Site), and evaluates the potential migration and probable environmental fate of contaminants detected at them.

NAS Brunswick is located within the Town of Brunswick and is bordered on the southwest by the village of Harpswell in Cumberland County, Maine. NAS Brunswick was established in 1942, and is owned and operated by the United States through the Department of the Navy. It is currently an active installation with the mission to fly and maintain aircraft.

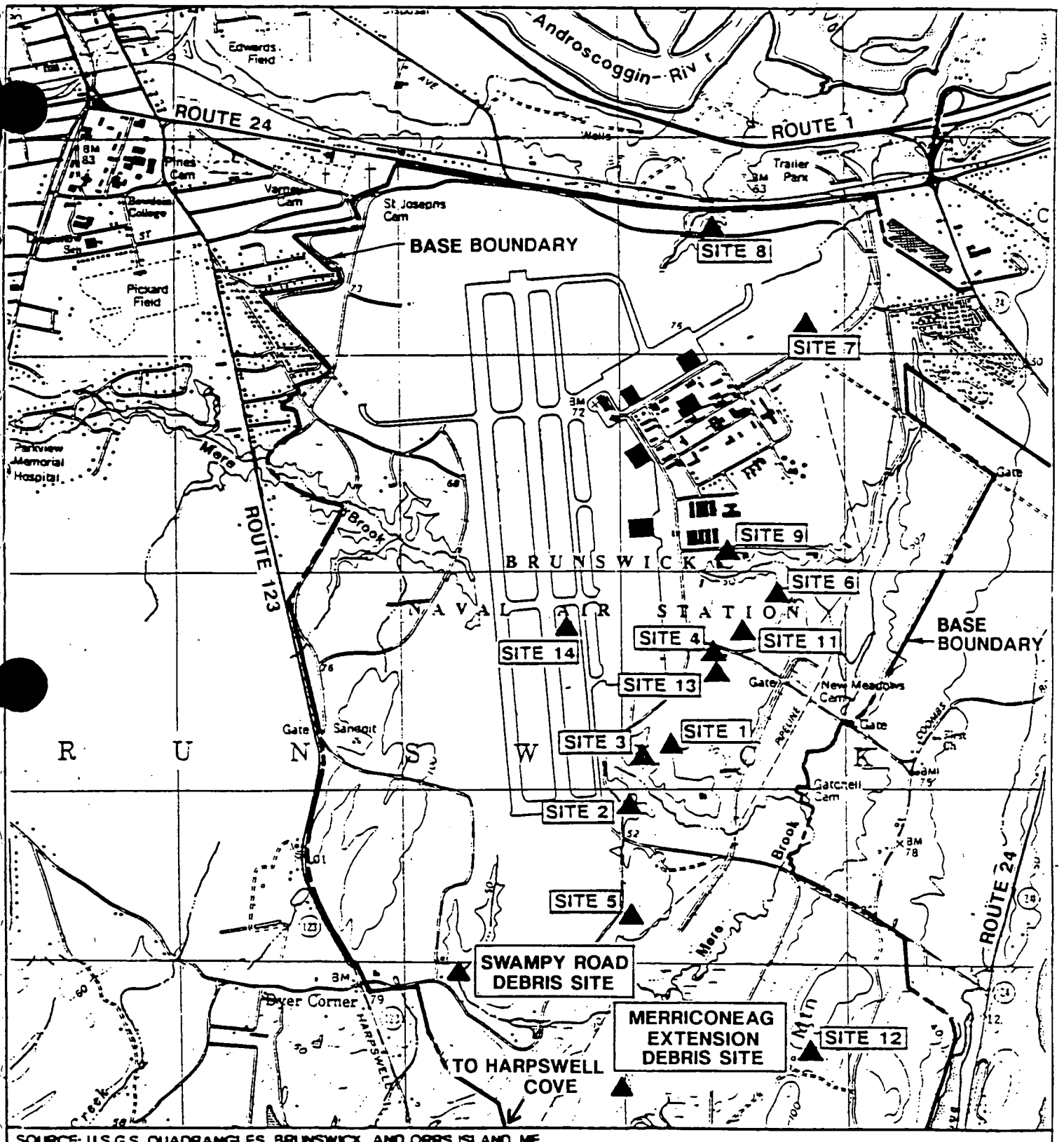
In the early 1980s, the Navy Energy and Environmental Support Activity (NEESA) initiated the Initial Assessment Survey (IAS) of NAS Brunswick, including an on-site survey and review of records and documents. As a result of the IAS, nine areas on the base were identified as possibly having received waste solvents, acids, paint thinners, construction rubble, household wastes, and other debris. Neither the Swampy Road Debris Site nor the Merriconeag Extension Debris Site were identified at that time.

Based on this information, and in accordance with the National Contingency Plan, the U.S. Environmental Protection Agency (USEPA) placed NAS Brunswick on the National Priorities List in 1987. In 1990, the Navy entered into a Federal Facility Agreement (FFA) with USEPA and the Maine Department of Environmental Protection (MEDEP) regarding the cleanup of environmental contamination at NAS Brunswick. The FFA sets forth the roles and responsibilities of each agency, sets deadlines for the investigation and cleanup of hazardous waste sites, and establishes a mechanism to resolve disputes among agencies.

The sites discovered during the IAS and identified in the FFA have since been investigated by the Navy's Installation Restoration Program in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the 1986 Superfund Amendments and Reauthorization Act (SARA) (E.C. Jordan Co., 1990 and 1991a). Because the Swampy Road and Merriconeag Extension Debris Sites had not been previously identified, they were not characterized during these earlier efforts.

The Swampy Road and Merriconeag Extension Debris Sites were brought to the Navy's attention in 1990 by an NAS Brunswick environmental employee who observed refuse in an unnamed stream and along its banks within the area of the base golf course (Figure 1-1). This site has been termed the Swampy Road Debris Site. The second site, located southeast of the golf course along a dirt road that joins Merriconeag Road, was found in a similar manner. Visible surface debris at this site included rusted drums and asbestos/cement piping. This area was named the Merriconeag Extension Debris Site. Navy records regarding historical dumping activities at these two sites do not exist.

Because of its concern about possible disposal of hazardous substances at these locations, the Navy, Northern Division, Naval Facilities Engineering Command, tasked ABB Environmental Services, Inc. (ABB-ES) to prepare a Site Inspection (SI) Work Plan to define those efforts necessary to characterize each site for the possible presence of hazardous substances (ABB-ES, 1992a). This Work Plan was approved by the Navy, USEPA, and MEDEP. ABB-ES was subsequently tasked to implement the Work Plan at the two sites. This document describes the results of these efforts.



SOURCE: U.S.G.S. QUADRANGLES, BRUNSWICK, AND ORRS ISLAND, ME. 1984, 1978. 7.5 MINUTE SERIES.

QUADRANGLE LOCATION

N

SCALE IN FEET

0 2,000 4,000

ABB ASEA BROWN BOVERI — ABB Environmental Services Inc.		SITE LOCATION MAP
INSTALLATION RESTORATION PROGRAM NAVAL AIR STATION BRUNSWICK, MAINE	SITE INSPECTION	
	JOB NO. 7126-01	FIGURE 1-1

2.0 IDENTIFICATION OF SITE-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

In this section, environmental regulations, standards, requirements, and criteria are evaluated to identify those federal and state requirements on a site-specific basis that need to be incorporated into the remedial response. The identification of applicable or relevant and appropriate requirements (ARARs), along with other available non-promulgated advisory and guidance material, is a key component in the planning, evaluation, and selection of remedial actions under CERCLA as amended by SARA. Identification and evaluation of ARARs is an iterative process, necessary throughout the remedial response process, including the site characterization phase. Because of the length of the ARARs discussion, and because both debris sites are at the SI stage only, the full ARARs discussion is presented as Appendix A.

3.0 EXPLORATION AND ANALYTICAL PROGRAM

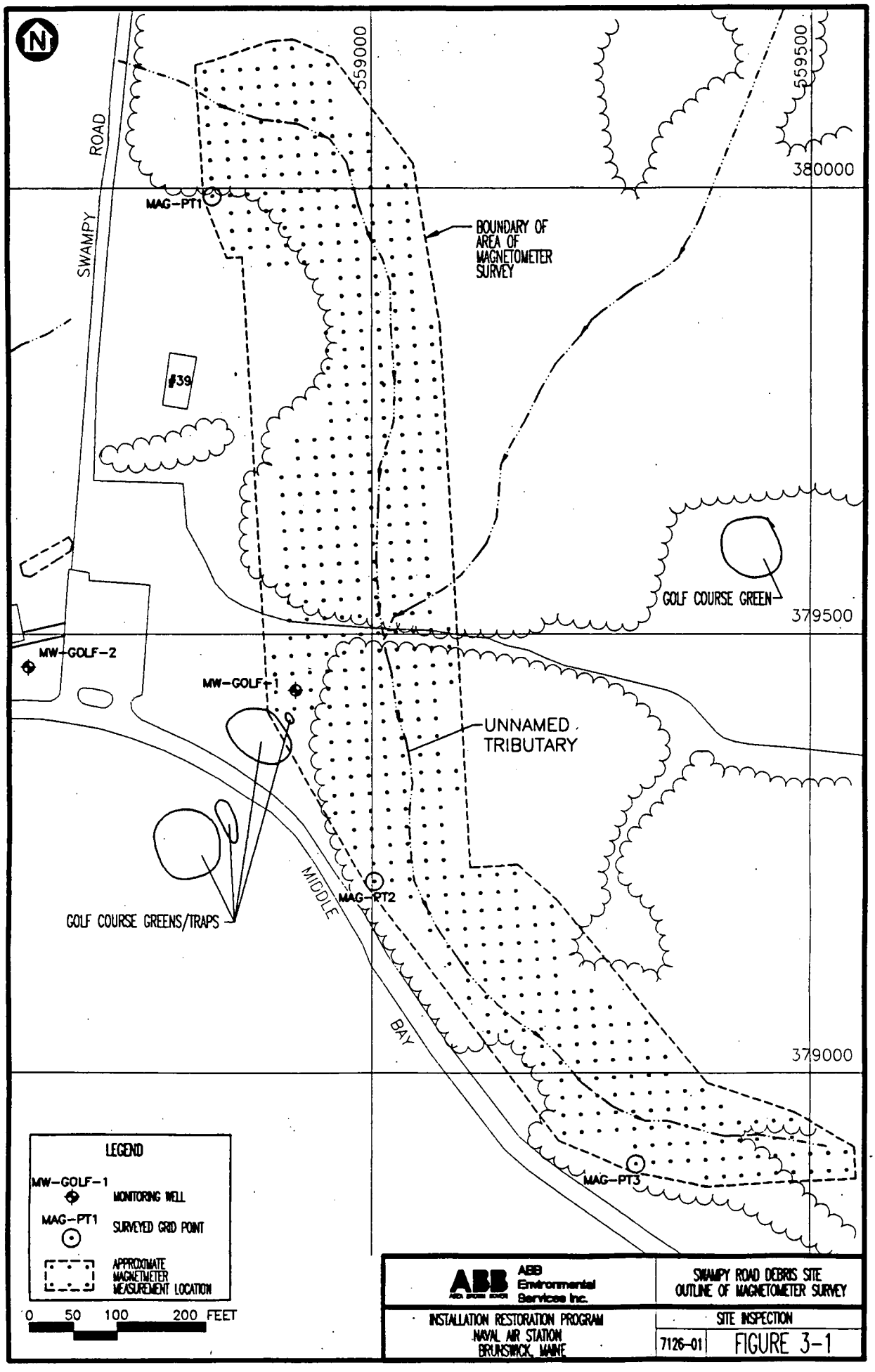
This section discusses field and laboratory procedures comprising the site inspection field program. The program was conducted according to the SI Work Plan (ABB-ES, 1992a), with one difference. The SI Work Plan stated that test pitting would be conducted at both sites only if the magnetometer survey detected significant anomalies. Subsequent to the SI Work Plan being accepted by regulatory agencies, MEDEP requested that five test pits be completed at each site regardless of the magnetometer survey results (MEDEP, 1992). Therefore, five test pits were excavated at the Swampy Road Debris Site. Because of the lack of magnetic anomalies, and with MEDEP approval during the field effort, only three test pits were excavated at the Merriconeag Extension Debris Site.

The field program was conducted during the first half of November 1992.

3.1 MAGNETOMETER INVESTIGATIONS

Magnetometry was conducted at the Swampy Road Debris Site and Merriconeag Extension Debris Site to delineate the lateral extent of waste disposal. A GEM magnetometer/gradiometer was used for data collection, and a computer was used to download data from the gradiometer and to process data for interpretation. Survey control lines were established before data collection with orange flagging and tape. With control established, paced and compass survey lines were run and gradiometer measurements were taken on a 20-by-20-foot grid over each of the areas outlined on Figures 3-1 and 3-2. Three magnetometer grid points at each of the debris sites were subsequently surveyed for horizontal control (see Subsection 3.5). These points are denoted at MAG PIT1, MAG-PT2, and MAG-PT3 on Figures 3-1 and 3-2. Areas of the grids were increased as needed to define any detected anomalies. To confirm data quality, base station readings were collected at regular intervals.

Magnetometry is used to define the lateral extent of wastes and to compare the relative magnitude of detected anomalies on a site-specific basis. Resolution of magnetic anomalies is primarily a function of the depth and mass of a ferrous object(s). These parameters are most often unknown in landfill and disposal-type settings and are difficult to qualify considering landfill heterogeneity. The most


N
559000
559500
380000
379500
379000
SWAMPY ROAD
MAG-PT1
BOUNDARY OF AREA OF MAGNETOMETER SURVEY
#39
GOLF COURSE GREEN
MW-GOLF-2
MW-GOLF-1
UNNAMED TRIBUTARY
MIDDLE BAY
MAG-PT2
GOLF COURSE GREENS/TRAPS
MAG-PT3
LEGEND
MW-GOLF-1
MONITORING WELL
MAG-PT1
SURVEYED GRID POINT
APPROXIMATE MAGNETMETER MEASUREMENT LOCATION
0 50 100 200 FEET
ABB Environmental Services Inc.
SWAMPY ROAD DEBRIS SITE
OUTLINE OF MAGNETOMETER SURVEY
INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
SITE INSPECTION
7126-01
FIGURE 3-1

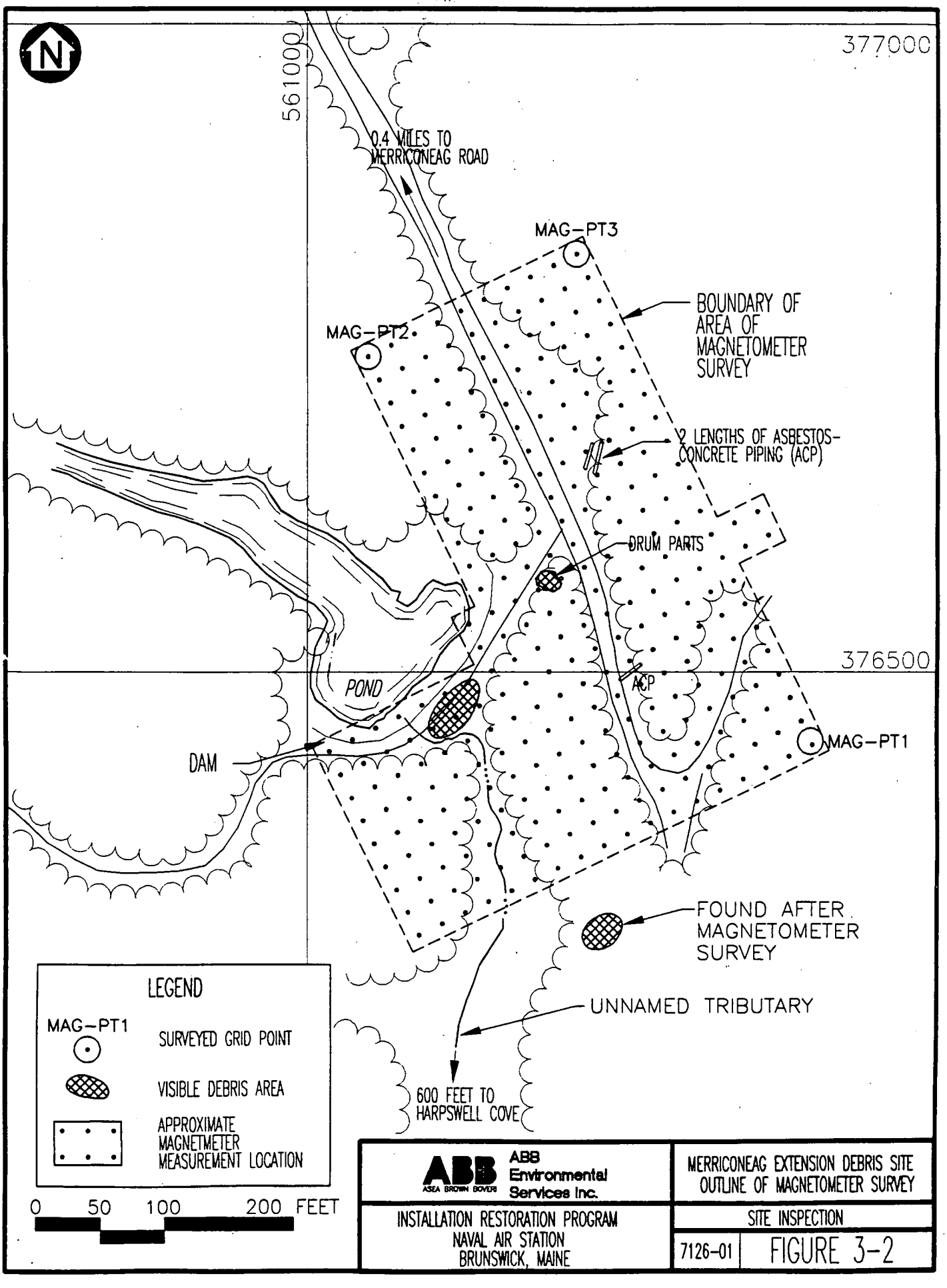


ABB Environmental Services Inc.	MERRICONEAG EXTENSION DEBRIS SITE OUTLINE OF MAGNETOMETER SURVEY
INSTALLATION RESTORATION PROGRAM NAVAL AIR STATION BRUNSWICK, MAINE	SITE INSPECTION
	7126-01 FIGURE 3-2

common evaluation of magnetic data is qualitative and involves the selection of magnetic anomalies based on their intensity above background values and the relative extent of each anomaly. In this manner, magnetic anomalies can be selected and prioritized for further, direct exploration if desired. Man-made or natural interferences such as metallic fences, metal buildings, and even sunspot activity can affect the quality of magnetic data.

The magnetic geophysical technique uses a proton-precession magnetometer that measures local deviations in the earth's magnetic field caused by surficial and buried metallic objects. The magnetometer has two sensors mounted 0.5 meters apart on a staff held vertically during operation. Total magnetic field values are recorded simultaneously by both sensors. The difference between the values recorded by the upper and lower sensors divided by the distance between them is the vertical gradient value.

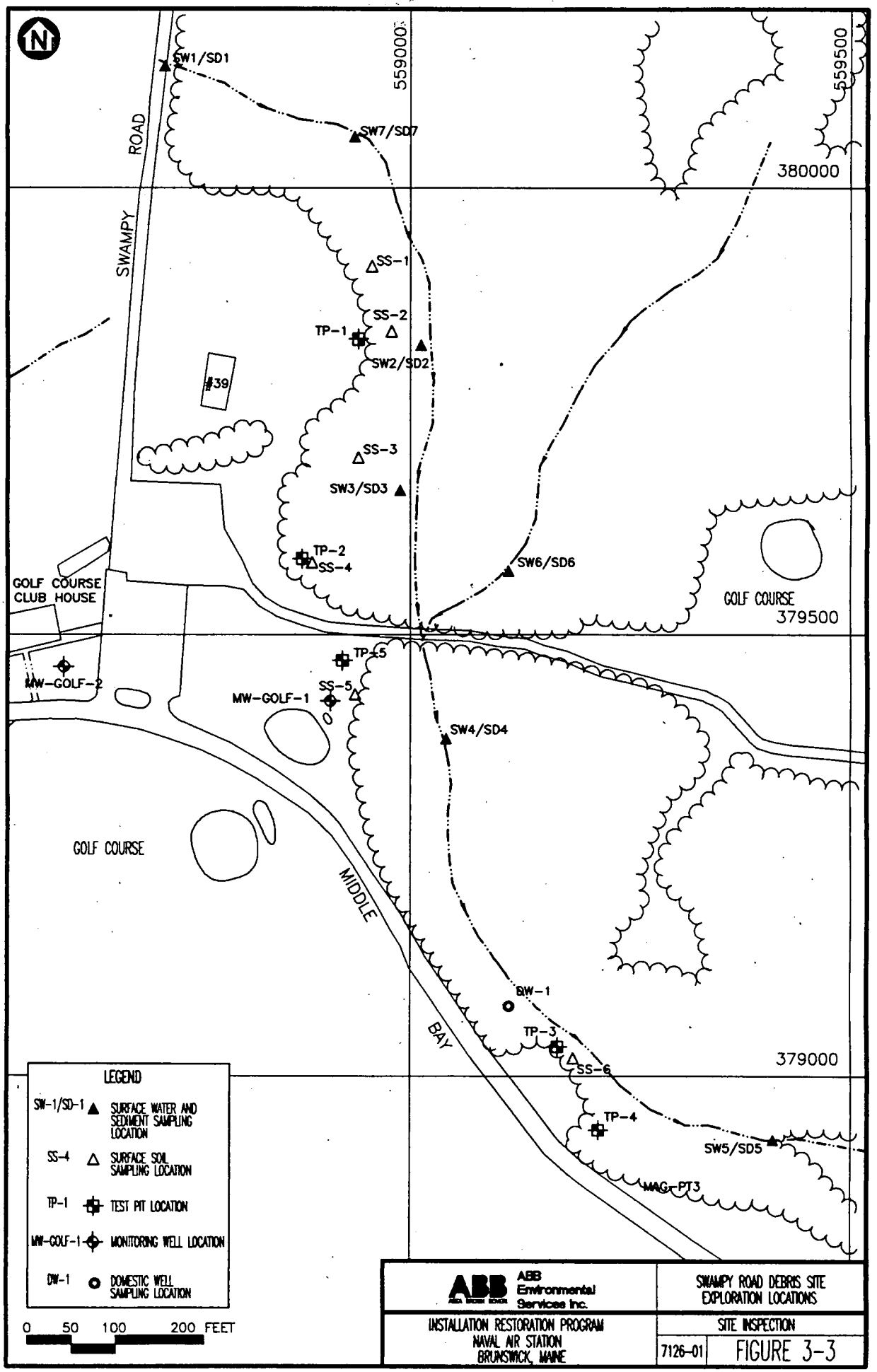
At the Swampy Road Debris Site, 558 magnetometer readings were recorded; 298 readings were taken at the Merriconeag Extension Debris Site. During the magnetometer surveys, a detailed surface inspection was conducted at each site to locate possible dumped materials, note surface debris, and position possible future test locations.

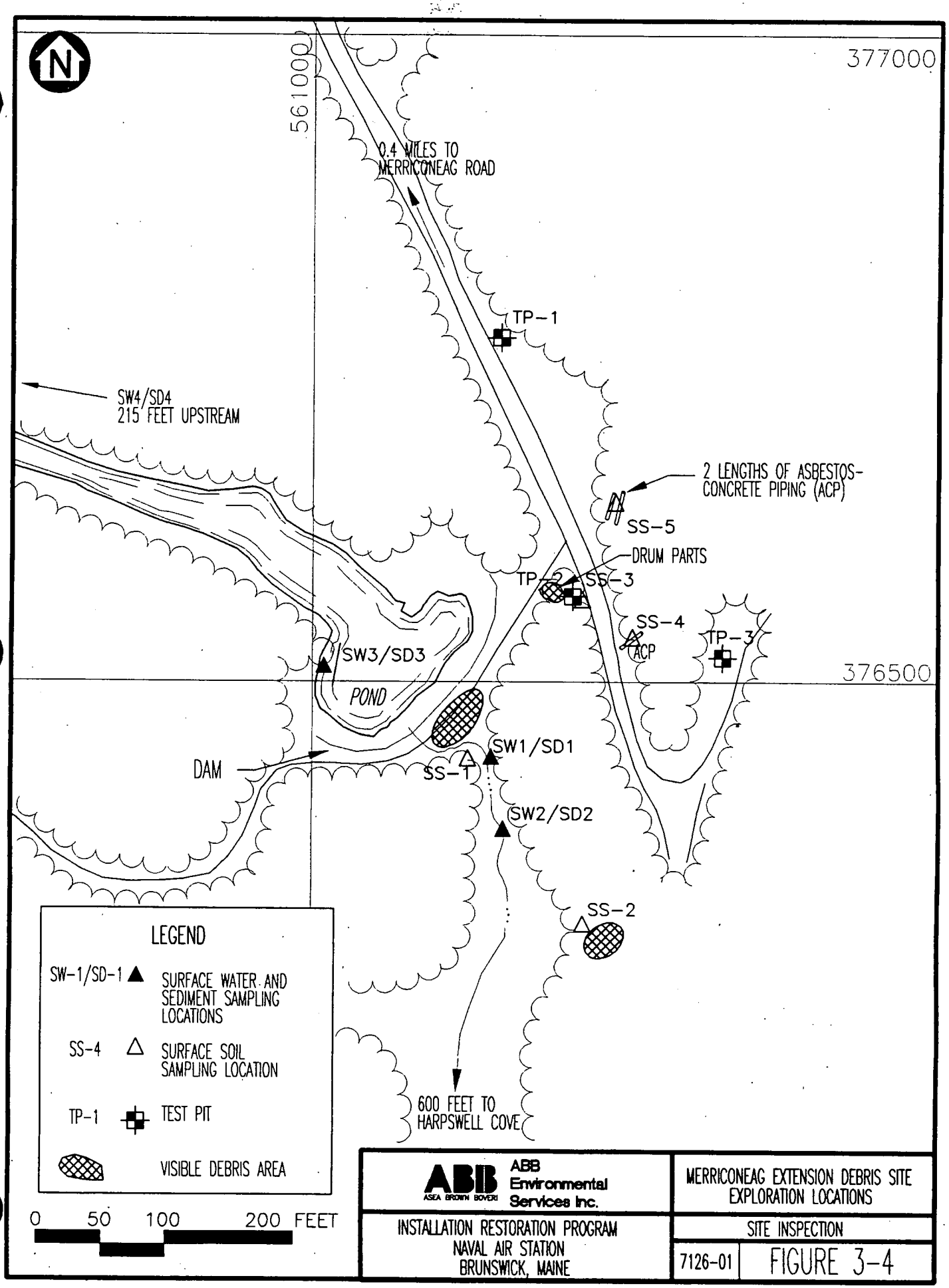
Results of the magnetometer surveys are discussed in greater detail in Sections 4.0 and 5.0.

3.2 TEST PITS

Test pits were excavated by backhoe at both sites to evaluate the physical nature of identified magnetic anomalies and to examine subsurface soils, assess the horizontal and vertical distribution of potential source contamination, and collect analytical soil samples. Five test pits were excavated at the Swampy Road Debris Site, and three test pits were excavated at the Merriconeag Extension Debris Site (Figures 3-3 and 3-4). Complete test pit records are contained in Appendix B.

During the test pit program, the backhoe bucket was steam-cleaned between test pits to prevent cross-contamination. Test pit soils and stratigraphy were logged by a qualified geologist. Soil samples were collected from the test pit face from areas that exhibited the most likely sources of contamination. Sample material was placed


N
SW1/SD1
SW7/SD7
559000
559500
380000
SWAMPY ROAD
SS-1
SS-2
TP-1
SW2/SD2
#39
SS-3
SW3/SD3
TP-2
SS-4
SW6/SD6
GOLF COURSE CLUB HOUSE
GOLF COURSE
379500
TP-5
MW-GOLF-2
SS-5
MW-GOLF-1
SW4/SD4
GOLF COURSE
MIDDLE BAY
DW-1
TP-3
SS-6
379000
TP-4
SW5/SD5
MAG-PT3
LEGEND
SW-1/SD-1 SURFACE WATER AND SEDIMENT SAMPLING LOCATION
SS-4 SURFACE SOIL SAMPLING LOCATION
TP-1 TEST PIT LOCATION
MW-GOLF-1 MONITORING WELL LOCATION
DW-1 DOMESTIC WELL SAMPLING LOCATION
0 50 100 200 FEET
ABB Environmental Services Inc.
SWAMPY ROAD DEBRIS SITE EXPLORATION LOCATIONS
INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
SITE INSPECTION
7126-01
FIGURE 3-3


N
377000
561000
0.4 MILES TO
MERRICONEAG ROAD
TP-1
SW4/SD4
215 FEET UPSTREAM
2 LENGTHS OF ASBESTOS-
CONCRETE PIPING (ACP)
SS-5
DRUM PARTS
TP-2
SS-3
SS-4
ACP
TP-3
SW3/SD3
POND
376500
SW1/SD1
DAM
SS-1
SW2/SD2
SS-2
600 FEET TO
HARPSWELL COVE
LEGEND
SW-1/SD-1
SURFACE WATER AND
SEDIMENT SAMPLING
LOCATIONS
SS-4
SURFACE SOIL
SAMPLING LOCATION
TP-1
TEST PIT
VISIBLE DEBRIS AREA
0 50 100 200 FEET
ABB
ASEA BROWN BOVERI
ABB
Environmental
Services Inc.
MERRICONEAG EXTENSION DEBRIS SITE
EXPLORATION LOCATIONS
INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
SITE INSPECTION
7126-01
FIGURE 3-4

directly into containers for volatile organic compound (VOC) analysis. After sampling for VOCs, enough soil was collected from this same location to fill sample jars for the other analytes, placed into a cleaned stainless steel bucket, and then thoroughly homogenized before filling the remaining jars. A detailed field log was maintained and a photograph of the test pits was taken before backfilling.

3.3 SURFACE SOIL SAMPLING

Six surface soil samples were collected at the Swampy Road Debris Site and five surface soil samples were collected at the Merriconeag Extension Debris Site (see Figures 3-3 and 3-4). Sample locations were established to represent the areas most likely to encounter contaminated soils because of proximity to observed trash and/or debris. Two soil samples (SS-4 and SS-5) were collected from directly beneath the observed asbestos pipes at the Merriconeag Extension Debris Site and were analyzed for asbestos only. The SS-1 location was selected to characterize soils along the face of the dam. The SS-2 location was selected based on observations made in the field and was placed downhill from an area with surface trash and rubble. A surface soil sample at SS-3 was collected because of drum parts scattered over the ground surface. All surface soil samples were collected from shallow soils once forest litter was discarded. A stainless steel spoon was used to collect a soil sample and to directly fill a soil jar for VOC samples. After sampling for VOCs, enough soil was collected from this same location to fill sample jars for the other analytes, placed into a cleaned stainless steel bucket, and then thoroughly homogenized before filling the remaining jars.

Results of the surface soil sampling are discussed more fully in Sections 4.0 and 5.0, and sampling locations are shown on the exploration location map for each site.

3.4 SURFACE WATER AND SEDIMENT SAMPLING

The purpose of the surface water and sediment sampling program was to assess the chemical impact of the sites on the water quality of nearby streams and to evaluate whether these impacts pose a potential threat to human health or the environment. At both sites, site-specific background conditions as well as locations that would most likely be impacted by contaminant sources were sampled. Sediment samples were collected at all surface water sampling locations for laboratory analysis. A total of

seven locations were sampled at the Swampy Road site; additionally, a water sample was collected from an old, possibly domestic well located in the streambed. At the Merriconeag site, four locations were sampled for surface waters and sediments; field data records are included in Appendix C. Results of the surface water and sediment sampling program are discussed in the site-specific sections, and sampling locations are shown on the exploration location map for each site.

Waters and sediments collected at SW-2/SD-2 and SW-3/SD-3 at the Swampy Road Debris Site were not collected from the brook but from the mucky wet flood zone west of the stream. Locations SW-2/SD-2 and SW-3/SD-3 were chosen based on the rationale described on page 4-18 of the Site Inspection Work Plan. The Work Plan states that, "Final sample locations will be based on . . . the presence of any discolored (orange or rusty) wet areas adjacent to the stream (e.g., leachate seeps)." Also, these two sampling locations are located immediately downslope of areas containing large amounts of refuse. One day prior to sampling, holes were scooped out of the mucky sediments at these two locations and were allowed to settle and fill with seeping water. Because these liquid samples contained more suspended matter than samples collected from relatively clear water in the stream channel, they would be expected to have relatively higher concentrations of inorganics more consistent with values measured in clays (see Subsection 3.8). Similarly, the sediment samples at these locations appeared to be finer-grained and to contain more organic matter than samples from the stream channel; therefore, concentrations of inorganic analytes would be expected to be higher than those in the stream channel. Samples collected from the stream, both upstream (SW-7/SD-7) and downstream (SW-4/SD-4), would be expected to exhibit values more representative of the free-flowing waters in the stream.

At the Merriconeag Extension Debris Site, two surface water and sediment samples (SW-1/SD-1 and SW-2/SD-2) were sampled downstream from the dam. One surface water and sediment sample (SW-3/SD-3) was collected from the pond. One surface water and sediment sample (SW-4/SD-4) was collected upstream of the pond to monitor upstream conditions.

3.5 Horizontal and Vertical Elevation Survey

The location and elevation of explorations were surveyed to the nearest 0.5 foot horizontally and 0.01 foot vertically, and referenced to NAS Brunswick datum. This

included all soil, sediment, and surface water sampling locations, the location of the old well at the Swampy Road Debris Site, and three grid points from each magnetometer survey. Survey data are contained in Appendix D.

3.6 LABORATORY ANALYTICAL PROGRAM

The laboratory analytical program identified and quantified contaminants and the general characteristics of soils, sediments, and surface waters at the two sites. Samples were submitted to a NEESA-approved Contract Laboratory Program (CLP) laboratory and were analyzed for Target Compound List (TCL) VOCs, TCL semivolatile organic compounds (SVOCs), TCL pesticides/polychlorinated biphenyls (PCBs), and Target Analyte List (TAL) inorganics. Waters were analyzed for low detection limit VOCs following a modified procedure of the USEPA 3/90 Statement of Work (SOW). Additionally, all surface waters were requested to be analyzed for hardness. Hardness is a typical analysis performed on drinking waters and is sometimes useful for the interpretation of other analytical data. However, because of a laboratory error, only one sample was analyzed. Hardness values were therefore calculated from calcium and magnesium concentrations for all water samples; results are presented in Appendix E (Table E-2). Samples analyzed for asbestos were examined using a polarized microscope to identify the presence, content, and type of asbestos. Table 3-1 summarizes the laboratory analytical program; Table 3-2 identifies the specific laboratory analyses performed on each sample; and Table 3-3 lists the laboratory analytical procedures. CLP detection limits are listed in Table 3-4.

3.7 VALIDATION OF ANALYTICAL DATA

CLP laboratories are required to perform analysis by specific quality assurance/ quality control (QA/QC) protocols. Samples were analyzed for TCL VOCs and SVOCs following the USEPA 3/90 SOW, low detection limit VOCs following a modified procedure of USEPA 3/90 SOW, TCL pesticide/PCBs following USEPA 2/88 SOW, and TAL inorganics following USEPA 3/90 SOW, hardness following USEPA Method 130.1, and asbestos using polarized light microscopy. Analytical data received from CLP laboratories underwent data validation. This process consisted of a review of the laboratory package in accordance with the *Region I Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses*

TABLE 3-1
LABORATORY ANALYTICAL PROGRAM SUMMARY

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

SITE	MEDIA	TCL VOCs	TCL SVOCs	TCL PEST/PCBs	TAL INORGANICS	ASBESTOS
Swampy Road Debris Site	Soil	11	11	11	11	-
Merriconeag Extension Debris Site		5	5	5	5	2
Subtotal		16	16	16	16	2
Field Duplicates		2	2	2	2	-
Rinseate Blanks		2	2	2	2	-
Subtotal		20	20	20	20	2
Matrix Spikes		1	1	1	1	-
Matrix Spike Duplicates		1	1	1	1	-
Total	Soil	22	22	22	22	2
Swampy Road Debris Site	Sediment	7	7	7	7	-
Merriconeag Extension Debris Site		4	4	4	4	-
Subtotal		11	12(1)	11	11	-
Field Duplicates		2	2	2	2	-
Rinseate Blank		1	2(1)	1	1	-
Source Blank		1	1	1	1	-
Subtotal		15	17	15	15	-
Matrix Spikes		1	1	1	1	-
Matrix Spike Duplicates		1	1	1	1	-
Total	Sediment	17	19	17	17	-

TABLE 3-1
LABORATORY ANALYTICAL PROGRAM SUMMARY

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

SITE	MEDIA	TCL VOCs	TCL SVOCs	TCL PEST/PCBs	TAL INORGANICS	*HARDNESS
Swampy Road Debris Site	Surface Water(2)	8	8	8	8	1
Merriconeag Extension Debris Site		4	4	4	4	0
Subtotal		12	12	12	12	1
Field Duplicates		2	2	2	2	0
Rinseate Blanks		0	0	0	0	0
Trip Blanks		2	-	-	-	-
Subtotal		16	14	14	14	1
Matrix Spikes		1	1	1	1	0
Matrix Spike Duplicates		1	1	1	1	0
Total	Surface Water	18	16	16	16	1

Notes:

(1) Total includes a resampling of one location due to missed hold time for SVOC.
(2) Total includes one shallow groundwater sample from old well.

TCL = Target Compound List
VOC = Volatile Organic Compound
SVOC = Semivolatile Organic Compound
Pest/PCB = Pesticide/Polychlorinated Biphenyl
* = Hardness values were requested for the 12 surface water locations. However, due to an error, only one value was determined in the lab.

TABLE 3-2
EXPLORATION AND SAMPLE INFORMATION

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

LOCATION AND MEDIA	TCL VOCs	TCL SVOCs	TCL PEST/PCBs	TAL INORGANICS	HARDNESS*
Swampy R ad Debris Site					
Surface Soil Samples					
SS-1	✓	✓	✓	✓	--
SS-2	✓	✓	✓	✓	--
SS-3	✓	✓	✓	✓	--
SS-4	✓	✓	✓	✓	--
SS-5	✓	✓	✓	✓	--
SS-6	✓	✓	✓	✓	--
Test Pit Soil Samples					
TP-1 (3' BGS)	✓	✓	✓	✓	--
TP-1 (4' BGS)	✓	✓	✓	✓	--
TP-2 (2' BGS)	✓	✓	✓	✓	--
TP-3 (4' BGS)	✓	✓	✓	✓	--
TP-4 (2' BGS)	✓	✓	✓	✓	--
Sediment Samples					
SD-1	✓	✓	✓	✓	--
SD-2	✓	✓	✓	✓	--
SD-3	✓	✓	✓	✓	--
SD-4	✓	✓	✓	✓	--
SD-5	✓	✓	✓	✓	--
SD-6	✓	✓	✓	✓	--
SD-7	✓	✓	✓	✓	--
Surface Water Samples					
SW-1	✓	✓	✓	✓	✓
SW-2	✓	✓	✓	✓	✓
SW-3	✓	✓	✓	✓	✓
SW-4	✓	✓	✓	✓	✓
SW-5	✓	✓	✓	✓	✓
SW-6	✓	✓	✓	✓	✓
SW-7	✓	✓	✓	✓	✓
DW-1	✓	✓	✓	✓	✓

continued

TABLE 3-2
EXPLORATION AND SAMPLE INFORMATION

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

LOCATION AND MEDIA	TCL VOCs	TCL SVOCs	TCL PEST/PCBs	TAL INORGANICS	ASBESTOS	HARDNESS*
Merriconeag Extension Debris Site						
Surface Soil Samples						
SS-1	✓	✓	✓	✓	--	--
SS-2	✓	✓	✓	✓	--	--
SS-3	✓	✓	✓	✓	--	--
SS-4	--	--	--	--	✓	--
SS-5	--	--	--	--	✓	--
Test Pit Soil Samples						
TP-1 (1' bgs)	✓	✓	✓	✓	--	--
TP-2 (1' bgs)	✓	✓	✓	✓	--	--
TP-3**	--	--	--	--	--	--
Sediment Samples						
SD-1	✓	✓	✓	✓	--	--
SD-2	✓	✓	✓	✓	--	--
SD-3	✓	✓	✓	✓	--	--
SD-4	✓	✓	✓	✓	--	--
Surface Water Samples						
SW-1	✓	✓	✓	✓	--	✓
SW-2	✓	✓	✓	✓	--	✓
SW-3	✓	✓	✓	✓	--	✓
SW-4	✓	✓	✓	✓	--	✓

Notes:

✓	=	Analyzed
--	=	Not analyzed
DW	=	Domestic Well Sample (Old Abandoned Well)
TCL	=	Target Compound List
TAL	=	Target Analyte List
bgs	=	below ground surface
VOC	=	Volatile Organic Compound
SVOC	=	Semivolatile Organic Compound
Pest/PCBs	=	pesticides/polychlorinated biphenyls
*	=	Values for hardness were, with one exception, calculated from calcium and magnesium values, rather than measured in the laboratory. See Table D-2 for hardness values.
**	=	Not sampled because of high groundwater and because only non-disturbed soils were observed.

TABLE 3-3
LABORATORY ANALYTICAL PROCEDURES

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

MEDIA	PARAMETER	METHOD	REFERENCE
Soil/Sediment	TCL VOCs	Purge & Trap GC/MS	3/90 SOW
	TCL SVOCs	GC/MS	3/90 SOW
	TCL Pesticides/PCBs	GC/ECD	2/88 SOW
	TAL Elements	AAS/PES	3/90 SOW
	Cyanide	Colorimetric	3/90 SOW
	Asbestos	Polarized Light Microscope	--
Surface Water/Old Well	TCL VOCs	Purge & Trap GC/MS	3/90 SOW-Low Detection Limit, 25 mL purge (91-1)
	TCL SVOCs	GC/MS	3/90 SOW
	TCL Pesticides/PCBs	GC/ECD	2/88 SOW
	TAL Elements	AAS/PES	3/90 SOW
	Cyanide	Colorimetric	3/90 SOW
	Temperature (field)	Thermometric	USEPA Method 170.1
	pH (field)	Potentiometric	USEPA Method 150.1
	Specific Conductivity (field)	Electronometric	USEPA Method 120.1
	Hardness	Colorimetric	USEPA Method 130.1

Notes:

TCL	=	Target Compound List
VOC	=	Volatile Organic Compound
SVOC	=	Semivolatile Organic Compound
PCB	=	Polychlorinated Biphenyl
TAL	=	Target Analyte List
GC/MS	=	Gas Chromatography/Mass Spectrometry
ECD	=	Electron Capture Detector
AAS/PES	=	Atomic Absorption Spectrophotometry/Plasma Emission Spectroscopy
SOW	=	Statement of Work
ML	=	Milliliter

TABLE 3-4
TARGET COMPOUND LIST DETECTION LIMITS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

PARAMETER No.	VOLATILE ORGANIC ANALYTES TCL PARAMETER NAME	CRQL (water) µg/L	CRQL (soil) µg/kg
100	Chloromethane	1	10
101	Bromomethane	1	10
102	Vinyl Chloride	1	10
103	Chloroethane	1	10
104	Methylene Chloride	1	10
105	Acetone	5	10
106	Carbon Disulfide	1	10
107	1,1-Dichloroethene	1	10
108	1,1-Dichloroethane	1	10
109	1,2-Dichloroethene (total)	1	10
110	Chloroform	1	10
111	1,2-Dichloroethane	1	10
112	2-Butanone	5	10
113	1,1,1-Trichloroethane	1	10
114	Carbon Tetrachloride	1	10
116	Bromodichloromethane	1	10
117	1,2-Dichloropropane	1	10
118	cis-1,3-Dichloropropene	1	10
119	Trichloroethene	1	10
120	Dibromochloromethane	1	10
121	1,1,2-Trichloroethane	1	10
122	Benzene	1	10
123	trans-1,3-Dichloropropene	1	10
125	Bromoform	1	10
126	4-Methyl-2-Pentanone	5	10
127	2-Hexanone	5	10

W0129279.T80/4

continued

TABLE 3-4
TARGET COMPOUND LIST DETECTION LIMITS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

PARAMETER NO.	VOLATILE ORGANIC ANALYTES TCL PARAMETER NAME	CRQL (water) µg/L	CRQL (soil) µg/kg
128	Tetrachloroethene	1	10
129	1,1,2,2-Tetrachloroethane	1	10
130	Toluene	1	10
131	Chlorobenzene	1	10
132	Ethylbenzene	1	10
133	Styrene	1	10
134	Total Xylenes	1	10
146	1,2-dibromoethane	1	NA
147	1,3-dichlorobenzene	1	NA
148	1,4-dichlorobenzene	1	NA
149	1,2-dichlorobenzene	1	NA
150	1,2-dibromo-3-chloropropane	1	NA

continued

TABLE 3-4
TARGET COMPOUND LIST DETECTION LIMITS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

PARAMETER No.	SEMIVOLATILE ORGANIC ANALYTES TCL PARAMETER NAME	CRQL (WATER) µg/L	CRQL (soil) µg/kg
200	Phenol	10	330
201	bis(2-Chloroethyl)ether	10	330
202	2-Chlorophenol	10	330
203	1,3-Dichlorobenzene	10	330
204	1,4-Dichlorobenzene	10	330
206	1,2-Dichlorobenzene	10	330
207	2-Methylphenol	10	330
208	2-2'-oxybis(1-chloropropane)	10	330
209	4-Methylphenol	10	330
210	n-Nitroso-di-n-propylamine	10	330
211	Hexachloroethane	10	330
212	Nitrobenzene	10	330
213	Isophorone	10	330
214	2-Nitrophenol	10	330
215	2,4-Dimethylphenol	10	330
217	bis(2-Chloroethoxy)methane	10	330
218	2,4-Dichlorophenol	10	330
219	1,2,4-Trichlorobenzene	10	330
220	Naphthalene	10	330
221	4-Chloroaniline	10	330
222	Hexachlorobutadiene	10	330
223	4-Chloro-3-methylphenol	10	330
224	2-Methylnaphthalene	10	330
225	Hexachlorocyclopentadiene	10	330
226	2,4,6-Trichlorophenol	10	330
227	2,4,5-Trichlorophenol	10	800

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continued

TABLE 3-4
TARGET COMPOUND LIST DETECTION LIMITS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

PARAMETER No.	SEMIVOLATILE ORGANIC ANALYTES TCL PARAMETER NAME	CRQL (WATER) µg/L	CRQL (soil) µg/kg
228	2-Chloronaphthalene	10	330
229	2-Nitroaniline	10	800
230	Dimethylphthalate	10	330
231	Acenaphthylene	10	330
232	2-6,Dinitrotoluene	10	330
233	3-Nitroaniline	25	800
234	Acenaphthene	10	330
235	2,4-Dinitrophenol	25	800
236	4-Nitrophenol	25	800
237	Dibenzofuran	10	330
238	2,4-Dinitrotoluene	10	330
239	Diethylphthalate	10	330
240	4-Chlorophenyl-phenylether	10	330
241	Fluorene	10	330
242	4-Nitroaniline	25	800
243	4,6-Dinitro-2-methylphenol	25	800
244	n-Nitrosodiphenylamine	10	330
245	4-Bromophenyl-phenylether	10	330
246	Hexachlorobenzene	10	330
247	Pentachlorophenol	25	800
248	Phenanthrene	10	330
249	Anthracene	10	330
250	Di-n-butylphthalate	10	330
251	Fluoranthene	10	330
252	Pyrene	10	330
253	Butylbenzylphthalate	10	330

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TABLE 3-4
TARGET COMPOUND LIST DETECTION LIMITS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

PARAMETER NO.	SEMIVOLATILE ORGANIC ANALYTES TCL PARAMETER NAME	CRQL (WATER) µg/L	CRQL (soil) µg/kg
254	3,3'-Dichlorobenzidine	10	330
255	Benzo(a)anthracene	10	330
256	Chrysene	10	330
257	bis(2-Ethylhexyl)phthalate	10	330
258	Di-n-octylphthalate	10	330
259	Benzo(b)fluoranthene	10	330
260	Benzo(k)fluoranthene	10	330
261	Benzo(a)pyrene	10	330
262	Indeno(1,2,3-cd)pyrene	10	330
263	Dibenz(a,h)anthracene	10	330
264	Benzo(g,h,i)perylene	10	330

continued

TABLE 3-4
TARGET COMPOUND LIST DETECTION LIMITS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INVESTIGATION
NAS BRUNSWICK

PARAMETER NO.	PESTICIDE/PCB ANALYTES TCL PARAMETER NAME	CRQL (water) µg/L	CRQL (soil) µg/kg
300	alpha-BHC	0.05	8
301	beta-BHC	0.05	8
302	delta-BHC	0.05	8
303	gamma-BHC (Lindane)	0.05	8
304	Heptachlor	0.05	8
305	Aldrin	0.05	8
306	Heptachlor Epoxide	0.05	8
307	Endosulfan I	0.05	8
308	Dieldrin	0.1	16
309	4,4'-DDE	0.1	16
310	Endrin	0.1	16
311	Endosulfan II	0.1	16
312	4,4'-DDD	0.1	16
313	Endrin Aldehyde	0.1	16
314	Endosulfan Sulfate	0.1	16
315	4,4'-DDT	0.1	16
316	Methoxychlor	0.5	80
317	Endrin Ketone	0.1	16
318	alpha-Chlordane	0.5	80
319	gamma-Chlordane	0.5	80
320	Toxaphene	1.0	160
321	Aroclor-1016	0.5	80
322	Aroclor-1221	0.5	80
323	Aroclor-1232	0.5	80
324	Aroclor-1242	0.5	80
325	Aroclor-1248	0.5	80
326	Aroclor-1254	1	160
327	Aroclor-1260	1	160

continued

TABLE 3-4
TARGET COMPOUND LIST DETECTION LIMITS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

PARAMETER No.	INORGANIC ANALYTES TAL PARAMETER NAME	CRDL (water) µg/L	CRQL (soil) µg/kg
400	Aluminum	200	40
401	Antimony	60	12
402	Arsenic	10	2
403	Barium	200	40
404	Beryllium	5	1
405	Cadmium	5	1
406	Calcium	5,000	1,000
407	Chromium	10	2
408	Cobalt	50	10
409	Copper	25	5
410	Iron	100	20
411	Lead	3	0.6
412	Magnesium	5,000	1,000
413	Manganese	15	3
414	Mercury	0.2	0.04
415	Nickel	40	8
416	Potassium	5,000	1,000
417	Selenium	5	1
418	Silver	10	2
419	Sodium	5,000	1,000
420	Thallium	10	2
421	Vanadium	50	10
422	Zinc	20	4
423	Cyanide	10	2

Notes:

CRDL = Contract Required Detection Limit
CRQL = Contract Required Quantitation Limit
TCL = Target Compound List
PCB = polychlorinated biphenyl
µg/L = micrograms per liter
µg/kg = micrograms per kilogram

(USEPA, 1988), and the "Region I Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses," (USEPA, 1989), as well as USEPA Region I revisions.

Analytical data are presented in Appendix E in tabular form. Three types of data tables are presented, as follows:

Table 1: Laboratory Report of Analysis. These tables present data as reported by the laboratory with associated laboratory qualifiers. Qualifiers are letter symbols referencing specific footnotes for data reporting.

Table 2: Validation/Summary Table. This table has all data qualifiers, as assigned during data validation.

Table 3: Summary Table. Summary, tables include only positive, validated analytical results. Summary tables include data evaluation qualifiers that may modify, but not eliminate, data utility.

Samples collected for laboratory analysis during the field investigation were labeled with computer-generated labels. These labels display a 14-digit sample identification code, identifying the site location, sample type, horizontal and vertical locators, event number, and a modifier. In addition to sample label generation, the Integrated Site Identification System, a data base system designed by ABB-ES, was used for sample numbering, tracking, and data manipulation.

The sample identification system consists of 14 alphanumeric characters in four information groups. Undesignated portions of the sample identification use an "X."

INFORMATION GROUP ITEM	DIGITS
Site and Sample Type	1-4
Horizontal and Vertical Locators	5-10
Sampling Event Number	11, 12
Modifier (e.g., duplicate)	13, 14

The following are examples of sample identification numbers:

MESDXX1XXX01XX: a Merriconeag Extension sediment sample (MESD) taken at location #1 (XX1) for the first time (01).

SRSWXX7XXX01XX: a Swampy Road surface water sample (SRSW) taken at location #7 (XX7).

MESSXX1XXX01XD: a Merriconeag Extension surface soil sample (MESS) taken from location #1 (XX1); duplicate sample (D).

SRPSXX4XX201XX: a Swampy Road test pit soil sample (SRPS) taken from Test Pit #4 at 2 feet (XX4XX2).

Sample type codes are summarized in Table 3-5.

The following subsections summarize the data qualifications/edits that have been determined by the validation process.

All Organic Analyses

Compound results below the Contract Required Quantitation Limit (CRQL) were flagged with a J by the laboratory and on Table 1. These results were considered estimated and flagged J on Tables 2 and 3.

Compound results greater than the calibration range were flagged with an E by the laboratory and on Table 1. Samples containing these compounds were diluted and reanalyzed, and the diluted results flagged with a D by the laboratory and on Table 1. On Table 2, the diluted results for all compounds beyond calibration range were inserted into the original results and the remainder of the diluted analysis were deleted from Tables 2 and 3.

Inorganic Analyses

Analyte results below the Contract Required Detection Limit (CRDL) were flagged with a B by the laboratory and on Table 1. These results were considered estimated and flagged with a J on Tables 2 and 3.

TABLE 3-5
LIST OF SAMPLE TYPE CODES

SITE INSPECTION SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE
NAS BRUNSWICK

TYPE CODE	SAMPLE TYPE DESCRIPTION
SR	Swampy Road
ME	Merriconeag Extension
SS	surface soil
PS	test pit soil
SW	surface water
SD	sediment
DW	domestic well
QB	quality control source water
QS	quality control sampler blank
QT	quality control trip blank

Volatile Analyses - Qualifications/Edits

1. Because of method blank contamination, acetone should be considered non-detect in SRSDXX2, SRSDXX3/XX, SRSSXX3/XD, SRSSXX5, and SRSSXX6.

2. Surrogate recovery was below QC limits for the analysis of SRSDXX4. All sample results were estimated.

3. Initial calibration criteria for linearity were not met for acetone. Only positive results were estimated in soil samples.

4. Several continuing calibration standards did not meet percentage difference criteria. Positive and non-detect results were estimated in associated samples for acetone and for positive results for 2-butanone.

Volatile Analyses - Comments

Please see items 1 - 4 under **Qualifications/Edits**. All hold times, instrument tunes, internal standards, and method blanks were within QC limits. Surrogate recoveries were acceptable except as discussed above. All matrix spike and matrix spike duplicate recoveries and relative percentage differences (RPDs) met QC criteria. All field duplicate results met precision criteria. Low concentrations of tentatively identified compounds (TICs) were identified in a few soil samples.

Low Detection Limit Volatile Analyses - Qualifications/Edits

5. Because of low surrogate recoveries, all results were estimated in SRSWXX3/XX, SRSWXX3/XD, and SRSWXX5.

6. Only a one point calibration was run for 1,2-dibromoethane, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, and 1,2-dibromo-3-chloropropane. All results for these compounds were estimated.

7. The initial calibration response factor for 2-butanone was below QC limits. All non-detect results were rejected.

8. Initial calibration linearity criteria were not met for acetone. All acetone results were estimated.

Low Detection Limit Volatile Analyses - Comments

Please see items 5 - 8 under **Qualifications/Edits**. All hold times, instrument tunes, internal standards, and method blanks met QC criteria. All surrogate recoveries were in compliance except as discussed above. Matrix spike and matrix spike duplicate recoveries and RPDs were within QC limits. Continuing calibration standards that did not meet QC criteria had no effect on the results. Field duplicate results were non-detect. Low concentrations of TICs were identified in one water sample.

Semivolatile Analyses - Qualifications/Edits

9. Because of method blank contamination, bis(2-ethylhexyl)phthalate (BEHP) should be considered non-detect in all samples **except** SRSSXX4, SRSWXX1, and SRSWXX2.

10. Several continuing calibration standards did not meet RPD criteria. Non-detect results for 3,3'-dichlorobenzidine were estimated in associated samples.

Semivolatile Analyses - Comments

Please see items 9 and 10 under **Qualifications/Edits**. All hold time, instrument tune, method blank, internal standard, and surrogate recovery criteria were met for all sample analyses. Matrix spike and matrix spike duplicate recoveries and RPDs were within recommended limits. Initial calibration criteria that did not meet QC criteria had no effect on the results. Several samples were diluted before analysis based on the results of the gas chromatography/flame ionization detector screen. Field duplicate results were acceptable. TICs were identified in most samples, with low concentrations in the water samples and moderate to high concentrations in the soil samples.

Pesticide/PCB Analyses - Qualifications/Edits

11. Hold times, which for pesticides/PCBs are 10 days from the date of sampling, were exceeded for the extraction of soil samples. Samples were extracted 12 and 13 days after sampling. All soil results were estimated.

Pesticide/PCB Analyses - Comments

Please see item 11 under **Qualifications/Edits**. All water samples were extracted and analyzed within hold time. All method blanks, initial and continuing calibrations, and surrogate recoveries were in compliance. All standard sequencing, breakdown, dichlorodiphenyltrichloroethane (4,4'-DDT) retention time, and dibutylchlorendate retention time shift criteria were met. All matrix spike and matrix spike duplicate recoveries and RPDs were within the required limits. All field duplicate results were acceptable.

Inorganic Analyses - Qualifications/Edits

Sediment Samples (SD)

12. Because of spike sample recovery less than 10 percent and post-digestion spike recovery of 0 percent, all antimony results in sediment samples were rejected.

13. Spike sample recovery was below QC limits for mercury, silver, and selenium. Results in all sediment samples were estimated.

14. Inductively Coupled Plasma (ICP) serial dilution criteria were not met for vanadium and sodium. All positive results in sediment samples were estimated.

15. Field duplicate precision criteria were not met for calcium and beryllium for MESDXX4/XX and MESDXX4/XD. Positive results for these analytes were estimated in MESDXX1, -2, -3, -4/XX, and -4/XD.

Soil Samples (PS or SS)

16. Because of prep blank contamination, cobalt results should be considered non-detect in MESSXX1/XD, SRPSXXlXX3, SRPSXX2XX2, SRPSXX4XX2, SRSSXX1, SRSSXX2/XX, and SRSSXX2/XD.

17. Spike sample recovery was below QC limits for antimony. Results were estimated in all soil samples.

18. Spike sample recovery was above QC limits for cadmium and lead. Positive results for these analytes were estimated in all soil samples.

19. Laboratory duplicate and post-digestion spike recovery were outside QC limits for lead. All lead results were previously qualified.

20. Post-digestion spike recovery was below QC limits for selenium. Results were estimated in MEPSXX1, MEPSXX2, MESSXX1, MESSXX2, MESSXX3, SRPSXXlXX4, SRPSXX2XX2, SRPSXX3XX4, SRSSXX3, and SRSSXX4.

21. ICP serial dilution criteria were not met for sodium and zinc. Positive results in all soil samples were estimated.

Water Samples (SW or DW)

22. Because of preparation blank or calibration blank contamination, results less than the concentrations listed should be considered non-detect.

Antimony	193 micrograms per liter (μg/L)
Iron	132 μg/L
Silver	50 μg/L
Vanadium	38 μg/L
Zinc	19 μg/L

23. Calcium and iron results in water samples were estimated because of calibration blanks that were greater than negative 2 x instrument detection limit.

24. Field duplicate precision criteria were not met for iron, lead, manganese, and zinc. All positive iron and manganese results were estimated. All lead and zinc results were estimated.

25. Post-digestion spike recovery was below QC limits for selenium. Results were estimated in SRSWXX3, SRSWXX7, and MESWXX1.

26. Post-digestion spike recovery was below QC limits for arsenic. Results were estimated in SRDWXX1.

Inorganic Analyses - Comments

Please see items 12 - 26 under **Qualifications/Edits**. All appropriate QC criteria were reviewed and found acceptable unless noted under **Qualifications/Edits**. All field duplicate results were acceptable except as noted above.

Hardness Analyses - Qualifications/Edits

There are no qualifications or edits to these data.

Hardness Analyses - Comments

Data were reviewed for hold times, spike recovery, laboratory control sample recovery, method and continuing calibration blank contamination, and continuing calibration verification. All QC results were acceptable. Because of laboratory error, only one sample was analyzed for hardness. However, hardness values for the other samples were calculated from the calcium and magnesium data; these results are included in Appendix E.

Asbestos Analyses - Qualification/Edits

There were no qualifications or edits to these data.

Asbestos Analyses - Comments

Samples were analyzed following the USEPA Interim Method for Determination of Asbestos in Bulk Insulation. This is a visual method of analysis and results are

reported in percentages based on volume rather than weight. Five to 10 percent cellulose was detected in both samples, but no asbestos.

3.8 BACKGROUND CONTAMINANT CONCENTRATIONS

Evaluation of site characterization data for the presence of hazardous substances includes an evaluation of the degree to which potential contaminants are site related. One mechanism to ascertain the degree of site-related contamination is to compare site data to established background concentrations. Background concentrations of hazardous substances are those either naturally occurring or resulting from anthropogenic activities that are not site related (USEPA, 1992). Although literature values can be used for background concentrations, site background concentrations are generally preferable. Background soil inorganic concentrations were previously identified at NAS Brunswick, and these values were used to assess possible site contamination by inorganics during the SI. Background concentrations for inorganics in surface waters and sediments were established for each site during the SI Program.

3.8.1 Surface and Subsurface Soils

Background concentrations of inorganics in soil at NAS Brunswick were established during previous remedial investigation (RI) studies from analysis of soil boring samples (E.C. Jordan Co., 1990). Concentration ranges and averages of TAL inorganics in background sand, and silt and clay samples are summarized in Table 3-6. The table summarizes results from background samples collected from locations throughout NAS Brunswick. Based on sample lithologies, results from analyses of test pit and surface soil samples from the Swampy Road Debris and Merriconeag Extension Debris Sites are most appropriately compared to results from the background sand samples. The maximum values for sands for each parameter were used as established background concentrations. Background values for other compounds in soils at NAS Brunswick have not formally been established, and the SI sampling program was too limited to permit the calculation of statistically valid background values. Therefore, literature values for background concentrations of selected chemicals were consulted. Table 3-7 presents a compilation of background values for polycyclic aromatic hydrocarbons (PAHs) associated with rural, agricultural, and urban soils.

TABLE 3-6
BACKGROUND CONCENTRATIONS OF INORGANICS IN SOIL

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

		SAND [1]			SILT AND CLAY [2]		
INORGANIC PARAMETER	CRDL (mg/kg)	MINIMUM (mg/kg)	MAXIMUM (mg/kg)	AVERAGE [3] (mg/kg)	MINIMUM (mg/kg)	MAXIMUM (mg/kg)	AVERAGE [3] (mg/kg)
Aluminum	40	4,700	6,900	6,000	5,000	33,000	19,670
Antimony	12	-	-	-	1.8	5.1	1.92
Arsenic	2	2.8	8.2	5.6	3.1	34	16.25
Barium	40	14	26	21.3	30	94	63.3
Beryllium	1	0.25	0.33	0.30	0.18	0.96	0.59
Cadmium	1	-	-	-	0.19	5.2	1.62
Calcium	1,000	340	760	566	1,600	4,500	2,550
Chromium	2	8.1	12	10.7	15	56	39.6
Cobalt	10	3.7	5.9	4.9	7.1	22	15.9
Copper	5	6.1	8.1	7.4	11	38	27.6
Iron	20	8,400	11,000	9,733	9,100	55,000	35,310
Lead	0.6	1.2	2.1	1.6	1.6	16	12.2
Magnesium	1,000	2,100	3,100	2,600	3,300	12,000	8,990
Manganese	3	82	260	157	290	1,000	628
Mercury	0.04	0.013	0.013	0.006	0.018	0.018	0.006
Nickel	8	7.4	9.7	8.6	13	50	36.3
Potassium	1,000	1,100	1,500	1,333	1,800	7,400	5020
Selenium	1	0.13	0.22	0.133	0.19	0.26	0.12
Silver	2	-	-	-	-	-	-

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TABLE 3-6
BACKGROUND CONCENTRATIONS OF INORGANICS IN SOIL

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

		SAND (1)			SILT AND CLAY(2)		
INORGANIC PARAMETER	CRDL (mg/kg)	MINIMUM (mg/kg)	MAXIMUM (mg/kg)	AVERAGE(3) (mg/kg)	MINIMUM (mg/kg)	MAXIMUM (mg/kg)	AVERAGE(3) (mg/kg)
Sodium	1,000	52	160	107	110	660	330
Thallium	2	0.17	0.17	0.071	0.14	0.27	0.12
Vanadium	10	16	20	11	25	70	50.8
Zinc	4	18	26	23	31	110	78.9
Cyanide	2	-	-	-	0.31	0.31	0.17

Notes:

(1) Sand samples used to define background consist of:

MW-705, 5'-7'
MW-705, 10'-12'
B-805, 10'-12'

(2) Silt/Clay samples used to define background consist of:

MW-207, 10'-12'	MW-705, 15'-17'	MW-808, 23'-25'
MW-208, 108'-110'	B-805, 15'-17'	MW-905, 9'-11'
MW-208, 110'-112'	MW-808, 10'-12'	MW-905, 14'-16'
MW-212, 14'-16'		

(3) Averages are calculated using one-half of the detection limit for nondetects.

CRDL = Contract Required Detection Limit for Target Analytes List (TAL) inorganics analysis
\- = Concentration below Instrument Detection Limit
mg/kg = milligrams per kilogram
Source: E.C. Jordan Co. (1990). "Draft Final RI Report - Naval Air Station, Brunswick, Brunswick, Maine"; U.S. Department of the Navy; Volume 3, Appendix K; August 1990.

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TABLE 3-7
PUBLISHED BACKGROUND SOIL CONCENTRATIONS OF POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)

SWAMPY ROAD DEBRIS SITE AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION NAS BRUNSWICK

COMPOUND	CONCENTRATION (µg/kg)		
	RURAL SOIL	AGRICULTURAL SOIL	URBAN SOIL
Acenaphthene	.0017	6	
Acenaphthylene		5	
Anthracene		11-13	
Benzo(a)anthracene	5-20	56-110	169-59,000
Benzo(a)pyrene	2-1,300	4.6-900	165-220
Benzo(b)fluoranthene	20-30	58-220	15,000-62,000
Benzo(e)pyrene		53-130	60-14,000
Benzo(ghi)perylene	10-70	66	900-47,000
Benzo(k)fluoranthene	10-110	58-250	300-26,000
Chrysene	38.3	78-120	251-640
Fluoranthene	0.3-40	120-210	200-166,000
Fluorene		9.7	
Indeno(1,2,3-cd)pyrene	10-15	63-100	8,000-61,000
Phenanthrene	30.0	48-140	
Pyrene	1-19.7	99-150	145-147,000

Sources:

IARC (1973)
White and Vanderslice (1980)
Windsor and Hites (1979)
Edwards (1983)
Butler et al. (1984)
Vogt et al. (1987)
Jones et al. (1987)

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Background concentrations for pesticides in soils at NAS Brunswick have been estimated as being less than 1,000 micrograms per kilogram (μg/kg) (E.C. Jordan Co., 1992a). These values are probably representative of residual widespread concentrations resulting from former base practices of insect control. The target cleanup concentration for Building 95, the former pesticide shop, is 500 μg/kg (ABB-ES, 1992b).

3.8.2 Surface Water and Sediment

Background concentrations for inorganics in surface waters and sediments were established for each site during the SI Program. At the Swampy Road Debris Site, the exploration location SW-1/SD-1 was considered the background location, and at the Merriconeag Extension Debris Site, SW-4/SD-4 was the background location. Both locations were selected because they are upstream from their respective debris sites. The inorganic values for these background locations are shown on Table 3-8. For samples SW-4/SD-4 at the Merriconeag Extension Debris Site, at which a duplicate sample was collected for both surface waters and sediments, the higher of the two concentrations for each analyte was used as the background value.

The samples selected as representative of site background conditions were also examined for organic constituents. The background surface water sample at Swampy Road (SW-1) contained BEHP at a concentration of 400 μg/L. BEHP is a general-purpose plasticizer for many polymers; all phthalates are generally recognized as being widespread in the environment (Doull, Klassen, and Amdur, 1986). Additionally, the USEPA recognizes all phthalates as being common laboratory contaminants (USEPA, 1988). Otherwise, the background sediment and surface water samples from both sites did not detect TCL VOCs, SVOCs, or pesticides/ PCBs.

For comparison, during the earlier characterization of other potential hazardous waste sites at NAS Brunswick, two background stream sediment samples (BK1 and BK2) were noted as having concentrations of total PAHs of 1,750 μg/kg and 21,870 μg/kg (E.C. Jordan Co., 1990). These background sediment samples were collected from Mere Brook on the western side of NAS Brunswick. BK1 was collected at the base boundary, and the second sample (BK2) was collected from the brook just west of the runways. It was noted that PAHs are ubiquitous in the base drainages and common in surface and shallow soils on base, probably due to use of petroleum fuels both on base and off-base. Additionally, detected concentrations

TABLE 3-8
BACKGROUND CONCENTRATIONS OF INORGANICS FOR SURFACE WATERS AND SEDIMENTS

SWAMPY ROAD DEBRIS SITE AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

INORGANIC PARAMETER	CRDL	CONCENTRATIONS[1] SEDIMENTS (mg/kg)		SURFACE WATERS (µg/L)	
		MESDXX4	SRSDXX1	MESWXX4	SRSWXX1
Aluminum	40	25,500	18,600	2,250	89.1 J
Antimony	12	-	-	-	-
Arsenic	2	10.6	22.5	-	3.4 J
Barium	40	89.7 J	57.7	12.1 J	4.9 J
Beryllium	1	2.0 J	1.0 J	-	-
Cadmium	1	-	-	-	-
Calcium	1,000	4,480 J	1,490	2,030 J	6,660 J
Chromium	2	41.3	28.7	5.8 J	-
Cobalt	10	26.6	17.4	-	-
Copper	5	10.0	7.6	-	-
Iron	20	32,900	28,100	2,360 J	429 J
Lead	0.6	38.1	68.1	-	-
Magnesium	1,000	7,640	5,080	2,360 J	2,100 J
Manganese	3	617	821	78.2	82.3
Mercury	0.04	-	-	0.11 J	-
Nickel	8	34.8	21.0	-	-
Potassium	1,000	3,640	2,310	804 J	1,100 J
Selenium	1	-	-	-	-
Silver	2	-	-	-	-
Sodium	1,000	397 J	190 J	3,940 J	4,710 J
Thallium	2	-	-	-	-
Vanadium	10	56.0 J	42.8 J	-	-
Zinc	4	101	119	-	-
Cyanide	2	-	-	-	-

Notes:

CRDL = Contract Required Detection Limit
ME = Merriconeag Extension
SR = Swampy Road
SD = Sediment
SW = Surface Water
mg/kg = milligrams per kilogram
µg/L = micrograms per liter
J = estimated value
- = concentration below CRDL

Background sediment and water samples from Merriconeag Extension Debris Site (MESDXX4 and MESWXX4) were each collected in duplicate. The higher of the two values are reported in this table.

were noted as being consistent with concentrations observed in a semi-urban environment.

4.0 SWAMPY ROAD DEBRIS SITE

4.1 SITE DESCRIPTION AND HISTORY

The Swampy Road Debris Site, located along an unnamed tributary of Mere Brook running near the Middle Bay and Swampy Roads, is south of the runways and within the area of NAS Brunswick's golf course (see Figure 1-1). Little historical data are available for this site, which was brought to the Navy's attention as a potential former waste disposal site in 1990.

The unnamed stream has cut a steep, incised drainage course in an area of relatively flat-lying coastal sediments of the Presumpscot Formation. Along the southern bank of this stream, encompassing a total length of about 1,700 feet, is an area that appears to have received refuse. During a site walkover on October 8, 1991 by ABB-ES and NAS Brunswick personnel, rusted cans, piping, drums, and old household material were observed mostly along the banks with very little being within the stream. Based on the presence of household material and the apparent age of much of the debris, disposal activities probably began before the establishment of NAS Brunswick, during the time when the area was farmland. It appears these activities have continued sporadically since. The area of the stream nearest Building #39, the golf course maintenance building, appears to have received the most recently deposited refuse (e.g., scrap metal, tires, grass cuttings, fencing, drainage pipes) (see Figure 3-1). The open area roughly bounded by Middle Bay Road, TP-3, and TP-4 appears to be an area that received refuse/fill over the years, probably because of easy access from the road. The stream bank in this area is unnaturally built out into the stream gully as a result of this dumping. There is no historical base record of dumping activity. The golf course manager on duty at the time of the site walkover stated that because of environmental awareness, approximately 10 to 15 empty 55-gallon containers had been removed from the stream during the past few years (ABB-ES, 1992a). The drums were located along the stream bank, north and south of the golf cart path that crosses the stream. The containers were sent to the Defense Reutilization and Marketing Office and disposed of as scrap metal, but were not sampled.

The golf course uses water from the stream as an irrigation supply. The pump house for this activity is located downstream at Merriconeag Road where a dam ponds water from the stream. Potable water used by the clubhouse is obtained from

MW-Golf-2, a drilled well located near the golf course clubhouse (see Figure 3-3). This well was sampled in October 1988 for TCL VOCs, TCL SVOCs, TCL pesticides/PCBs, and TAL inorganic compounds as part of the RI/Feasibility Study program at NAS Brunswick and did not show the presence of contamination (E.C. Jordan Co., 1990). The clubhouse well has also been sampled annually since 1986 by NAS Brunswick for metals, pesticides, herbicides, and VOCs in accordance with the sampling and analysis requirements of 40 Code of Federal Regulations Part 136. No contamination has been detected.

4.2 TECHNICAL APPROACH

To help explain the extent of debris disposal and to help assess potential site contamination, the exploration program included the following activities:

- a magnetometer survey
- a detailed surface inspection
- test pitting
- collection of soil, surface water, and sediment samples

These efforts are detailed in Section 3.0.

4.3 HYDROGEOLOGY

Explorations at this site did not include the installation of monitoring wells that would have allowed an assessment of the stratigraphic sequence, depth to groundwater, and depths of individual lithologic layers. However, groundwater flow at this site has been interpreted based on the observed regional hydrogeologic conditions in this portion of the base and the rest of the base. Groundwater is expected to flow within the sandy, silty, and clayey soils that overlie the Presumpscot clay unit observed throughout the base. Groundwater is expected to flow toward the stream and/or in a southeasterly direction. Groundwater seepage rates are expected to be similar to those observed at Site 3, located along Mere Brook, where they range from 0.008 to 0.04 feet per day (E.C. Jordan Co., 1991a).

MW-Golf-2, as shown on Figure 3-3, is the well used to supply potable water to the golf course clubhouse. According to the information supplied by NAS Brunswick

staff, this well replaced MW-Golf-1 in 1981 as the potable water source. Drilling records for MW-Golf-2 indicate sand to approximately 20 feet below ground surface (bgs), clay to 77 feet bgs, and rock from 87 feet to the bottom of the well at 180 feet bgs. The well casing extends to 97 feet bgs.

Water level and analytical data from MW-Golf-1 and MW-Golf-2 were not considered in the interpretation of hydrogeologic conditions at this site. Information regarding construction of MW-Golf-1 could not be located and MW-Golf-2 is a bedrock well that is cased to 97 feet bgs. Because MW-Golf-2, and possibly MW-Golf-1, does not terminate at the water table, groundwater elevation data would not be appropriate for use in constructing water table maps.

Analytical results for MW-Golf-1 and MW-Golf-2 are contained in Appendix K of the Draft Final RI Report, 1990. The wells were sampled in October, 1989. Because these wells are screened at considerable depth below the water table, and because groundwater flow at the Swampy Road Debris Site is estimated to flow southeasterly, away from these two wells, this analytical data is not considered relevant to this document.

4.4 Nature and Distribution of Contamination

This subsection discusses the results of the geophysical survey and environmental sampling at the Swampy Road Debris Site.

4.4.1 Magnetometer Survey

Magnetic data, presented in the form of vertical gradient contours, are superimposed on site features as shown on Figure 4-1. Magnetic data suggest the presence of ferrous debris at the site. Target areas for intrusive investigation were identified based on a review of the relative magnitude of the magnetic anomalies and of the surficial conditions noted during the magnetic survey. Five target areas were identified for test-pitting based on these data (Table 4-1). The target areas were typified by vertical gradient values above background values and the presence of assorted surficial debris materials. Based on an analysis of the relative magnitude of observed magnetic anomalies and the location of surficial ferrous debris noted during the magnetic survey, anomalies are interpreted as being directly attributable to the presence of the ferrous surficial debris (Table 4-1; Figure 4-1). The magnitude

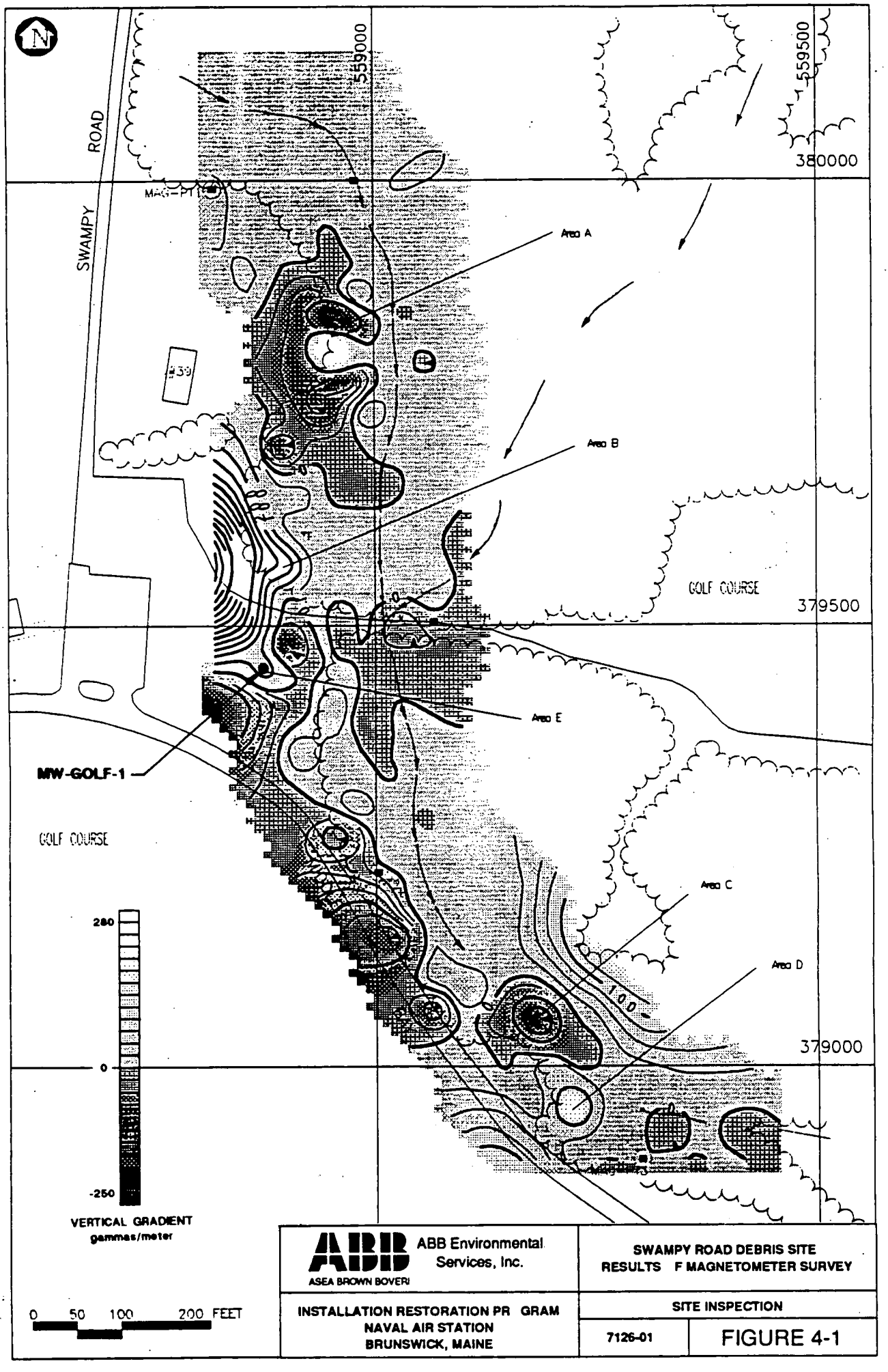
N
SWAMPY ROAD
MAG-PT
559000
559500
380000
379500
379000
Area A
Area B
Area C
Area D
Area E
#39
GOLF COURSE
GOLF COURSE
MW-GOLF-1
100
280
0
-250
VERTICAL GRADIENT
gammas/meter
0 50 100 200 FEET
ABB
ASEA BROWN BOVERI
ABB Environmental Services, Inc.
SWAMPY ROAD DEBRIS SITE
RESULTS F MAGNETOMETER SURVEY
INSTALLATION RESTORATION PR GRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
SITE INSPECTION
7126-01
FIGURE 4-1

TABLE 4-1
MAGNETOMETER SURVEY RESULTS - SWAMPY ROAD DEBRIS SITE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

TARGET AREAS	APPROXIMATE AREAL EXTENT, FEET	RELATIVE MAGNITUDE, GAMMAS/METER	SURFICIAL DEBRIS PRESENT	TEST PIT
Area A	60 x 60	25 - 2891	Concrete rubble, chainlink fencing, pipes, glass, cans, wood, grass cuttings, and assorted refuse.	TP-1
Area B	60 x 60	10 - 1067	Radiator, welded drums forming a culvert, cans, TV, and assorted piping.	TP-2
Area C	60 x 60	7- 1234	Concrete rubble, metal flashing, grass cuttings, and chainlink fencing.	TP-3
Area D	60 x 60	10 - 906	Metal trough, bricks, and wood scraps.	TP-4
Area E	20 x 20	10 - 790	Household refuse.	TP-5

MAGNETIC BASE STATION VALUES

DATE	TIME	TOTAL FIELD, GAMMAS
9-24-92	10:40	54999
	11:34	54982
	14:00	54999
	15:42	55007
9-25-92	09:06	54771
	11:06	54828
	11:18	54824

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of the anomalies is interpreted as indicating that considerable amounts of buried ferrous materials are not present. For example, TP-5 was established due to a magnetic high detected in this area. Although surface debris is apparent at this location, subsurface soils were found to be undisturbed and natural and were therefore not sampled for analysis. Further inspection established that the magnetic high was probably due to a metal cover on the well used by the golf course for non-potable purposes. This well, identified as MW-Golf-1 in a previous investigation, was sampled and contamination was not detected (E.C. Jordan Co., 1990). TP-5 was placed east and north of this well in an effort to characterize subsurface conditions while attempting to avoid damaging subsurface piping and wiring associated with the well.

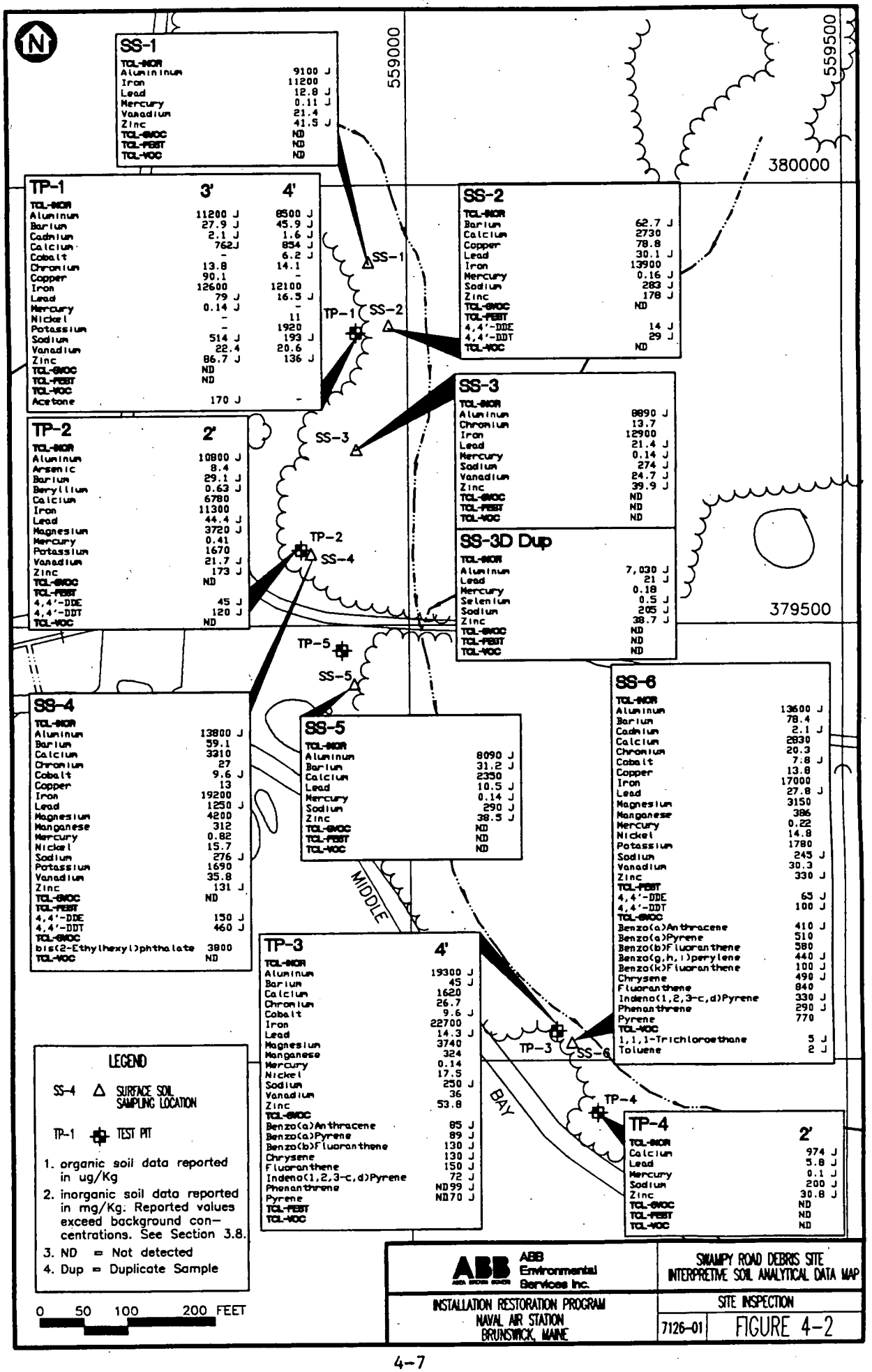
4.4.2 Test Pit and Surface Soils

Five test pits were excavated; test pit logs are contained in Appendix B. The locations of these test pits were established according to results of the magnetometer survey. All the test pits were excavated in areas with trash and refuse scattered over the ground. All test pits except TP-4 had brightly colored fine, loose natural sands below the filled material. TP-4 was observed as having 17 inches of fill over a saturated, organic rich, silty, fine sand and clayey sand.

During the excavation of TP-1, the backhoe bucket sheared off a glass container containing an oily looking substance. This container was found at a depth of 3 feet, situated at what was interpreted as being the contact of filled and natural soils. A sample was collected of this oily substance from the 3-foot depth as well as from the natural soils below this container at the 4-foot depth. Results of these two samples are presented in Figure 4-2.

Six surface soil locations were selected for sampling to characterize the areas that contained the greatest amount of surface debris.

Figure 4-2 shows the concentrations of all analytes detected in the surface and test pit soils at the site; all organic compounds detected and inorganic analytes above background are presented. TCL VOCs were not detected, with one exception. Acetone was detected at a value of 170J μg/kg in TP-1 at a depth of 3 feet bgs. Acetone is also a common laboratory contaminant (USEPA, 1988). A second sample from this test pit, at a depth of 4 feet bgs, did not detect this constituent. Given the single detection of acetone, its low concentration, and the fact that acetone is a


N
559000
559500
380000
379500
SS-1
TCL-SVOC
Aluminum 9100 J
Iron 11200
Lead 12.8 J
Mercury 0.11 J
Vanadium 21.4
Zinc 41.5 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
TP-1 3' 4'
TCL-SVOC
Aluminum 11200 J 8500 J
Barium 27.9 J 45.9 J
Cadmium 2.1 J 1.6 J
Calcium 762J 854 J
Cobalt - 6.2 J
Chromium 13.8 14.1
Copper 90.1 -
Iron 12600 12100
Lead 79 J 16.5 J
Mercury 0.14 J -
Nickel - 11
Potassium - 1920
Sodium 514 J 193 J
Vanadium 22.4 20.6
Zinc 86.7 J 136 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC
Acetone 170 J -
SS-2
TCL-SVOC
Barium 62.7 J
Calcium 2730
Copper 78.8
Lead 30.1 J
Iron 13900
Mercury 0.16 J
Sodium 283 J
Zinc 178 J
TCL-SVOC ND
TCL-PEST
4,4'-DDE 14 J
4,4'-DDT 29 J
TCL-VOC ND
SS-3
TCL-SVOC
Aluminum 8890 J
Chromium 13.7
Iron 12900
Lead 21.4 J
Mercury 0.14 J
Sodium 274 J
Vanadium 24.7 J
Zinc 39.9 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SS-3D Dup
TCL-SVOC
Aluminum 7,030 J
Lead 21 J
Mercury 0.18
Selenium 0.5 J
Sodium 205 J
Zinc 38.7 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
TP-2 2'
TCL-SVOC
Aluminum 10800 J
Arsenic 8.4
Barium 29.1 J
Beryllium 0.63 J
Calcium 6780
Iron 11300
Lead 44.4 J
Magnesium 3720 J
Mercury 0.41
Potassium 1670
Vanadium 21.7 J
Zinc 173 J
TCL-SVOC ND
TCL-PEST
4,4'-DDE 45 J
4,4'-DDT 120 J
TCL-VOC ND
SS-4
TCL-SVOC
Aluminum 13800 J
Barium 59.1
Calcium 3310
Chromium 27
Cobalt 9.6 J
Copper 13
Iron 19200
Lead 1250 J
Magnesium 4200
Manganese 312
Mercury 0.82
Nickel 15.7
Sodium 276 J
Potassium 1690
Vanadium 35.8
Zinc 131 J
TCL-SVOC ND
TCL-PEST
4,4'-DDE 150 J
4,4'-DDT 460 J
TCL-SVOC
bis(2-Ethylhexyl)phthalate 3800
TCL-VOC ND
SS-5
TCL-SVOC
Aluminum 8090 J
Barium 31.2 J
Calcium 2350
Lead 10.5 J
Mercury 0.14 J
Sodium 290 J
Zinc 38.5 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SS-6
TCL-SVOC
Aluminum 13600 J
Barium 78.4
Cadmium 2.1 J
Calcium 2830
Chromium 20.3
Cobalt 7.8 J
Copper 13.8
Iron 17000
Lead 27.8 J
Magnesium 3150
Manganese 386
Mercury 0.22
Nickel 14.8
Potassium 1780
Sodium 245 J
Vanadium 30.3
Zinc 330 J
TCL-PEST
4,4'-DDE 65 J
4,4'-DDT 100 J
TCL-SVOC
Benzo(a)Anthracene 410 J
Benzo(a)Pyrene 510
Benzo(b)Fluoranthene 580
Benzo(g,h,i)perylene 440 J
Benzo(k)Fluoranthene 100 J
Chrysene 490 J
Fluoranthene 840
Indeno(1,2,3-c,d)Pyrene 330 J
Phenanthrene 290 J
Pyrene 770
TCL-VOC
1,1,1-Trichloroethane 5 J
Toluene 2 J
TP-3 4'
TCL-SVOC
Aluminum 19300 J
Barium 45 J
Calcium 1620
Chromium 26.7
Cobalt 9.6 J
Iron 22700
Lead 14.3 J
Magnesium 3740
Manganese 324
Mercury 0.14
Nickel 17.5
Sodium 250 J
Vanadium 36
Zinc 53.8
TCL-SVOC
Benzo(a)Anthracene 85 J
Benzo(a)Pyrene 89 J
Benzo(b)Fluoranthene 130 J
Chrysene 130 J
Fluoranthene 150 J
Indeno(1,2,3-c,d)Pyrene 72 J
Phenanthrene ND99 J
Pyrene ND70 J
TCL-PEST
TCL-VOC
TP-4 2'
TCL-SVOC
Calcium 974 J
Lead 5.8 J
Mercury 0.1 J
Sodium 200 J
Zinc 30.8 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SS-1
SS-2
SS-3
SS-4
SS-5
SS-6
TP-1
TP-2
TP-3
TP-4
TP-5
MIDDLE
BAY
LEGEND
SS-4 SURFACE SOIL SAMPLING LOCATION
TP-1 TEST PIT
1. organic soil data reported in ug/Kg
2. inorganic soil data reported in mg/Kg. Reported values exceed background concentrations. See Section 3.8.
3. ND = Not detected
4. Dup = Duplicate Sample
0 50 100 200 FEET
ABB Environmental Services Inc.
SWAMPY ROAD DEBRIS SITE
INTERPRETIVE SOIL ANALYTICAL DATA MAP
INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
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7126-01
FIGURE 4-2

common laboratory contaminant, site-related contamination by VOCs is not demonstrated.

SVOCs were detected in only two of the 11 surface and subsurface soil samples collected from the site. Total PAHs were detected at 925J μg/kg in TP-3 at a depth of 4 feet and at 4,760J μg/kg in SS-6. These samples were collected from the same general area and may reflect the same conditions. The presence of PAHs could relate to burned materials that may have been dumped in this area or material that was burned on site. The higher PAH values in the surface soil compared to the sample collected at 4 feet bgs may be the result of limited migration of PAHs downward into the soil column as a result of infiltrating water. Observed levels of total carcinogenic PAHs (cPAHs) (benzo(a)anthracene, benzo(b) fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene) ranged up to 2,420 μg/kg in Sample SS-6. The maximum total cPAH concentration is therefore nearly an order of magnitude lower than the concentration of 18,000 μg/kg cPAH calculated during earlier investigations at NAS Brunswick Site 8 as corresponding to an incremental human health risk of 10^{-5} for a hypothetical future residential exposure (E.C. Jordan Co., 1990; E.C. Jordan Co., 1992b). The calculation used standard USEPA values for all variables. This calculated incremental carcinogenic health risk is at the middle of the USEPA target risk range of 10^{-4} to 10^{-6}. Therefore, the levels of cPAHs observed in these soils are considered to be well below levels of concern for human health. The values observed were also compared to levels reported in the literature (see Table 3-7). This comparison indicates that the values observed are well within concentrations typically associated with background conditions in soils. With the available data, it is not possible to absolutely establish whether or not the PAHs represent site-related contaminants of concern; regardless, they are present at concentrations not expected to pose an unacceptable risk to human health.

Concentrations of two pesticides (4,4'-DDE [dichlorodiphenyldichloroethylene] and 4,4'-DDT) up to 460J μg/kg were detected at four locations but were non-detect elsewhere. These detections are interpreted as representing low-level background concentrations, and are consistent with values observed elsewhere at NAS Brunswick. They are also below the site cleanup level of 500 μg/kg established for the Building 95 removal action (ABB-ES, 1992b). This concentration has been determined to be protective of human health and the environment. Therefore, pesticides are not considered to be contaminants of concern at this site.

Concentrations of TAL inorganics exceeding NAS Brunswick background concentrations were detected in every soil sample. In general, no significant trend could be discerned. Further, no standards for soil concentrations exist, therefore, comparison to ARARs cannot be done. It is noted that lead and copper were detected at concentrations above background in TP-1 at 3 feet. This sample was of the oily substance found in the sheared-off glass container. Lead was detected at concentrations exceeding NAS Brunswick background concentrations in every soil sample except that from TP-4 (Figure 4-2). Background lead concentrations at the base have been documented as ranging up to 6 milligrams per kilogram (mg/kg) in sands and to 16 mg/kg in silts/clays (Table 3-6). With one exception, lead concentrations at the Swampy Road site ranged from 10.5 mg/kg to 44.4 mg/kg. These levels are therefore about two to seven times NAS Brunswick background concentrations and may or may not indicate site-related contamination. Lead was detected at SS-4 at a concentration of 1,250J mg/kg, by far the highest level observed. This sample location is immediately downgradient of an area that has much surface debris including piping. However, the lead concentration from 3 feet bgs at the adjacent test pit was only 44 mg/kg.

Mercury was detected in the soils at concentrations ranging from non-detect (CRDL = 0.04 mg/kg) to 0.82 mg/kg, with the vast majority of the samples containing about 0.12 mg/kg. The soil concentrations are higher than those associated with background at NAS Brunswick although, with one exception, they are well within the range of 0.01 to 0.54 mg/kg published in the literature for sandy surface soils (Kabata-Pendias A., 1986). All of the detected concentrations were within the values published for southeastern Maine of 0.2 to 1.3 mg/kg (Shacklette and Boerngen, 1984). Furthermore, mercury is very strongly sorbed to sediments, much more so than to typical soils (Arthur D. Little, 1987) and therefore, background concentrations in sediments would be expected to be much higher than in soils. However, at this site, the highest concentration was observed in the soil sample from SS-4.

Mercury is commonly used in fungicides, pesticides, bactericides, and disinfectants (Martin Grayson, 1985). Hence, it is also possible that the mercury concentrations are the result, wholly or in part, of past and/or current uses of such products at the golf course. Therefore, the concentrations observed in the sediments could be naturally occurring, anthropogenic, or a combination of both.

4.4.3 Surface Water and Sediment

Figure 4-3 shows analytical surface water and sediment data from those samples collected within the area of the brook itself. Inorganic concentrations below site-specific background levels are not shown. Because samples SW-2/SD-2 and SW-3/SD-3 were collected from the mucky zone away from the main brook (see Subsection 3.4), the data from these samples is shown separately on Figure 4-4.

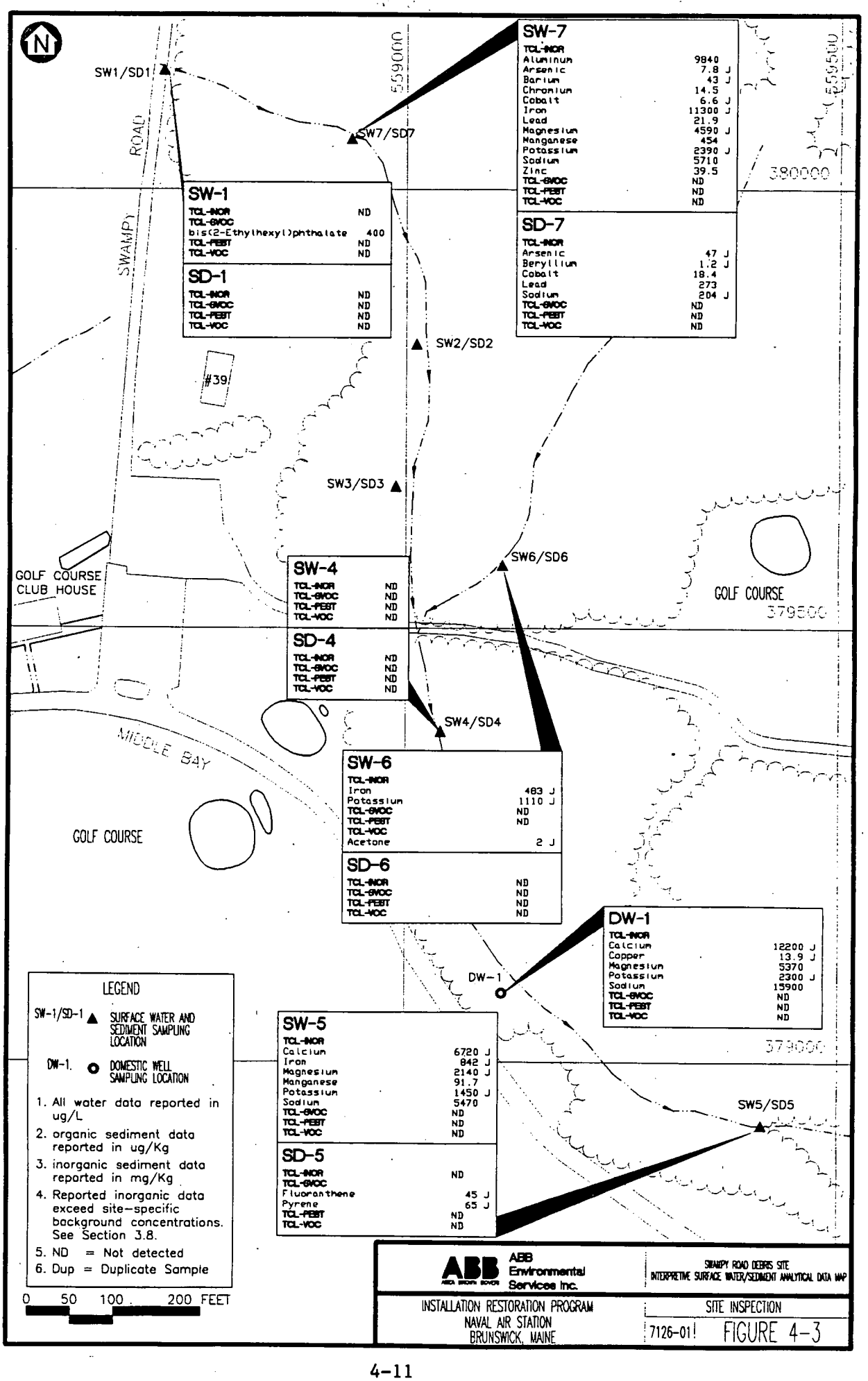
In the five sediment samples collected within the area of the brook itself, no TCL VOCs were observed.

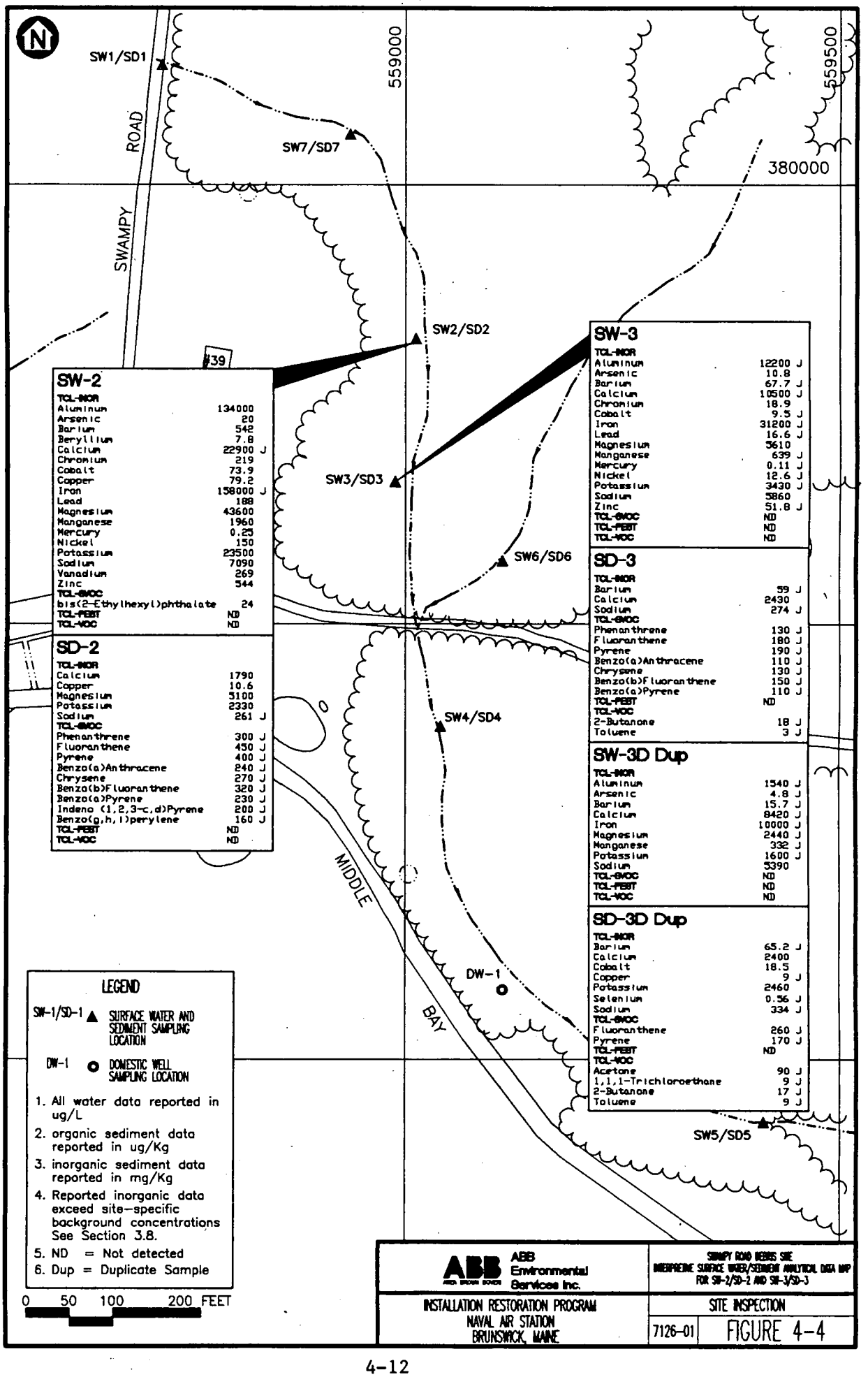
TCL SVOCs were detected in only one of the five brook sediment samples, at a total concentration of 110 μg/kg for two PAHs. This concentration is several orders of magnitude lower than levels considered to be background for sediments at NAS Brunswick (see Subsection 3.8), and is thus not considered to represent site-related contamination.

All five sediment samples were non-detect for TCL pesticides/PCBs.

Inorganic analytes above site background concentrations (as defined by SD-1) were detected in only one sediment sample, SD-7, which is also upstream from the debris site proper. Because sediment samples collected in the stream channel adjacent to and downstream of the debris site displayed concentrations of inorganic analytes below those observed in the upstream, background location, site-related inorganic contamination of sediments is not indicated.

In the stream surface waters, only one detection of a TCL VOC, acetone at 2J μg/L, and one detection of a TCL SVOC, BEHP at 400J μg/L (in the upstream, background sample), were noted. Acetone concentrations were qualified as estimated during the data validation process because initial calibration criteria were not met (see Subsection 3.7). In addition, acetone concentrations from a total of five samples were considered non-detect because of method blank contamination. It is also noted that the acetone concentrations were all qualified during the data validation process, and that both acetone and phthalates are common laboratory contaminants (USEPA, 1988). Given the low levels observed, and the sample locations, the VOC and SVOC detections are considered to reflect laboratory contamination and not site-related contamination.


N
SW1/SD1
SW7/SD7
SW2/SD2
SW3/SD3
SW6/SD6
SW4/SD4
SW5/SD5
DW-1
ROAD
SWAMPY
#39
GOLF COURSE CLUB HOUSE
GOLF COURSE
MIDDLE BAY
559000
559500
380000
379500
379000
SW-7
TCL-INOR
Aluminum 9840
Arsenic 7.8 J
Barium 43 J
Chromium 14.5
Cobalt 6.6 J
Iron 11300 J
Lead 21.9
Magnesium 4590 J
Manganese 454
Potassium 2390 J
Sodium 5710
Zinc 39.5
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-7
TCL-INOR
Arsenic 47 J
Beryllium 1.2 J
Cobalt 18.4
Lead 273
Sodium 204 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SW-1
TCL-INOR ND
TCL-SVOC
bis(2-Ethylhexyl)phthalate 400
TCL-PEST ND
TCL-VOC ND
SD-1
TCL-INOR ND
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SW-4
TCL-INOR ND
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-4
TCL-INOR ND
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SW-6
TCL-INOR
Iron 483 J
Potassium 1110 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC
Acetone 2 J
SD-6
TCL-INOR ND
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
DW-1
TCL-INOR
Calcium 12200 J
Copper 13.9 J
Magnesium 5370
Potassium 2300 J
Sodium 15900
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SW-5
TCL-INOR
Calcium 6720 J
Iron 842 J
Magnesium 2140 J
Manganese 91.7
Potassium 1450 J
Sodium 5470
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-5
TCL-INOR ND
TCL-SVOC
Fluoranthene 45 J
Pyrene 65 J
TCL-PEST ND
TCL-VOC ND
LEGEND
SW-1/SD-1 ▲ SURFACE WATER AND SEDIMENT SAMPLING LOCATION
DW-1. ○ DOMESTIC WELL SAMPLING LOCATION
1. All water data reported in ug/L
2. organic sediment data reported in ug/Kg
3. inorganic sediment data reported in mg/Kg
4. Reported inorganic data exceed site-specific background concentrations. See Section 3.8.
5. ND = Not detected
6. Dup = Duplicate Sample
0 50 100 200 FEET
ABB Environmental Services Inc.
SWAMPY ROAD DEBRIS SITE
INTERPRETIVE SURFACE WATER/SEDIMENT ANALYTICAL DATA MAP
INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
SITE INSPECTION
7126-01
FIGURE 4-3


N
SW1/SD1
SW7/SD7
SWAMPY ROAD
559000
559500
380000
SW2/SD2
#39
SW3/SD3
SW6/SD6
SW4/SD4
SW5/SD5
MIDDLE BAY
DW-1
SW-2
TCL-INOR
Aluminum 134000
Arsenic 20
Barium 542
Beryllium 7.8
Calcium 22900 J
Chromium 219
Cobalt 73.9
Copper 79.2
Iron 158000 J
Lead 188
Magnesium 43600
Manganese 1960
Mercury 0.25
Nickel 150
Potassium 23500
Sodium 7090
Vanadium 269
Zinc 544
TCL-SVOC
bis(2-Ethylhexyl)phthalate 24
TCL-PEST ND
TCL-VOC ND
SD-2
TCL-INOR
Calcium 1790
Copper 10.6
Magnesium 5100
Potassium 2330
Sodium 261 J
TCL-SVOC
Phenanthrene 300 J
Fluoranthene 450 J
Pyrene 400 J
Benzo(a)Anthracene 240 J
Chrysene 270 J
Benzo(b)Fluoranthene 320 J
Benzo(a)Pyrene 230 J
Indeno (1,2,3-c,d)Pyrene 200 J
Benzo(g,h,i)perylene 160 J
TCL-PEST ND
TCL-VOC ND
SW-3
TCL-INOR
Aluminum 12200 J
Arsenic 10.8
Barium 67.7 J
Calcium 10500 J
Chromium 18.9
Cobalt 9.5 J
Iron 31200 J
Lead 16.6 J
Magnesium 3610
Manganese 639 J
Mercury 0.11 J
Nickel 12.6 J
Potassium 3430 J
Sodium 5860
Zinc 51.8 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-3
TCL-INOR
Barium 59 J
Calcium 2430
Sodium 274 J
TCL-SVOC
Phenanthrene 130 J
Fluoranthene 180 J
Pyrene 190 J
Benzo(a)Anthracene 110 J
Chrysene 130 J
Benzo(b)Fluoranthene 150 J
Benzo(a)Pyrene 110 J
TCL-PEST ND
TCL-VOC
2-Butanone 18 J
Toluene 3 J
SW-3D Dup
TCL-INOR
Aluminum 1540 J
Arsenic 4.8 J
Barium 15.7 J
Calcium 8420 J
Iron 10000 J
Magnesium 2440 J
Manganese 332 J
Potassium 1600 J
Sodium 5390
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-3D Dup
TCL-INOR
Barium 65.2 J
Calcium 2400
Cobalt 18.5
Copper 9 J
Potassium 2460
Selenium 0.56 J
Sodium 334 J
TCL-SVOC
Fluoranthene 260 J
Pyrene 170 J
TCL-PEST ND
TCL-VOC
Acetone 90 J
1,1,1-Trichloroethane 9 J
2-Butanone 17 J
Toluene 9 J
LEGEND
SW-1/SD-1 SURFACE WATER AND SEDIMENT SAMPLING LOCATION
DW-1 DOMESTIC WELL SAMPLING LOCATION
1. All water data reported in ug/L
2. organic sediment data reported in ug/Kg
3. inorganic sediment data reported in mg/Kg
4. Reported inorganic data exceed site-specific background concentrations See Section 3.8.
5. ND = Not detected
6. Dup = Duplicate Sample
0 50 100 200 FEET
ABB Environmental Services Inc.
SWAMPY ROAD DEBRIS SITE
DIBENZENE SURFACE WATER/SEDIMENT ANALYTICAL DATA MAP FOR SW-2/SD-2 AND SW-3/SD-3
INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
SITE INSPECTION
7126-01
FIGURE 4-4

In the surface water samples, TCL pesticides/PCBs were all below detection limits.

Because of the physical setting and exposure to the stream, the maximum surface water inorganics concentrations were compared to the Clean Water Act Ambient Water Quality Criteria (AWQC) for protection of freshwater aquatic life (see Appendix E). For conservativeness, the values for chronic exposure, rather than acute exposure, were used. Of these, only iron and lead exceeded the criteria. High iron concentrations have been noted elsewhere at NAS Brunswick and may therefore be related to basewide- or regionally elevated iron concentrations (E.C. Jordan Co., 1991b). However, it is also noted that these highest concentrations were observed at SW-7, upstream of the Swampy Road Debris Site, and that no exceedances of the AWQC in stream channel water samples were noted within or downstream of the site. At SW-7, the lead concentration was 21.9 μg/L, well above the chronic AWQC of 3.2 μg/L but well below the acute AWQC of 83 μg/L. The three other water samples from the main channel downstream of SW-7 were all non-detect for lead. Therefore, these iron and lead concentrations are not widespread, and these metals are not interpreted as presenting a substantial threat to aquatic life. A single exceedance of the copper chronic AWQC for protection of freshwater aquatic life was noted in the sample from the abandoned well (sample DW-1), in which the copper concentration was measured at 13.9 μg/L, marginally higher than the chronic AWQC of 12 μg/L and below the acute copper AWQC of 18 μg/L.

Data from samples SW-2/SD-2 and SW-3/SD-3 are shown on Figure 4-4 because of the nature in which the samples were collected (see Subsection 3.4). The water and sediment samples are representative of organic-rich stream sediments and interstitial waters. Although the values are generally higher than those from samples collected within the area of the stream, the results, qualitatively, do not suggest the presence of site-related contamination of concern. Comparison to Maximum Contaminant Levels (MCLs) or AWQCs is not appropriate.

5.0 MERRICONEAG EXTENSION DEBRIS SITE

5.1 SITE DESCRIPTION AND HISTORY

The Merriconeag Extension Debris Site is southeast of the golf course, near the confluence of Mere Brook and Harpswell Cove (see Figure 1-1). No historical data exist for this area, which was brought to the Navy's attention as a potential former waste disposal site in 1990.

Currently, the site consists of a concrete rubble and soil dam that spans an approximate 200-foot arc (see Figure 3-2). The downhill side of the dam drops approximately 15 feet to a 30-to-40-foot-wide natural gully. The dam constrains water from a stream, and creates a 0.75-acre pond. Ponded water eventually spills through two 18-inch diameter concrete pipes set in the western portion of the level dam, about 3 feet from the top. Harpswell Cove is approximately 800 feet downstream from the dam location. Visible debris on the downhill face of the dam includes several rusting pieces of iron culvert that may once have been part of this dam, or which were brought to the site from another location, and concrete rubble. To the east of the dam and along the access road are what appear to be pieces of three half-buried, rusted 55-gallon containers. On the eastern side of the road, two lengths (7.5 feet and 9 feet) of asbestos/cement pipe and a rusted muffler lie on the ground. The areas surrounding the dam, pond, and road are wooded and show little evidence of being disturbed or reworked.

5.2 TECHNICAL APPROACH

The exploration program conducted at the Merriconeag Extension Debris Site included the following activities:

- a magnetometer survey
- a detailed surface inspection
- test pitting
- collection of soil, water, and sediment samples for laboratory analysis
- collection of soil samples for asbestos analysis

These efforts are detailed in Section 3.0.

5.3 HYDROGEOLOGY

Observations of the geology at this site were made during the excavation of three test pits; test pit logs in Appendix B. A thin veneer of sands (zero to 10 inches) overlies what has been called, at other areas on base, a transitional zone composed of silty and clayey sands to sandy silts and clays. These fine-grained soils inhibit downward migration of precipitation and the relatively low elevation of the site produces a shallow groundwater surface. Groundwater movement at the site is expected to flow toward the stream and/or in a south-to-southwest direction toward Harpswell Cove.

5.4 NATURE AND DISTRIBUTION OF CONTAMINATION

This subsection describes the results of the geophysical survey and environmental sampling at the Merriconeag Extension Debris Site.

5.4.1 Magnetometer Survey

Magnetic data, presented in the form of vertical gradient contours, are superimposed on site features as shown on Figure 5-1. Magnetic data suggest the presence of ferrous debris at the site. The two large anomalies located along the face of the dam are readily explained by the presence of reinforced concrete rubble (the eastern, positive gradient anomaly) and a discarded, welded drum culvert (the western, negative gradient anomaly). Target areas for intrusive activities were identified based on a review of the relative magnitude of the magnetic anomalies and of the surficial conditions noted during the survey. Three target areas were identified for intrusive exploration based on these data (Table 5-1). The target areas were typified by vertical gradient values above background values. The magnitude of the observed magnetic anomalies and the presence of little surficial ferrous debris (see Table 5-1) suggest that considerable amounts of buried ferrous materials are not present.

During subsequent test-pitting at TP-3, the cause of the high magnetic anomaly was not discovered. A metal detector was used at the time of test-pitting to further define any anomalies identified in the magnetometer survey. At TP-3, the metal detector did not detect an anomalous response. Other areas exhibiting

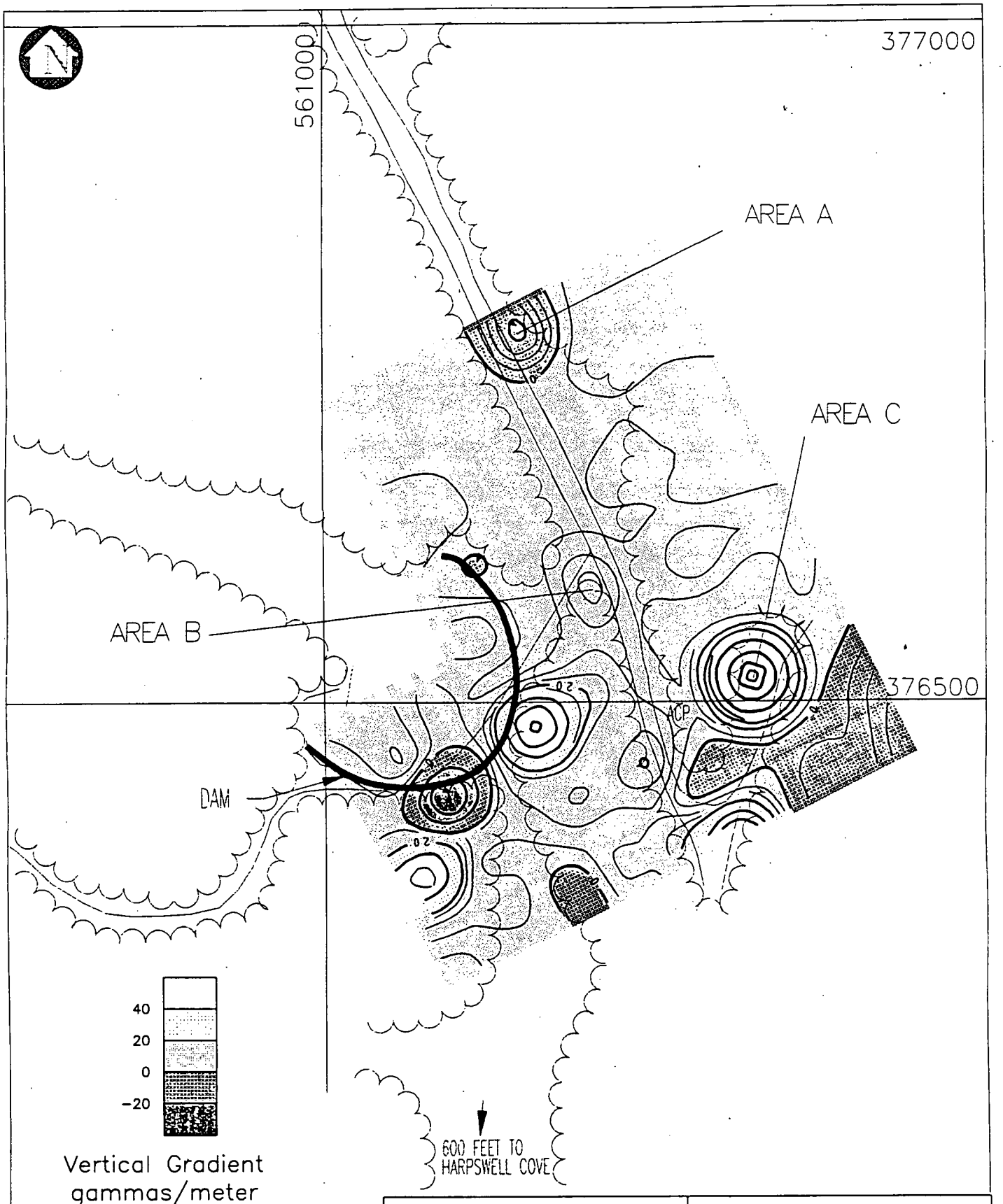


ABB Environmental Services, Inc. ASEA BROWN BOVERI	MERRICONEAG EXTENSION DEBRIS SITE RESULTS OF MAGNETOMETER SURVEY	
INSTALLATION REST RATION PROGRAM NAVAL AIR STATION BRUNSWICK, MAINE	SITE INSPECTION	
	7126-01	FIGURE 5-1

TABLE 5-1
MAGNETOMETER SURVEY RESULTS - MERRICONEAG EXTENSION DEBRIS SITE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

TARGET AREAS	APPROXIMATE AREAL EXTENT, FEET	RELATIVE MAGNITUDE, GAMMAS/METER	SURFICIAL DEBRIS PRESENT	TEST PIT
Area A	20 x 20	10 - 105	None observed	TP-1
Area B	40 x 30	12 - 44	55-gallon drum fragments	TP-2
Area C	20 x 20	13 - 1485	None observed	TP-3

MAGNETIC BASE STATION VALUES

DATE	TIME	TOTAL FIELD, GAMMAS
9-23-92	09:40	54908
	10:53	54914
	11:55	54914
	13:17	54921
	14:05	54924
	15:00	54929

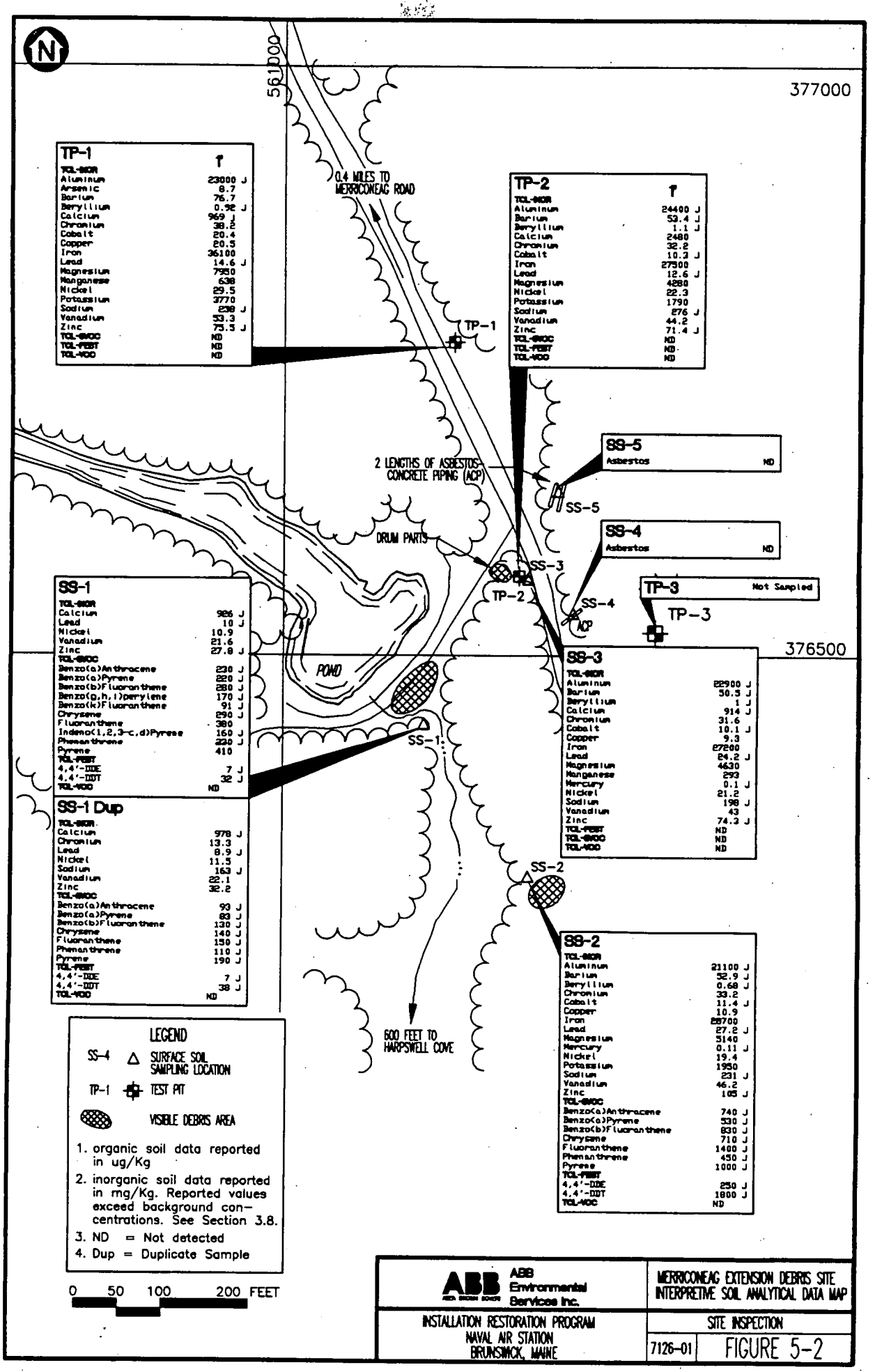
29279.T180/21

magnetometer anomalies were also checked with the metal detector. Besides the obvious metal pieces identified during the magnetometer survey, the metal detector did not confirm anomalous magnetometer readings. An indication that the magnetometer anomaly at Area C (TP-3) is a false anomaly is that the unusually high reading found at this area was recorded at only a single station. An anomaly of that magnitude would more than likely be recorded at neighboring stations within the 20-by-20-foot grid.

5.4.2 Surface and Test Pit Soils

Based on results of the magnetometer survey, three test pits were excavated (Figure 5-2). TP-3 was not sampled because of high groundwater and because only non-disturbed soils were observed at this location. The visible debris area closest to Harpswell Cove was discovered only after the magnetometer survey was conducted. A surface soil sample (SS-2) was collected from within the area of observed debris, on the downslope side.

TCL VOCs were not detected in the soil samples analyzed. TCL SVOCs were detected in only two of the five surface soil sampling locations. The SVOCs detected were PAHs, at total concentrations of 5,660J μg/kg in sample SS-2 and at 896J μg/kg in sample SS-1 (see Figure 5-2). Observed levels of total cPAHs ranged only up to 2,810 μg/kg. The maximum total cPAH concentration is therefore nearly an order of magnitude lower than the concentration of 18,000 μg/kg cPAH calculated during earlier investigations at NAS Brunswick Site 8 as corresponding to an incremental human health risk of 10^{-5} for a hypothetical future residential exposure (E.C. Jordan Co., 1990; E.C. Jordan Co., 1992b). The calculation used standard USEPA values for all variables. This calculated incremental carcinogenic health risk is at the middle of the USEPA target risk range of 10^{-4} to 10^{-6}. Therefore, the levels of cPAHs observed in these soils are considered to be well below levels of concern for human health. Furthermore, because PAHs are naturally occurring and are also associated with combustion of fossil fuels, detections are not unexpected. Therefore, the observed values were also compared to levels associated with background soils (see Table 3-7). This comparison indicates that the observed values are well within concentrations typically associated with background conditions in soils. Based on these factors, PAHs are not considered to represent site-related contaminants of concern.


N
561000
377000
376500
0.4 MILES TO MERRICONEAG ROAD
2 LENGTHS OF ASBESTOS-CONCRETE PIPING (ACP)
DRUM PARTS
POND
600 FEET TO HARPSWELL COVE
TP-1
TP-2
TP-3
SS-1
SS-2
SS-3
SS-4
SS-5
ACP
TP-1
TOL-SVOC
Aluminum 23000 J
Arsenic 8.7
Barium 76.7
Beryllium 0.92 J
Calcium 969 J
Chromium 38.2
Cobalt 20.4
Copper 20.5
Iron 36100
Lead 14.6 J
Magnesium 7950
Manganese 638
Nickel 29.5
Potassium 3770
Sodium 238 J
Vanadium 53.3
Zinc 75.5 J
TOL-SVOC ND
TOL-PEST ND
TOL-VOC ND
TP-2
TOL-SVOC
Aluminum 24400 J
Barium 53.4 J
Beryllium 1.1 J
Calcium 2480
Chromium 32.2
Cobalt 10.3 J
Iron 27500
Lead 12.6 J
Magnesium 4280
Nickel 22.3
Potassium 1790
Sodium 276 J
Vanadium 44.2
Zinc 71.4 J
TOL-SVOC ND
TOL-PEST ND
TOL-VOC ND
SS-5
Asbestos ND
SS-4
Asbestos ND
TP-3 Not Sampled
SS-1
TOL-SVOC
Calcium 926 J
Lead 10 J
Nickel 10.9
Vanadium 21.6
Zinc 27.8 J
TOL-SVOC
Benzo(a)Anthracene 230 J
Benzo(a)Pyrene 220 J
Benzo(b)Fluoranthene 280 J
Benzo(g,h,i)perylene 170 J
Benzo(k)Fluoranthene 91 J
Chrysene 290 J
Fluoranthene 380
Indeno(1,2,3-c,d)Pyrene 160 J
Phenanthrene 220 J
Pyrene 410
TOL-PEST
4,4'-DDE 7 J
4,4'-DDT 32 J
TOL-VOC ND
SS-1 Dup
TOL-SVOC
Calcium 978 J
Chromium 13.3
Lead 8.9 J
Nickel 11.5
Sodium 163 J
Vanadium 22.1
Zinc 32.2
TOL-SVOC
Benzo(a)Anthracene 93 J
Benzo(a)Pyrene 83 J
Benzo(b)Fluoranthene 130 J
Chrysene 140 J
Fluoranthene 150 J
Phenanthrene 110 J
Pyrene 190 J
TOL-PEST
4,4'-DDE 7 J
4,4'-DDT 38 J
TOL-VOC ND
SS-3
TOL-SVOC
Aluminum 22900 J
Barium 50.5 J
Beryllium 1 J
Calcium 914 J
Chromium 31.6
Cobalt 10.1 J
Copper 9.3
Iron 27200
Lead 24.2 J
Magnesium 4630
Manganese 293
Mercury 0.1 J
Nickel 21.2
Sodium 198 J
Vanadium 43
Zinc 74.3 J
TOL-PEST ND
TOL-SVOC ND
TOL-VOC ND
SS-2
TOL-SVOC
Aluminum 21100 J
Barium 52.9 J
Beryllium 0.68 J
Chromium 33.2
Cobalt 11.4 J
Copper 10.9
Iron 28700
Lead 27.2 J
Magnesium 5140
Mercury 0.11 J
Nickel 19.4
Potassium 1950
Sodium 231 J
Vanadium 46.2
Zinc 105 J
TOL-SVOC
Benzo(a)Anthracene 740 J
Benzo(a)Pyrene 530 J
Benzo(b)Fluoranthene 830 J
Chrysene 710 J
Fluoranthene 1400 J
Phenanthrene 450 J
Pyrene 1000 J
TOL-PEST
4,4'-DDE 250 J
4,4'-DDT 1800 J
TOL-VOC ND
LEGEND
SS-4 SURFACE SOIL SAMPLING LOCATION
TP-1 TEST PIT
VISIBLE DEBRIS AREA
1. organic soil data reported in ug/Kg
2. inorganic soil data reported in mg/Kg. Reported values exceed background concentrations. See Section 3.8.
3. ND = Not detected
4. Dup = Duplicate Sample
0 50 100 200 FEET
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MERRICONEAG EXTENSION DEBRIS SITE
INTERPRETIVE SOIL ANALYTICAL DATA MAP
INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
SITE INSPECTION
7126-01
FIGURE 5-2

Two pesticides were detected at two locations only, at maximum concentrations of 250J μg/kg for 4,4'-DDE and 1,800J μg/kg for 4,4'-DDT. The detections at SS-1 are interpreted as representing low-level background concentrations, and are well within the site cleanup level of 500 μg/kg established for the Building 95 removal action (ABB-ES, 1992a). This concentration has been established to be protective of human health and the environment. The detection of 4,4'-DDT at SS-2 may result from localized dumping of trash adjacent to the sampling location. Since this area received unknown types of refuse, a possibility exists that materials contaminated with 4,4'-DDT, for example cans or spraying equipment, may have been dumped here. On the basis of all sampling data, 4,4'-DDT is clearly not widespread at these levels.

As at the Swampy Road Debris Site, exceedances of site background concentrations for inorganics were noted in the soil samples. However, no trend of apparent significance could be detected, and no criteria exist for comparison. It does not appear, however, that significant soil contamination by inorganics exists.

Neither sample analyzed for asbestos indicated the presence of asbestos. Therefore, it is concluded that release of asbestos particles to the adjacent soils from the asbestos-cement piping on site is not occurring.

5.4.3 Surface Water and Sediment

In the sediment samples, acetone was detected in three samples at a maximum concentration of 120J μg/L. Toluene and 2-butanone were the only other TCL VOCs detected, in one or two other samples only. The acetone concentrations were qualified as estimated during the data validation process because initial calibration criteria were not met (see Subsection 3.7). In addition, acetone concentrations in a total of five sediment and soil samples from the Swampy Road site were considered non-detect because of method blank contamination. The acetone, toluene, and 2-butanone concentrations were all qualified during the data validation process, and all three chemicals are common laboratory contaminants (USEPA, 1988). Given the levels of VOCs observed, the possibility that the detections reflect laboratory contamination, and the lack of other VOCs detected in the sediment samples, TCL VOCs are not considered to be site-related contaminants of concern.

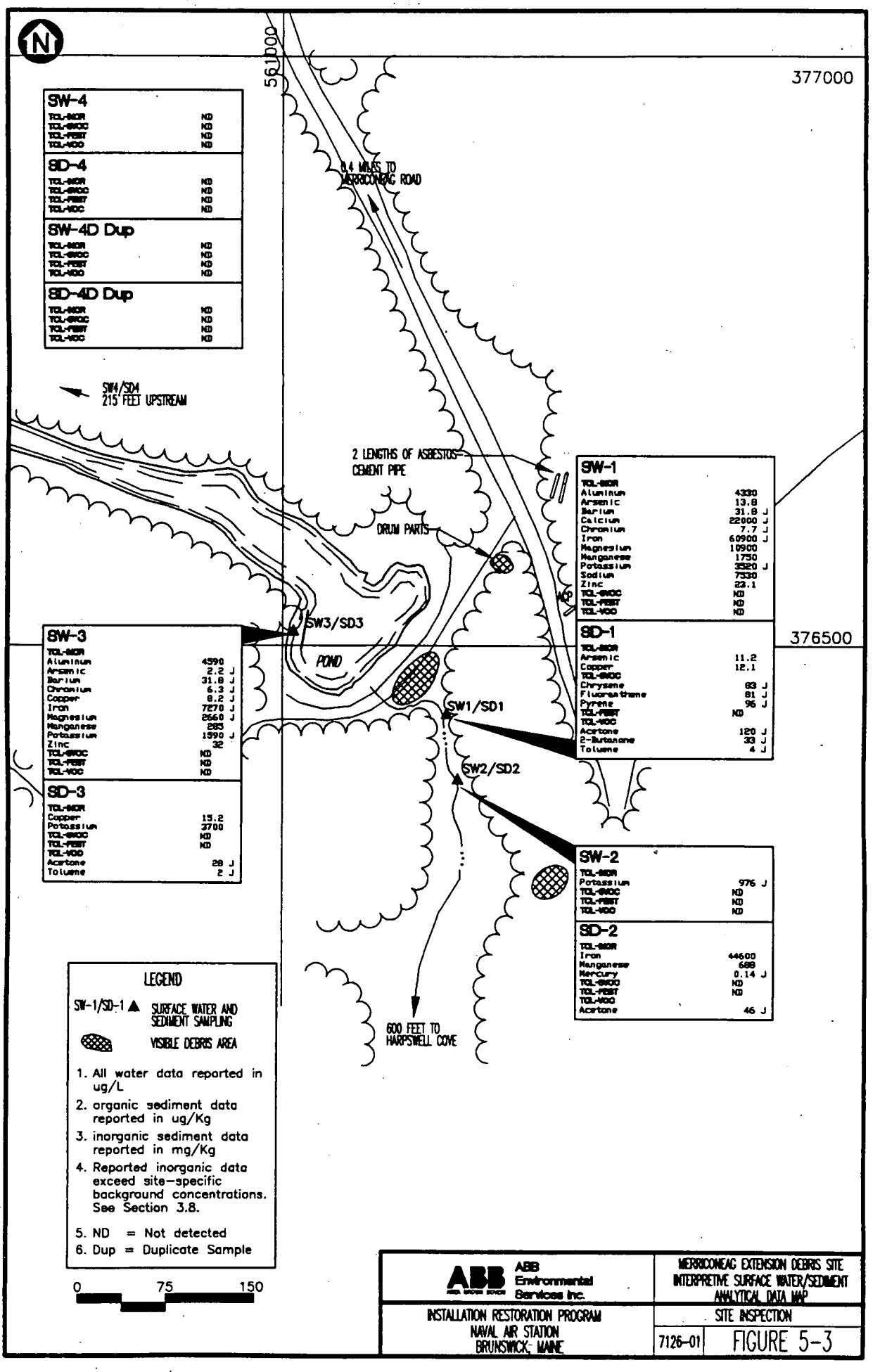
Only one sediment sample contained TCL SVOCs; SD-1 reported total PAHs at 260 μg/kg. This concentration is orders of magnitude lower than levels considered

to be background for sediments at NAS Brunswick (see Subsection 3.8), and is thus not considered to represent site-related contamination.

All samples analyzed were non-detect for TCL pesticides/PCBs.

Many inorganics concentrations were higher at the Merriconeag Extension Debris Site than at the Swampy Road Debris Site. The higher concentrations are likely a function of the geologic origin of the soils and sediments, and not related to contamination. As mentioned earlier, this site has a thin to nonexistent sandy topsoil that overlies silty and clayey to sandy silts. Samples collected here likely have more clay and silt than the Swampy Road Debris Site samples, and clays and silts generally (and specifically at NAS Brunswick) have higher inorganics concentrations than do sands (see Table 3-6). Sediment inorganic concentrations detected do not indicate contamination problems from the presence of heavy metals and are not of concern.

In the surface water samples, all TCL VOCs, SVOCs, and pesticides/PCBs were below detection limits. Only a few inorganics were observed above site background concentrations (Figure 5-3). The surface water in the unnamed stream is not used for potable purposes; therefore, detected concentrations were not compared to MCLs. The maximum surface water inorganics concentrations were, instead, compared to the AWQC for protection of freshwater aquatic life (see Appendix E). For conservativeness, the values for chronic exposure, rather than acute exposure, were used. Of the inorganics detected, only iron exceeded the AWQC. High iron concentrations have been noted elsewhere at NAS Brunswick and may therefore be related to basewide- or regionally elevated iron concentrations (E.C. Jordan Co., 1991b). However, it is also noted that SW-2, collected only 75 feet downstream of SW-1, was below site background values for iron. Therefore, high iron concentrations are not widespread, and iron is not interpreted as presenting a substantial threat to aquatic life.


N
561000
377000
376500
SW-4
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-4
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SW-4D Dup
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-4D Dup
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SW4/SD4
215 FEET UPSTREAM
0.4 MILES TO
MERRICONEAG ROAD
2 LENGTHS OF ASBESTOS-
CEMENT PIPE
DRUM PARTS
MP
SW-1
TCL-SVOC
Aluminum 4330
Arsenic 13.8
Barium 31.8 J
Calcium 22000 J
Chromium 7.7 J
Iron 60900 J
Magnesium 10900
Manganese 1750
Potassium 3520 J
Sodium 7530
Zinc 23.1
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-1
TCL-SVOC
Arsenic 11.2
Copper 12.1
TCL-SVOC
Chrysene 83 J
Fluoranthene 81 J
Pyrene 96 J
TCL-PEST ND
TCL-VOC
Acetone 120 J
2-Butanone 33 J
Toluene 4 J
SW3/SD3
POND
SW-3
TCL-SVOC
Aluminum 4590
Arsenic 2.2 J
Barium 31.8 J
Chromium 6.3 J
Copper 8.2 J
Iron 7270 J
Magnesium 2660 J
Manganese 285
Potassium 1590 J
Zinc 32
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-3
TCL-SVOC
Copper 13.2
Potassium 3700
TCL-SVOC ND
TCL-PEST ND
TCL-VOC
Acetone 28 J
Toluene 2 J
SW1/SD1
SW2/SD2
SW-2
TCL-SVOC
Potassium 976 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC ND
SD-2
TCL-SVOC
Iron 44600
Manganese 688
Mercury 0.14 J
TCL-SVOC ND
TCL-PEST ND
TCL-VOC
Acetone 46 J
600 FEET TO
HARPSWELL COVE
LEGEND
SW-1/SD-1 ▲ SURFACE WATER AND SEDIMENT SAMPLING
VISIBLE DEBRIS AREA
1. All water data reported in ug/L
2. organic sediment data reported in ug/Kg
3. inorganic sediment data reported in mg/Kg
4. Reported inorganic data exceed site-specific background concentrations. See Section 3.8.
5. ND = Not detected
6. Dup = Duplicate Sample
0 75 150
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INTERPRETIVE SURFACE WATER/SEDIMENT ANALYTICAL DATA MAP
INSTALLATION RESTORATION PROGRAM
NAVAL AIR STATION
BRUNSWICK, MAINE
SITE INSPECTION
7126-01
FIGURE 5-3

6.0 CONTAMINANT FATE AND TRANSPORT

Although very low levels of contaminants were detected at the Swampy Road and Merriconeag Extension Debris Sites, this section evaluates the migration potential and probable environmental fate of those contaminants. Contaminants detected at these sites include VOCs, SVOCs, pesticides, and inorganics. The observed distribution of these contaminants in different environmental media (soil, sediment, and surface water) at these sites is the result of their physico-chemical properties and site conditions. Applicable physico-chemical properties for organic chemicals include specific gravity, solubility, volatility, and the organic carbon partition coefficient (K_{oc}). Applicable physico-chemical properties for inorganic constituents include oxidation state, pH, cation exchange capacity and specific solute species. Site conditions governing fate and transport (i.e., persistence and migration) of chemicals include original chemical distribution, topography, meteorological conditions, and hydrogeology.

6.1 CONTAMINANT TRANSPORT

Site conditions and the physico-chemical properties of site contaminants establish which contaminant transport mechanisms will predominate. Once the dominant transport mechanisms have been identified, the contaminant distribution can be interpreted in terms of past events, and the future contaminant distribution can be estimated.

Applicable physico-chemical properties of the VOCs, SVOCs, and pesticides observed at the debris sites are listed in Table 6-1. Specific gravity is the ratio of the mass of a given volume of a liquid substance to the mass of an equal volume of water. Liquids with specific gravities greater than 1 are termed "heavier" than water. Solubility values and the K_{oc} represent measures of the tendency of a material to move from one phase to another. Solubility measures the partitioning between the pure liquid or solid form of a chemical and the aqueous phase, or the tendency of a material to dissolve in water. Substances with relatively low solubilities are more likely to remain in a separate phase when in contact with water; substances with high solubilities will dissolve and move with water. K_{oc} measures the extent that an organic chemical partitions between a solid phase and a liquid phase, and is used to predict to what extent a chemical could be adsorbed to soil organic carbon.

TABLE 6-1
PHYSICO-CHEMICAL PROPERTIES OF ORGANIC SITE CONTAMINANTS

SWAMPY ROAD DEBRIS SITE
MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

COMPOUND	MEDIA CONTAMINATED	CAS NUMBER	WATER SOLUBILITY (mg/L)	DENSITY (g/cm^3)	K_{oc}	VAPOR PRESSURE (mm Hg)	H ($\frac{ATM*m^3}{mol}$)
VOLATILE ORGANIC COMPOUNDS							
1,1,1-Trichloroethane	S,SD	71-55-6	1500	1.3492	152	100	0.0276
Acetone	SD,SW	67-64-1	MISCIBLE	0.791	2.2	186	3.97×10^{-5}
2-Butanone	SD	78-93-3	268000	0.805	4.5	100	4.68×10^{-5}
Toluene	S,SD	108-88-3	535	0.8623	300	22	6.61×10^{-3}
SEMIVOLATILE ORGANIC COMPOUNDS							
Benzo(a)pyrene	S,SD,SW	50-32-8	0.0038	1.351	94000	5.6×10^{-9}	1.55×10^{-6}
Bis(2-ethylhexyl)Phthalate	SW	117-81-7	0.285	0.9843	5900	2×10^{-7}	3.6×10^{-7}
Benzo(g,h,i)Perylene	S,SD	191-24-2	0.00026	NAV	409000	1×10^{-10}	1.4×10^{-7}
Indeno(1,2,3-c,d)Pyrene	S,SD	193-39-5	0.062	NAV	NAV	1×10^{-10}	6.95×10^{-8}
Benzo(k)Fluoranthene	S	207-8-9	0.00055	NAV	270,000	9.6×10^{-11}	1.04×10^{-6}
Benzo(b)Fluoranthene	S,SD,SW	205-99-2	0.014	NAV	550000	5×10^{-7}	1.2×10^{-5}
Chrysene	S,SD,SW	218-01-9	0.0018	1.274	200000	6.3×10^{-9}	1.05×10^{-6}
Fluoranthene	S,SD,SW	206-44-0	0.0206	1.252	38000	5×10^{-6}	6.46×10^{-6}
Phenanthrene	S,SD,SW	85-01-8	1	1.025	14000	6.8×10^{-4}	1.6×10^{-4}
Pyrene	S,SD,SW	129-00-0	0.132	1.271	38000	2.5×10^{-6}	5×10^{-6}
Benzo(a)Anthracene	S,SD,SW	56-55-3	NAV	NAV	NAV	2.2×10^{-9}	1.2×10^{-6}
PESTICIDES							
4,4'-DDE	S	72-55-9	0.04	NAV	4400000	6.5×10^{-6}	2.3×10^{-5}
4,4'-DDT	S	50-29-3	0.0031	1.56	NAV	1.5×10^{-7}	3.9×10^{-5}

NOTES:

CAS Chemical Abstracts Service Registry Number
mg/L milligrams per liter
g/cm^3 grams per cubic centimeter
mm Hg millimeters of mercury
$(ATM-m^3)$
mol (Atmospheres * cubic meters) per mole
H Henry's Law Constant.
K_{oc} Organic carbon partition coefficient
NA Not Applicable
NAV Not Available in References.
S Soil
SD Sediment
SW Surface Water

Solubility, Density, Vapor Pressure, H, and Koc Values from (1) Mercer, J.W., Skipp, D.C. and Griffin, D., 1990, " Basics for pump - and treat groundwater remediation technology," EPA-600/8-90/003", (2) K. Verschueren, 1983, "Handbook of Environmental Data on Organic Chemicals", Van Nostrand Reinhold Company, NY; (3) MacKay, D, W.Y. Shiu, and K.C. MA, 1992, "Illustrated Handbook of Physical - Chemical Properties and Environmental Fate for Organic Chemicals", Vol. 1 and Vol. 11, Lewis Publishers, Michigan, and (4) "IRP Organic Chemical Compounds and Analytical Methods", Air National Guard Support Center, Andrews AFB, MD.

Chemicals with a K_{oc} greater than 10,000 will adsorb strongly to soil organic carbon. Chemicals with a K_{oc} in the range of 1,000 to 10,000 can be moderately adsorbed or retarded during transport with water. Chemicals with a K_{oc} of less than 1,000 weakly adsorb to soil organic carbon and tend to be more mobile. Volatility measures the tendency of a chemical to partition into the gaseous phase. Volatility is measured by vapor pressure and Henry's Law Constant (H). Volatility increases with increasing vapor pressure. Compounds with H values less than $1.0x10^{-5}$ have a low degree of volatility, and those with H below $3.0x10^{-7}$ are considered non-volatile. H values between $1.0x10^{-5}$ and $1.0x10^{-3}$ are moderately volatile, while those with values above $1.0x10^{-3}$ are highly volatile.

Specific gravities, solubilities, volatilities, and K_{oc} values are not provided for the inorganics listed in Table 6-1 because elemental analyses measure the total amount of a particular constituent in the sample rather than the actual chemical form or metal oxidation state. The distribution of specific solute species, pH, and oxidation state are important in establishing the total solubility or mobility of a given element.

6.1.1 Atmospheric Migration

Atmospheric migration of contaminants occurs primarily by: (1) volatilization of the chemical into air, and (2) release of fugitive dust with chemicals adsorbed to soil particles. The first mechanism, volatilization, is an important pathway for VOCs from surface soils to receptors on or off site. The second mechanism, fugitive dust release, may be a pathway for organic compounds with high K_{oc} values and low H values (e.g., SVOCs and pesticides) and inorganics. The extent of atmospheric migration is governed by meteorological conditions and the amount of exposed contaminated surface soils.

6.1.2 Surface Water Migration

Surface water can transport chemicals either as a dissolved phase or adsorbed onto entrained soil particles. Dissolved and adsorbed phase contaminants move to surface water via either runoff from contaminated surface soils or discharge from contaminated groundwater.

6.1.3 Groundwater Migration

Contaminants may reach the groundwater table via downward seepage of chemicals, either as pure liquids or dissolved in water, by the action of rainfall infiltrating subsurface soil. One factor affecting the concentration of a chemical in groundwater is the solubility of that chemical in water. Contaminants entering groundwater as a dissolved phase move with groundwater flow; however, if contaminants enter groundwater as a non-aqueous phase liquid, the contaminants will migrate in a direction dependent on the specific gravity of the chemical phase, groundwater flow, entry pressures, and the surface topography of any confining layers.

6.2 CONTAMINANT FATE

The primary contaminants at the Swampy Road and Merriconeag Extension Debris Sites are low levels of VOCs, SVOCs, pesticides, and metals. Acetone, 1,1,1-trichloroethane, toluene, BEHP, PAHs, 4,4'-DDT, 4,4'-DDE, and metals were detected at the Swampy Road Debris Site, while acetone, toluene, 2-butanone, PAHs, 4,4'-DDT, 4,4'-DDE, and metals were reported at the Merriconeag Extension Debris Site. As noted in the site-specific discussions, the SVOCS (PAHs), pesticides, and inorganics may simply reflect background conditions; the VOCs may easily have resulted from laboratory contamination.

VOCs. The VOC contaminants are classified as halogenated hydrocarbons (e.g., 1,1,1-trichloroethane), aromatic hydrocarbons (e.g., toluene), and non-halogenated VOCs (e.g. acetone and 2-butanone). Processes that will control the fate of VOCs at these sites include volatilization, biodegradation, and dissolution.

Volatilization is believed to be the most significant transport mechanism for VOCs in the near-surface and unsaturated soils. VOCs are expected to partition between the soil and gaseous phase into the soil pore spaces in the unsaturated soils. This process will occur most readily for compounds with a high vapor pressure and a high H value. In addition, VOCs present in surface water will partition to the gaseous phase, particularly those with lower solubility (e.g., 1,1,1-trichloroethane and toluene). This mechanism, while still important, is less significant for VOCs with greater aqueous solubility, as shown by the presence of acetone in a surface water sample.

Dissolution of VOCs from soil is also an important transport mechanism for VOCs at these sites. Runoff from contaminated soils could transport dissolved VOCs to surface water and sediment locations. Additionally, VOCs adsorbed to sediment particles would partition to the aqueous phase. Factors affecting the concentration of VOCs in surface water include solubility, K_{oc}, and volatility.

Biodegradation reactions act to reduce the total mass of VOCs. Naturally occurring soil and aquatic microorganisms capable of degrading aromatic hydrocarbons have been studied (Jamison, et al., 1975; and Bailey, et al., 1973) and a relationship between dissolved oxygen (DO) and biodegradation has been evaluated. DO concentrations expected in surface water at these sites indicate that potential oxygen-consuming reactions may occur rapidly for the aromatic hydrocarbons and non-halogenated VOCs. As the aromatic hydrocarbons are mobilized from the soil or sediment, they are likely to be rapidly degraded as long as DO is available.

Halogenated VOCs are degraded by different mechanisms than aromatic hydrocarbons. Reductive dechlorination of halogenated VOCs occurs most rapidly under anaerobic conditions. The only halogenated VOC at these sites is 1,1,1-trichloroethane. Under the aerobic conditions expected in surface water at these sites, the process of reductive dechlorination is expected to be slow, and primary fate mechanism for the halogenated VOCs will be volatilization.

Acetone was detected at only one surface water location at the Swampy Road Debris Site, at a concentration less than the CRQL; VOCs were detected in only one sediment sample (but not its duplicate), indicating sample non-homogeneity. The most probable fate of VOCs at this site is volatilization/dissolution from near-surface soils, mechanical transport/dissolution for sediment, and volatilization for the surface water.

At the Merriconeag Extension Debris Site, VOCs were not detected in the shallow soils, most likely because of volatilization and dissolution, if they were ever present here. VOCs were not detected in surface water samples, most likely the result of volatilization of these compounds as well as adsorption to sediment particles; again, assuming that those materials were once disposed here. The most probable fate of VOCs in sediments at this site is mechanical transport (adsorbed to sediment particles) along with dissolution to the aqueous phase with subsequent volatilization from the surface water.

SVOCs and Pesticides. Processes that control the fate of SVOCs (primarily PAHs and phthalates) and pesticides at the two debris sites include adsorption, biodegradation, and dissolution. The SVOCs and pesticides detected are expected to be relatively immobile because of adsorption to the organic carbon fraction of the soil predicted through K_{oc}s and low solubilities (Tinsley, 1979; Kenaga and Goring, 1978). In aerobic environments, natural biodegradation processes can decrease the concentrations of PAHs and pesticides (Kenaga and Goring, 1978; Weil, Dune, and Quentin, 1973). These processes could be significant in decreasing concentrations of these compounds over time. The primary transport mechanism for SVOCs and pesticides is expected to be mechanical transport of contaminants adsorbed to soil or sediment particles via runoff and surface water flow.

No PAHs or pesticides were detected in the Swampy Road Debris Site surface water samples. The fate of SVOCs and pesticides is expected to be similar to that for the Merriconeag Extension Debris Site. Pesticides were not detected in the Swampy Road Debris Site sediment samples, indicating either that these compounds are strongly adsorbed to soil particles and are relatively immobile, or that pesticides were not widely used in this area. The probable fate of SVOCs at this site is mechanical transport along with biodegradation over time.

SVOCs and pesticides were not detected in the surface water at the Merriconeag Extension Debris Site. Pesticides were not detected in sediment samples, which indicates that the low levels of 4,4'-DDT and 4,4'-DDE detected in the soil samples are strongly adhered to soil particles and are relatively immobile. The most probable fate of SVOCs is mechanical transport of contaminants adsorbed to soil particles, along with biodegradation over time.

Inorganics. Inorganics detected at these sites include metals (aluminum and lead), transition metals (iron, manganese, vanadium, chromium, cobalt, cadmium, mercury, nickel, silver, zinc, and copper), alkaline earth metals (calcium, magnesium, and barium), alkali metals (sodium and potassium), and nonmetallic elements (arsenic).

The discussion in this subsection remains qualitative because of the complex nature of inorganic chemistry. The mobility of inorganics in soil-water systems is strongly affected by compound solubility, pH, soil cation exchange capacity, soil type, oxidation-reduction potential, adsorption processes, major ion concentrations, and salinity. The distribution of inorganics would most likely be controlled by adsorption processes. Once absorbed to soil, the inorganics may migrate with the soil particles.

The migration of dissolved inorganics is dependent upon the individual adsorption characteristics.

7.0 SUMMARY AND CONCLUSIONS

This section summarizes the site inspection results and presents an overall conclusion for each of the two debris sites.

7.1 SWAMPY ROAD DEBRIS SITE

- A magnetometer and surface inspection confirmed the presence of surface debris over an extended area. The magnetometer readings do not suggest the presence of large amounts of buried ferrous material, and it is concluded that only surface dumping took place.

- Surface and subsurface soils do not contain site-related VOCs and have only low levels of SVOCs and pesticides consistent with NAS Brunswick background levels and published concentrations for uncontaminated soils. A limited number of inorganics were detected at concentrations above those considered to represent base background conditions.

- Stream sediments collected from the main channel of the unnamed stream adjacent to and downstream of the debris site did not contain contaminants above background levels. One sediment sample upstream of the observed debris contained the inorganics arsenic, beryllium, cobalt, lead, and sodium at concentrations above site background levels.

- Surface water samples from the main channel of the unnamed stream contained organic and inorganic constituents at or below concentrations generally considered protective of freshwater aquatic life. Exceedances of the AWQC were noted for iron and lead only. Previous investigations at NAS Brunswick also detected concentrations of iron in exceedance of the AWQC, and these elevated levels may be an area-wide characteristic. The single exceedance of the lead AWQC in the stream channel was from a sample located upstream of the debris site.

- The surface debris should be removed with proper disposal. No further investigations for hazardous substances are necessary.

7.2 MERRICONEAG EXTENSION DEBRIS SITE

- Surface debris apparently related to sporadic, unlicensed dumping is present. A magnetometer and detailed surface inspection failed to detect evidence of hidden or buried ferrous material.

- Surface and subsurface soil sample analyses detected no VOCs. Several SVOCs were detected at concentrations similar to or lower than those presented in the literature as representative of uncontaminated conditions. Two samples had detectable concentrations of pesticides, one at a level interpreted as a residual concentration from former spraying and one detection that may reflect disposal of pesticides or pesticide-containing materials. No PCBs were detected. Four or more inorganic analytes were detected in every soil sample at levels above those previously established for NAS Brunswick as representative of background conditions.

- Surface water and sediment samples were within site-specific background ranges for TCL VOCs, SVOCs, pesticides/PCBs, and inorganics.

- Concentrations of site-related contaminants in surface water samples were within the range established by the AWQC as being protective of freshwater aquatic life, except for iron. Previous investigations at NAS Brunswick have also detected concentrations of iron in exceedance of the chronic AWQC, and these elevated levels may be an area-wide characteristic. Mercury was detected at concentrations above the chronic AWQC for protection of freshwater aquatic life; however, the highest mercury concentration was detected in the upstream (background) location. Therefore, it is concluded that there were no site-related detections of mercury and no site-related exceedances of the mercury AWQC.

- Surface debris should be removed for appropriate disposal. No further investigations for hazardous substances are necessary.

- Several lengths of asbestos-cement piping are located on the ground surface. Two samples collected from beneath the piping showed no evidence of asbestos. This piping should be disposed as solid waste in accordance with all applicable laws.

ABB-ES	ABB Environmental Services, Inc.
ARARs	Applicable or Relevant and Appropriate Requirements
AWQC	Ambient Water Quality Criteria
BEHP	bis(2-ethylhexyl)phthalate
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLP	Contract Laboratory Program
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
4,4'-DDE	dichlorodiphenyldichloroethylene
4,4'-DDT	dichlorodiphenyltrichloroethane
DO	dissolved oxygen
FFA	Federal Facility Agreement
H	Henry's Law Constant
IAS	Initial Assessment Study
ICP	inductively coupled plasma
K_{oc}	organic carbon partition coefficient
MCL	Maximum Contaminant Level
MEDEP	Maine Department of Environmental Protection
mg/kg	milligrams per kilogram
NAS	Naval Air Station
NEESA	Naval Energy and Environmental Support Activity
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
QA/QC	Quality Assurance/Quality Control

RI	Remedial Investigation
RPD	relative percentage difference
SARA	Superfund Amendments and Reauthorization Act
SI	Site Inspection
SOW	Statement of Work
SVOC	semivolatile organic compound
TAL	Target Analyte List
TCL	Target Compound List
TIC	tentatively identified compound
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
μg/kg	micrograms per kilogram
μg/L	micrograms per liter

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APPENDIX A

IDENTIFICATION OF SITE-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

IDENTIFICATION OF SITE-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

In this section, environmental regulations, standards, requirements, and criteria are evaluated to identify those federal and state requirements on a site-specific basis that need to be incorporated into the remedial response. The identification of ARARs, along with other available non-promulgated advisory and guidance material, is a key component in the planning, evaluation, and selection of remedial actions under CERCLA as amended by SARA. Identification and evaluation of ARARs is an iterative process, necessary throughout the remedial response process, including the site characterization phase.

A.1 DEFINITION OF ARARS

Development of a comprehensive inventory of ARARs involves a two-tiered analysis: establishing the applicability of an environmental regulation; and evaluating relevancy and appropriateness if the regulation is not applicable. A requirement may be either "applicable" or "relevant and appropriate," but not both.

Applicable requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site.

Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site, address problems or situations sufficiently similar to those encountered at the site that their use is well-suited to the particular site. Only those state standards identified by the state in a timely manner that are more stringent than the applicable federal standard may be relevant and appropriate. However, there is more discretion in the determination; it is possible for only part of a requirement to be considered relevant and appropriate, the rest being dismissed if judged not to be relevant and appropriate in a given case.

Other requirements to be considered (TBC) are non-promulgated advisories or guidance issued by the federal or state government that are not legally binding, and do not have status as potential ARARs. If there are no specific ARARs for a chemical or site condition, or if existing ARARs are not deemed sufficiently protective, then guidance or advisory criteria should be identified and used to confirm protection of human health and the environment.

A.2 IDENTIFICATION OF ARARS

Because of their site-specific nature, identification of ARARs requires evaluation of the body of federal, state, and local environmental and health regulations with respect to site characteristics, chemicals present, and proposed remedial alternatives. Requirements that govern actions at CERCLA sites can be categorized into three distinct areas:

- **Chemical-specific** requirements generally involve health- or risk-based numerical values or methodologies that establish site-specific acceptable chemical concentrations and/or amounts. These values are used to develop action levels and/or cleanup concentrations.

- **Location-specific** requirements involve restrictions established for specific substances or activities based on their location.

- **Action-specific** requirements involve performance, design, or other action-specific requirements and are generally technology- or activity-based.

A.2.1 Chemical-specific ARARs

Chemical-specific ARARs are numerical values or procedures that, when applied to a specific site, establish numerical limits for individual chemicals or groups of chemicals. These ARARs are generally health- or risk-based and represent an acceptable concentration of that chemical in or discharged to an environmental medium. Table A-1 summarizes potential chemical-specific ARAR, listed by the media to which they apply. Individual chemical values for groundwater and surface water specified within federal and state regulations and guidance materials are

TABLE A-1
POTENTIAL CHEMICAL-SPECIFIC ARARS, CRITERIA, ADVISORIES, AND GUIDANCE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

	REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS
Federal	RCRA - Subpart F Groundwater Protection Standards, Alternative Concentration Limits (40 CFR 264.94)	Relevant and Appropriate	This requirement outlines standards, in addition to background concentrations and MCLs, to be used in establishing cleanup levels for remediating groundwater contamination. These requirements are relevant and appropriate only if certain conditions relating to transport and exposure are met.
	CWA - Ambient Water Quality Criteria (40 CFR 131)	Applicable	AWQC include criteria for the protection of human health and aquatic life for surface water bodies. Human health criteria are established for exposure routes involving ingestion of water and consumption of aquatic organisms.
Federal Guidance and Advisories to be Considered	USEPA Office of Drinking Water, Health Advisories	To Be Considered	Health Advisories (HAs) are issued as nonregulatory guidance. HA values are concentration of contaminants in drinking water at which adverse health effects would not be expected to occur. HAs are established for one-day, ten-day, longer-term, and lifetime exposure durations.
State	Maine Drinking Water Rules (10-144A CMR Chapters 231-233)	Relevant and Appropriate	Maine's Primary Drinking Water Standards are equivalent to federal MCLs. When state levels are more stringent than federal levels, the state levels may be used.

continued

TABLE A-1
POTENTIAL CHEMICAL-SPECIFIC ARARS, CRITERIA, ADVISORIES, AND GUIDANCE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

	REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS
State (con't.)	Maine Regulations Relating to Water Quality Criteria for Toxic Pollutants (MEDEP Regs, Chapter 584)	Applicable	This rule limits the concentrations of certain materials allowed in Maine waters to prevent the occurrence of pollutants in toxic amounts as required by state and federal law. Except if naturally occurring, ambient levels of toxic pollutants shall not exceed the CWA AWQC. Where AWQC do not exist, the Board of Environmental Protection shall adopt site-specific numerical criteria.
State Criteria and Guidance to be Considered	Rules Relating to Testing of Private Water Systems for Potentially Hazardous Contaminants (10-144A CMR Chapter 233, Appendix C)	Applicable	Appendix C outlines Maximum Exposure Guidelines (MEGs) for organic and inorganic compounds. MEGs include health advisories, which are maximum allowable concentrations of specific contaminants in drinking water.
Federal Guidance and Advisories To Be Considered	USEPA Risk Reference Doses (RfDs)	To Be Considered	RfDs are considered the levels unlikely to cause significant adverse health effects associated with a threshold mechanism of action in human exposure for a lifetime.
	USEPA Human Health Assessment Group Cancer Slope Factors (CSFs)	To Be Considered	Carcinogenic effects present the most up-to-date information on cancer risk potency derived from USEPA's Human Health Assessment Group.

continued

TABLE A-1
POTENTIAL CHEMICAL-SPECIFIC ARARS, CRITERIA, ADVISORIES, AND GUIDANCE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS
Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites (OSWER Directive #9355.4-02)	To Be Considered	Sets forth interim soil cleanup levels for lead in lieu of any USEPA-verified toxicological values.

Notes:

ARAR = Applicable or Relevant and Appropriate Requirement
AWQC = Ambient Water Quality Criteria
CFR = Code of Federal Regulations
CMR = Code of Maine Rules
CSF = cancer slope factor
CWA = Clean Water Act
HA = Health Advisory
MCL = Maximum Contaminant Level
MEDEP = Maine Department of Environmental Protection
MEG = Maximum Exposure Guidelines
MRSA = Maine Revised Statutes Annotated
NAS = Naval Air Station
OSWER = Office of Solid Waste and Emergency Response
RCRA = Resource Conservation and Recovery Act
RfD = reference dose
USEPA = U.S. Environmental Protection Agency

presented in Table A-2. A summary of key chemical-specific ARAR issues by environmental media is provided below.

Groundwater: Chemical-specific ARARs for groundwater include regulations and criteria promulgated under the Safe Drinking Water Act (SDWA), Clean Water Act (CWA), and state statutes. Specific rules and regulations established to implement these laws include the National Primary Drinking Water Regulations and the Maine Drinking Water Rules. The National Drinking Water Regulations consist of contaminant-specific standards known as Maximum Contaminant Levels (MCLs) and Maximum Contaminant Level Goals (MCLGs). MCLs are enforceable standards that are the maximum permissible level for specific contaminants in public water supplies. MCLGs are non-enforceable health-based goals that establish levels at which no known or anticipated adverse health effects occur. MCLs and MCLGs are applicable for the Swampy Road Debris Site because the site is located near the golf course where potable water used by the clubhouse is obtained from a drilled well. MCLs and MCLGs are relevant and appropriate for the Merriconeag Extension Debris Site because, while groundwater at the site is not currently used as a drinking water source, the groundwater beneath this site could potentially be used as a drinking water supply in the future.

Under Maine Drinking Water Rules, the state adopted federal MCLs with some modifications and additions. The Maine Maximum Exposure Guidelines (MEGs) have been promulgated under the Maine Solid Waste Management Regulations for solid waste disposal sites, and therefore may be applicable. State standards are typically considered for chemicals for which no federal MCL has been established or when the state standard is more stringent than the federal MCL. Table A-2 lists the federal MCLs and MCLGs. The state MEG values are also included in Table A-2.

Surface Water: The State of Maine classifies surface water bodies according to use. Surface water at the Swampy Road Debris Site consists of an unnamed tributary stream of Mere Brook. Surface water at the Merriconeag Extension Debris Site consists of a pond created by damming an unnamed stream, which eventually discharges to Harpswell Cove. While the golf course uses water from the stream near the dam as an irrigation supply, the stream is not classified as a source of drinking water. Therefore, non-zero MCLGs and MCLs would not apply to the stream. These streams have never officially been classified by the State of Maine, but by regulatory default are considered Class B waterways, which include use as

TABLE A-2
CHEMICAL STANDARDS

SWAMPY ROAD DEBRIS SITE
MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
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CHEMICAL	Safe Drinking Water Act [a] (SDWA)				CWA Water Quality Criteria [b]				Health Advisories [a]					Maine Water Quality Control Regulations [c]
					For Protection of Human Health		For Protection of Freshwater Aquatic Life							
	MCL (mg/l)	MCLG (mg/l)	Proposed MCL (mg/l)	Proposed MCLG (mg/l)	Water and Fish Consumption (mg/l)[a]	Fish Con-sumption only (mg/l)	Acute (mg/l)	Chronic (mg/l)	1-Day Child (mg/l)	10-Day Child (mg/l)	Longer Term Child (mg/l)	Longer Term Adult (mg/l)	Lifetime Adult (mg/l)	Maximum Exposure Guidelines (mg/l)
VOLATILE ORGANIC COMPOUNDS (VOCs)														
1,1,1-Trichloroethane	0.2	0.2			18.4	1030			100	40	40	100	0.2	0.2
1,1,2,2-Tetrachloroethane					0.00017	0.0107		2.4 *						
1,1,2-Trichloroethane	0.003	0.005			0.0006	0.0418		9.4 *	0.6	0.4	0.4	1	0.003	0.003
1,1-Dichloroethane														0.005
1,1-Dichloroethylene	0.007	0.007			0.000033	0.00185			2	1	1	4	0.007	0.007
1,2-Dibromoethane														
1,2-Dibromo-3-Chloropropane														
1,2-Dichloroethane	0.005	0			0.00094	0.243	118 *	20 *	0.7	0.7	0.7	2.6		0.005
1,2-Dichloroethene (total)														0.07
1,2-Dichloropropane	0.005	0								0.09				0.005
2-Butanone														0.17
2-Hexanone														
4-Methyl-2-Pentanone														
Acetone														
Benzene	0.005	0			0.00066	0.04	5.3 *		0.2	0.2				0.005
BHC,G(Lindane)	0.0002	0.002					0.002	0.00008	1	1	0.3	0.1	0.002	
Bromodichloromethane			0.1 L						7	7	4	13		
Bromoform			0.1 L						5	2	2	6		
Bromomethane									0.1	0.1	0.1	0.5	0.01	0.01
Carbon Disulfide														
Carbon Tetrachloride	0.005	0			0.0004	0.00694	35.2 *		4	0.2	0.07	0.3		0.0027
Chlorobenzene	0.1	0.1			0.488									0.047
Chloroethane														
Chloroform			0.1 L		0.00019	0.0157	28.9 *	1.24 *	4	4	0.1	0.4		
Chloromethane					0.00019				9	0.4	0.4	1	0.003	0.003
cis-1,2-Dichloroethylene	0.07	0.07							4	3	3	11	0.07	0.07
cis-1,3-Dichloropropene					0.087				0.03	0.03	3	0.1		
Dibromochloromethane			0.1 L											

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TABLE A-2
CHEMICAL STANDARDS

SWAMPY ROAD DEBRIS SITE
MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

CHEMICAL	Safe Drinking Water Act [a] (SDWA)				CWA Water Quality Criteria [b]				Health Advisories [a]					Maine Water Quality Control Regulations [c]
					For Protection of Human Health		For Protection of Freshwater Aquatic Life				Longer Term			
	MCL (mg/l)	MCLG (mg/l)	Proposed MCL (mg/l)	Proposed MCLG (mg/l)	Water and Fish Consumption (mg/l)[a]	Fish Con-sumption only (mg/l)	Acute (mg/l)	Chronic (mg/l)	1-Day Child (mg/l)	10-Day Child (mg/l)	Child (mg/l)	Adult (mg/l)	Lifetime Adult (mg/l)	Maximum Exposure Guidelines (mg/l)
Ethylbenzene	0.7	0.7			1.4	3.28	32 *		30	3	1	3	0.7	0.7
Methylene Chloride	0.005	0							10	2				0.048
Styrene	0.1	0.1							20	2	2	7	0.1	0.005
Tetrachloroethene	0.005	0			0.0008	0.00885	5.28 *	0.84 *	2	2	1	5		0.003
Toluene	1	1			14.3	424	17.4 *		20	2	2	7	1	1.4
Total Xylenes	10	10							40	40	40	100	10	0.6
trans-1,2-Dichloroethylene	0.1	0.1							20	2	2	6	0.1	0.07
trans-1,3-Dichloropropene					0.087									
Trichloroethene	0.005	0			0.0027	0.0807	45 *	21.9 *						0.005
Vinyl Chloride	0.002	0			0.002	0.525			3	3	0.01	0.05		0.00015
Xylene (total)	10	10							40	40	40	100	10	0.6
SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)														
1,2,4-Trichlorobenzene	0.07	0.07							0.1	0.1	0.1	0.5	0.07	0.07
1,2-Dichlorobenzene	0.6	0.6							9	9	9	30	0.6	0.085
1,3-Dichlorobenzene	0.6	0.6							9	9	9	30	0.6	0.085
1,4-Dichlorobenzene	0.075	0.075			0.075				10	10	10	40	0.075	0.027
2,4,5-Trichlorophenol					2.6									
2,4,6-Trichlorophenol					0.0012									
2,4-Dichlorophenol					3.09		2.02 *	0.365 *	0.03	0.03	0.03	0.1	0.02	0.02
2,4-Dimethylphenol							2.12 *							
2,4-Dinitrophenol														
2,4-Dinitrotoluene					0.00011	0.0091	0.33 *	0.23 *	0.5	0.5	0.3	1		
2,6-Dinitrotoluene									0.04	0.04	0.04	0.14	0.001	
2-Chloronaphthalene														
2-Chlorophenol							4.38 *		0.05	0.05	0.05	0.2	0.04	
2-Methylnaphthalene					0.0000028									0.00003
2-Methylphenol														
2-Nitroaniline														
2-Nitrophenol									0.8	0.8	0.8	0.3	0.08	

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A-2
CHEMICAL STANDARDS

SWAMPY ROAD DEBRIS SITE
MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

CHEMICAL	Safe Drinking Water Act [a] (SDWA)				CWA Water Quality Criteria [b]				Health Advisories [a]					Maine Water Quality Control Regulations [c]
					For Protection of Human Health		For Protection of Freshwater Aquatic Life							
	MCL (mg/l)	MCLG (mg/l)	Proposed MCL (mg/l)	Proposed MCLG (mg/l)	Water and Fish Consumption (mg/l)[a]	Fish Con-sumption only (mg/l)	Acute (mg/l)	Chronic (mg/l)	1-Day Child (mg/l)	10-Day Child (mg/l)	Longer Term Child (mg/l)	Longer Term Adult (mg/l)	Lifetime Adult (mg/l)	Maximum Exposure Guidelines (mg/l)
3,3'-Dichlorobenzidine					0.0000103	0.0000204								
3-Nitroaniline														
4,6-Dinitro-2-methylphenol														
4-Bromophenyl-phenylether														
4-Chloroaniline														
4-Chlorophenyl-phenylether														
4-Chloro-3-Methylphenol							0.03							
4-Methylphenol														
4-Nitroaniline														
4-Nitrophenol									0.8	0.8	0.8	3		
Acenaphthene					0.0000028		1.7 *	0.52 *						0.00003
Acenaphthylene					0.0000028									0.00003
Anthracene					0.0000028									0.00003
Benzo(a)Anthracene			0.0001	0	0.0000028									0.00003
Benzo(a)Pyrene	0.0002	0			0.0000028									0.00003
Benzo(b)Fluoranthene			0.0002	0	0.0000028									0.00003
Benzo(g,h,i)perylene					0.0000028									0.00003
Benzo(k)Fluoranthene			0.0002	0	0.0000028									0.00003
bis(2-Chloroethoxy)methane														
bis(2-Chloroethyl)ether					0.00003	0.00136								0.0083
bis(2-Chloroisopropyl)ether					0.0347				4	4	4	13	0.3	0.25
bis(2-Ethylhexyl)phthalate	0.006	0			15	50	0.4 P	0.36 P						0.025
Butylbenzylphthalate			0.1	0										
Carbazole														
Chrysene			0.0002	0	0.0000028									0.00003
Dibenzofuran														
Dibenz(a,h)Anthracene			0.0003	0	0.0000028									0.00003
Diethylphthalate					350	1800							5	
Dimethylphthalate					313									

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TABLE A-2
CHEMICAL STANDARDS

SWAMPY ROAD DEBRIS SITE
MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

CHEMICAL	Safe Drinking Water Act [a] (SDWA)				CWA Water Quality Criteria [b]				Health Advisories [a]					Maine Water Quality Control Regulations [c]
					For Protection of Human Health		For Protection of Freshwater Aquatic Life							
	MCL (mg/l)	MCLG (mg/l)	Proposed MCL (mg/l)	Proposed MCLG (mg/l)	Water and Fish Consumption (mg/l)[a]	Fish Con-sumption only (mg/l)	Acute (mg/l)	Chronic (mg/l)	1-Day Child (mg/l)	10-Day Child (mg/l)	Longer Term Child (mg/l)	Longer Term Adult (mg/l)	Lifetime Adult (mg/l)	Maximum Exposure Guidelines (mg/l)
Di-n-butylphthalate					34	154								0.22
Di-n-octylphthalate														
Fluoranthene					0.042	0.054	3.98 *							
Fluorene					0.0000028									0.00003
Hexachlorobenzene	0.001	0			0.00000072	0.00000074	0.006 P	0.00368 P	0.05	0.05	0.05	0.2		0.0002
Hexachlorobutadiene					0.00045		0.09 *	0.0093 *	0.3	0.3	0.1	0.4	0.001	0.001
Hexachlorocyclopentadiene	0.05	0.05			0.206		0.007 *	0.0052 *						0.05
Hexachloroethane					0.0019	0.00874	0.98 *	0.54 *	5	5	0.1	0.5	0.001	0.001
Indeno(1,2,3-c,d)Pyrene			0.0004	0	0.0000028									0.00003
Isophorone					5.2	520	117 *		15	15	15	15	0.1	0.14
Naphthalene					0.0000028		2.3 *	0.62 *	0.5	0.5	0.4	1	0.02	0.025
Nitrobenzene					19.8		27 *							0.0014
Nitrophenols							0.23 *	0.15 *	0.8	0.8	0.8	3	0.06	
N-Nitrosodiphenylamine					0.0049	0.0161								
N-Nitroso-di-n-propylamine														
Pentachlorophenol	0.001	0			1.01		0.02 **	0.013 **	1	0.3	0.3	1		0.006
Phenanthrene					0.0000028		0.03 P	0.0063 P						0.00003
Phenol					3.5		10.2 **	2.56 **	6	6	6	20	4	
Pyrene					0.0000028									0.00003
PESTICIDES/ HERBICIDES														
4,4'-DDD														
4,4'-DDE														
4,4'-DDT					0.000000024	0.000000024	0.0011	0.000001						0.00083
Aldrin					0.000000074				0.0003	0.0003	0.0003	0.0003		
alpha-BHC	0.2	0.2			0.0000092	0.000031								
alpha-Chlordane	0.002	0			0.00000046	0.00000048	0.0024	0.0000043	0.06	0.06				0.00027
Aroclor-1016	0.0005	0			0.000000079	0.000000079	0.002	0.000014						0.00005
Aroclor-1221	0.0005	0			0.000000079	0.000000079	0.002	0.000014						0.00005
Aroclor-1232	0.0005	0			0.000000079	0.000000079	0.002	0.000014						0.00005

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A-2
CHEMICAL STANDARDS

SWAMPY ROAD DEBRIS SITE
MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

CHEMICAL	Safe Drinking Water Act [a] (SDWA)				CWA Water Quality Criteria [b]				Health Advisories [a]					Maine Water Quality Control Regulations [c]
					For Protection of Human Health		For Protection of Freshwater Aquatic Life							
	MCL (mg/l)	MCLG (mg/l)	Proposed MCL (mg/l)	Proposed MCLG (mg/l)	Water and Fish Consumption (mg/l)[a]	Fish Con-sumption only (mg/l)	Acute (mg/l)	Chronic (mg/l)	1-Day Child (mg/l)	10-Day Child (mg/l)	Longer Term Child (mg/l)	Longer Term Adult (mg/l)	Lifetime Adult (mg/l)	Maximum Exposure Guidelines (mg/l)
Aroclor-1242	0.0005	0			0.000000079	0.000000079	0.002	0.000014						0.00005
Aroclor-1248	0.0005	0			0.000000079	0.000000079	0.002	0.000014						0.00005
Aroclor-1254	0.0005	0			0.000000079	0.000000079	0.002	0.000014						0.00005
Aroclor-1260	0.0005	0			0.000000079	0.000000079	0.002	0.000014						0.00005
beta-BHC	0.2	0.2			0.0000163	0.0000547								
delta-BHC	0.2	0.2												
Dieldrin					0.000000071		0.0025	0.0000019	0.0005	0.0005	0.0005	0.002		0.00002
Endosulfan I							0.00022	0.000056						
Endosulfan II							0.00022	0.000056						
Endosulfan Sulfate														
Endrin	0.002	0.002			0.001		0.00018	0.0000023	0.02	0.02	0.003	0.01	0.002	0.0002
Endrin Ketone														
gamma-BHC (Lindane)	0.0002	0.0002			0.0000186	0.0000625	0.002	0.00008	1	1	0.03	0.1	0.0002	0.0002
gamma-Chlordane	0.002	0								0.06	0.06			0.00027
Heptachlor	0.0004	0			0.00000028	0.00000029	0.00052	0.0000038	0.01	0.01	0.005	0.005		0.00008
Heptachlor Epoxide	0.0002	0					0.00052	0.0000038	0.01		0.0001	0.0001		0.00004
Methoxychlor	0.04	0.04							0.05	0.05	0.05	0.2	0.04	0.1
Toxaphene	0.003	0			0.00000071	0.00000073	0.00073	0.0000002	0.5	0.04				0.0003
INORGANICS														
Aluminum	0.05-0.2 S													1.43
Antimony	0.006	0.006			0.146	45	0.088 P	0.03 P	0.015	0.015	0.015	0.015	0.003	
Arsenic	0.05 R				0.0000022	0.0000175								
Barium	2	2			1								2	1.5
Beryllium	0.004	0.004			0.0000037	0.0000641	0.13 *	0.0053 *	30	30	4	20		
Cadmium	0.005	0.005			0.01		0.0039 +	0.0011 +	0.04	0.04	0.005	0.02	0.005	0.005
Calcium														
Chromium	0.1	0.1							1	1	0.2	0.8	0.1	0.1
Cobalt														
Copper	1.3 T	1.3					0.018 +	0.012 +						

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TABLE A-2
CHEMICAL STANDARDS

SWAMPY ROAD DEBRIS SITE
MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

CHEMICAL	Safe Drinking Water Act [a] (SDWA)				CWA Water Quality Criteria [b]				Health Advisories [a]					Maine Water Quality Control Regulations [c]
					For Protection of Human Health		For Protection of Freshwater Aquatic Life							
	MCL (mg/l)	MCLG (mg/l)	Proposed MCL (mg/l)	Proposed MCLG (mg/l)	Water and Fish Consumption (mg/l)[a]	Fish Con-sumption only (mg/l)	Acute (mg/l)	Chronic (mg/l)	1-Day Child (mg/l)	10-Day Child (mg/l)	Longer Term Child (mg/l)	Longer Term Adult (mg/l)	Lifetime Adult (mg/l)	Maximum Exposure Guidelines (mg/l)
Iron	0.3 S				0.3			1						
Lead	0.015 T	0			0.05		0.083 +	0.0032 +						0.02
Magnesium														
Manganese	0.05 S			0.2 L	0.05	1								0.2
Mercury	0.002	0.002			0.000144	0.000146	0.0024	0.000012				0.002	0.002	0.002
Nickel	0.1	0.1			0.0134	0.1	1.4 +	0.16 +	1	1	0.5	1.7	0.1	0.15
Potassium														
Selenium	0.05	0.05			0.01		0.02	0.005						0.01
Silver	0.1 S						0.0041	0.00012	0.2	0.2	0.2	0.2	0.1	0.05
Sodium														
Thallium	0.002	0.0005			0.013	0.048	1.4 *	0.04 *	0.007	0.007	0.007	0.02	0.0004	0.0004
Vanadium									0.08	0.08	0.03	0.11	0.02	
Zinc	5 S						0.12 +	0.11 +	6	6	3	12	2	
Cyanide			0.2	0.2	0.2		0.022	0.0052	0.2	0.2	0.2	0.8	0.2	0.154

SOURCES:
[a] – U.S. Environmental Protection Agency (USEPA), 1992. Fact Sheet: Drinking Water Regulations and Health Advisories. Office of Water, Washington D.C., December, 1992.
[b] – USEPA, 1991. Water Quality Criteria Summary. Office of Science and Technology, Washington, D.C., May 1, 1991.
[c] – State of Maine, 1992. Revised Maximum Exposure Guidelines. Department of Human Services, Augusta, Maine, September 1992.

NOTES:
* – Insufficient data to develop criteria. Value given is the lowest observed effect level.
+ – Hardness dependent criteria (100 mg/L $CaCO_3$ used)
** – pH dependent criteria (7.8 pH used)
L – Listed for regulation
P – Proposed criteria
R – Under review
S – Secondary Drinking Water Standard
T – Based on treatment technique. Value given is an action level.

ACRONYMS:
CWA – Clean Water Act
MCL – Maximum Contaminant Level
MCLG – Maximum Contaminant Level Goal
mg/l – milligrams per liter

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wildlife habitat and recreational uses such as boating, and other secondary contact recreational activities.

Federal Ambient Water Quality Criteria (AWQC) have been developed under the CWA (see Table A-2). The State of Maine has adopted AWQC in the Maine Regulations Relating to Water Quality Criteria for Toxic Pollutants and can develop criteria on a site-specific basis if federal criteria are not available. AWQC would be considered potentially applicable ARARs for these sites if protection of aquatic life is a concern or if human exposure from consumption of contaminated fish is a concern. However, AWQC values are not intended to be used as drinking water cleanup standards because no criteria are provided for human exposure from ingestion of water alone. The MCLG for carcinogens, zero, are not considered applicable or relevant and appropriate because they are health goals and cannot be measured.

Soils and Sediments: No federal or state regulations specify concentration limits for contaminants in soils or sediments. Risk assessment guidance and advisories are chemical-specific TBCs for soil and sediment. These guidance materials are presented in Table A-1.

A.2.2 Location-specific ARARs

Location-specific ARARs represent restrictions placed on the concentration of hazardous substances or the conduct of activities because of the location of a site. These ARARs set restrictions relative to special site features such as wetlands, floodplains, sensitive ecosystems, as well as historic or archeological sites, and provide a basis for assessing existing site conditions. Table A-3 presents site-specific federal and state standards, requirements, criteria, or limitations identified for the Swampy Road Debris and the Merriconeag Extension Debris Sites. Special features at these sites potentially regulated by location-specific ARARs include wetlands, endangered species, and archeological/historical sites. Many location-specific ARARs also fall under the definition of action-specific because the regulations do not apply unless some activity is conducted in the regulated area.

Wetlands and Floodplains: The streams at both sites and the pond at the Merriconeag Extension Debris Site constitute wetlands. Construction within wetlands is regulated under the National Environmental Protection Act (NEPA), the CWA, and the Maine Natural Resources Protection Act. Remedial actions addressing

TABLE A-3
POTENTIAL LOCATION-SPECIFIC ARARS, CRITERIA, ADVISORIES, AND GUIDANCE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

MEDIA	REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS
WETLANDS/FLOODPLAINS			
Federal	CWA Section 404	Applicable	Section 404 of the CWA regulates the discharge of dredged or fill material into U.S. waters, including wetlands. The purpose of Section 404 is to ensure that proposed discharges are evaluated with respect to impact on the aquatic ecosystem. If a remedial alternative involves dredged or fill material discharge to a wetland, a permit must be obtained from the U.S. Army Corps of Engineers.
	Protection of Wetlands Executive Order No. 11990 (40 CFR 6, Appendix C)	Applicable	Requires federal agencies to avoid, to the extent possible, the adverse impacts associated with the destruction or loss of wetlands and to avoid support of new construction in wetlands if a practical alternative exists.
	U.S. Army Corps of Engineers Permit Program Regulations (33 CFR 320-330)	Applicable	These regulations prescribe the statutory authorities, and general and special policies and procedures applicable to the review of applications for Department of Army permits for controlling certain activities in U.S. waters including discharge of dredged or fill material.
	Guidelines for Specification of Disposal Sites for Dredged or Fill Materials (40 CFR 230)	Applicable	These guidelines maintain that no dredged or fill material discharge will be permitted if there is a practicable alternative with less impact to the aquatic ecosystem. Discharge will also not be permitted unless steps are taken to minimize potential adverse impacts, or if it will cause or contribute to significant degradation of U.S. waters.
	Fish and Wildlife Coordination Act (40 CFR 302)	Applicable	This act requires that any federal agency proposing to modify a body of water must consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and other related state agencies.

continued

TABLE A-3
POTENTIAL LOCATION-SPECIFIC ARARS, CRITERIA, ADVISORIES, AND GUIDANCE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

MEDIA	REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS
	RCRA - General Facility Standards (40 CFR 264.10-264.18)	Relevant and Appropriate	A facility located in a 100-year floodplain must be designed, constructed, operated, and maintained to prevent washout of any hazardous wastes by a 100-year flood.
	Floodplain Management Executive Order No. 11968 (40 CFR 6, Appendix C)	Applicable	Requires federal agencies to evaluate the potential effects of adverse impacts to floodplains associated with direct and indirect development of a floodplain.
State	Maine Natural Resources Protection Act (38 MRSA, Section 480-A through S)	Applicable	This act outlines requirements for certain activities adjacent to any freshwater wetland greater than 10 acres or with an associated stream, brook, or pond or adjacent to a coastal wetland. The activities must not unreasonably interfere with certain natural features, such as natural flow or quality of any waters, nor harm significant aquatic habitat, freshwater fisheries, or other aquatic life.
	Natural Resources Protection Act, Permit by Rule Standards (MEDEP Regs, Chapter 305)	Applicable	This rule outlines prescribed standards for specific activities that may take place in or adjacent to wetlands and water bodies.
	Maine Hazardous Waste Management Rules (MEDEP Regs, 800-802, 850, 851, 853-857)	Applicable	These rules correspond to RCRA hazardous waste requirements and outline the criteria for the siting of a new facility. No portion of a treatment facility may be located within a wetland or within 300 feet of any 100-year floodplain.
State Guidance and Advisories to be Considered	Town Shoreland Zoning Ordinances and State Minimum Guidelines	To Be Considered	These minimum guidelines and town ordinances apply to activities proposed within 200 feet of a high water mark of a stream or other body of water.

continued

TABLE A-3
POTENTIAL LOCATION-SPECIFIC ARARS, CRITERIA, ADVISORIES, AND GUIDANCE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

MEDIA	REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS
ENDANGERED SPECIES			
Federal	Endangered Species Act (50 CFR 402)	Applicable	This act requires action to avoid jeopardizing the continued existence of listed endangered species or notification of their habitat.
State	Maine Inland Fisheries and Wildlife Laws and Regulations (12 MRSA Chapter 713, Section 7751)	Applicable	The State of Maine has authority to research, list, and protect any species deemed endangered or threatened. These species are listed as either endangered or threatened in the state regulations. The Maine Department of Inland Fisheries and Wildlife has also developed the following administrative categories for species not considered endangered or threatened but considered important for research and further evaluation: Maine Watch List, Special Concern List, and Indeterminate Category. The Department determines appropriate use(s) of various habitats on a case-by-case basis. The Maine lists may differ from the federal lists of endangered species.
State Guidance and Advisories To Be Considered	Maine Critical Areas Program and Maine Natural Heritage Program	To Be Considered	These state programs issue policies and regulations governing special habitats or communities.
	Maine Critical Areas Act (5 MRSA 3310 through 3316)	To Be Considered	This nonregulatory legislation allows Maine agencies such as the Critical Areas Program and the Natural Heritage Areas Program to identify, research, and protect critical areas and endangered or threatened plants.

continued

TABLE A-3
POTENTIAL LOCATION-SPECIFIC ARARS, CRITERIA, ADVISORIES, AND GUIDANCE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

MEDIA	REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS
ARCHEOLOGICAL AND HISTORICAL PRESERVATION			
Federal	Archaeological and Historical Preservation Act (40 CFR 6)	Applicable	Establishes procedures to provide for preservation of historical and archaeological data which might be destroyed through alteration of terrain as a result of a federal construction project or a federally licensed activity or program.
	Historic Sites, Buildings and Antiquities Act (40 CFR 6)	Applicable	Requires federal agencies to consider the existence and location of landmarks on the National Registry of Natural Landmarks to avoid undesirable impacts on such landmarks.
	National Historic Preservation Act (16 CFR 470)	Applicable	Requires federal agencies to consider the effect of any federally assisted undertaking or licensing on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places.
OTHER NATURAL RESOURCES			
State	Maine Standards for Classification of Groundwater (38 MRSA, Section 470)	Applicable	This law requires the classification of the state's groundwater to protect, conserve, and maintain groundwater resources in the interest of the health, safety, and general welfare of the people of the state.
	Maine Standards for Classification of Minor Drainages (38 MRSA, Section 468)	Applicable	By default, these streams are classified as a Class B water under the state water quality standards.

continued

TABLE A-3
POTENTIAL LOCATION-SPECIFIC ARARS, CRITERIA, ADVISORIES, AND GUIDANCE

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

MEDIA	REQUIREMENT	STATUS	REQUIREMENT SYNOPSIS
	Maine Site Location Development Law and Regulations (38 MRSA Sections 481-490; MEDEP Regs, Chapters 371-377)	Applicable	This act and regulations govern the drilling for natural resources and include hazardous activities that consume, generate, or handle hazardous wastes and oil. Activities cannot adversely affect existing uses, scenic character, or natural resources in the municipality or neighboring municipality.
	Maine Solid Waste Management Rules: Landfill Disposal Facilities (38 MRSA, Section 1301 et seq.; MEDEP Regs, Chapters 400-406)	Applicable	These regulations outline landfill siting requirements including minimum distances to aquifers, bedrock, and geologic faults.

Notes:

ARARs = Applicable or Relevant and Appropriate Requirements
CFR = Code of Federal Regulations
CWA = Clean Water Act
MEDEP = Maine Department of Environmental Protection
MRSA = Maine Revised Statutes Annotated
NAS = Naval Air Station
RCRA = Resource Conservation and Recovery Act

contaminated sediments and surface waters should meet the substantive requirements of these regulations. NEPA requires that federal agencies include, in their decision-making processes, appropriate and careful consideration of all environmental effects of proposed actions, avoid or minimize adverse effects of the proposed actions, and restore and enhance environmental quality as much as possible. An alternative located in a wetland or floodplain may not be selected unless a determination is made that no practicable alternative exists outside the wetland or floodplain. If no practicable alternative exists, potential harm must be minimized and action taken to restore and preserve natural and beneficial value. Additionally, Section 404 of the CWA regulates discharge of dredged and fill materials to waters of the United States. Remedial actions within wetlands would have to comply with the requirements of Section 404. These regulations along with state statutes provide direction with respect to management of dredged materials.

For alternatives proposing construction in or discharge of dredge or fill material to a river or wetland, the U.S. Army Corps of Engineers must be consulted, and a permit may be required. For proposed discharges to surface water, the Fish and Wildlife Coordination Act, which requires USEPA to notify various federal agencies of the proposed action, applies.

Endangered Species: The Fish and Wildlife Coordination Act (16 USC 661 *et seq.*) requires that before issuing a federal permit or undertaking any federal action that causes the impoundment, diversion, or other control or modification of any body of water, the applicable federal agency must consult with (1) the appropriate state agency exercising jurisdictions over wildlife resources, (2) the U.S. Fish and Wildlife Service, and (3) the National Marine Fisheries Service. Under 40 CFR 6.302(f), reports and recommendations of wildlife agencies should be incorporated into environmental assessments. The Maine Inland Fisheries and Wildlife Laws and Regulations protect listed endangered species.

Archeological and Historical Preservation: The Archaeological and Historical Preservation Act established procedures for registration and protection of historic and archeological data. Before the selection and initiation of a remedial action, a evaluation should be made that no archaeological or historical data would be disturbed.

A.2.3 Action-specific ARARs

Action-specific ARARs provide a basis for screening remedial technologies, developing remedial alternatives, and assessing the feasibility and effectiveness of each remedial alternative. Action-specific ARARs, unlike location- and chemical-specific ARARs, are usually technology- or activity-based limitations that direct how remedial actions are conducted. The applicability of this set of requirements is directly related to the particular remedial activities selected for the site. Table A-4 is an initial identification of those requirements typically associated with remedial actions at CERCLA sites. The following subsections provide an overview of the requirements identified in the tables. Because identification of ARARs is an iterative process to be conducted throughout remedial response, the list of requirements identified for each site and their relevance may change as more information is obtained. This is relevant to the identification of potential action-specific ARARs because until remedial alternatives are developed and screened for each site, only an initial identification of a broad range of environmental and worker safety regulations can be made. This list will change and become more refined as possible remedial actions are developed for these sites. Resource Conservation and Recovery Act (RCRA) requirements contained within 40 CFR 261 through 268 are generally considered relevant and appropriate for remedial actions implemented under CERCLA. These requirements apply to the generation, handling, treatment, storage, and disposal of hazardous wastes. Technical requirements for specific units, such as landfills, waste piles, and incinerators, are delineated within 40 CFR 264 (Subparts I through X). These requirements are usually considered relevant and appropriate for remedial alternatives proposing to manage waste considered sufficiently similar to RCRA hazardous waste. Compliance with RCRA technical standards for various treatment units confirms the waste will be handled properly and safely. Conditions stipulated within 40 CFR 264.18 (specifying location standards for new hazardous waste treatment, storage, or disposal facilities) apply to alternatives proposing to locate and construct new hazardous waste treatment or disposal units.

RCRA requirements applicable to alternatives involving off-site treatment or disposal that are relevant and appropriate to on-site treatment approaches include standards for owners and operators of permitted hazardous waste facilities (i.e., preparedness and prevention, contingency plan and emergency procedures, recordkeeping and reporting, and groundwater monitoring). In addition, these alternatives should meet the intent of RCRA closure and post-closure requirements. Releases of RCRA

TABLE A-4
POTENTIAL ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

REQUIREMENT	REQUIREMENT SYNOPSIS
Federal	
RCRA - Identification and Listing of Hazardous Waste (40 CFR 261)	Defines those solid wastes subject to regulation as hazardous wastes.
RCRA - Standards Applicable to Generators of Hazardous Waste (40 CFR 262)	This requirement sets standards for generators of hazardous waste that address (1) accumulating waste, (2) preparing hazardous waste for shipment, and (3) preparing the uniform hazardous waste manifest. These requirements are integrated with DOT regulations.
RCRA - Standards Applicable to Transporters of Hazardous Waste (40 CFR 263)	Establishes procedures for transporters of hazardous waste within the U.S. if the transportation requires a manifest under 40 CFR 262.
RCRA - Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities (40 CFR 264)	Establishes minimum national standards which define the acceptable management of hazardous wastes for owners and operators of facilities which treat, store, or dispose of hazardous wastes.
RCRA - General Facility Standards (40 CFR 264.10-264.18)	General facility requirements outline general waste analysis, security measures, inspections, and training requirements.
RCRA - Preparedness and Prevention (40 CFR 264.30-264.37)	This regulation outlines requirements for safety equipment and spill control for hazardous waste facilities. Part of the regulation includes a requirement that facilities be designed, maintained, constructed, and operated to minimize the possibility of an unplanned release that could threaten human health or the environment.
RCRA - Contingency Plan and Emergency Procedures (40 CFR 264.50-264.56)	This regulation outlines the requirements for emergency procedures to be used following explosions, fires, etc.
RCRA - Manifest System, Recordkeeping, and Reporting (40 CFR 264.70 - 264.77)	Outlines procedures for manifesting hazardous waste for owners and operators of on-site and off-site facilities that treat, store, or dispose of hazardous waste.

continued

TABLE A-4
POTENTIAL ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

REQUIREMENT	REQUIREMENT SYNOPSIS
RCRA - Releases from Solid Waste Management Units (40 CFR 264.90-264.109)	This regulation details groundwater monitoring requirements for hazardous waste treatment facilities. The regulation outlines general groundwater monitoring standards, as well as standards for detection monitoring, compliance monitoring, and corrective action monitoring.
RCRA - Closure and Post-closure (40 CFR 264.110-264.120)	This regulation details general requirements for closure and post-closure of hazardous waste facilities, including installation of a groundwater monitoring program.
RCRA - Waste Piles (40 CFR 264.250-264.269)	This regulation details procedures, operating requirements, and closure and post-closure for waste piles. If removal or decontamination of all contaminated subsoils is not possible, closure and post-closure requirements for landfills must be attained.
RCRA - Landfills (40 CFR 264.300-264.339)	This regulation details the design, operation, monitoring, inspection, recordkeeping, closure, and permit requirements for a RCRA landfill. Two liners must be installed to prevent groundwater contamination. A leachate collection system must be placed above and between the liner systems.
RCRA - Incinerators (40 CFR 264.340-264.599)	This regulation specifies the performance standards, operating requirements and monitoring, inspection, and closure guidelines of any incinerator burning hazardous waste.
RCRA - Miscellaneous Units (40 CFR 264.600-264.999)	These standards are applicable to miscellaneous units not previously defined under existing RCRA regulations. Subpart X outlines performance requirements that miscellaneous units be designed, constructed, operated, and maintained to prevent releases to the subsurface, groundwater, surface water, and wetlands that may have adverse effects on human health and the environment.

continued

TABLE A-4
POTENTIAL ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

REQUIREMENT	REQUIREMENT SYNOPSIS
RCRA - Interim Status TSDF Standards; Thermal Treatment (40 CFR, 265.370 - 265.383)	General operating, waste analysis, monitoring/inspection, and closure requirements for thermal treatment facilities (other than facilities which use enclosed devices with controlled flame combustion), are established. This rule also prohibits open burning of hazardous waste, except for the open burning and detonation of waste explosives.
RCRA - Interim Status TSDF Standards; Chemical, Physical, and Biological Treatment (40 CFR 265.400 -265.406)	The requirements established in this rule apply to owners and operators of facilities which treat hazardous waste by chemical, physical, or biological methods in other than tanks, surface impoundments, and land treatment facilities. General operating, waste analysis and trial test, inspection, and closure requirements are established. Special requirements for ignitable or reactive wastes and incompatible wastes are also established.
RCRA - Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities (40 CFR 266)	Part 256 deals with both recycling/reuse activities and types of wastes being recycled or reused.
RCRA Land Disposal Restrictions (40 CFR 268)	Land disposal of RCRA hazardous wastes is restricted without specified treatment. It must be determined that the waste, beyond a reasonable doubt, meets the definition of one of the specified restricted wastes and the remedial action must constitute "placement" for the land disposal restrictions to be considered applicable. For each hazardous waste, the LDRs specify that the waste must be treated either by a treatment technology or to a concentration level prior to disposal in a RCRA Subtitle C permitted facility.
RCRA - Land Disposal Restrictions for Newly Listed Wastes and Hazardous Debris (40 CFR 148, 260, 261, 262, 265, 270 and 271)	Provides several treatment options for the management and disposal of contaminated debris. Redefines indoor waste piles as "containment buildings" and provides design and operating standards which ensure containment of waste equivalent to the containment achieved by tanks.

continued

TABLE A-4
POTENTIAL ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

REQUIREMENT	REQUIREMENT SYNOPSIS
RCRA - Hazardous Waste Permit Program (40 CFR 270)	Establishes requirements for obtaining permits to treat, store, or dispose of hazardous wastes.
RCRA - Hazardous and Solid Waste Amendments, 1984 (HSWA) Section 3004(u) and (v) - Corrective Action Requirements	Establishes standards for owners and operators of permitted hazardous waste facilities (i.e., preparedness and prevention, contingency plan and emergency procedures, recordkeeping and reporting, and groundwater monitoring).
CWA - National Pollutant Discharge Elimination System (40 CFR 122 and 125)	Requires permit specifying the permissible concentration or level of contaminants in the effluent for the discharge of pollutants from any point source into waters of the U.S.
CWA - National Pretreatment Standards (40 CFR 403)	Sets pretreatment standards through the National Categorical Standards or the General Pretreatment Regulations, for the introduction of pollutants from non-domestic sources into POTWs, in order to control pollutants which pass through, cause interference, or are otherwise incompatible with treatment processes in a POTW.
Clean Air Act - National Primary and Secondary Ambient Air Quality Standards (40 CFR 50)	Primary ambient air quality standards define levels of air quality to protect public health. Secondary ambient air quality standards protect public welfare from known or anticipated adverse effects from pollutants.
CAA - New Source Performance Standards (40 CFR 60)	These standards limit the emissions of a number of different pollutants, including the six criteria pollutants as well as fluorides, sulfuric acid mist, and total reduced sulfur (including hydrogen sulfide).
CAA - National Emission Standards for Hazardous Air Pollutants (40 CFR 61)	Establishes emission levels for certain hazardous air pollutants, including asbestos.

continued

TABLE A-4
POTENTIAL ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

REQUIREMENT	REQUIREMENT SYNOPSIS
SDWA - Underground Injection Control Regulations (40 CFR 144, 146, 147, and 1000)	Establishes minimum program and performance standards for underground injection programs. Technical criteria and standards for siting, operation, maintenance, reporting, and recordkeeping are included in Part 146. Also requires protection of underground sources of drinking water.
USEPA Criteria for Classification of Solid Waste Disposal Facilities and Practices (40 CFR 257)	Establishes criteria for use under RCRA in determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on public health or the environment and thereby constitute prohibited open dumps.
OSHA - General Industry Standards (29 CFR 1910)	These regulations specify the 8-hour time-weighted average concentration for various organic compounds. Training requirements for workers at hazardous wastes operations are specified in 29 CFR 1910.120.
OSHA - Safety and Health Standards (29 CFR 1926)	This regulation specifies the type of safety equipment and procedures to be followed during site remediation.
OSHA - Recordkeeping, Reporting, and Related Regulations (29 CFR 1904)	This regulation outlines the recordkeeping and reporting requirements for an employer under OSHA.
DOT Rules for Transportation of Hazardous Materials (49 CFR 107, 171, 173, 178, and 179)	This regulation outlines procedures for the packaging, labeling, manifesting, and transporting of hazardous materials.
FIFRA (40 CFR Part 165)	FIFRA regulations include procedures for the storage and disposal of pesticides, pesticide-related wastes, and their containers.
<u>State</u>	
Maine Landfill Disposal Regulations (MEDEP Regs, Chapter 401)	These regulations outline the permitting requirements for waste disposal by landfill. Chapter 401 specifies closure and post-closure maintenance requirements.

continued

TABLE A-4
POTENTIAL ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

REQUIREMENT	REQUIREMENT SYNOPSIS
Maine Hazardous Waste Management Rules (MEDEP Regs, Chapters 800-802, 850, 851, 853-857)	The rules provide a comprehensive program for handling, storage, and recordkeeping at hazardous waste facilities. They supplement the RCRA regulations.
Maine Water Pollution Control Law: Conditions of Licenses (38 MRSA, Section 414-A)	Regulates the discharge of any pollutants. Specifies that the discharge, either by itself or combined with other discharges, will not lower the quality of any classified body of water. The discharge will be subject to effluent limitations that require application of the best practicable treatment.
Maine Water Pollution Control Law: Certain Deposits and Discharges Prohibited (38 MRSA, Section 420)	No person, firm, corporation, or other legal entity shall place, deposit, discharge, or spill mercury or toxic or hazardous substances, either directly or indirectly, into the inland groundwater or surface waters, tidal waters, on the ice, or on the banks thereof, so that the same may flow or be washed into such waters, or in such a manner that the drainage therefrom may flow into such waters.
Establishment of Air Quality Regions (38 MRSA, Section 583; MEDEP Regs, Chapter 114)	The Metropolitan Portland Air Quality Region is Class II.
Maine Ambient Air Quality Standards (38 MRSA, Section 584; MEDEP Regs, Chapter 110)	This Chapter establishes ambient air quality standards that are maximum levels of a particular pollutant permitted in the ambient air.
Maine Emission License Regulations (38 MRSA, Section 585, 590; MEDEP Regs, Chapter 115)	These requirements specify who must obtain an air emissions license, application information, and standards and criteria that must be met.
Incinerator Particulate Emission Standard (38 MRSA Section 600; MEDEP Regs, Chapter 104)	Establishes limitations on the amount of particulate matter allowed to be emitted from several categories and sizes of incinerators, as well as a limitation on the capacity of emission from all incinerators.

continued

TABLE A-4
POTENTIAL ACTION-SPECIFIC APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

SWAMPY ROAD DEBRIS SITE
AND MERRICONEAG EXTENSION DEBRIS SITE

SITE INSPECTION
NAS BRUNSWICK

REQUIREMENT	REQUIREMENT SYNOPSIS
Maine Growth Offset Regulations (38 MRSA, Section 590; MEDEP Regs, Chapter 113)	This rule applies to new licenses for facilities in non-attainment areas. They require Reasonably Available Control Technology or better for the base case emission, and offset reductions from other facilities.
Maine Asbestos Abatement Regulations (MEDEP Regs, Chapter 136)	These regulations define requirements for the licensing of asbestos abatement contractors, workers, project supervisors, evaluation specialists, and design consultants, and training courses for each job category. These regulations also specify the minimum work practice requirements for asbestos abatement contractors.
<u>State Guidance and Criteria to be Considered</u>	
MEDEP, Bureau of Water Quality Control, Policy Number 10, "The Discharge of Hazardous Substances to Groundwaters of the State"	The Bureau will deny any applications for waste discharge licenses for the discharge to groundwaters of substances designated by the Board to be hazardous when such substances are present in concentrations exceeding groundwater levels which occur naturally in the area. Exemption may be granted if the groundwater is treated to reduce the concentrations of pollutants discharged to below the level considered safe for drinking water.

Notes:

CDRs	=	Land Disposal Retrictions			
CFR	=	Code of Federal Regulations	NAS	=	Naval Air Station
CAA	=	Clean Air Act	OSHA	=	Occupational Safety and Health Administration
CWA	=	Clean Water Act	POTW	=	publicly owned treatment works
DOT	=	Department of Transportation (U.S.)	RCRA	=	Resource Conservation and Recovery Act
FIFRA	=	Federal Insecticide, Fungicide, and Rodenticide Act	SDWA	=	Safe Drinking Water Act
HSWA	=	Hazardous and Solid Waste Amendments	TSDF	=	Treatment, Storage, and Disposal Facilities
LDR	=	Land Disposal Restriction			
MEDEP	=	Maine Department of Environmental Protection	USEPA	=	U.S. Environmental Protection Agency
MRSA	=	Maine Revised Statutes Annotated			

hazardous constituents into all media, on or off-site, are subject to the Hazardous and Solid Waste Amendments of 1984, Section 3004(u) and (v) corrective action requirements. However, because the corrective action requirements are only now being developed by USEPA, CERCLA remedial actions must continue to operate within the existing RCRA requirements.

For alternatives involving disposal of hazardous wastes, the RCRA Land Disposal Restrictions (LDRs) (40 CFR 268) may be ARARs. When RCRA-hazardous wastes are moved, disturbed, or physically altered during a remedial action, LDRs require that the waste be treated to specified Best Demonstrated Available Technology or concentration-based levels before the waste can be placed or replaced on land. The LDRs also prohibit storage of hazardous waste, except for accumulation to facilitate recovery, treatment, or disposal. Under the LDRs, treatment standards have been established for all RCRA-listed hazardous wastes and California List wastes. Currently, LDRs also apply to RCRA-characteristic hazardous waste but are not consistently applied to contaminated soil and debris. A final determination by regulatory authorities will be necessary to facilitate selection of a remedial action.

RCRA regulations are supplemented by the Maine Hazardous Waste Management Rules. These rules govern the handling, storage, and recordkeeping at hazardous waste facilities.

Several regulations promulgated under the CWA and the state statutes apply when considering alternatives that involve groundwater treatment, and discharges to either groundwater, surface water, or publicly owned treatment works (POTWs). The CWA National Pollutant Discharge Elimination System requires permit applications for all point-source surface water discharges. Best Management Practices may be required that include, but are not limited to, requirements for compliance with water quality standards, a discharge monitoring system, and records maintenance. CWA Pretreatment Standards (40 CFR 403) apply to discharges to a POTW. The Maine Water Pollution Control Law regulates discharge of pollutants to inland surface water or groundwater.

Remedial alternatives involving emissions to the atmosphere must comply with the Clean Air Act Ambient National Air Quality Standards of 40 CFR 50 and the Maine Ambient Air Quality Standards. In addition, the Maine Emission License Regulations establish air emission and ambient air quality standards for specified processes.

Occupational Safety and Health Administration standards defined within 29 CFR 1904, 1910, and 1926 apply to worker safety and require employers to communicate risks at the workplace to employees.

For alternatives proposing to transport hazardous wastes or substances off site, the U.S. regulations (49 CFR 171 through 179) and RCRA transportation regulations (40 CFR 263) must be followed. These regulations specify that vehicles and operators involved in transporting hazardous wastes comply with packaging, labeling, and shipping standards.

APPENDIX B

TEST PIT LOGS

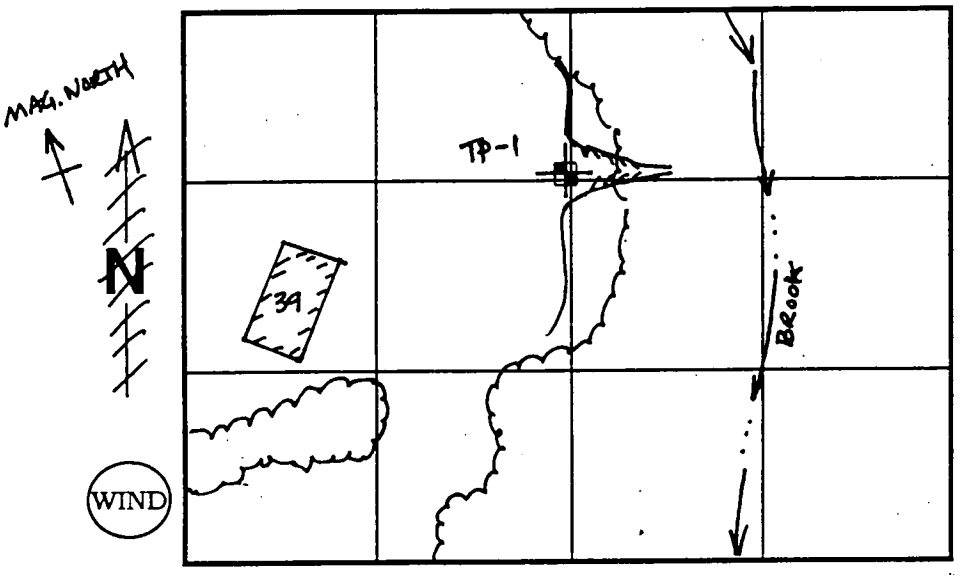
NASB TEST PIT RECORD

SITE SWAMPY ROAD

TEST PIT TP-1 DATE 11-4-92 TIME 13:20 END 14:30

COORDINATES _____ GRID ELEMENT _____

SKETCH MAP OF TEST PIT SITE



SCALE 1" = 100 FT.

CREW MEMBERS:

1. T. Longley – ABB
2. B. Schoonard – ABB
3. D. Blanchette – EARTHWORKS
4. J. SHARP – EARTHWORKS
5.
6.

MONITOR EQUIPMENT:

PI Meter	(Y)	N
Explosive Gas	Y	N
Avail. Oxygen	Y	N
OVA	Y	N

Other _____

Photographs, Roll #1

Exposure 1,2,3,4,5,6,7

NOTES:

TARGET ON MAG. SURVEY GRID AT 340N-60W.

SITE HAS MUCH SURFACE DEBRIS, METAL TRASH, DRUMS, etc. WOULD LEAD TO LARGE MAG. ANOMALY. AREA IS NATURAL GULLY ON LIP OF LARGER GULLY FORMED BY THE STREAM. THIS SMALLER GULLY WAS AREA THAT HAS ACCEPTED SURFACE TRASH OVER LONG PERIOD OF TIME.

2:10 p.m. M. Hubert, DEP, ARRIVES.

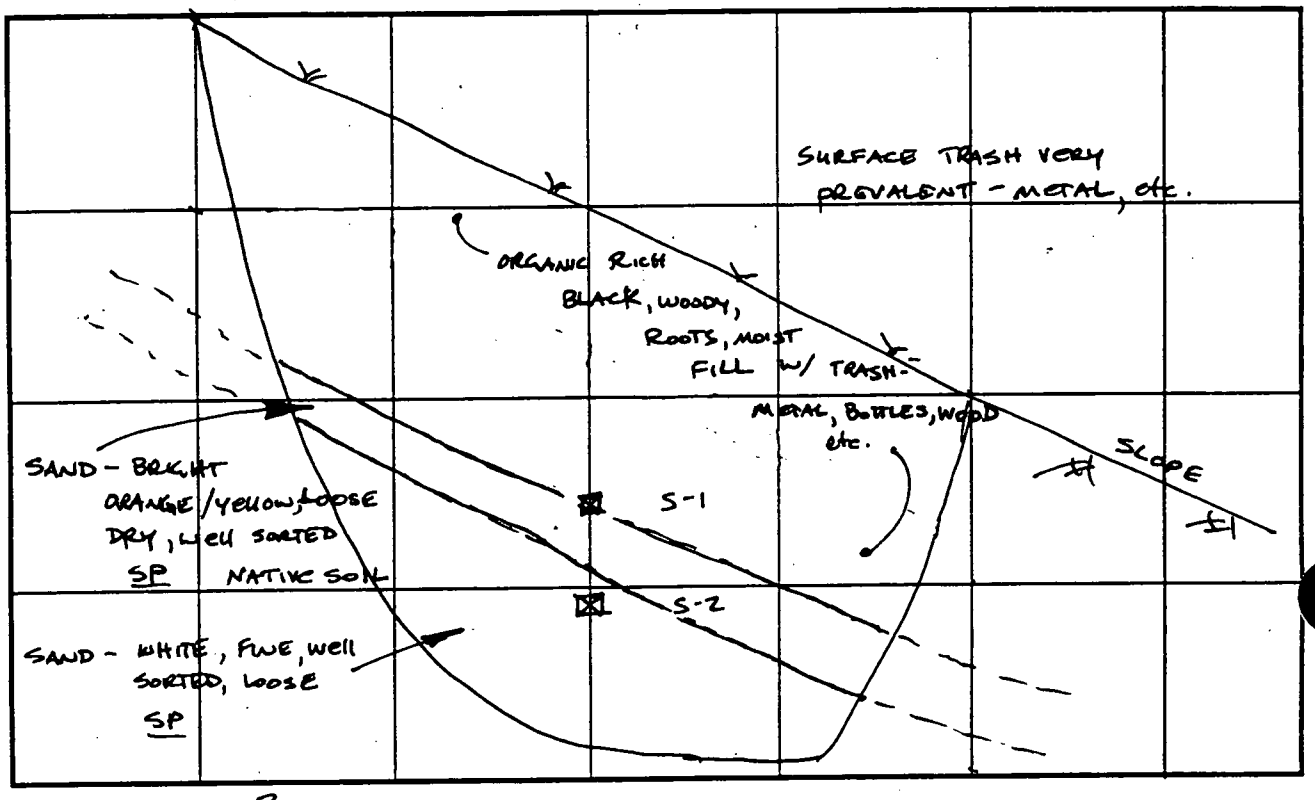
ABB Environmental Services, Inc.

9009053T

NASB TEST PIT RECORD

Profile Along Test Pit- TP-1 SWAMPY ROAD

SKETCH MAP OF TEST PIT PROFILE



SCALE 1" = 2 FT.
DEPTH (FT.)

NOTES:

S-1 SRPSXX1XX301XX
Sample of oily substance in sheared-off square bottle (by backhoe bucket). This bottle is at ~3' depth at fill/soil interface

S-2 SRPSXX1XX401XX
Sample of native soil below glass bottle

SAMPLES OBTAINED:

No.	Int. Ser. No.	Depth (Ft.)	HD. SP. VOA PPM
S-1	37-41	3	3 ppm
S-2	200-204	4	—
S-3			
S-4			
S-5			
S-6			
S-7			
S-8			

REFERENCE: Field Book, Pg. _____

Attachments _____

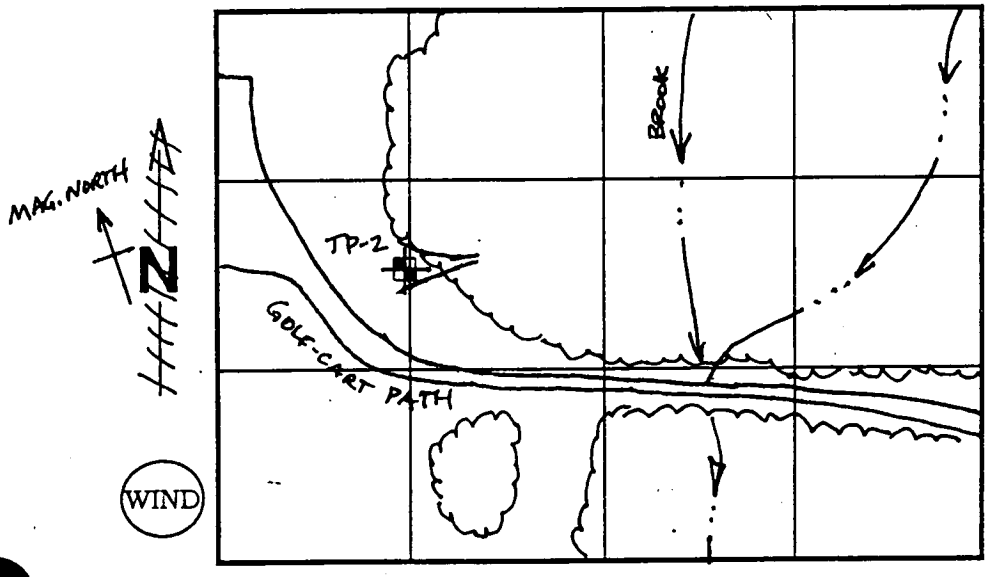
SIGNATURE: _____

ABB Environmental Services, Inc.

NASB TEST PIT RECORD

SITE SWAMPY ROAD
TEST PIT TP-2 DATE 11-4-92 TIME 14:45 END 15:20
COORDINATES _____ GRID ELEMENT _____

SKETCH MAP OF TEST PIT SITE



SCALE 1" = 100 FT.

CREW MEMBERS:

1. T. Langley
2. B. Schoonard
} ABB
3. D. Blanchette
4. J. Sharp
} Earthworks
5.
6.

MONITOR EQUIPMENT:

PI Meter	(Y)	N
Explosive Gas	Y	N
Avail. Oxygen	Y	N
OVA	Y	N

Other _____

Photographs, Roll #1
Exposure 8, 9, 10

NOTES:

TARGET IS MAG. SURVEY COORDINATES 60N-120W

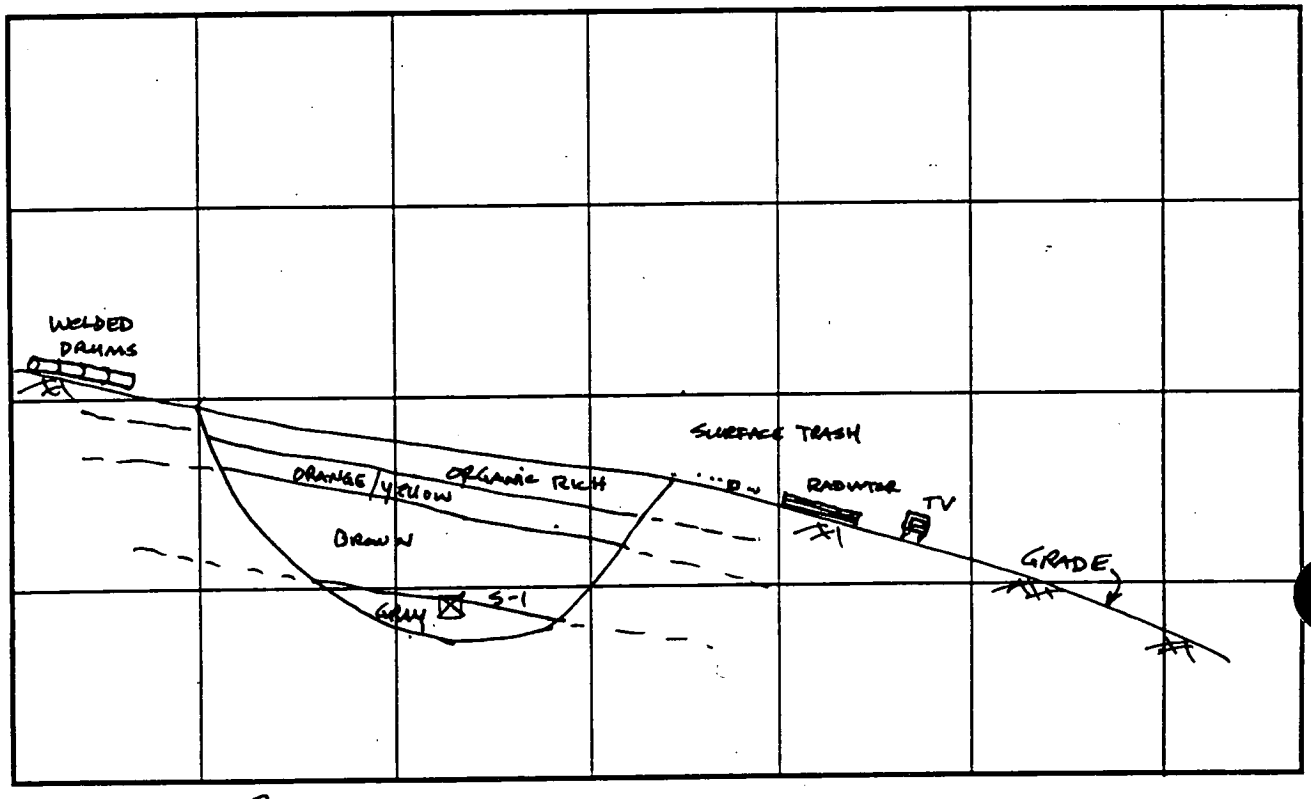
LOCATION IS A FEEDER GULLY TO THE MAIN GULLY CAUSED BY THE BROOK. ASSORTED REFUSE IS WITHIN THE GULLY - LARGE CAST IRON RADIATOR, 4 DRUMS WELDED END-TO-END TO MAKE HOME-MADE CULVERT, TV, CANS, PIPING, etc. TRASH APPEARS TO BE ON THE SURFACE & NOT BURIED

ABB Environmental Services, Inc.

NASB TEST PIT RECORD

Profile Along Test Pit- TP-2 SWAMPY ROAD

SKETCH MAP OF TEST PIT PROFILE



SCALE 1" = 2 FT.
DEPTH (FT.)

NOTES:

S-1 SRPSXX2XX201XX

DUG 2 TEST PITS IN THIS GULLY - BOTH WERE IDENTICAL STRATIGRAPHICALLY. ABOUT 10' FROM EACH OTHER

0-4" ORGANIC LAYER - DEEP BROWN TO BLACK
4"-8" BRIGHT ORANGE & YELLOW FINE SAND, WELL SORTED, LOOSE, DRY, NATURAL SOIL - SP
8"-18" BROWN LOAMY SAND, MANY ROOTS, LOOSE
18"-24" GRAY FINE SAND, LOOSE, DRY SP

SAMPLES OBTAINED:

No.	Int. Ser. No.	Depth (Ft.)	HD. SP. VOA PPM
S-1	43-48	2	—
S-2			
S-3			
S-4			
S-5			
S-6			
S-7			
S-8			

REFERENCE: Field Book, Pg. _____

Attachments _____

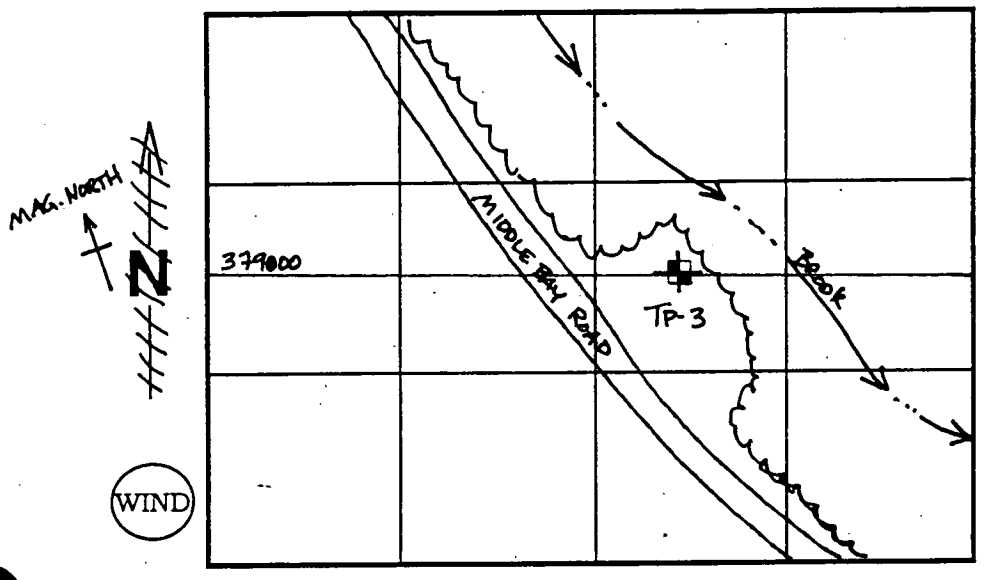
SIGNATURE: _____

ABB Environmental Services, Inc.

NASB TEST PIT RECORD

SITE SWAMPY ROAD
TEST PIT TP-3 DATE 11-4-92 TIME 15:45 END 16:25
COORDINATES _____ GRID ELEMENT _____

SKETCH MAP OF TEST PIT SITE



SCALE 1" = 100 FT.

CREW MEMBERS:

1. T. LONGLEY } ABB
2. B. SCHOONARD
3. D. BLANCHETTE } EARTHWORKS
4. J. SHARP
5.
6.

MONITOR EQUIPMENT:

PI Meter	(Y)	N
Explosive Gas	Y	N
Avail. Oxygen	Y	N
OVA	Y	N

Other _____

Photographs, Roll #1

Exposure 11, 12

NOTES:

TARGET IS MAG. SURVEY COORDINATES 480S-180E

LOCATION IS PART OF AREA COVERED WITH BURDOCKS THAT APPEARS TO HAVE RECEIVED SOIL & TRASH - CONVENIENT AREA TO DISCARD DUE TO GULLY. MAG. TARGET APPEARS TO BE METAL FLASHING, ON BANK OF GULLY

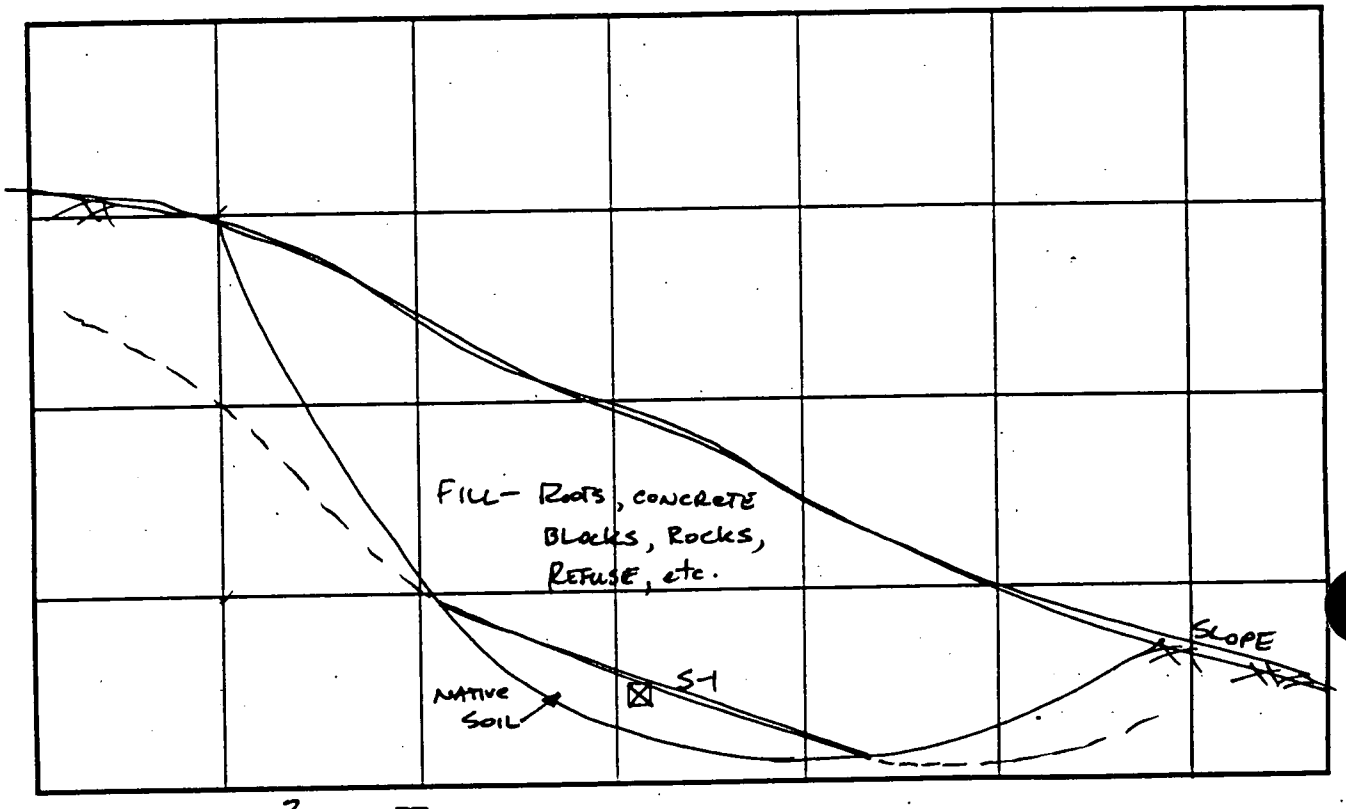
15:45 MARK HYLAND, DON CALE (ME. DEP) & LT. ZAP OF BASE ENVIRONMENTAL ARRIVE

ABB Environmental Services, Inc.

9009053T

Profile Along Test Pit- TP-3 SWAMPY ROAD

SKETCH MAP OF TEST PIT PROFILE



SCALE 1" = 2 FT.
DEPTH (FT.)

NOTES:

S-1 SRPSXX3XX401XX

0-3' DEEP BROWN SILTY SAND, MOIST, ORGANIC RICH W/ REFUSE THROUGHOUT - CONCRETE BLOCKS, ROCKS, ROOTS, etc. - FILL
- LEACHED ZONE BELOW FILL ABOVE NATIVE SOIL -
3'-5' BRIGHT ORANGE YELLOW FINE SAND, LOOSE, WELL SORTED - SP
NATIVE SOIL.

SAMPLES OBTAINED:

No.	Int. Ser. No.	Depth (Ft.)	HD. SP. VOA PPM
S-1	49-54	4	0
S-2			
S-3			
S-4			
S-5			
S-6			
S-7			
S-8			

REFERENCE: Field Book, Pg. _____

Attachments _____

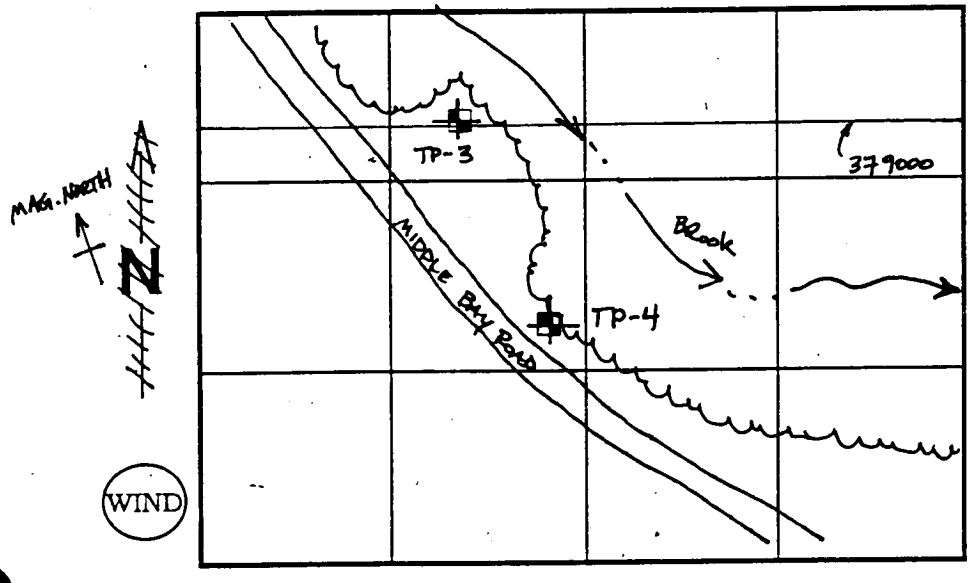
SIGNATURE: _____

ABB Environmental Services, Inc.

NASB TEST PIT RECORD

SITE SWAMPY ROAD
TEST PIT TP-4 DATE 11-5-92 TIME 08:00 END 08:30
COORDINATES _____ GRID ELEMENT _____

SKETCH MAP OF TEST PIT SITE



SCALE 1" = 100 FT.

CREW MEMBERS:

1. T. LONGLEY } ABB
2. B. SCHOONARD
3. J. SHARP } EARTHWORKS
4. D. BLANCHETTE
5.
6.

MONITOR EQUIPMENT:

PI Meter	(Y)	N
Explosive Gas	Y	N
Avail. Oxygen	Y	N
OVA	Y	N

Other _____

Photographs, Roll #1

Exposure 13,14

NOTES:

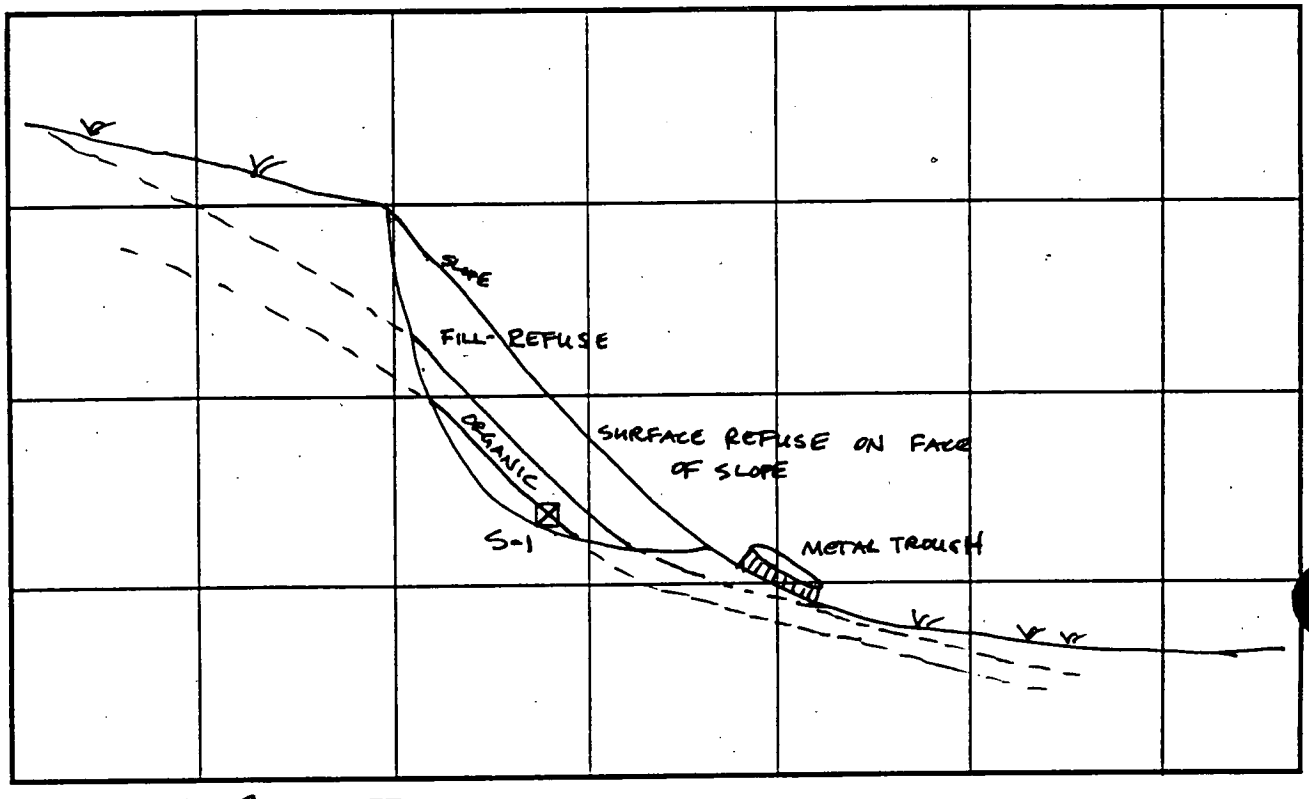
TARGET IS MAG. SURVEY COORDINATES 580S-220E

AS WITH TP-3, THIS AREA APPEARS TO HAVE ACCEPTED SOIL, REFUSE, ETC. OVER COURSE OF MANY YEARS. THE MAG. TARGET APPEARS TO BE A LARGE METAL WATER TROUGH - POSSIBLY USED AS WATER TROUGH FOR CATTLE MANY YEARS AGO WHEN AREA WAS FARMLAND.
TROUGH IS EXPOSED ALONG FACE OF SLOPE.

ABB Environmental Services, Inc.

Profile Along Test Pit- TP-4 SWAMPY ROAD

SKETCH MAP OF TEST PIT PROFILE



SCALE 1" = 2 FT.
DEPTH (FT.)

NOTES:

S-1 SRPS XX4 XX2 01XX

0-17" BROWN SILTY SAND, MOIST, MANY ROOTS- FILL- CONTAINS BRICKS, METAL, WOOD, etc. Throughout

17"-24" BLACK, ORGANIC RICH SILT & SAND, MANY ROOTS, SATURATED - NATURAL

24"-36" GRAY FINE SAND, SATURATED, TRACE SILT & CLAY SP-SM NATIVE

SAMPLES OBTAINED:

No.	Int. Ser. No.	Depth (Ft.)	HD. SP. VOA PPM
S-1	55-59	2	0
S-2			
S-3			
S-4			
S-5			
S-6			
S-7			
S-8			

REFERENCE: Field Book, Pg. _____

Attachments _____

SIGNATURE: _____

ABB Environmental Services, Inc.

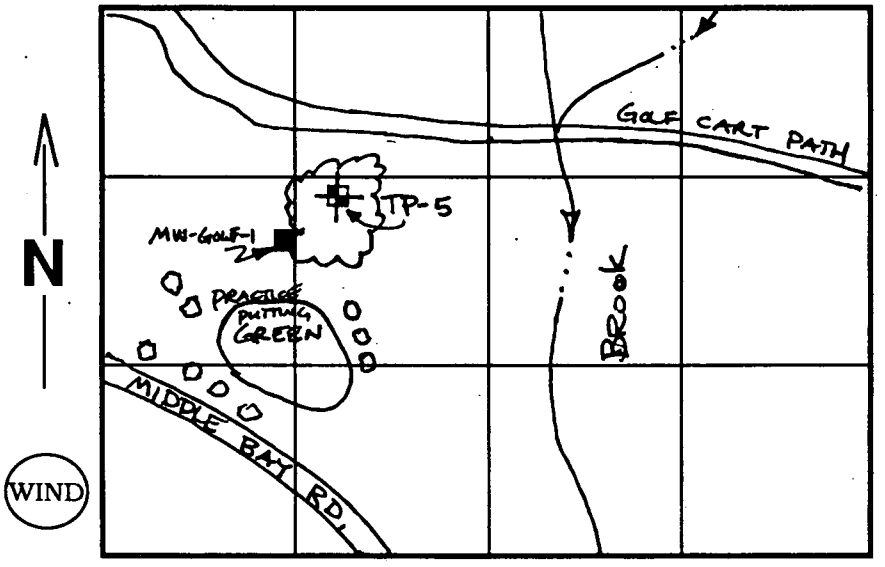
NASB TEST PIT RECORD

SITE SWAMPY ROAD

TEST PIT TP-5 DATE 11-5-92 TIME 09:10 END 09:30

COORDINATES _____ GRID ELEMENT _____

SKETCH MAP OF TEST PIT SITE



SCALE 1" = 100 FT.

CREW MEMBERS:

1. T. Langley
2. B. Schonard } ABB
3. D. BLANCHETTE
4. J. SHARP } EARTHworks
5.
6.

MONITOR EQUIPMENT:

PI Meter	(Y)	N
Explosive Gas	Y	N
Avail. Oxygen	Y	N
OVA	Y	N

Other RADIATION MONITOR

Photographs, Roll NO

Exposure

NOTES:

TARGET AREA WAS DETERMINED AS BEING CAUSED BY STEEL COVER OVER MW-GOLF-1. THIS WELL HAS ASSOCIATED BELOW GROUND PIPING & WIRING. TEST PIT WAS PLACED TO (1) MINIMIZE DAMAGE TO GOLF COURSE (2) EXCAVATE AS NEAR AS PRACTICAL TO MW-GOLF-1 WITHOUT DAMAGING BELOW-GROUND PIPING & WIRING.

AREA WITHIN TRIANGLE OF PUTTING GREEN-BROOK-GOLF CART PATH SHOWS SURFACE TRASH & RUBBLE. ALSO, THERE IS A STEEL BARBED WIRE FENCE (OLD & BROKEN BUT MORE-OR-LESS CONTINUOUS) FROM AREA JUST WEST OF TP-5 TO JUST EAST OF PRACTICE PUTTING GREEN.

BACKHOE EXCAVATED A SHALLOW PIT. SURFACE DEBRIS IS SHALLOW & MIXED W/ SURFACE DUFF & ORGANICS for APPROX. 6". SOIL BELOW ORGANICS IS NATURAL IN-PLACE SOILS, VERY brightly colored yellows & ORANGES, AND IS A FINE, WELL SORTED SAND. BECAUSE OF MAG. ANOMALY INTERP. AS BEING THE COVER TO THE WELL & SHALLOW SURFACE TRASH, DECISION WAS MADE TO COLLECT A SURFACE SOIL SAMPLE DOWNGRADIENT OF THIS AREA - THIS IS SS-5.

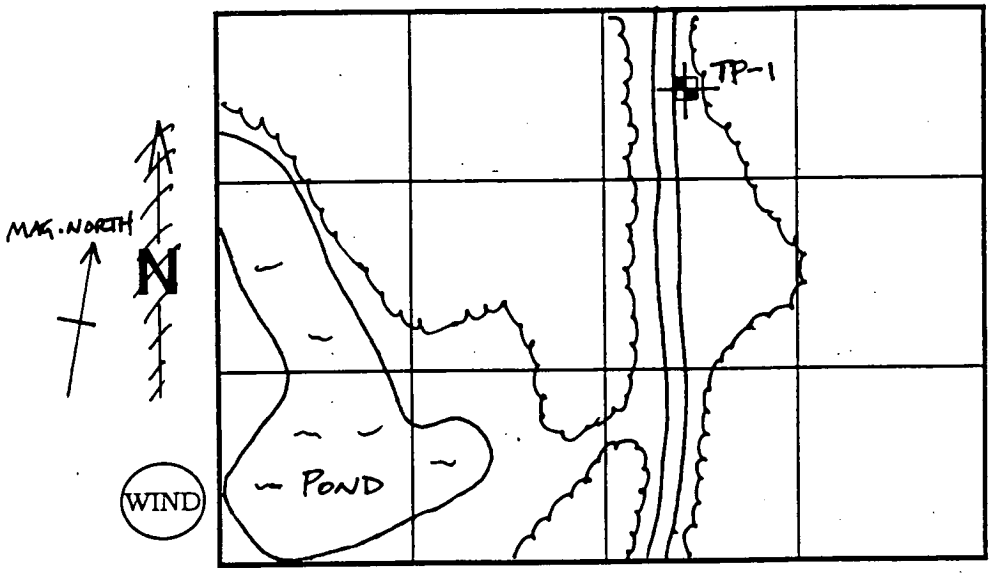
ABB Environmental Services, Inc.

9009053T

NASB TEST PIT RECORD

SITE MERRICONEAG EXTENSION
TEST PIT TP-1 DATE 11-4-92 TIME 10:10 END 10:45
COORDINATES _____ GRID ELEMENT _____

SKETCH MAP OF TEST PIT SITE



SCALE 1" = 100 FT.

CREW MEMBERS:

1. T. LONGLEY
2. B. SCHOONARD
3. D. BLANCHETTE
4. J. SHARP
5.
6.

MONITOR EQUIPMENT:

PI Meter	(Y)	N
Explosive Gas	Y	N
Avail. Oxygen	Y	N
OVA	Y	N

Other _____

Photographs, Roll #1

Exposure 14, 15

NOTES:

TARGET IS MAG. ANOMALY AT MAG. SURVEY COORDINATES 1400N - 920E

AT EDGE OF ROADWAY
WITH BACKHOE, SCRAPED AN AREA 10' X 20' up TO 2' DEEP & COULD NOT LOCATE CAUSE OF THE MAG. ANOMALY. NO SURFACE OR SUBSURFACE APPARENT CAUSE for THE MAG. RESPONSE.

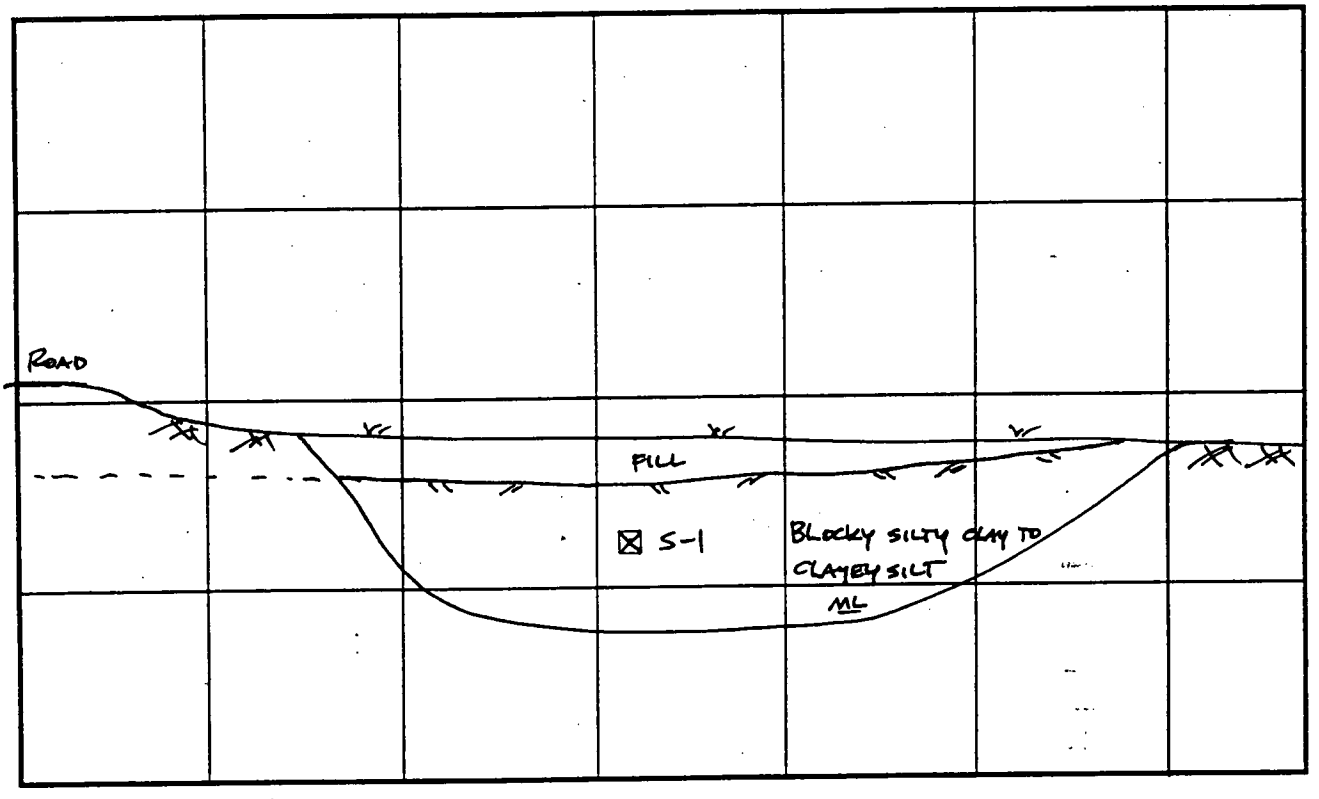
10:50 DICK BEHR, ME. DEP, ARRIVES ON SITE

ABB Environmental Services, Inc.

NASB TEST PIT RECORD

Profile Along Test Pit- TP-1 MERRICONEAG EXTENSION

SKETCH MAP OF TEST PIT PROFILE



SCALE 1" = 2 FT.
DEPTH (FT.)

NOTES: S-1 MEPSXX1XX101XX

AT EDGE OF ROADWAY

0-5" GRAVELLY SAND AND SILT, MOIST, LOOSE - FILL - FROM ROAD CONSTRUCTION - CONTAINS TAR PIECES FROM OLD ROAD SURFACE - BROUGHT IN AS FILL

5"-2' OLIVE GRAY CLAYEY SILT, NON-PLASTIC, DENSE, MOIST, BLOCKY, MARINE SEDIMENT ML

SAMPLES OBTAINED:

No.	Int. Ser. No.	Depth (Ft.)	HD. SP. VOA PPM
S-1	103-107	1	0 ppm
S-2			
S-3			
S-4			
S-5			
S-6			
S-7			
S-8			

REFERENCE: Field Book, Pg. _____

Attachments _____

SIGNATURE: _____

ABB Environmental Services, Inc.

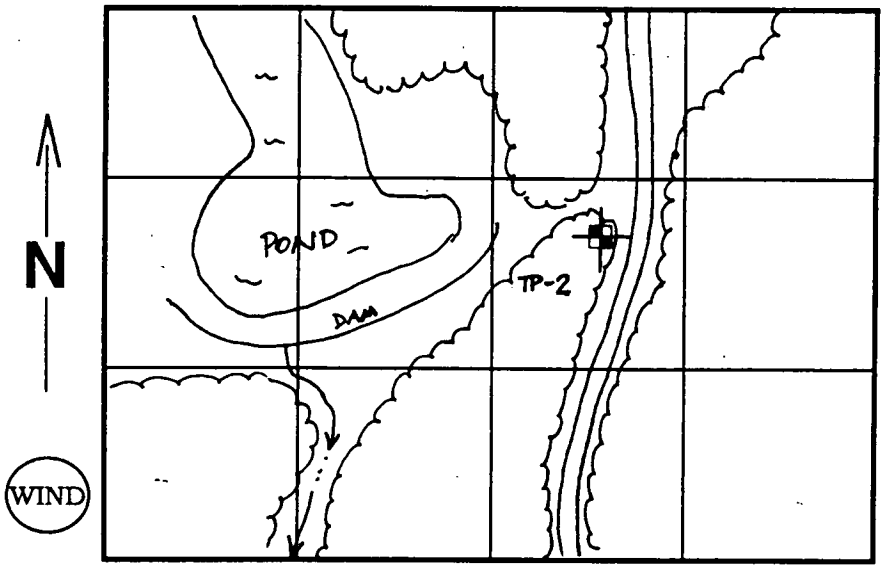
NASB TEST PIT RECORD

SITE MERRICONEAG EXTENSION

TEST PIT TP-2 DATE 11-5-92 TIME 13:00 END 13:25

COORDINATES _____ GRID ELEMENT _____

SKETCH MAP OF TEST PIT SITE



SCALE 1" = 100 FT.

CREW MEMBERS:

1. T. LONGLEY } ABB
2. B. SCHOONARD } ABB
3. D. BLANCHETTE - EARTHWORKS
4. R. BEHR - ME. DEP
5.
6.

MONITOR EQUIPMENT:

PI Meter	(Y)	N
Explosive Gas	Y	N
Avail. Oxygen	Y	N
OVA	Y	N

Other _____

Photographs, Roll #1

Exposure 17, 18

NOTES:

TARGET IS AREA OF DRUM PARTS. COORDINATES ON MAG. SURVEY ARE 1200N-880E. ONE OF 3 drum PARTS AT THIS LOCATION IS IDENTIFIED AS "CONTENTS- COMPLETE PARACHUTE ASSEMBLY." OTHER 2 DRUM PIECES ARE RUSTY & CRUSHED.

ME. DEP & ABB AGREE ON TEST PIT AT THIS LOCATION. NO OTHER TEST PITS ARE TO BE CONDUCTED AT MERRICONEAG EXTENSION SITE. 3 TOTAL WERE EXCAVATED HERE AT MERRICONEAG EXTENSION SITE.

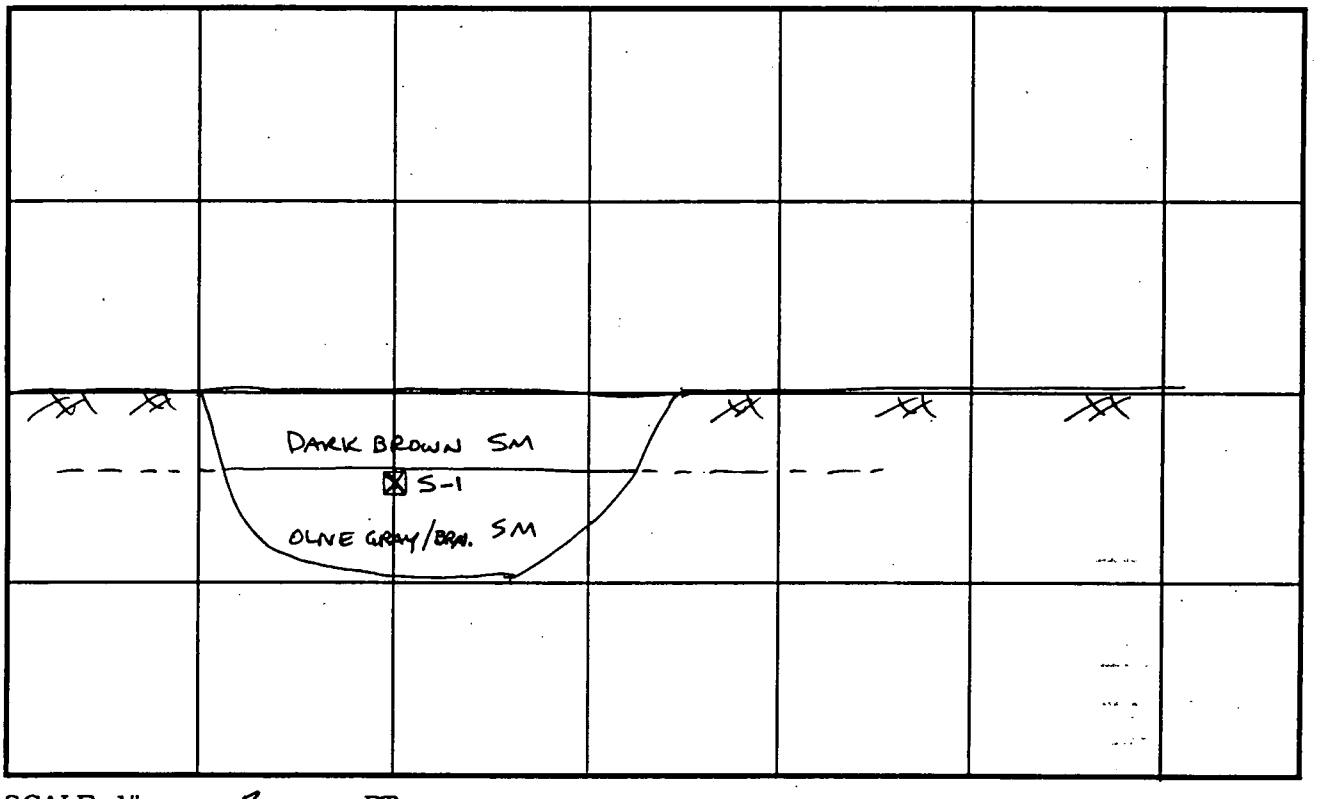
ABB Environmental Services, Inc.

9009053T

NASB TEST PIT RECORD

Profile Along Test Pit- TP-2 MERRICONEAG ROAD

SKETCH MAP OF TEST PIT PROFILE



SCALE 1" = 2 FT.
DEPTH (FT.)

NOTES:

S-1 MEPSXX2XX101XX

0-10" DARK BROWN SILTY SAND, MOIST, FRIABLE, MANY ROOTS. SM

10"-24" OLIVE-GRAY TO BROWN SILTY SAND TO SANDY SILT, DRY, FEW ROOTS

SAMPLES OBTAINED:

No.	Int. Ser. No.	Depth (Ft.)	HD. SP. VOA PPM
S-1	109-113	1	0
S-2			
S-3			
S-4			
S-5			
S-6			
S-7			
S-8			

REFERENCE: Field Book, Pg. _____

Attachments _____

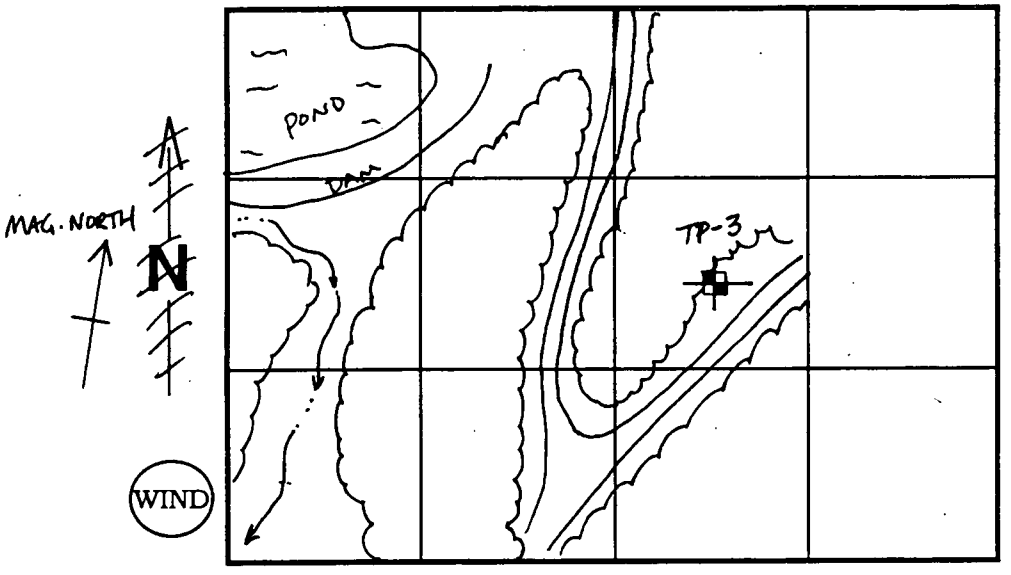
SIGNATURE: _____

ABB Environmental Services, Inc.

NASB TEST PIT RECORD

SITE MERRICONEAG EXTENSION
TEST PIT TP-3 DATE 11-5-92 TIME 10:50 END 11:30
COORDINATES _____ GRID ELEMENT _____

SKETCH MAP OF TEST PIT SITE



SCALE 1" = 100 FT.

CREW MEMBERS:

1. T. LONGLEY } ABB
2. B. SCHOONARD
3. D. BLANCHETTE } EARTHWORKS
4. J. SHARP
5. D. BEHR - ME. DEP
6. J. CARUTHERS - NASB ENV

MONITOR EQUIPMENT:

PI Meter	(Y)	N
Explosive Gas	Y	N
Avail. Oxygen	Y	N
OVA	Y	N

Other _____

Photographs, Roll #1

Exposure —

NOTES:

TARGET IS MAG. ANOMALY AT MAG. SURVEY COORDINATES 1100N-960E

AREA IS WET due to SEASONAL STREAM & DRAINAGE WAY. Backhoe excavation DID NOT Reveal SOURCE OF MAGNETOMETER ANOMALY. J. Caruthers OF NASB arrives with a metal DETECTOR, a SCHONSTEDT Magnetic LOCATOR MODEL GA-52C, AND A WALK-OVER OF This site GIVES NO positive Response. D. BEHR, T. LONGLEY, J. Caruthers WALK the site & check out other reported mag. ANOMALIES w/ this instrument - all are NEGATIVE IN Response except for obvious metal parts LOCATED IN the site inspection & MAG. SURVEY. Decision WAS MADE BY ALL present that one other TEST pit would be dug AT This site (TP-2). Other LOCATIONS will NOT be dug by backhoe based on findings w/ the Magnetic LOCATOR.

ABB Environmental Services, Inc.

APPENDIX C

FIELD DATA RECORDS

FIELD PARAMETERS

SITE INSPECTION SWAMPY ROAD DEBRIS SITE AND MERRICONEAG EXTENSION DEBRIS SITE NAS BRUNSWICK

LOCATION	DATE SAMPLED	TEMPERATURE (DEG. C)	pH	SPECIFIC CONDUCTIVITY (μMHOS/CM)
Swampy Road Debris Site				
SW-1	11-11-92	5.4	6.1	92
SW-2	11-10-92	1.8	7.3	89
SW-3	11-10-92	3.2	7.8	122
SW-4	11-10-92	1.7	7.2	79
SW-5	11-10-92	2.0	6.6	112
SW-6	11-10-92	2.1	7.8	72
SW-7	11-11-92	4.6	6.5	79
Well	11-11-92	8.2	6.6	197
Merriconeag Extension Debris Site				
SW-1	11-11-92	4.2	7.1	197
SW-2	11-11-92	3.9	7.5	55
SW-3	11-11-92	1.5	6.2	33
SW-4	11-11-92	5.2	7.2	52

W00129279.080/4

ABB ENVIRONMENTAL SERVICES INC.

FIELD INSTRUMENTATION & QUALITY ASSURANCE RECORD

PROJECT: NAS Brunswick | JOB NUMBER: 7126-01 | DATE: Nov 10 1992

FIELD INSTRUMENTATION CALIBRATION DATA

INSTRUMENT TYPE / I.D. # — CALIBRATION INFORMATION

CREW # 1	USE	TEMP COMP.	BUFFERS USED / METER VALUE	CONDUCTIVITY READINGS
Orion #12	☐ pH ☑ TEMPERATURE ☐ CONDUCTIVITY	☑ YES ☐ NO	☐ pH 4 ☐ pH 7 ☐ pH 10 — 4.0 / 7.0	METER VALUE DRY ___ STANDARD VALUE ___ METER VALUE ___
Cole Parmer #12	☐ pH ☐ TEMPERATURE ☑ CONDUCTIVITY	☑ YES ☐ NO	☐ pH 4 ☐ pH 7 ☐ pH 10	METER VALUE DRY 0 STANDARD VALUE 200 METER VALUE 200
	PHOTOIONIZATION AIR QUALITY MONITORING DEVICE		☐ ZERO W/ BACKGROUND ☐ ZERO W/ ZERO AIR	SPAN GAS VALUE ___ METER VALUE ___

CREW # 2	USE	TEMP COMP.	BUFFERS USED / METER VALUE	CONDUCTIVITY READINGS
	☐ pH ☐ TEMPERATURE ☐ CONDUCTIVITY	☐ YES ☐ NO	☐ pH 4 ☐ pH 7 ☐ pH 10	METER VALUE DRY ___ STANDARD VALUE ___ METER VALUE ___
	☐ pH ☐ TEMPERATURE ☐ CONDUCTIVITY	☐ YES ☐ NO	☐ pH 4 ☐ pH 7 ☐ pH 10	METER VALUE DRY ___ STANDARD VALUE ___ METER VALUE ___
	PHOTOIONIZATION AIR QUALITY MONITORING DEVICE		☐ ZERO W/ BACKGROUND ☐ ZERO W/ ZERO AIR	SPAN GAS VALUE ___ METER VALUE ___

FLUIDS / MATERIALS RECORD

DEIONIZED WATER SOURCE: ☑ ABB STAGING ☐ PORTABLE SYSTEM ☐ OTHER ___

DECONTAMINATION FLUIDS: ☑ LIQUI-NOX ☐ TSP SOLUTION ☐ 20 % HNO3 LOT NO. ___ ☐ OTHER ___ LOT NO. ___

CALIBRATION FLUIDS: ☑ pH BUFFER #7 LOT NO. 31211; #4 LOT NO. 31130; LOT NO. ___ ☑ COND. STANDARD LOT NO. A292D

FILTRATION PAPER ID: ☐ IN LINE MANUF. ___ LOT NO. ___ ☐ VACUUM MANF. ___ LOT NO. ___ ☐ PRESSURE MANF. ___ LOT NO. ___

☑ HNO3	LOT NO.	E20058
☐ H2SO4	LOT NO.	
☑ HCL	LOT NO.	
☑ NaOH	LOT NO.	
☐ ZnAOC	LOT NO.	
☐ NaTHIO	LOT NO.	
☐ MnSO4	LOT NO.	
☐ ALK. IODIDE	LOT NO.	
☐ ___	LOT NO.	
☐ ___	LOT NO.	

SAMPLE CREW ID

CREW # 1 TYPE SW/SED — NAMES: P. Smith, T. Lowery

CREW # 2 TYPE ___ — NAMES: ___

Paul G. Smith — SAMPLER SIGNATURE

MD 08-10-89

ABB ENVIRONMENTAL SERVICES INC.

FIELD INSTRUMENTATION & QUALITY ASSURANCE RECORD

PROJECT: BNAS | JOB NUMBER: 7126-01 | DATE: 11-11-92

FIELD INSTRUMENTATION CALIBRATION DATA

INSTRUMENT TYPE / I.D. # — CALIBRATION INFORMATION

CREW # 1	USE	TEMP COMP.	BUFFERS USED / METER VALUE		CONDUCTIVITY READINGS
Orion #12	☑ pH ☑ TEMPERATURE ☐ CONDUCTIVITY	☑ YES ☐ NO	☐ pH 4 ☐ pH 7 ☐ pH 10	4.0 7.0 	METER VALUE DRY / STANDARD VALUE / METER VALUE
Amb. Science #12	☐ pH ☐ TEMPERATURE ☑ CONDUCTIVITY	☑ YES ☐ NO	☐ pH 4 ☐ pH 7 ☐ pH 10	/ / /	METER VALUE DRY 0 STANDARD VALUE 200 METER VALUE 200
	PHOTOIONIZATION AIR QUALITY MONITORING DEVICE		☐ ZERO W/ BACKGROUND ☐ ZERO W/ ZERO AIR		SPAN GAS VALUE METER VALUE

CREW # 2	USE	TEMP COMP.	BUFFERS USED / METER VALUE		CONDUCTIVITY READINGS
	☐ pH ☐ TEMPERATURE ☐ CONDUCTIVITY	☐ YES ☐ NO	☐ pH 4 ☐ pH 7 ☐ pH 10		METER VALUE DRY STANDARD VALUE METER VALUE
	☐ pH ☐ TEMPERATURE ☐ CONDUCTIVITY	☐ YES ☐ NO	☐ pH 4 ☐ pH 7 ☐ pH 10		METER VALUE DRY STANDARD VALUE METER VALUE
	PHOTOIONIZATION AIR QUALITY MONITORING DEVICE		☐ ZERO W/ BACKGROUND ☐ ZERO W/ ZERO AIR		SPAN GAS VALUE METER VALUE

FLUIDS / MATERIALS RECORD

DEIONIZED WATER SOURCE:
- ☑ ABB STAGING
- ☐ PORTABLE SYSTEM
- ☐ OTHER _____

DECONTAMINATION FLUIDS:
- ☑ LIQUI-NOX
- ☐ TSP SOLUTION
- ☐ 20 % HNO3 LOT NO. _____
- ☐ OTHER _____ LOT NO. _____

CALIBRATION FLUIDS:
- ☑ pH BUFFER LOT NO. _____ LOT NO. _____ LOT NO. _____
- ☑ COND. STANDARD LOT NO. _____

FILTRATION PAPER ID:
- ☐ IN LINE MANUF. _____ LOT NO. _____
- ☐ VACUUM MANF. _____ LOT NO. _____
- ☐ PRESSURE MANF. _____ LOT NO. _____

- ☑ HNO3 LOT NO. E20058
- ☐ H2SO4 LOT NO. _____
- ☑ HCL LOT NO. _____
- ☑ NaOH LOT NO. _____
- ☐ ZnAOC LOT NO. _____
- ☐ NaTHIO LOT NO. _____
- ☐ MnSO4 LOT NO. _____
- ☐ ALK.IODIDE LOT NO. _____
- ☐ _____ LOT NO. _____
- ☐ _____ LOT NO. _____

SAMPLE CREW ID

CREW # 1 TYPE ~~2~~ SW/SD — NAMES: T. Lovelace, P. Smith

CREW # 2 TYPE _____ — NAMES: _____

Paul C Smith
SAMPLER SIGNATURE

MD 08-10-89

ABB ENVIRONMENTAL SERVICES, INC

PAGE _____ OF _____

FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-11-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1015

SW SAMPLE LOCATION ID: SRSWXXIXXXOIXX (SW-1)

SD SAMPLE LOCATION ID: SRSDXXIXXXOIXX (SED-1)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .7 FT

DEPTH OF SAMPLE FROM TOP OF WATER: 0-.3 FT

TEMPERATURE: 5.4 DEG C.

pH ..... 6.1 UNITS

SPEC. COND. 92 umhos/cm

TYPE OF SURFACE WATER:
- [x] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER

FROM CULVERT

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [x] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 0-2 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [ ] COLORED _____
- [ ] _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [x] SAND - MED
- [ ] ORGANIC
- [ ] GRAVEL SMALL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SPLIT~~ SPOON
- [ ] HAND SPOON
- [ ] ALUMINUM PANS
- [x] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] STREAM WATER
- [x] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

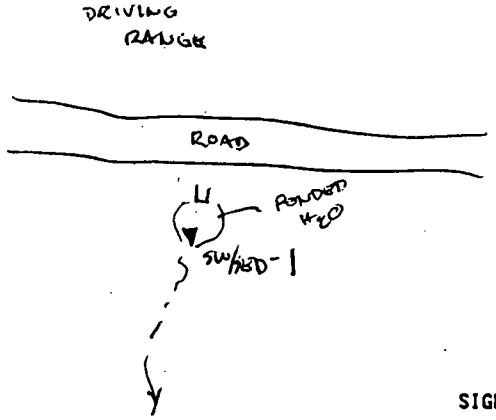
ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[x] TCL VOC		[x]	[x]			[x]
[x] TCL SVOC		[x]	[x]			[x]
[x] TCL PEST/PCB		[x]	[x]			[x]
[x] TCL INORGANICS		[x]	[x]			[x]
[x] CYANIDE		[x]	[x]			[x]
[x] HARDNESS		[x]	[x]			[x]
[ ] ASBESTOS		[ ]	[ ]			[ ]

SAMPLE BOTTLE ID NUMBERS

SW			SED
1	2		163
3	4		164
5	6		165
7			166
8			167
9			

NOTES



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PAGE _____ OF _____

FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-10-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1300

SW SAMPLE LOCATION ID: SRSWXX2XXXO1XX (SW-2)

SD SAMPLE LOCATION ID: SRSDXX2XXXO1XX (SED-2)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .7 FT

DEPTH OF SAMPLE FROM TOP OF WATER: SURFACE FT

TEMPERATURE: 1.8 DEG C.

pH ..... 7.3 UNITS

SPEC. COND. 89 umhos/cm

TYPE OF SURFACE WATER:
- [ ] STREAM
- [ ] RIVER
- [x] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [x] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 1-3 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [x] COLORED GRAY
- [ ] _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [ ] SAND
- [x] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: SILTY (SLURRY LIKE)

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SCOOP~~ SPOON
- [ ] HAND SPOON
- [x] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [x] LIQUI-NOX
- [x] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] STREAM WATER
- [ ] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[x] TCL VOC		[x]	[x]		40ml	[x]
[x] TCL SVOC		[x]	[x]		1l	[x]
[x] TCL PEST/PCB		[x]	[x]		1l	[x]
[x] TCL INORGANICS		[x]	[x]			[x]
[x] CYANIDE		[x]	[x]			[x]
[x] HARDNESS		[x]	[ ]			[x]
[ ] ASBESTOS		[ ]	[ ]			[ ]

SW			SED
10	11		168
12	13		169
14	15		170
16			171
17			172
18			

NOTES

SIGNATURE: Paul C. Smith

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PAGE _____ OF _____

FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-10-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1115

SW SAMPLE LOCATION ID: SRSWXX3XXXO1XX (SW-3)

SD SAMPLE LOCATION ID: SRSDXX3XXXO1XX (SED-3)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .5 FT

DEPTH OF SAMPLE FROM TOP OF WATER: 0 FT

TEMPERATURE: 3.2 DEG C.

pH ..... 7.8 UNITS

SPEC. COND. 122 umhos/cm

TYPE OF SURFACE WATER:
- [x] STREAM (PCS)
- [ ] RIVER
- [ ] POND/LAKE
- [x] SEEP
- [ ] OTHER

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [x] FIELD DUPLICATE COLLECTED DUP. ID SRSWXX3XXXO1XD

SAMPLE LOCATION SKETCH BELOW ?
- [x] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 1-3 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR
- [x] COLORED GRAY-GREEN
- [ ]

TYPE OF SEDIMENT:
- [ ] CLAY
- [x] SAND
- [x] ORGANIC
- [x] GRAVEL
- [x] OTHER: SILTY

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SPLIT~~ SPOON
- [ ] HAND SPOON
- [x] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ]

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] STREAM WATER
- [x] NONE

FIELD QC DATA: [x] FIELD DUPLICATE COLLECTED. DUP ID SRSDXX3XXXO1XD

ANALYTICAL PARAMETERS

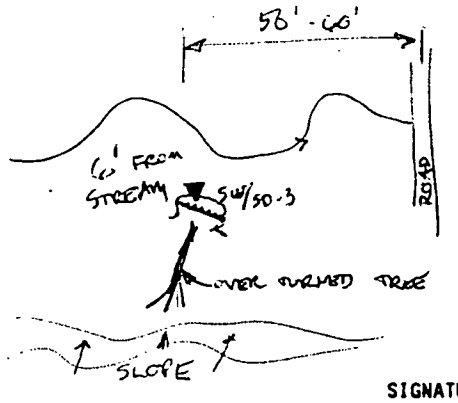
	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[x] TCL VOC		[x]	[x]			[x]
[x] TCL SVOC		[x]	[x]			[x]
[x] TCL PEST/PCB		[x]	[x]			[x]
[x] TCL INORGANICS		[x]	[x]			[x]
[x] CYANIDE		[x]	[x]			[x]
[x] HARDNESS		[x]	[x]			[x]
[ ] ASBESTOS		[ ]	[ ]			[ ]

SAMPLE BOTTLE ID NUMBERS

SW			SED
19	20		173
21	22		174
23	24		175
25			176
26			177
27			

NOTES

SAMPLE TAKEN FROM DEPRESSION AT BASE OF OVERTURNED TREE



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PAGE _____ OF _____

FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-10-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1115

SW SAMPLE LOCATION ID: SRSWXX3XXXX01XD (SW-3 DUP)

SD SAMPLE LOCATION ID: SRSDXX3XXXX01XD (SED-3 DUP)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: FT

DEPTH OF SAMPLE FROM TOP OF WATER: FT

TEMPERATURE: DEG C.

pH .....: UNITS

SPEC. COND.: umhos/cm

TYPE OF SURFACE WATER:
- [ ] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [ ] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [ ] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED
DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [ ] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [ ] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [ ] COLORED _____
- [ ] _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [ ] SAND
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [ ] S.S. SPLIT SPOON
- [ ] HAND SPOON
- [ ] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] STREAM WATER
- [ ] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS SW			SED
[X] TCL VOC		[X]	[X]			[✓]	73	74		198
[X] TCL SVOC		[X]	[X]			[✓]	75	76		199
[X] TCL PEST/PCB		[X]	[X]			[✓]	77	78		200
[X] TCL INORGANICS		[X]	[X]			[✓]	79			201
[X] CYANIDE		[X]	[X]			[✓]	80			202
[X] HARDNESS		[X]	[ ]			[✓]	81			
[ ] ASBESTOS		[ ]	[ ]			[ ]				

NOTES

SIGNATURE: Paul C. Smith

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PAGE _____ OF _____

FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-10-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1100

SW SAMPLE LOCATION ID: SRSWXX4XXXX01XX (SW-4)

SD SAMPLE LOCATION ID: SRSDXX4XXXX01XX (SED-4)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .5 FT

DEPTH OF SAMPLE FROM TOP OF WATER: 0-.1 FT

TEMPERATURE: 1.7 DEG C.

pH ..... 7.2 UNITS

SPEC. COND. 79 umhos/cm

TYPE OF SURFACE WATER:
- [x] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [x] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [x] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 1-2 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

SAMPLE OBSERVATIONS:
- [x] ODOR BOGGY
- [ ] COLORED _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [x] SAND
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. SPLIT SPOON
- [ ] HAND SPOON
- [x] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

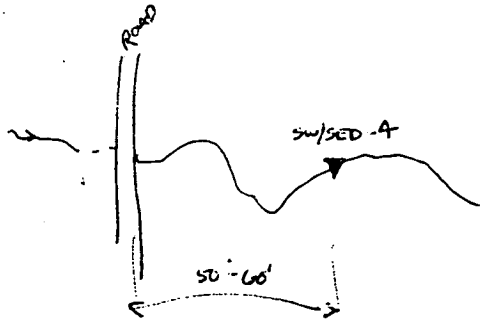
DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] STREAM WATER
- [x] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS SW			SED
[x] TCL VOC		[x]	[x]			[x]	28	29		178
[x] TCL SVOC		[x]	[x]			[x]	30	31		179
[x] TCL PEST/PCB		[x]	[x]			[x]	32	33		180
[x] TCL INORGANICS		[x]	[x]			[x]	34			181
[x] CYANIDE		[x]	[x]			[x]	35			182
[x] HARDNESS		[x]	[ ]			[x]	36			
[ ] ASBESTOS		[ ]	[ ]			[ ]				

NOTES



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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-10-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1015

SW SAMPLE LOCATION ID: (SW-5) ~~[illegible]~~ SRSWXXSXXX01XX

SD SAMPLE LOCATION ID: (SED-5) SRSDXXSXXX01XX

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .75 FT

DEPTH OF SAMPLE FROM TOP OF WATER: 0-.3 FT

TEMPERATURE: 2.0 DEG C.

pH ..... 6.6 UNITS

SPEC. COND. 112 umhos/cm

TYPE OF SURFACE WATER:
- [x] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [ ] YES
- [x] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 0-1 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

VISIBLE OBSERVATIONS:
- [ ] ODOR _____
- [x] COLORED GRAY/GREEN
- [ ] _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [x] SAND FINE
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SPLIT~~ SPOON
- [ ] HAND SPOON
- [x] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [x] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] STREAM WATER
- [ ] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[x] TCL VOC		[x]	[x]	HCL 4°C	2-40 ml	[x]
[x] TCL SVOC		[x]	[x]	↓	1 l AGLUM	[x]
[x] TCL PEST/PCB		[x]	[x]	HNO3	1 l POLY	[x]
[x] TCL INORGANICS		[x]	[x]	NaOH	1 l AMB POLY	[x]
[x] CYANIDE		[x]	[x]	4°C HNO3	1 l AGLUM	[x]
[x] HARDNESS		[x]	[x]			
[ ] ASBESTOS		[ ]	[ ]			

SAMPLE BOTTLE ID NUMBERS

SW			SED
37	38		183
39	40		184
41	42		185
43			186
44			187
45			

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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-10-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1230

SW SAMPLE LOCATION ID: SRSWXX6XXX01XX (SW-6)

SD SAMPLE LOCATION ID: SRSDXX6XXX01XX (SED-6)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .75 FT

DEPTH OF SAMPLE FROM TOP OF WATER: 0-.4 FT

TEMPERATURE: 2.1 DEG C.

pH ..... 7.8 UNITS

SPEC. COND. 72 umhos/cm

TYPE OF SURFACE WATER:
- [x] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [x] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 1-3 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [ ] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [x] COLORED TAN
- [ ] _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [x] SAND - FINE
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SPLIT~~ SPOON
- [ ] HAND SPOON
- [x] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

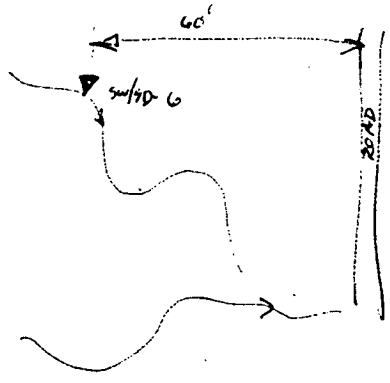
DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] STREAM WATER
- [x] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS			
[x] TCL VOC		[x]	[x]			[x]	46	47		188
[x] TCL SVOC		[x]	[x]			[x]	48	49		189
[x] TCL PEST/PCB		[x]	[x]			[x]	50	51		190
[x] TCL INORGANICS		[x]	[x]			[x]	52			191
[x] CYANIDE		[x]	[x]			[x]	53			192
[x] HARDNESS		[x]	[ ]			[x]	54			
[ ] ASBESTOS		[ ]	[ ]			[ ]				

NOTES



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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-11-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 0945

SW SAMPLE LOCATION ID: SRSWXXTXXXOIXX SW-7

SD SAMPLE LOCATION ID: SRSDXX7XXXOIXX (SED-7)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .4 FT

DEPTH OF SAMPLE FROM TOP OF WATER: SURFACE FT

TEMPERATURE: 4.6 DEG C.

pH ..... 6.5 UNITS

SPEC. COND. 79 umhos/cm

TYPE OF SURFACE WATER:
- [x] STREAM ?
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [x] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 1 - 3 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [ ] COLORED _____
- [ ] _____

TYPE OF SEDIMENT:
- [x] CLAY
- [ ] SAND
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SPLIT~~ SPOON
- [ ] HAND SPOON
- [x] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] STREAM WATER
- [x] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS SW	SW		SED
[x] TCL VOC		[x]	[x]			[x]	55	56		193
[x] TCL SVOC		[x]	[x]			[x]	57	58		194
[x] TCL PEST/PCB		[x]	[x]			[x]	59	60		195
[x] TCL INORGANICS		[x]	[x]			[x]	61			196
[x] CYANIDE		[x]	[x]			[x]	62			197
[x] HARDNESS		[x]	[ ]			[x]	63			
[ ] ASBESTOS		[ ]	[ ]			[ ]				

NOTES

LOW FLOW

QT-2 - 11/11/92 @ 0800 FROM STAGING D.I. H_2O

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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-11-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1430

SW SAMPLE LOCATION ID: SRDWXX1XXXX01XX (DW-1)

SD SAMPLE LOCATION ID: ——

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: 2-3 FT

DEPTH OF SAMPLE FROM TOP OF WATER: .5 FT

TEMPERATURE: 8.2 DEG C.

pH ..... 6.6 UNITS

SPEC. COND. 197 umhos/cm

TYPE OF SURFACE WATER:
- [ ] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [x] OTHER CISTERN WELL

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ? [ ] YES [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: _____ IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [ ] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [ ] COLORED _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [ ] SAND
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [ ] S.S. SPLIT SPOON
- [ ] HAND SPOON
- [ ] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] STREAM WATER
- [ ] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
[x] TCL VOC		[x]	[ ]			[x]	64 / 65
[x] TCL SVOC		[x]	[ ]			[x]	66 / 67
[x] TCL PEST/PCB		[x]	[ ]			[x]	68 / 69
[x] TCL INORGANICS		[x]	[ ]			[x]	70
[x] CYANIDE		[x]	[ ]			[x]	71
[x] HARDNESS		[x]	[ ]			[x]	72
[ ] ASBESTOS		[ ]	[ ]			[ ]	

NOTES

OPEN 3'ϕ WELL w/WOOD COVER w/ DEAD SMALL ANIMAL IN IT.

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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-11-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1145

SW SAMPLE LOCATION ID: MESWXX1XXX01XX (SW-1)

SD SAMPLE LOCATION ID: MESDXX1XXX01XX (SED-1)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .5 FT

DEPTH OF SAMPLE FROM TOP OF WATER: SURFACE FT

TEMPERATURE: 4.2 DEG C.

pH ..... 7.1 UNITS

SPEC. COND. 197 umhos/cm

TYPE OF SURFACE WATER:
- [ ] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [x] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ? [ ] YES [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 2 - 6 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [x] COLORED GRAY
- [ ] _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [ ] SAND
- [x] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SPLIT~~ SPOON
- [ ] HAND SPOON
- [ ] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] STREAM WATER
- [ ] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS SW			SED
[x] TCL VOC		[x]	[x]			[x]	91	92		203
[x] TCL SVOC		[x]	[x]			[x]	93	94		204
[x] TCL PEST/PCB		[x]	[x]			[x]	95	96		205
[x] TCL INORGANICS		[x]	[x]			[x]	97			206
[x] CYANIDE		[x]	[x]			[x]	98			207
[x] HARDNESS		[x]	[ ]			[x]	99			
[ ] ASBESTOS		[ ]	[ ]			[ ]				

NOTES

TAKEN IN H_2O @ BASE OF EARTHEN DAM (STANDING)

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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-11-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1130

SW SAMPLE LOCATION ID: MESWXX2XXX01XX (SW-2)

SD SAMPLE LOCATION ID: MESDXX2XXX01XX (SED-2)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .5 FT

DEPTH OF SAMPLE FROM TOP OF WATER: SURFACE FT

TEMPERATURE: 3.9 DEG C.

pH ..... 7.5 UNITS

SPEC. COND. 55 umhos/cm

TYPE OF SURFACE WATER:
- [x] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [x] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 1-2 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [ ] COLORED _____
- [ ] _____

TYPE OF SEDIMENT:
- [x] CLAY
- [ ] SAND
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SPLIT~~ SPOON
- [ ] HAND SPOON
- [x] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] STREAM WATER
- [x] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

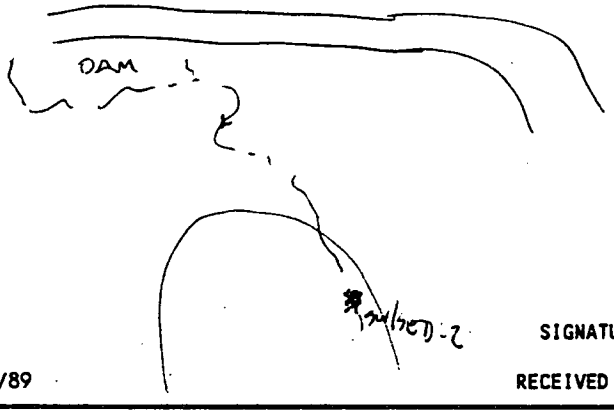
ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[x] TCL VOC		[x]	[x]			[x]
[x] TCL SVOC		[x]	[x]			[x]
[x] TCL PEST/PCB		[x]	[x]			[x]
[x] TCL INORGANICS		[x]	[x]			[x]
[x] CYANIDE		[x]	[x]			[x]
[x] HARDNESS		[x]	[ ]			[x]
[ ] ASBESTOS		[ ]	[ ]			[ ]

SAMPLE BOTTLE ID NUMBERS

SW			SED
100	101		208
102	103		209
104	105		210
106			211
107			212
108			

NOTES



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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-11-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY START: END: 1215

SW SAMPLE LOCATION ID: MESWXX3XXXO1XX (SW-3)

SD SAMPLE LOCATION ID: MESDXX3XXXO1XX (SED-3)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: 1.0 FT

DEPTH OF SAMPLE FROM TOP OF WATER: .3 FT

TEMPERATURE: 1.5 DEG C.

pH ..... 6.2 UNITS

SPEC. COND. 33 umhos/cm

TYPE OF SURFACE WATER:
- [ ] STREAM
- [ ] RIVER
- [x] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [x] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 0-2 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [ ] COLORED _____
- [ ] _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [ ] SAND
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SPLIT~~ SPOON
- [ ] HAND SPOON
- [x] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [x] LIQUI-NOX
- [x] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] STREAM WATER
- [x] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

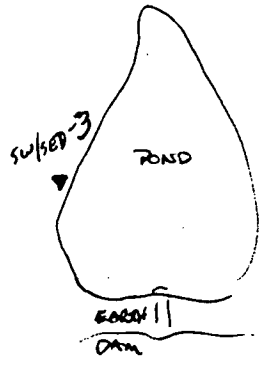
ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[x] TCL VOC		[x]	[x]			[x]
[x] TCL SVOC		[x]	[x]			[x]
[x] TCL PEST/PCB		[x]	[x]			[x]
[x] TCL INORGANICS		[x]	[x]			[x]
[x] CYANIDE		[x]	[x]			[x]
[x] HARDNESS		[x]	[x]			[x]
[ ] ASBESTOS		[ ]	[ ]			[ ]

SAMPLE BOTTLE ID NUMBERS

SW			SED
109	110		213
111	112		214
113	114		215
115			216
116			217
117			

NOTES



SIGNATURE: Paul C. Smith

RECEIVED BY: _____

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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-11-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1315

SW SAMPLE LOCATION ID: MESWXX4XXXX01XX (SW-4)

SD SAMPLE LOCATION ID: MESDXX4XXXX01XX (SED-4)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: .8 FT

DEPTH OF SAMPLE FROM TOP OF WATER: 0-.1 FT

TEMPERATURE: 5.2 DEG C.

pH ..... 7.2 UNITS

SPEC. COND. 52 umhos/cm

TYPE OF SURFACE WATER:
- [x] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [x] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [x] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] NONE

FIELD QC. DATA: [x] FIELD DUPLICATE COLLECTED
DUP. ID MESWXX4XXXX01XD

SAMPLE LOCATION SKETCH BELOW ?
- [ ] YES
- [x] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: 0-4 IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [x] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [ ] COLORED _____
- [ ] _____

TYPE OF SEDIMENT:
- [x] CLAY
- [ ] SAND
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [x] S.S. ~~SPLIT~~ SPOON
- [ ] HAND SPOON
- [x] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [x] STREAM WATER
- [x] NONE

FIELD QC DATA: [x] FIELD DUPLICATE COLLECTED. DUP ID MESDXX4XXXX01XD

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED
[x] TCL VOC		[x]	[x]	HCL	40 ml	[x]
[x] TCL SVOC		[x]	[x]	4°C	1 l	[x]
[x] TCL PEST/PCB		[x]	[x]	4°C	4 oz	[x]
[x] TCL INORGANICS		[x]	[x]	HNO_3		[x]
[x] CYANIDE		[x]	[x]	NaOH		[x]
[x] HARDNESS		[x]	[ ]	HNO_3		[x]
[ ] ASBESTOS		[ ]	[ ]			[ ]

SAMPLE BOTTLE ID NUMBERS

SW			SED
118	119		218
120	121		219
122	123		220
124			221
125			222
126			

NOTES

MESWXX4XXXX01XX MS
MESWXX4XXXX01XX MSD

SW: 145 - 153 BOTTLE NUMBERS
154 - 162 " "

SED: 228 - 232
233 - 237

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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-11-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY: START: END: 1315

SW SAMPLE LOCATION ID: MESWXX4XXXO1XD (SW-4 DUP)

SD SAMPLE LOCATION ID: MESDXX4XXXO1YD (SED-4 DUP)

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: FT

DEPTH OF SAMPLE FROM TOP OF WATER: FT

TEMPERATURE: DEG C.

pH ..... UNITS

SPEC. COND. umhos/cm

TYPE OF SURFACE WATER:
- [ ] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [ ] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [ ] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [ ] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [ ] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [ ] COLORED _____
- [ ] _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [ ] SAND
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [ ] S.S. SPLIT SPOON
- [ ] HAND SPOON
- [ ] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] STREAM WATER
- [ ] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS SW			SED
[X] TCL VOC		[X]	[X]			[X]	127	128		223
[X] TCL SVOC		[X]	[X]			[X]	129	130		224
[X] TCL PEST/PCB		[X]	[X]			[X]	131	132		225
[X] TCL INORGANICS		[X]	[X]			[X]	133			226
[X] CYANIDE		[X]	[X]			[X]	134			227
[X] HARDNESS		[X]	[ ]			[X]	135			
[ ] ASBESTOS		[ ]	[ ]			[ ]				

NOTES

SIGNATURE: Paul C. Smith

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FIELD DATA RECORD - SURFACE WATER & SEDIMENT

JOB NUMBER: 7126-01 DATE: 11-11-92

PROJECT: BRUNSWICK N.A.S.

LOCATION ACTIVITY START: END: 1045

SW SAMPLE LOCATION ID: SRQSXX3XXXX01XX

SD SAMPLE LOCATION ID: SRQSXX3XXXX01XX

SURFACE WATER DATA

WATER DEPTH @ SAMPLE LOCATION: FT

DEPTH OF SAMPLE FROM TOP OF WATER: FT

TEMPERATURE: DEG C.

pH ..... UNITS

SPEC. COND. umhos/cm

TYPE OF SURFACE WATER:
- [ ] STREAM
- [ ] RIVER
- [ ] POND/LAKE
- [ ] SEEP
- [ ] OTHER _____

EQUIPMENT USED FOR COLLECTION:
- [ ] NONE, GRAB INTO BOTTLE
- [ ] BOMB SAMPLER
- [ ] PUMP _____

VELOCITY MESUREMENTS OBTAINED:
- [ ] YES, SEE FLOW DATA BELOW
- [ ] NO

DECONTAMINATION FLUIDS USED:
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] NONE

FIELD QC. DATA: [ ] FIELD DUPLICATE COLLECTED DUP. ID _____

SAMPLE LOCATION SKETCH BELOW ?
- [ ] YES
- [ ] NO

SEDIMENT DATA

DEPTH OF SEDIMENT SAMPLE: IN

TYPE OF SAMPLE COLLECTED:
- [ ] DISCRETE
- [ ] COMPOSITE

SAMPLE OBSERVATIONS:
- [ ] ODOR _____
- [ ] COLORED _____
- [ ] _____

TYPE OF SEDIMENT:
- [ ] CLAY
- [ ] SAND
- [ ] ORGANIC
- [ ] GRAVEL
- [ ] OTHER: _____

EQUIPMENT USED FOR COLLECTION:
- [ ] GRAVITY CORER
- [ ] S.S. SPLIT SPOON
- [ ] HAND SPOON
- [ ] ALUMINUM PANS
- [ ] S.S. BUCKET
- [ ] DREDGE
- [ ] _____

DECONTAMINATION FLUIDS USED
- [ ] LIQUI-NOX
- [ ] DEIONIZED WATER
- [ ] TSP SOLUTION
- [ ] HEXANE
- [ ] HNO3 SOLUTION
- [ ] POTABLE WATER
- [ ] STREAM WATER
- [ ] NONE

FIELD QC DATA: [ ] FIELD DUPLICATE COLLECTED. DUP ID _____

ANALYTICAL PARAMETERS

	METHOD NUMBER	MATRIX SW	MATRIX SED	PRESERVATION METHOD	VOLUME REQUIRED	SAMPLE COLLECTED	SAMPLE BOTTLE ID NUMBERS
[X] TCL VOC		[ ]	[ ]			[X]	238 / 239
[X] TCL SVOC		[ ]	[ ]			[X]	240 / 241
[X] TCL PEST/PCB		[ ]	[ ]			[X]	242 / 243
[X] TCL INORGANICS		[ ]	[ ]			[X]	244
[X] CYANIDE		[ ]	[ ]			[X]	245
[ ] HARDNESS		[ ]	[ ]			[ ]	
[ ] ASBESTOS		[ ]	[ ]			[ ]	

NOTES

SIGNATURE: Paul C. Smith

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APPENDIX D

SURVEY DATA

OWEN HASKELL, INC.
Land Surveyor
8 Broadway
SOUTH PORTLAND, MAINE 04106
(207) 799-5694

JOB BNAS MERRICONEAG EXTENSION

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

	N	E	ELV
MAG PT 1	376447.1180	561391.2111	13.60
MAG PT 2	378760.1044	561105.4304	31.92
MAG PT 3	376822.2759	561208.7580	30.30
SW1/SD1	376442.4424	561139.9436	7.92
SW2/SD2	376388.7375	561155.9780	7.66
SW3/SD3	376512.9796	561009.0509	19.17
SW4/SD4	376745.5514	560602.3192	19.15
S1	376441.2983	561121.6964	9.13
SS2	376311.3857	561212.1579	7.25
SS3	376564.5641	561211.0784	19.94
SS4	376535.2248	561249.9903	17.00
SS5	376639.4667	561236.6978	28.76
TEST PIT 1	376766.2894	561146.7952	31.58
TEST PIT 2	376566.7483	561203.4132	20.09

OWEN HASKELL, INC.
Land Surveyor
8 Broadway
SOUTH PORTLAND, MAINE 04106
(207) 799-5694

JOB BNAS Swampy Rd Debris 7
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE _____

	N	E	ELV.
MAG PT 1	379990.8169	558819.1491	52.47
MAG PT 2	379214.2271	559004.0105	30.02
MAG PT 3	378876.3813	559297.9289	36.02
SW1/SD1	380137.2875	558720.8548	49.51 INV 12"Cmp 43.81 gd
SW2/SD2	379825.9439	559011.7172	31.38
SW3/SD3	379661.8284	558988.0116	30.46
SW4/SD4	379380.4181	559040.5191	25.83
SW5/SD5	378927.3675	559410.5786	22.62
SW6/SD6	379569.1375	559110.8800	28.59
SW7/SD7	380058.3350	558936.3628	33.06
SS1	379912.2204	558955.8254	42.72
SS2	379840.2166	558978.2759	37.19
SS3	379698.8984	558940.5649	39.03
SS4	379581.2850	558888.0272	42.56
SS5	379430.8984	558936.3701	37.39
SS6	379020.1307	559184.3607	31.32
DW-1	379079.4566	559111.7332	25.46
Test Pit 1	379831.7447	558940.7674	51.27
Test Pit 2	379585.6503	558876.5161	44.26
Test Pit 3	379028.2183	559172.2343	34.14
Test Pit 4	378939.2893	559213.5052	35.99

APPENDIX E

ANALYTICAL DATA

Samples collected for laboratory analysis during the field investigation were labeled with computer-generated labels. These labels display a 14-digit sample identification code, identifying the site location, sample type, horizontal and vertical locators, event number, and a modifier. In addition to sample label generation, ISIS, a data base system designed by ABB-ES, was used for sample numbering, tracking, and data manipulation.

The sample identification system consists of 14 alphanumeric characters in four information groups. Undesignated portions of the sample identification use an "X."

INFORMATION GROUP ITEM	DIGITS
Site and Sample Type	1-4
Horizontal and Vertical Locators	5-10
Sampling Event Number	11, 12
Modifier (e.g., duplicate)	13, 14

The following are examples of sample identification numbers:

MESDXX1XXX01XX: a Merriconeag Extension sediment sample (MESD) taken at location #1 (XX1) for the first time (01).

SRSWXX7XXX01XX: a Swampy Road surface water sample (SRSW) taken at location #7 (XX7).

MESSXX1XXX01XD: a Merriconeag Extension surface soil sample (MESS) taken from location #1 (XX1); duplicate sample (D).

SRPSXX4XX201XX: a Swampy Road test pit soil sample (SRPS) taken from Test Pit #4 at 2 feet (XX4XX2).

Sample type codes are summarized in Table E-1.

TABLE E-1
LIST OF SAMPLE TYPE CODES

SWAMPY ROAD DEBRIS SITE AND MERRICONEAG EXTENSION DEBRIS SITE
SITE INSPECTION
NAS BRUNSWICK

TYPE CODE	SAMPLE TYPE DESCRIPTION
SR	Swampy Road
ME	Merriconeag Extension
SS	surface soil
PS	test pit soil
SW	surface water
SD	sediment
DW	domestic well
QB	quality control source water
QS	quality control sampler blank
QT	quality control trip blank

TABLE E-2
HARDNESS RESULTS OF SURFACE WATERS

SWAMPY ROAD DEBRIS SITE AND MERRICONEAG EXTENSION DEBRIS SITE
SITE INSPECTION
NAS BRUNSWICK

LOCATION	Ca(mg/L)	Mg(mg/L	HARDNESS (mg/L)	
			Calculated Values	Laboratory Values
Swampy Road Debris Site				
SW-1	6.66	2.10	25.28	–
SW-2	22.9	43.6	236.72	–
SW-3	10.50	5.61	49.32	–
SW-3 DUP	8.42	2.44	31.07	–
SW-4	6.07	1.89	22.94	–
SW-5	6.72	2.14	25.59	–
SW-6	6.49	1.90	24.03	–
SW-7	4.64	4.59	30.49	28
Merriconeag Extension Debris Site				
SW-1	22.0	10.90	99.82	–
SW-2	1.60	1.49	10.14	–
SW-3	1.81	2.66	15.47	–
SW-4	1.85	2.20	13.68	–
SW-4 DUP	2.03	2.36	14.79	–

Notes:

1. mg/L = milligrams per liter
2. Ca = calcium
3. Mg = magnesium
4. Hardness values are calculated by the equation: H(mg/L) = 2.497[Ca(mg/L)] + 4.118 [Mg(mg/L)]
5. Concentrations for Ca and Mg are taken from CLP data.
6. – = not analyzed

Reference: Standard Methods for the Examination of Water and Wastewater, 1989.

To: Bob McGirr

From: Kate Kuebler / Steve Turner

Date: January 18, 1993

Subject: Validation : Brunswick Naval Air Station
Project No.: 07126-01
Sampling Date: November 05 - 11, 1992
December 02, 1992

Review is complete for the data packages generated by ESE pertaining to soil sediment, and water samples collected at the Brunswick Naval Air Station. Review was performed following USEPA Region I guidelines. Samples were analyzed for TCL volatile and semivolatile organics following USEPA 3/90 Statement of Work (3/90 SOW), low detection limit volatile organics following a modified procedure of USEPA 3/90 SOW, TCL pesticide/PCBs following USEPA 2/88 Statement of Work, TCL inorganics, hardness, and asbestos. Package documentation was incomplete with the following resubmissions requested:

1. Revised inorganic Form XII, ICP Quarterly Linear Range.
2. pH data for samples analyzed for cyanide.
3. All raw data for mercury analyses.
4. Actual results for ICS-A solution reported on Form IV for SDG BW0001.
5. Clarification of standard results in raw data for arsenic analyses.
6. Corrected Sample Dates Summaries with correct dates of analyses.
7. Revised Form I SV-TIC. Same CAS number is reported for two different compounds.
8. Mass spectra and library search for SV-TICs. Several were missing.
9. Verification of %Mass for volatile mass spectra instrument tune solution.
10. Clarification of the calculation for surrogate recoveries for TCL volatile, semivolatile, and low detection limit volatile analyses.
11. Revised Form I VOA to include missing B qualifiers.
12. Several chain of custodies do not report the date received by the lab.

The data tables referred to in this memo are comprised of the following:

Table 1 : Laboratory Report of Analysis
Table 2 : Validation / Summary Table
Table 3 : Summary Table

The following subsections summarize the qualifications/edits that have been determined by validation.

All Organic Analyses

Compound results below the CRQL were flagged with a J by the laboratory and on Table 1. These results were considered estimated and flagged J on Tables 2 and 3.

Compound results greater than the calibration range were flagged with an E by the laboratory and on Table 1. Samples containing these compounds were diluted and reanalyzed, and the diluted results flagged with a D by the laboratory and on Table 1. On Table 2, the diluted results for all compounds beyond calibration range were inserted

into the original results and the remainder of the diluted analysis deleted from Table 2 and Table 3.

Inorganic Analyses

Analyte results below the CRDL were flagged with a B by the laboratory and on Table 1. These results were considered estimated and flagged with a J on Tables 2 and 3.

Volatile Analyses - Qualifications/Edits

1. Due to method blank contamination, acetone should be considered nondetect in SRSDXX2, SRSDXX3/XX, SRSSXX3/XD, SRSSXX5, and SRSSXX6.

2. Surrogate recovery was below QC limits for the analysis of SRSDXX4. All sample results were estimated.

3. Initial calibration criteria for linearity were not met for acetone. Only positive results were estimated in soil samples.

4. Several continuing calibration standards did not meet percent difference criteria. Positive and nondetect results were estimated in associated samples for acetone and for positive results for 2-butanone.

Volatile Analyses - Comments

Please see items 1 - 4 under **Qualifications/Edits**. All hold times, instrument tunes, internal standards, and method blanks were within QC limits. Surrogate recoveries were acceptable except as discussed above. All matrix spike and matrix spike duplicate recoveries and RPDs met QC criteria. All field duplicate results met precision criteria. Low concentrations of TICs were identified in a few soil samples.

Low Detection Limit Volatile Analyses - Qualifications/Edits

5. Due to low surrogate recoveries, all results were estimated in SRSWXX3/XX, SRSWXX3/XD, and SRSWXX5.

6. Only a one point calibration was run for 1,2-dibromoethane, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, and 1,2-dibromo-3-chloropropane. All results for these compounds were estimated.

7. Initial calibration response factor for 2-butanone was below QC limits. All nondetect results were rejected.

8. Initial calibration linearity criteria were not met for acetone. All acetone results were estimated.

Low Detection Limit Volatile Analyses - Comments

Please see items 5 - 8 under **Qualifications/Edits**. All hold times, instrument tunes, internal standards, and method blanks met QC criteria. All surrogate recoveries were compliant except

as discussed above. Matrix spike and matrix spike duplicate recoveries and RPDs were within QC limits. Continuing calibration standards that did not meet QC criteria had no effect on the results. Field duplicate results were nondetect. Low concentrations of TICs were identified in one water sample.

Semivolatile Analyses - Qualifications/Edits

9. Due to method blank contamination, bis(2-ethylhexyl)phthalate (BEHP) should be considered nondetect in all samples **except** SRSSXX4, SRSWXX1, and SRSWXX2.

10. Several continuing calibration standards did not meet percent difference criteria. Nondetect results for 3,3'-dichlorobenzidine were estimated in associated samples.

Semivolatile Analyses - Comments

Please see items 9 and 10 under **Qualifications/Edits**. All hold time, instrument tune, method blank, internal standard, and surrogate recovery criteria were met for all sample analyses. Matrix spike and matrix spike duplicate recoveries and RPDs were within recommended limits. Initial calibration criteria that did not meet QC criteria had no effect on the results. Several samples were diluted prior to analysis based on the results of GC/FID screen. Field duplicate results were acceptable. TICs were identified in most samples, with low concentrations in the water samples and moderate to high concentrations in the soil samples.

Pesticide/PCB Analyses - Qualifications/Edits

11. Hold times were exceeded for the extraction of all soil samples. Samples were extracted 12 and 13 days after sampling. All soil results were estimated.

Pesticide/PCB Analyses - Comments

Please see item 11 under **Qualifications/Edits**. All water samples were extracted and analyzed within hold time. All method blanks, initial and continuing calibrations, and surrogate recoveries were compliant. All standard sequencing, breakdown, DDT retention time, and DBC retention time shift criteria were met. All matrix spike and matrix spike duplicate recoveries and RPDs were within the required limits. All field duplicate results were acceptable.

Inorganic Analyses - Qualifications/Edits

Sediment Samples (SD)

12. Due to spike sample recovery less than 10% and post-digestion spike recovery of 0%, all antimony results in sediment samples were rejected.

13. Spike sample recovery was below QC limits for mercury, silver, and selenium. Results in all sediment samples were estimated.

14. ICP serial dilution criteria were not met for vanadium and sodium. All positive results in sediment samples were estimated.

15. Field duplicate precision criteria were not met for calcium and beryllium for MESDXX4/XX and MESDXX4/XD. Positive results for these analytes were estimated in MESDXX1, -2, -3, -4/XX, and -4/XD.

Soil Samples (PS or SS)

16. Due to prep blank contamination, cobalt results should be considered nondetect in MESSXX1/XD, SRPSXX1XX3, SRPSXX2XX2, SRPSXX4XX2, SRSSXX1, SRSSXX2/XX, and SRSSXX2/XD.

17. Spike sample recovery was below QC limits for antimony. Results were estimated in all soil samples.

18. Spike sample recovery was above QC limits for cadmium and lead. Positive results for these analytes were estimated in all soil samples.

19. Laboratory duplicate and post-digestion spike recovery were outside QC limits for lead. All lead results were previously qualified.

20. Post-digestion spike recovery was below QC limits for selenium. Results were estimated in MEPSXX1, MEPSXX2, MESSXX1, MESSXX2, MESSXX3, SRPSXX1XX4, SRPSXX2XX2, SRPSXX3XX4, SRSSXX3, and SRSSXX4.

21. ICP serial dilution criteria were not met for sodium and zinc. Positive results in all soil samples were estimated.

Water Samples (SW or DW)

22. Due to preparation blank or calibration blank contamination, results less than the concentrations listed should be considered nondetect.

Antimony	193 ug/L	Vanadium	38 ug/L
Iron	132 ug/L	Zinc	19 ug/L
Silver	50 ug/L		

23. Calcium and iron results in water samples were estimated due to calibration blanks that were greater than negative 2xIDL.

24. Field duplicate precision criteria were not met for iron, lead, manganese, and zinc. All positive iron and manganese results were estimated. All lead and zinc results were estimated.

25. Post-digestion spike recovery was below QC limits for selenium. Results were estimated in SRSWXX3, SRSWXX7, and MESWXX1.

26. Post-digestion spike recovery was below QC limits for arsenic. Results were estimated in SRDWXX1.

Inorganic Analyses - Comments

Please see items 12 - 26 under **Qualifications/Edits.** All appropriate QC criteria were reviewed

and found acceptable unless noted under **Qualifications/Edits**. All field duplicate results were acceptable except as note above.

Hardness Analyses - Qualifications/Edits

There are no qualifications or edits to these data.

Hardness Analyses - Comments

Data were reviewed for hold times, spike recovery, lab control sample recovery, method and continuing calibration blank contamination, and continuing calibration verification. All QC results were acceptable. Due to laboratory error, only one sample was analyzed for hardness.

Asbestos Analyses - Qualification/Edits

There were no qualifications or edits to these data.

Asbestos Analyses - Comments

Samples were analyzed following the USEPA Interim Method for Determination of Asbestos in Bulk Insulation. This is a visual method of analysis and results are reported in percentages based on volume rather than weight. 5-10% cellulose was detected in both samples.

LABORATORY ANALYTICAL PROGRAM SUMMARY

SITE INSPECTION SWAMPY ROAD DEBRIS SITE AND MERRICONEAG EXTENSION DEBRIS SITE NAS BRUNSWICK

SITE	MEDIA	TCL VOCs	TCL SVOCs	TCL PEST/PCBs	TCL INORGANICS	ASBESTOS
Swampy Road Debris Site	Soil	11	11	11	11	-
Mericoneag Extension Debris Site		5	5	5	5	2
Subtotal		16	16	16	16	2
Field Duplicates		2	2	2	2	-
Rinseate Blanks		2	2	2	2	-
Subtotal		20	20	20	20	2
Matrix Spikes		1	1	1	1	-
Matrix Spike Duplicates		1	1	1	1	-
Total	Soil	22	22	22	22	2
Swampy Road Debris Site	Sediment	7	7	7	7	-
Mericoneag Extension Debris Site		4	4	4	4	-
Subtotal		11	12(1)	11	11	-
Field Duplicates		2	2	2	2	-
Rinseate Blank		1	2(1)	1	1	-
Source Blank		1	1	1	1	-
Subtotal		15	17	15	15	-
Matrix Spikes		1	1	1	1	-
Matrix Spike Duplicates		1	1	1	1	-
Total	Sediment	17	19	17	17	-

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continued

LABORATORY ANALYTICAL PROGRAM SUMMARY

SITE INSPECTION SWAMPY ROAD DEBRIS SITE AND MERRICONEAG EXTENSION DEBRIS SITE NAS BRUNSWICK

SITE	MEDIA	TCL VOCs	TCL SVOCs	TCL PEST/PCBs	TCL INORGANICS	ASBESTOS
						Hardness
Swampy Road Debris Site	Surface Water[2]	8	8	8	8	8
Merriconeag Extension Debris Site		4	4	4	4	4
Subtotal		12	12	12	12	12
Field Duplicates		2	2	2	2	2
Rinseate Blanks		0	0	0	0	0
Trip Blanks		2	-	-	-	-
Subtotal		16	14	14	14	14
Matrix Spikes		1	1	1	1	1
Matrix Spike Duplicates		1	1	1	1	1
Total	Surface Water	18	16	16	16	16

Notes:

(1) Total includes a resampling of one location due to missed hold time for SVOC.
(2) Total includes one shallow groundwater sample from old well.
TCL = Target Compound List
VOC = Volatile Organic Compound
SVOC = Semivolatile Organic Compound
Pest/PB = Pesticide/Polychlorinated Biphenyl

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LABORATORY ANALYTICAL PROCEDURES

SITE INSPECTION SWAMPY ROAD DEBRIS SITE AND MERRICONEAG EXTENSION DEBRIS SITE NAS BRUNSWICK

MEDIA	PARAMETER	METHOD	REFERENCE
Soil/Sediment	TCL VOCs	Purge & Trap GC/MS	3/90 SOW
	TCL SVOCs	GC/MS	3/90 SOW
	TCL Pesticides/PCBs	GC/ECD	2/88 SOW
	TAL Elements	AAS/PES	3/90 SOW
	Cyanide	Colorimetric	3/90 SOW
	Asbestos	Polarized Light Microscope	--
Surface Water/Old Well	TCL VOCs	Purge & Trap GC/MS	3/90 SOW-Low, 25 mℓ purge Detection Limit (91-1)
	TCL SVOCs	GC/MS	3/90 SOW
	TCL Pesticides/PCBs	GC/ECD	2/88 SOW
	TAL Elements	AAS/PES	3/90 SOW
	Cyanide	Colorimetric	3/90 SOW
	Temperature (field)	Thermometric	USEPA Method 170.1
	pH (field)	Potentiometric	USEPA Method 150.1
	Specific Conductivity (field)	Electronometric	USEPA Method 120.1
	Hardness	Colorimetric	USEPA Method 130.1

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LIST OF SAMPLE TYPE CODES

SITE INSPECTION SWAMPY ROAD DEBRIS SITE AND MERRICONEAG EXTENSION DEBRIS SITE NAS BRUNSWICK

TYPE CODE	SAMPLE TYPE DESCRIPTION
SR	Swampy Road
ME	Merriconeag Extension
SS	surface soil
PS	test pit soil
SW	surface water
SD	sediment
DW	domestic well
QB	quality control source water
QS	quality control sampler blank
QT	quality control trip blank

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18
DATE SAMPLED: 11/11/92
DATE ANALYZED: 11/18/92

ANALYTE	RL	
Chloromethane	1	1 U
Bromomethane	1	1 U
Vinyl Chloride	1	1 U
Chloroethane	1	1 U
Methylene Chloride	1	1 U
Acetone	5	5 U
Carbon Disulfide	1	1 U
1,1-Dichloroethene	1	1 U
1,1-Dichloroethane	1	1 U
1,2-Dichlorethene (total)	1	1 U
Chloroform	1	1 U
1,2-Dichloroethane	1	1 U
2-Butanone	5	5 U
1,1,1-Trichloroethane	1	1 U
Carbon Tetrachloride	1	1 U
Bromodichloromethane	1	1 U
1,2-Dichloropropane	1	1 U
cis-1,3-Dichloropropene	1	1 U
Trichloroethene	1	1 U
Dibromochloromethane	1	1 U
1,1,2-Trichloroethane	1	1 U
Benzene	1	1 U
trans-1,3-Dichloropropene	1	1 U
Bromoform	1	1 U
4-Methyl-2-Pentanone	5	5 U
2-Hexanone	5	5 U
Tetrachloroethene	1	1 U
1,1,2,2-Tetrachloroethane	1	1 U
Toluene	1	1 U
Chlorobenzene	1	1 U
Ethylbenzene	1	1 U
Styrene	1	1 U
Xylene (total)	1	1 U
1,2-Dibromoethane	1	1 U
1,3-Dichlorobenzene	1	1 U
1,4-Dichlorobenzene	1	1 U
1,2-Dichlorobenzene	1	1 U
1,2-Dibromo-3-Chloropropane	1	1 U

Dilution Factor: 1.0

Associated Method Blank: 06482
Associated Equipment Blank: -
Associated Field Blank: SRQBXX1XXX01XX
Associated Trip Blank: SRQTXX2XXX01XX

Site: DOMESTIC WELL U: Not detected

Table 2
Validation / Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18
DATE SAMPLED: 11/11/92
DATE ANALYZED: 11/18/92

ANALYTE	RL	
Chloromethane	1	1 U
Bromomethane	1	1 U
Vinyl Chloride	1	1 U
Chloroethane	1	1 U
Methylene Chloride	1	1 U
Acetone	5	5 UJ
Carbon Disulfide	1	1 U
1,1-Dichloroethene	1	1 U
1,1-Dichloroethane	1	1 U
1,2-Dichlorethene (total)	1	1 U
Chloroform	1	1 U
1,2-Dichloroethane	1	1 U
2-Butanone	5	R
1,1,1-Trichloroethane	1	1 U
Carbon Tetrachloride	1	1 U
Bromodichloromethane	1	1 U
1,2-Dichloropropane	1	1 U
cis-1,3-Dichloropropene	1	1 U
Trichloroethene	1	1 U
Dibromochloromethane	1	1 U
1,1,2-Trichloroethane	1	1 U
Benzene	1	1 U
trans-1,3-Dichloropropene	1	1 U
Bromoform	1	1 U
4-Methyl-2-Pentanone	5	5 U
2-Hexanone	5	5 U
Tetrachloroethene	1	1 U
1,1,2,2-Tetrachloroethane	1	1 U
Toluene	1	1 U
Chlorobenzene	1	1 U
Ethylbenzene	1	1 U
Styrene	1	1 U
Xylene (total)	1	1 U
1,2-Dibromoethane	1	1 UJ
1,3-Dichlorobenzene	1	1 UJ
1,4-Dichlorobenzene	1	1 UJ
1,2-Dichlorobenzene	1	1 UJ
1,2-Dibromo-3-Chloropropane	1	1 UJ

Dilution Factor: 1.0

Associated Method Blank: 06482
Associated Equipment Blank: -
Associated Field Blank: SRQBXX1XXX01XX
Associated Trip Blank: SRQTXX2XXX01XX

Site: DOMESTIC WELL U: Not detected J: Estimated R: Unsuable

Table 3
Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18
DATE SAMPLED: 11/11/92
DATE ANALYZED: 11/18/92

ANALYTE	RL		
Chloromethane	1	-	
Bromomethane	1	-	
Vinyl Chloride	1	-	
Chloroethane	1	-	
Methylene Chloride	1	-	
Acetone	5	-	
Carbon Disulfide	1	-	
1,1-Dichloroethene	1	-	
1,1-Dichloroethane	1	-	
1,2-Dichlorethene (total)	1	-	
Chloroform	1	-	
1,2-Dichloroethane	1	-	
2-Butanone	5		R
1,1,1-Trichloroethane	1	-	
Carbon Tetrachloride	1	-	
Bromodichloromethane	1	-	
1,2-Dichloropropane	1	-	
cis-1,3-Dichloropropene	1	-	
Trichloroethene	1	-	
Dibromochloromethane	1	-	
1,1,2-Trichloroethane	1	-	
Benzene	1	-	
trans-1,3-Dichloropropene	1	-	
Bromoform	1	-	
4-Methyl-2-Pentanone	5	-	
2-Hexanone	5	-	
Tetrachloroethene	1	-	
1,1,2,2-Tetrachloroethane	1	-	
Toluene	1	-	
Chlorobenzene	1	-	
Ethylbenzene	1	-	
Styrene	1	-	
Xylene (total)	1	-	
1,2-Dibromoethane	1	-	
1,3-Dichlorobenzene	1	-	
1,4-Dichlorobenzene	1	-	
1,2-Dichlorobenzene	1	-	
1,2-Dibromo-3-Chloropropane	1	-	

Dilution Factor: 1.0

Associated Method Blank: 06482
Associated Equipment Blank: -
Associated Field Blank: SRQBXX1XXX01XX
Associated Trip Blank: SRQTXX2XXX01XX

Site: DOMESTIC WELL R: Unusable -: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18
DATE SAMPLED: 11/11/92

ANALYTE	SOW-3/90 - II CRQL		
Aluminum	200	17.3	U
Antimony	60	26.7	B
Arsenic	10	1.5	UW
Barium	200	9.4	B
Beryllium	5	1.6	U
Cadmium	5	4.6	U
Calcium	5000	12200	
Chromium	10	5.3	U
Cobalt	50	5.3	U
Copper	25	13.9	B
Iron	100	6.7	B
Lead	3	3.6	
Magnesium	5000	5370	
Manganese	15	3.8	B
Mercury	0.2	0.10	U
Nickel	40	12.2	U
Potassium	5000	2300	B
Selenium	5	1.5	U
Silver	10	2.7	U
Sodium	5000	15900	
Thallium	10	1.5	U
Vanadium	50	2.6	B
Zinc	20	6.7	B
Cyanide	10	10.0	U

Associated Method Blank: PBBW0001
Associated Equipment Blank: -
Associated Field Blank: SRQBXX1XXX01XX

Site: DOMESTIC WELL *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

Table 2
Validation / Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18
DATE SAMPLED: 11/11/92

ANALYTE	SOW-3/90 - II CRQL		
Aluminum	200	17.3	U
Antimony	60	26.7	U
Arsenic	10	1.5	UJ
Barium	200	9.4	J
Beryllium	5	1.6	U
Cadmium	5	4.6	U
Calcium	5000	12200	J
Chromium	10	5.3	U
Cobalt	50	5.3	U
Copper	25	13.9	J
Iron	100	6.7	UJ
Lead	3	3.6	U
Magnesium	5000	5370	
Manganese	15	3.8	J
Mercury	0.2	0.10	U
Nickel	40	12.2	U
Potassium	5000	2300	J
Selenium	5	1.5	U
Silver	10	2.7	U
Sodium	5000	15900	
Thallium	10	1.5	U
Vanadium	50	2.6	U
Zinc	20	6.7	U
Cyanide	10	10.0	U

Associated Method Blank: PBBW0001
Associated Equipment Blank: -
Associated Field Blank: SRQBXX1XXX01XX

Site: DOMESTIC WELL *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

Table 3
Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18
DATE SAMPLED: 11/11/92

ANALYTE	SOW-3/90 - II CRQL		
Aluminum	200	-	
Antimony	60	-	
Arsenic	10	-	
Barium	200	9.4	J
Beryllium	5	-	
Cadmium	5	-	
Calcium	5000	12200	J
Chromium	10	-	
Cobalt	50	-	
Copper	25	13.9	J
Iron	100	-	
Lead	3	-	
Magnesium	5000	5370	
Manganese	15	3.8	J
Mercury	0.2	-	
Nickel	40	-	
Potassium	5000	2300	J
Selenium	5	-	
Silver	10	-	
Sodium	5000	15900	
Thallium	10	-	
Vanadium	50	-	
Zinc	20	-	
Cyanide	10	-	

Associated Method Blank: PBBW0001
Associated Equipment Blank: -
Associated Field Blank: SRQBXX1XXX01XX

Site: DOMESTIC WELL *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: QBW018 #
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/18/92
DATE ANALYZED: 11/26/92

ANALYTE	SOW-2/88 CRQL		
alpha-BHC	0.05	0.053	U
beta-BHC	0.05	0.053	U
delta-BHC	0.05	0.053	U
gamma-BHC (Lindane)	0.05	0.053	U
Heptachlor	0.05	0.053	U
Aldrin	0.05	0.053	U
Heptachlor Epoxide	0.05	0.053	U
Endosulfan I	0.05	0.053	U
Dieldrin	0.1	0.11	U
4,4'-DDE	0.1	0.11	U
Endrin	0.1	0.11	U
Endosulfan II	0.1	0.11	U
4,4'-DDD	0.1	0.11	U
Endosulfan Sulfate	0.1	0.11	U
4,4'-DDT	0.1	0.11	U
Methoxychlor	0.5	0.53	U
Endrin Ketone	0.1	0.11	U
alpha-Chlordane	0.5	0.53	U
gamma-Chlordane	0.5	0.53	U
Toxaphene	1	1.1	U
Aroclor-1016	0.5	0.53	U
Aroclor-1221	0.5	0.53	U
Aroclor-1232	0.5	0.53	U
Aroclor-1242	0.5	0.53	U
Aroclor-1248	0.5	0.53	U
Aroclor-1254	1	1.1	U
Aroclor-1260	1	1.1	U
Dilution Factor:		1.00	

Associated Method Blank: PBLKABW010
Associated Equipment Blank: SRQSXX3XXX01XX
Associated Field Blank: SRQBXX1XXX01XX

Site: DOMESTIC WELL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 2
Validation / Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: QBW018 #
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/18/92
DATE ANALYZED: 11/26/92

ANALYTE	SOW-2/88 CRQL		
alpha-BHC	0.05	0.053	U
beta-BHC	0.05	0.053	U
delta-BHC	0.05	0.053	U
gamma-BHC (Lindane)	0.05	0.053	U
Heptachlor	0.05	0.053	U
Aldrin	0.05	0.053	U
Heptachlor Epoxide	0.05	0.053	U
Endosulfan I	0.05	0.053	U
Dieldrin	0.1	0.11	U
4,4'-DDE	0.1	0.11	U
Endrin	0.1	0.11	U
Endosulfan II	0.1	0.11	U
4,4'-DDD	0.1	0.11	U
Endosulfan Sulfate	0.1	0.11	U
4,4'-DDT	0.1	0.11	U
Methoxychlor	0.5	0.53	U
Endrin Ketone	0.1	0.11	U
alpha-Chlordane	0.5	0.53	U
gamma-Chlordane	0.5	0.53	U
Toxaphene	1	1.1	U
Aroclor-1016	0.5	0.53	U
Aroclor-1221	0.5	0.53	U
Aroclor-1232	0.5	0.53	U
Aroclor-1242	0.5	0.53	U
Aroclor-1248	0.5	0.53	U
Aroclor-1254	1	1.1	U
Aroclor-1260	1	1.1	U
Dilution Factor:		1.00	

Associated Method Blank: PBLKABW010
Associated Equipment Blank: SRQSXX3XXX01XX
Associated Field Blank: SRQBXX1XXX01XX

Site: DOMESTIC WELL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 3
Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: QBW018 #
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/18/92
DATE ANALYZED: 11/26/92

ANALYTE	SOW-2/88 CRQL	
alpha-BHC	0.05	-
beta-BHC	0.05	-
delta-BHC	0.05	-
gamma-BHC (Lindane)	0.05	-
Heptachlor	0.05	-
Aldrin	0.05	-
Heptachlor Epoxide	0.05	-
Endosulfan I	0.05	-
Dieldrin	0.1	-
4,4'-DDE	0.1	-
Endrin	0.1	-
Endosulfan II	0.1	-
4,4'-DDD	0.1	-
Endosulfan Sulfate	0.1	-
4,4'-DDT	0.1	-
Methoxychlor	0.5	-
Endrin Ketone	0.1	-
alpha-Chlordane	0.5	-
gamma-Chlordane	0.5	-
Toxaphene	1	-
Aroclor-1016	0.5	-
Aroclor-1221	0.5	-
Aroclor-1232	0.5	-
Aroclor-1242	0.5	-
Aroclor-1248	0.5	-
Aroclor-1254	1	-
Aroclor-1260	1	-

Dilution Factor: 1.00

Associated Method Blank: PBLKABW010
Associated Equipment Blank: SRQSXX3XXX01XX
Associated Field Blank: SRQBXX1XXX01XX

Site: DOMESTIC WELL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18 #
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/12/92
DATE ANALYZED: 11/24/92

ANALYTE	SOW-3/90 - II CRQL		
Phenol	10	10	U
bis(2-Chloroethyl)ether	10	10	U
2-Chlorophenol	10	10	U
1,3-Dichlorobenzene	10	10	U
1,4-Dichlorobenzene	10	10	U
1,2-Dichlorobenzene	10	10	U
2-Methylphenol	10	10	U
2,2'-oxybis(1-Chloropropane)	10	10	U
4-Methylphenol	10	10	U
N-Nitroso-di-n-propylamine	10	10	U
Hexachloroethane	10	10	U
Nitrobenzene	10	10	U
Isophorone	10	10	U
2-Nitrophenol	10	10	U
2,4-Dimethylphenol	10	10	U
bis(2-Chloroethoxy)methane	10	10	U
2,4-Dichlorophenol	10	10	U
1,2,4-Trichlorobenzene	10	10	U
Naphthalene	10	10	U
4-Chloroaniline	10	10	U
Hexachlorobutadiene	10	10	U
4-Chloro-3-Methylphenol	10	10	U
2-Methylnaphthalene	10	10	U
Hexachlorocyclopentadiene	10	10	U
2,4,6-Trichlorophenol	10	10	U
2,4,5-Trichlorophenol	25	25	U
2-Chloronaphthalene	10	10	U
2-Nitroaniline	25	25	U
Dimethylphthalate	10	10	U
Acenaphthylene	10	10	U
2,6-Dinitrotoluene	10	10	U

Site: DOMESTIC WELL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18 #
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/12/92
DATE ANALYZED: 11/24/92

ANALYTE	SOW-3/90 - II CRQL		
3-Nitroaniline	25	25	U
Acenaphthene	10	10	U
2,4-Dinitrophenol	25	25	U
4-Nitrophenol	25	25	U
Dibenzofuran	10	10	U
2,4-Dinitrotoluene	10	10	U
Diethylphthalate	10	10	U
4-Chlorophenyl-phenylether	10	10	U
Fluorene	10	10	U
4-Nitroaniline	25	25	U
4,6-Dinitro-2-methylphenol	25	25	U
N-Nitrosodiphenylamine	10	10	U
4-Bromophenyl-phenylether	10	10	U
Hexachlorobenzene	10	10	U
Pentachlorophenol	25	25	U
Phenanthrene	10	10	U
Anthracene	10	10	U
Carbazole	10	10	U
Di-n-butylphthalate	10	10	U
Fluoranthene	10	10	U
Pyrene	10	10	U
Butylbenzylphthalate	10	10	U
3,3'-Dichlorobenzidine	10	10	U
Benzo(a)Anthracene	10	10	U
Chrysene	10	10	U
bis(2-Ethylhexyl)phthalate	10	5	JB
Di-n-octylphthalate	10	10	U
Benzo(b)Fluoranthene	10	10	U
Benzo(k)Fluoranthene	10	10	U
Benzo(a)Pyrene	10	10	U
Indeno(1,2,3-c,d)Pyrene	10	10	U
Dibenz(a,h)Anthracene	10	10	U
Benzo(g,h,i)perylene	10	10	U

Dilution Factor: 1.00

Associated Method Blank: 62780
Associated Equipment Blank: -
Associated Field Blank: SRQBXX1XXX01XX

Site: DOMESTIC WELL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 2
Validation / Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18 #
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/12/92
DATE ANALYZED: 11/24/92

ANALYTE	SOW-3/90 - II CRQL		
Phenol	10	10	U
bis(2-Chloroethyl)ether	10	10	U
2-Chlorophenol	10	10	U
1,3-Dichlorobenzene	10	10	U
1,4-Dichlorobenzene	10	10	U
1,2-Dichlorobenzene	10	10	U
2-Methylphenol	10	10	U
2,2'-oxybis(1-Chloropropane)	10	10	U
4-Methylphenol	10	10	U
N-Nitroso-di-n-propylamine	10	10	U
Hexachloroethane	10	10	U
Nitrobenzene	10	10	U
Isophorone	10	10	U
2-Nitrophenol	10	10	U
2,4-Dimethylphenol	10	10	U
bis(2-Chloroethoxy)methane	10	10	U
2,4-Dichlorophenol	10	10	U
1,2,4-Trichlorobenzene	10	10	U
Naphthalene	10	10	U
4-Chloroaniline	10	10	U
Hexachlorobutadiene	10	10	U
4-Chloro-3-Methylphenol	10	10	U
2-Methylnaphthalene	10	10	U
Hexachlorocyclopentadiene	10	10	U
2,4,6-Trichlorophenol	10	10	U
2,4,5-Trichlorophenol	25	25	U
2-Chloronaphthalene	10	10	U
2-Nitroaniline	25	25	U
Dimethylphthalate	10	10	U
Acenaphthylene	10	10	U
2,6-Dinitrotoluene	10	10	U

Site: DOMESTIC WELL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 2
Validation / Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18 #
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/12/92
DATE ANALYZED: 11/24/92

ANALYTE	SOW-3/90 - II CRQL		
3-Nitroaniline	25	25	U
Acenaphthene	10	10	U
2,4-Dinitrophenol	25	25	U
4-Nitrophenol	25	25	U
Dibenzofuran	10	10	U
2,4-Dinitrotoluene	10	10	U
Diethylphthalate	10	10	U
4-Chlorophenyl-phenylether	10	10	U
Fluorene	10	10	U
4-Nitroaniline	25	25	U
4,6-Dinitro-2-methylphenol	25	25	U
N-Nitrosodiphenylamine	10	10	U
4-Bromophenyl-phenylether	10	10	U
Hexachlorobenzene	10	10	U
Pentachlorophenol	25	25	U
Phenanthrene	10	10	U
Anthracene	10	10	U
Carbazole	10	10	U
Di-n-butylphthalate	10	10	U
Fluoranthene	10	10	U
Pyrene	10	10	U
Butylbenzylphthalate	10	10	U
3,3'-Dichlorobenzidine	10	10	UJ
Benzo(a)Anthracene	10	10	U
Chrysene	10	10	U
bis(2-Ethylhexyl)phthalate	10	10	U
Di-n-octylphthalate	10	10	U
Benzo(b)Fluoranthene	10	10	U
Benzo(k)Fluoranthene	10	10	U
Benzo(a)Pyrene	10	10	U
Indeno(1,2,3-c,d)Pyrene	10	10	U
Dibenz(a,h)Anthracene	10	10	U
Benzo(g,h,i)perylene	10	10	U

Dilution Factor: 1.00

Associated Method Blank: 62780
Associated Equipment Blank: -
Associated Field Blank: SRQBXX1XXX01XX

Site: DOMESTIC WELL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 3
Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18 #
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/12/92
DATE ANALYZED: 11/24/92

ANALYTE	SOW-3/90 - II CRQL	
Phenol	10	-
bis(2-Chloroethyl)ether	10	-
2-Chlorophenol	10	-
1,3-Dichlorobenzene	10	-
1,4-Dichlorobenzene	10	-
1,2-Dichlorobenzene	10	-
2-Methylphenol	10	-
2,2'-oxybis(1-Chloropropane)	10	-
4-Methylphenol	10	-
N-Nitroso-di-n-propylamine	10	-
Hexachloroethane	10	-
Nitrobenzene	10	-
Isophorone	10	-
2-Nitrophenol	10	-
2,4-Dimethylphenol	10	-
bis(2-Chloroethoxy)methane	10	-
2,4-Dichlorophenol	10	-
1,2,4-Trichlorobenzene	10	-
Naphthalene	10	-
4-Chloroaniline	10	-
Hexachlorobutadiene	10	-
4-Chloro-3-Methylphenol	10	-
2-Methylnaphthalene	10	-
Hexachlorocyclopentadiene	10	-
2,4,6-Trichlorophenol	10	-
2,4,5-Trichlorophenol	25	-
2-Chloronaphthalene	10	-
2-Nitroaniline	25	-
Dimethylphthalate	10	-
Acenaphthylene	10	-
2,6-Dinitrotoluene	10	-

Site: DOMESTIC WELL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 3
Summary Table

SAMPLE LOCATION: SRDWXX1XXX01XX
LAB NUMBER: BNASW3*18 #
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/12/92
DATE ANALYZED: 11/24/92

ANALYTE	SOW-3/90 - II CRQL	
3-Nitroaniline	25	-
Acenaphthene	10	-
2,4-Dinitrophenol	25	-
4-Nitrophenol	25	-
Dibenzofuran	10	-
2,4-Dinitrotoluene	10	-
Diethylphthalate	10	-
4-Chlorophenyl-phenylether	10	-
Fluorene	10	-
4-Nitroaniline	25	-
4,6-Dinitro-2-methylphenol	25	-
N-Nitrosodiphenylamine	10	-
4-Bromophenyl-phenylether	10	-
Hexachlorobenzene	10	-
Pentachlorophenol	25	-
Phenanthrene	10	-
Anthracene	10	-
Carbazole	10	-
Di-n-butylphthalate	10	-
Fluoranthene	10	-
Pyrene	10	-
Butylbenzylphthalate	10	-
3,3'-Dichlorobenzidine	10	-
Benzo(a)Anthracene	10	-
Chrysene	10	-
bis(2-Ethylhexyl)phthalate	10	-
Di-n-octylphthalate	10	-
Benzo(b)Fluoranthene	10	-
Benzo(k)Fluoranthene	10	-
Benzo(a)Pyrene	10	-
Indeno(1,2,3-c,d)Pyrene	10	-
Dibenz(a,h)Anthracene	10	-
Benzo(g,h,i)perylene	10	-

Dilution Factor: 1.00

Associated Method Blank: 62780
Associated Equipment Blank: -
Associated Field Blank: SRQBXX1XXX01XX

Site: DOMESTIC WELL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:		MEPSXX1XX101XX		MEPSXX2XX101XX		SRPSXX1XX301XX		SRPSXX1XX401XX		SRPSXX2XX201XX		SRPSXX3XX401XX		SRPSXX4XX201XX	
LAB NUMBER:		BNASS2*1 #		BNASS2*2 #		BNASS2*9 #		BNASS2*10 #		BNASS2*11 #		BNASS2*12 #		BNASS2*13 #	
DATE SAMPLED:		11/05/92		11/05/92		11/05/92		11/04/92		11/04/92		11/04/92		11/05/92	
ANALYTE	SOW-3/90 - II CRQL														
Aluminum	40	23000		24400		11200		8500		10800		19300		4860	
Antimony	12	2.8	UN	3.5	UN	3.7	UN	2.6	UN	3.1	UN	3.3	UN	3.3	UN
Arsenic	2	8.7		6.4		2.6	B	2.0	B	8.4		4.4		0.63	B
Barium	40	76.7		53.4	B	27.9	B	45.9	B	29.1	B	45.0	B	23.0	B
Beryllium	1	0.92	B	1.1	B	0.52	U	0.37	U	0.44	U	0.63	B	0.46	U
Cadmium	1	1.1	UN	1.4	UN	2.1	N	1.6	N	1.3	UN	1.3	UN	1.3	UN
Calcium	1000	969	B	2480		762	B	854	B	6780		1620		974	B
Chromium	2	38.2		32.2		13.8		14.1		11.6		26.7		11.4	
Cobalt	10	20.4		10.3	B	4.5	B	6.2	B	3.0	B	9.6	B	4.2	B
Copper	5	20.5		7.7		90.1		5.8		3.2	B	6.6	B	3.6	B
Iron	20	36100		27500		12600		12100		11300		22700		5420	
Lead	0.6	14.6	SN*	12.6	WN*	79.0	SN*	16.5	WN*	44.4	SN*	14.3	WN*	5.8	N*
Magnesium	1000	7950		4280		1940		3080		3720		3740		1480	
Manganese	3	638		185		200		201		188		324		63.7	
Mercury	0.04	0.06	U	0.08	U	0.14	B	0.06	U	0.41		0.14		0.10	B
Nickel	8	29.5		22.3		5.6	B	11.0		5.7	B	17.5		4.3	B
Potassium	1000	3770		1790		791	B	1920		483	B	1670		723	B
Selenium	1	0.37	UW	0.46	UW	0.49	U	0.35	UW	0.41	UW	0.43	UW	0.43	U
Silver	2	0.67	U	0.83	U	0.88	U	0.63	U	0.74	U	0.78	U	0.78	U
Sodium	1000	238	BE	276	BE	514	BE	193	BE	140	BE	250	BE	200	BE
Thallium	2	0.37	U	0.46	U	0.49	UW	0.35	U	0.41	U	0.43	U	0.43	UW
Vanadium	10	53.3		44.2		22.4		20.6		21.7		36.0		12.0	B
Zinc	4	75.5	E	71.4	E	86.7	E	136	E	173	E	53.8	E	30.8	E
Cyanide	2	2.5	U	3.1	U	3.2	U	2.3	U	2.8	U	2.9	U	2.9	U
Percent Solids:		81		65		62		86		73		69		69	
Associated Method Blank:		PBBS001		PBBS001		PBBS001		PBBS001		PBBS001		PBBS001		PBBS001	
Associated Equipment Blank:		MEQSXX6XXX01XX		MEQSXX6XXX01XX		SRQSXX5XXX01XX		SRQSXX5XXX01XX		SRQSXX5XXX01XX		SRQSXX5XXX01XX		SRQSXX5XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: TEST PIT SOIL *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

PROJECT: NASB

Inorganic Soil Analysis (mg/kg)

01/19/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:	BNASS2*1 #	BNASS2*2 #	BNASS2*9 #	BNASS2*10 #	BNASS2*11 #	BNASS2*12 #	BNASS2*13 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/04/92	11/04/92	11/04/92	11/05/92
ANALYTE — SOW-3/90 - II CRQL							
Aluminum 40	23000 J	24400 J	11200 J	8500 J	10800 J	19300 J	4860 J
Antimony 12	2.8 UJ	3.5 UJ	3.7 UJ	2.6 UJ	3.1 UJ	3.3 UJ	3.3 UJ
Arsenic 2	8.7	6.4	2.6 J	2.0 J	8.4	4.4	0.63 J
Barium 40	76.7	53.4 J	27.9 J	45.9 J	29.1 J	45.0 J	23.0 J
Beryllium 1	0.92 J	1.1 J	0.52 U	0.37 U	0.44 U	0.63 J	0.46 U
Cadmium 1	1.1 U	1.4 U	2.1 J	1.6 J	1.3 U	1.3 U	1.3 U
Calcium 1000	969 J	2480	762 J	854 J	6780	1620	974 J
Chromium 2	38.2	32.2	13.8	14.1	11.6	26.7	11.4
Cobalt 10	20.4	10.3 J	4.5 U	6.2 J	3.0 U	9.6 J	4.2 U
Copper 5	20.5	7.7	90.1	5.8	3.2 J	6.6 J	3.6 J
Iron 20	36100	27500	12600	12100	11300	22700	5420
Lead 0.6	14.6 J	12.6 J	79.0 J	16.5 J	44.4 J	14.3 J	5.8 J
Magnesium 1000	7950	4280	1940	3080	3720	3740	1480
Manganese 3	638	185	200	201	188	324	63.7
Mercury 0.04	0.06 U	0.08 U	0.14 J	0.06 U	0.41	0.14	0.10 J
Nickel 8	29.5	22.3	5.6 J	11.0	5.7 J	17.5	4.3 J
Potassium 1000	3770	1790	791 J	1920	483 J	1670	723 J
Selenium 1	0.37 UJ	0.46 UJ	0.49 U	0.35 UJ	0.41 UJ	0.43 UJ	0.43 U
Silver 2	0.67 U	0.83 U	0.88 U	0.63 U	0.74 U	0.78 U	0.78 U
Sodium 1000	238 J	276 J	514 J	193 J	140 J	250 J	200 J
Thallium 2	0.37 U	0.46 U	0.49 U	0.35 U	0.41 U	0.43 U	0.43 U
Vanadium 10	53.3	44.2	22.4	20.6	21.7	36.0	12.0 J
Zinc 4	75.5 J	71.4 J	86.7 J	136 J	173 J	53.8 J	30.8 J
Cyanide 2	2.5 U	3.1 U	3.2 U	2.3 U	2.8 U	2.9 U	2.9 U
Percent Solids:	81	65	62	86	73	69	69
Associated Method Blank:	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: TEST PIT SOIL *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

Table 3
Summary Table

SAMPLE LOCATION:		MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:		BNASS2*1 #	BNASS2*2 #	BNASS2*9 #	BNASS2*10 #	BNASS2*11 #	BNASS2*12 #	BNASS2*13 #
DATE SAMPLED:		11/05/92	11/05/92	11/05/92	11/04/92	11/04/92	11/04/92	11/05/92
ANALYTE	SOW-3/90 - II CRQL							
Aluminum	40	23000 J	24400 J	11200 J	8500 J	10800 J	19300 J	4860 J
Antimony	12	-	-	-	-	-	-	-
Arsenic	2	8.7	6.4	2.6 J	2.0 J	8.4	4.4	0.63 J
Barium	40	76.7	53.4 J	27.9 J	45.9 J	29.1 J	45.0 J	23.0 J
Beryllium	1	0.92 J	1.1 J	-	-	-	0.63 J	-
Cadmium	1	-	-	2.1 J	1.6 J	-	-	-
Calcium	1000	969 J	2480	762 J	854 J	6780	1620	974 J
Chromium	2	38.2	32.2	13.8	14.1	11.6	26.7	11.4
Cobalt	10	20.4	10.3 J	-	6.2 J	-	9.6 J	-
Copper	5	20.5	7.7	90.1	5.8	3.2 J	6.6 J	3.6 J
Iron	20	36100	27500	12600	12100	11300	22700	5420
Lead	0.6	14.6 J	12.6 J	79.0 J	16.5 J	44.4 J	14.3 J	5.8 J
Magnesium	1000	7950	4280	1940	3080	3720	3740	1480
Manganese	3	638	185	200	201	188	324	63.7
Mercury	0.04	-	-	0.14 J	-	0.41	0.14	0.10 J
Nickel	8	29.5	22.3	5.6 J	11.0	5.7 J	17.5	4.3 J
Potassium	1000	3770	1790	791 J	1920	483 J	1670	723 J
Selenium	1	-	-	-	-	-	-	-
Silver	2	-	-	-	-	-	-	-
Sodium	1000	238 J	276 J	514 J	193 J	140 J	250 J	200 J
Thallium	2	-	-	-	-	-	-	-
Vanadium	10	53.3	44.2	22.4	20.6	21.7	36.0	12.0 J
Zinc	4	75.5 J	71.4 J	86.7 J	136 J	173 J	53.8 J	30.8 J
Cyanide	2	-	-	-	-	-	-	-
Percent Solids:		81	65	62	86	73	69	69
Associated Method Blank:		PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001
Associated Equipment Blank:		MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: TEST PIT SOIL *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX2XX201XX	SRPSXX3XX401XX
LAB NUMBER:	QBS001 #	QBS002 #	QBS002 D #	QBS009 #	QBS010 #	QBS011 #	QBS011 D #	QBS012 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92
DATE EXTRACTED:	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92
DATE ANALYZED:	11/30/92	11/30/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92

ANALYTE	SOW-2/88 CRQL								
alpha-BHC	8	20 U	25 U	49 U	26 U	18 U	22 U	110 U	23 U
beta-BHC	8	20 U	25 U	49 U	26 U	18 U	22 U	110 U	23 U
delta-BHC	8	20 U	25 U	49 U	26 U	18 U	22 U	110 U	23 U
gamma-BHC (Lindane)	8	20 U	25 U	49 U	26 U	18 U	22 U	110 U	23 U
Heptachlor	8	20 U	25 U	49 U	26 U	18 U	22 U	110 U	23 U
Aldrin	8	20 U	25 U	49 U	26 U	18 U	22 U	110 U	23 U
Heptachlor Epoxide	8	20 U	25 U	49 U	26 U	18 U	22 U	110 U	23 U
Endosulfan I	8	20 U	25 U	49 U	26 U	18 U	22 U	110 U	23 U
Dieldrin	16	40 U	49 U	98 U	51 U	37 U	44 U	220 U	46 U
4,4'-DDE	16	40 U	49 U	98 U	51 U	37 U	45	220 U	46 U
Endrin	16	40 U	49 U	98 U	51 U	37 U	44 U	220 U	46 U
Endosulfan II	16	40 U	49 U	98 U	51 U	37 U	44 U	220 U	46 U
4,4'-DDD	16	40 U	49 U	98 U	51 U	37 U	44 U	220 U	46 U
Endosulfan Sulfate	16	40 U	49 U	98 U	51 U	37 U	44 U	220 U	46 U
4,4'-DDT	16	40 U	49 U	98 U	51 U	37 U	120	220 U	46 U
Methoxychlor	80	200 U	250 U	490 U	260 U	180 U	220 U	1100 U	230 U
Endrin Ketone	16	40 U	49 U	98 U	51 U	37 U	44 U	220 U	46 U
alpha-Chlordane	80	200 U	250 U	490 U	260 U	180 U	220 U	1100 U	230 U
gamma-Chlordane	80	200 U	250 U	490 U	260 U	180 U	220 U	1100 U	230 U
Toxaphene	160	400 U	490 U	980 U	510 U	370 U	440 U	2200 U	460 U
Aroclor-1016	80	200 U	250 U	490 U	260 U	180 U	220 U	1100 U	230 U
Aroclor-1221	80	200 U	250 U	490 U	260 U	180 U	220 U	1100 U	230 U
Aroclor-1232	80	200 U	250 U	490 U	260 U	180 U	220 U	1100 U	230 U
Aroclor-1242	80	200 U	250 U	490 U	260 U	180 U	220 U	1100 U	230 U
Aroclor-1248	80	200 U	250 U	490 U	260 U	180 U	220 U	1100 U	230 U
Aroclor-1254	160	400 U	490 U	980 U	510 U	370 U	440 U	2200 U	460 U
Aroclor-1260	160	400 U	490 U	980 U	510 U	370 U	440 U	2200 U	460 U
Dilution Factor:		1.00	1.00	2.00	1.00	1.00	1.00	5.00	1.00
Percent Solids:		81	65	65	62	86	73	73	69
Associated Method Blank:		PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001
Associated Equipment Blank:		MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: TEST PIT SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRPSXX4XX201XX
LAB NUMBER: QBS013 #
DATE SAMPLED: 11/05/92
DATE EXTRACTED: 11/18/92
DATE ANALYZED: 12/01/92

ANALYTE	SOW-2/88 CRQL		
alpha-BHC	8	23	U
beta-BHC	8	23	U
delta-BHC	8	23	U
gamma-BHC (Lindane)	8	23	U
Heptachlor	8	23	U
Aldrin	8	23	U
Heptachlor Epoxide	8	23	U
Endosulfan I	8	23	U
Dieldrin	16	46	U
4,4'-DDE	16	46	U
Endrin	16	46	U
Endosulfan II	16	46	U
4,4'-DDD	16	46	U
Endosulfan Sulfate	16	46	U
4,4'-DDT	16	46	U
Methoxychlor	80	230	U
Endrin Ketone	16	46	U
alpha-Chlordane	80	230	U
gamma-Chlordane	80	230	U
Toxaphene	160	460	U
Aroclor-1016	80	230	U
Aroclor-1221	80	230	U
Aroclor-1232	80	230	U
Aroclor-1242	80	230	U
Aroclor-1248	80	230	U
Aroclor-1254	160	460	U
Aroclor-1260	160	460	U

Dilution Factor: 1.00
Percent Solids: 69

Associated Method Blank: PBLKABS001
Associated Equipment Blank: SRQSXX5XXX01XX
Associated Field Blank: SRQBXX1XXX01XX

Site: TEST PIT SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:	QBS001 #	QBS002 #	QBS009 #	QBS010 #	QBS011 #	QBS012 #	QBS013 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92
DATE EXTRACTED:	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92
DATE ANALYZED:	11/30/92	11/30/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92

ANALYTE	SOW-2/88 CRQL														
alpha-BHC	8	20	UJ	25	UJ	26	UJ	18	UJ	22	UJ	23	UJ	23	UJ
beta-BHC	8	20	UJ	25	UJ	26	UJ	18	UJ	22	UJ	23	UJ	23	UJ
delta-BHC	8	20	UJ	25	UJ	26	UJ	18	UJ	22	UJ	23	UJ	23	UJ
gamma-BHC (Lindane)	8	20	UJ	25	UJ	26	UJ	18	UJ	22	UJ	23	UJ	23	UJ
Heptachlor	8	20	UJ	25	UJ	26	UJ	18	UJ	22	UJ	23	UJ	23	UJ
Aldrin	8	20	UJ	25	UJ	26	UJ	18	UJ	22	UJ	23	UJ	23	UJ
Heptachlor Epoxide	8	20	UJ	25	UJ	26	UJ	18	UJ	22	UJ	23	UJ	23	UJ
Endosulfan I	8	20	UJ	25	UJ	26	UJ	18	UJ	22	UJ	23	UJ	23	UJ
Dieldrin	16	40	UJ	49	UJ	51	UJ	37	UJ	44	UJ	46	UJ	46	UJ
4,4'-DDE	16	40	UJ	49	UJ	51	UJ	37	UJ	45	J	46	UJ	46	UJ
Endrin	16	40	UJ	49	UJ	51	UJ	37	UJ	44	UJ	46	UJ	46	UJ
Endosulfan II	16	40	UJ	49	UJ	51	UJ	37	UJ	44	UJ	46	UJ	46	UJ
4,4'-DDD	16	40	UJ	49	UJ	51	UJ	37	UJ	44	UJ	46	UJ	46	UJ
Endosulfan Sulfate	16	40	UJ	49	UJ	51	UJ	37	UJ	44	UJ	46	UJ	46	UJ
4,4'-DDT	16	40	UJ	49	UJ	51	UJ	37	UJ	120	J	67	U	46	UJ
Methoxychlor	80	200	UJ	250	UJ	260	UJ	180	UJ	220	UJ	230	UJ	230	UJ
Endrin Ketone	16	40	UJ	49	UJ	51	UJ	37	UJ	44	UJ	46	UJ	46	UJ
alpha-Chlordane	80	200	UJ	250	UJ	260	UJ	180	UJ	220	UJ	230	UJ	230	UJ
gamma-Chlordane	80	200	UJ	250	UJ	260	UJ	180	UJ	220	UJ	230	UJ	230	UJ
Toxaphene	160	400	UJ	490	UJ	510	UJ	370	UJ	440	UJ	460	UJ	460	UJ
Aroclor-1016	80	200	UJ	250	UJ	260	UJ	180	UJ	220	UJ	230	UJ	230	UJ
Aroclor-1221	80	200	UJ	250	UJ	260	UJ	180	UJ	220	UJ	230	UJ	230	UJ
Aroclor-1232	80	200	UJ	250	UJ	260	UJ	180	UJ	220	UJ	230	UJ	230	UJ
Aroclor-1242	80	200	UJ	250	UJ	260	UJ	180	UJ	220	UJ	230	UJ	230	UJ
Aroclor-1248	80	200	UJ	250	UJ	260	UJ	180	UJ	220	UJ	230	UJ	230	UJ
Aroclor-1254	160	400	UJ	490	UJ	510	UJ	370	UJ	440	UJ	460	UJ	460	UJ
Aroclor-1260	160	400	UJ	490	UJ	510	UJ	370	UJ	440	UJ	460	UJ	460	UJ
Dilution Factor:		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Percent Solids:		81		65		62		86		73		69		69	

Associated Method Blank:	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: TEST PIT SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 3
Summary Table

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:	QBS001 #	QBS002 #	QBS009 #	QBS010 #	QBS011 #	QBS012 #	QBS013 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92
DATE EXTRACTED:	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92
DATE ANALYZED:	11/30/92	11/30/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE SOW-2/88 CRQL							
alpha-BHC 8	-	-	-	-	-	-	-
beta-BHC 8	-	-	-	-	-	-	-
delta-BHC 8	-	-	-	-	-	-	-
gamma-BHC (Lindane) 8	-	-	-	-	-	-	-
Heptachlor 8	-	-	-	-	-	-	-
Aldrin 8	-	-	-	-	-	-	-
Heptachlor Epoxide 8	-	-	-	-	-	-	-
Endosulfan I 8	-	-	-	-	-	-	-
Dieldrin 16	-	-	-	-	-	-	-
4,4'-DDE 16	-	-	-	-	45 J	-	-
Endrin 16	-	-	-	-	-	-	-
Endosulfan II 16	-	-	-	-	-	-	-
4,4'-DDD 16	-	-	-	-	-	-	-
Endosulfan Sulfate 16	-	-	-	-	-	-	-
4,4'-DDT 16	-	-	-	-	120 J	-	-
Methoxychlor 80	-	-	-	-	-	-	-
Endrin Ketone 16	-	-	-	-	-	-	-
alpha-Chlordane 80	-	-	-	-	-	-	-
gamma-Chlordane 80	-	-	-	-	-	-	-
Toxaphene 160	-	-	-	-	-	-	-
Aroclor-1016 80	-	-	-	-	-	-	-
Aroclor-1221 80	-	-	-	-	-	-	-
Aroclor-1232 80	-	-	-	-	-	-	-
Aroclor-1242 80	-	-	-	-	-	-	-
Aroclor-1248 80	-	-	-	-	-	-	-
Aroclor-1254 160	-	-	-	-	-	-	-
Aroclor-1260 160	-	-	-	-	-	-	-
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:	81	65	62	86	73	69	69
Associated Method Blank:	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: TEST PIT SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:		MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:		BNASS2*1	BNASS2*2	BNASS2*9	BNASS2*10	BNASS2*11	BNASS2*12	BNASS2*13
DATE SAMPLED:		11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92
DATE EXTRACTED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:		11/27/92	11/27/92	11/28/92	11/27/92	11/27/92	11/27/92	11/27/92
ANALYTE	SOW-3/90 - II CRQL							
Phenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
bis(2-Chloroethyl)ether	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Chlorophenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
1,3-Dichlorobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
1,4-Dichlorobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
1,2-Dichlorobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Methylphenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,2'-oxybis(1-Chloropropane)	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
4-Methylphenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
N-Nitroso-di-n-propylamine	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Hexachloroethane	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Nitrobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Isophorone	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Nitrophenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4-Dimethylphenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
bis(2-Chloroethoxy)methane	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4-Dichlorophenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
1,2,4-Trichlorobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Naphthalene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
4-Chloroaniline	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Hexachlorobutadiene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
4-Chloro-3-Methylphenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Methylnaphthalene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Hexachlorocyclopentadiene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4,6-Trichlorophenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4,5-Trichlorophenol	800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
2-Chloronaphthalene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Nitroaniline	800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
Dimethylphthalate	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Acenaphthylene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,6-Dinitrotoluene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U

Site: TEST PIT SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:	BNASS2*1	BNASS2*2	BNASS2*9	BNASS2*10	BNASS2*11	BNASS2*12	BNASS2*13
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/27/92	11/27/92	11/28/92	11/27/92	11/27/92	11/27/92	11/27/92

ANALYTE	SOW-3/90 - II CRQL														
3-Nitroaniline	800	2100	U	2600	U	26000	U	900	U	1100	U	1200	U	1200	U
Acenaphthene	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
2,4-Dinitrophenol	800	2100	U	2600	U	26000	U	900	U	1100	U	1200	U	1200	U
4-Nitrophenol	800	2100	U	2600	U	26000	U	900	U	1100	U	1200	U	1200	U
Dibenzofuran	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
2,4-Dinitrotoluene	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Diethylphthalate	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
4-Chlorophenyl-phenylether	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Fluorene	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
4-Nitroaniline	800	2100	U	2600	U	26000	U	900	U	1100	U	1200	U	1200	U
4,6-Dinitro-2-methylphenol	800	2100	U	2600	U	26000	U	900	U	1100	U	1200	U	1200	U
N-Nitrosodiphenylamine	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
4-Bromophenyl-phenylether	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Hexachlorobenzene	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Pentachlorophenol	800	2100	U	2600	U	26000	U	900	U	1100	U	1200	U	1200	U
Phenanthrene	330	840	U	1000	U	11000	U	360	U	420	U	99	J	480	U
Anthracene	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Carbazole	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Di-n-butylphthalate	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Fluoranthene	330	840	U	1000	U	11000	U	360	U	420	U	150	J	480	U
Pyrene	330	840	U	1000	U	11000	U	360	U	420	U	170	J	480	U
Butylbenzylphthalate	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
3,3'-Dichlorobenzidine	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Benzo(a)Anthracene	330	840	U	1000	U	11000	U	360	U	420	U	85	J	480	U
Chrysene	330	840	U	1000	U	11000	U	360	U	420	U	130	J	480	U
bis(2-Ethylhexyl)phthalate	330	71	JB	180	JB	11000	U	230	JB	170	JB	160	JB	120	JB
Di-n-octylphthalate	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Benzo(b)Fluoranthene	330	840	U	1000	U	11000	U	360	U	420	U	130	J	480	U
Benzo(k)Fluoranthene	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Benzo(a)Pyrene	330	840	U	1000	U	11000	U	360	U	420	U	89	J	480	U
Indeno(1,2,3-c,d)Pyrene	330	840	U	1000	U	11000	U	360	U	420	U	72	J	480	U
Dibenz(a,h)Anthracene	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Benzo(g,h,i)perylene	330	840	U	1000	U	11000	U	360	U	420	U	460	U	480	U
Dilution Factor:		2.00		2.00		20.0		1.00		1.00		1.00		1.00	
Percent Solids:		79		65		63		93		79		72		69	
Associated Method Blank:		62811		62811		62811		62811		62811		62811		62811	
Associated Equipment Blank:		MEQSXX6XXX01XX		MEQSXX6XXX01XX		SRQSXX5XXX01XX		SRQSXX5XXX01XX		SRQSXX5XXX01XX		SRQSXX5XXX01XX		SRQSXX5XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: TEST PIT SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 2
Validation / Summary Table

SAMPLE LOCATION:		MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:		BNASS2*1	BNASS2*2	BNASS2*9	BNASS2*10	BNASS2*11	BNASS2*12	BNASS2*13
DATE SAMPLED:		11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92
DATE EXTRACTED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:		11/27/92	11/27/92	11/28/92	11/27/92	11/27/92	11/27/92	11/27/92
ANALYTE	SOW-3/90 - II CRQL							
Phenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
bis(2-Chloroethyl)ether	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Chlorophenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
1,3-Dichlorobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
1,4-Dichlorobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
1,2-Dichlorobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Methylphenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,2'-oxybis(1-Chloropropane)	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
4-Methylphenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
N-Nitroso-di-n-propylamine	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Hexachloroethane	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Nitrobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Isophorone	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Nitrophenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4-Dimethylphenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
bis(2-Chloroethoxy)methane	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4-Dichlorophenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
1,2,4-Trichlorobenzene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Naphthalene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
4-Chloroaniline	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Hexachlorobutadiene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
4-Chloro-3-Methylphenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Methylnaphthalene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Hexachlorocyclopentadiene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4,6-Trichlorophenol	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4,5-Trichlorophenol	800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
2-Chloronaphthalene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2-Nitroaniline	800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
Dimethylphthalate	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Acenaphthylene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,6-Dinitrotoluene	330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U

Site: TEST PIT SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:	BNASS2*1	BNASS2*2	BNASS2*9	BNASS2*10	BNASS2*11	BNASS2*12	BNASS2*13
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/27/92	11/27/92	11/28/92	11/27/92	11/27/92	11/27/92	11/27/92
ANALYTE SOW-3/90 - II CRQL							
3-Nitroaniline 800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
Acenaphthene 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4-Dinitrophenol 800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
4-Nitrophenol 800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
Dibenzofuran 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
2,4-Dinitrotoluene 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Diethylphthalate 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
4-Chlorophenyl-phenylether 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Fluorene 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
4-Nitroaniline 800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
4,6-Dinitro-2-methylphenol 800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
N-Nitrosodiphenylamine 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
4-Bromophenyl-phenylether 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Hexachlorobenzene 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Pentachlorophenol 800	2100 U	2600 U	26000 U	900 U	1100 U	1200 U	1200 U
Phenanthrene 330	840 U	1000 U	11000 U	360 U	420 U	99 J	480 U
Anthracene 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Carbazole 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Di-n-butylphthalate 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Fluoranthene 330	840 U	1000 U	11000 U	360 U	420 U	150 J	480 U
Pyrene 330	840 U	1000 U	11000 U	360 U	420 U	170 J	480 U
Butylbenzylphthalate 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
3,3'-Dichlorobenzidine 330	840 UJ	1000 UJ	11000 UJ	360 UJ	420 UJ	460 UJ	480 UJ
Benzo(a)Anthracene 330	840 U	1000 U	11000 U	360 U	420 U	85 J	480 U
Chrysene 330	840 U	1000 U	11000 U	360 U	420 U	130 J	480 U
bis(2-Ethylhexyl)phthalate 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Di-n-octylphthalate 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Benzo(b)Fluoranthene 330	840 U	1000 U	11000 U	360 U	420 U	130 J	480 U
Benzo(k)Fluoranthene 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Benzo(a)Pyrene 330	840 U	1000 U	11000 U	360 U	420 U	89 J	480 U
Indeno(1,2,3-c,d)Pyrene 330	840 U	1000 U	11000 U	360 U	420 U	72 J	480 U
Dibenz(a,h)Anthracene 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Benzo(g,h,i)perylene 330	840 U	1000 U	11000 U	360 U	420 U	460 U	480 U
Dilution Factor:	2.00	2.00	20.0	1.00	1.00	1.00	1.00
Percent Solids:	79	65	63	93	79	72	69
Associated Method Blank:	62811	62811	62811	62811	62811	62811	62811
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: TEST PIT SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 3
Summary Table

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:	BNASS2*1	BNASS2*2	BNASS2*9	BNASS2*10	BNASS2*11	BNASS2*12	BNASS2*13
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/27/92	11/27/92	11/28/92	11/27/92	11/27/92	11/27/92	11/27/92
ANALYTE SOW-3/90 - II	CRQL						
Phenol	330	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	330	-	-	-	-	-	-	-
2-Chlorophenol	330	-	-	-	-	-	-	-
1,3-Dichlorobenzene	330	-	-	-	-	-	-	-
1,4-Dichlorobenzene	330	-	-	-	-	-	-	-
1,2-Dichlorobenzene	330	-	-	-	-	-	-	-
2-Methylphenol	330	-	-	-	-	-	-	-
2,2'-oxybis(1-Chloropropane)	330	-	-	-	-	-	-	-
4-Methylphenol	330	-	-	-	-	-	-	-
N-Nitroso-di-n-propylamine	330	-	-	-	-	-	-	-
Hexachloroethane	330	-	-	-	-	-	-	-
Nitrobenzene	330	-	-	-	-	-	-	-
Isophorone	330	-	-	-	-	-	-	-
2-Nitrophenol	330	-	-	-	-	-	-	-
2,4-Dimethylphenol	330	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	330	-	-	-	-	-	-	-
2,4-Dichlorophenol	330	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	330	-	-	-	-	-	-	-
Naphthalene	330	-	-	-	-	-	-	-
4-Chloroaniline	330	-	-	-	-	-	-	-
Hexachlorobutadiene	330	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	330	-	-	-	-	-	-	-
2-Methylnaphthalene	330	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	330	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	330	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	800	-	-	-	-	-	-	-
2-Chloronaphthalene	330	-	-	-	-	-	-	-
2-Nitroaniline	800	-	-	-	-	-	-	-
Dimethylphthalate	330	-	-	-	-	-	-	-
Acenaphthylene	330	-	-	-	-	-	-	-
2,6-Dinitrotoluene	330	-	-	-	-	-	-	-

Site: TEST PIT SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 3
Summary Table

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:	BNASS2*1	BNASS2*2	BNASS2*9	BNASS2*10	BNASS2*11	BNASS2*12	BNASS2*13
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/05/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/27/92	11/27/92	11/28/92	11/27/92	11/27/92	11/27/92	11/27/92
ANALYTE SOW-3/90 - II CRQL							
3-Nitroaniline 800	-	-	-	-	-	-	-
Acenaphthene 330	-	-	-	-	-	-	-
2,4-Dinitrophenol 800	-	-	-	-	-	-	-
4-Nitrophenol 800	-	-	-	-	-	-	-
Dibenzofuran 330	-	-	-	-	-	-	-
2,4-Dinitrotoluene 330	-	-	-	-	-	-	-
Diethylphthalate 330	-	-	-	-	-	-	-
4-Chlorophenyl-phenylether 330	-	-	-	-	-	-	-
Fluorene 330	-	-	-	-	-	-	-
4-Nitroaniline 800	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol 800	-	-	-	-	-	-	-
N-Nitrosodiphenylamine 330	-	-	-	-	-	-	-
4-Bromophenyl-phenylether 330	-	-	-	-	-	-	-
Hexachlorobenzene 330	-	-	-	-	-	-	-
Pentachlorophenol 800	-	-	-	-	-	-	-
Phenanthrene 330	-	-	-	-	-	99 J	-
Anthracene 330	-	-	-	-	-	-	-
Carbazole 330	-	-	-	-	-	-	-
Di-n-butylphthalate 330	-	-	-	-	-	-	-
Fluoranthene 330	-	-	-	-	-	150 J	-
Pyrene 330	-	-	-	-	-	170 J	-
Butylbenzylphthalate 330	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine 330	-	-	-	-	-	-	-
Benzo(a)Anthracene 330	-	-	-	-	-	85 J	-
Chrysene 330	-	-	-	-	-	130 J	-
bis(2-Ethylhexyl)phthalate 330	-	-	-	-	-	-	-
Di-n-octylphthalate 330	-	-	-	-	-	-	-
Benzo(b)Fluoranthene 330	-	-	-	-	-	130 J	-
Benzo(k)Fluoranthene 330	-	-	-	-	-	-	-
Benzo(a)Pyrene 330	-	-	-	-	-	89 J	-
Indeno(1,2,3-c,d)Pyrene 330	-	-	-	-	-	72 J	-
Dibenz(a,h)Anthracene 330	-	-	-	-	-	-	-
Benzo(g,h,i)perylene 330	-	-	-	-	-	-	-
Dilution Factor:	2.00	2.00	20.0	1.00	1.00	1.00	1.00
Percent Solids:	79	65	63	93	79	72	69
Associated Method Blank:	62811	62811	62811	62811	62811	62811	62811
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: TEST PIT SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:	BNASS2*1 #	BNASS2*2 #	BNASS2*9 #	BNASS2*10 #	BNASS2*11 #	BNASS2*12 #	BNASS2*13 #
DATE SAMPLED:	11/05/92	11/05/92	11/04/92	11/04/92	11/04/92	11/04/92	11/05/92
DATE ANALYZED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/14/92
ANALYTE SOW-3/90 - II CRQL							
Chloromethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Bromomethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Vinyl Chloride 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Chloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Methylene Chloride 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Acetone 10	13 U	15 U	170	11 U	13 U	14 U	14 U
Carbon Disulfide 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1-Dichloroethene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1-Dichloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,2-Dichloroethene (total) 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Chloroform 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,2-Dichloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
2-Butanone 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1,1-Trichloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Carbon Tetrachloride 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Bromodichloromethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,2-Dichloropropane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
cis-1,3-Dichloropropene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Trichloroethene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Dibromochloromethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1,2-Trichloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Benzene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
trans-1,3-Dichloropropene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Bromoform 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
4-Methyl-2-Pentanone 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
2-Hexanone 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Tetrachloroethene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1,2,2-Tetrachloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Toluene 10	13 U	15 U	15 J	11 U	13 U	14 U	14 U
Chlorobenzene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Ethylbenzene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Styrene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Total Xylenes 10	13 U	15 U	13 J	11 U	13 U	14 U	14 U
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:	79	65	63	93	79	72	69
Associated Method Blank:	69666	69666	69666	69666	69666	69666	69684
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:	-	-	-	-	-	-	-

Site: TEST PIT SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:	BNASS2*1 #	BNASS2*2 #	BNASS2*9 #	BNASS2*10 #	BNASS2*11 #	BNASS2*12 #	BNASS2*13 #
DATE SAMPLED:	11/05/92	11/05/92	11/04/92	11/04/92	11/04/92	11/04/92	11/05/92
DATE ANALYZED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/14/92
ANALYTE SOW-3/90 - II CRQL							
Chloromethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Bromomethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Vinyl Chloride 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Chloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Methylene Chloride 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Acetone 10	13 U	15 U	170 J	11 U	13 U	14 U	14 U
Carbon Disulfide 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1-Dichloroethene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1-Dichloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,2-Dichloroethene (total) 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Chloroform 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,2-Dichloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
2-Butanone 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1,1-Trichloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Carbon Tetrachloride 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Bromodichloromethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,2-Dichloropropane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
cis-1,3-Dichloropropene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Trichloroethene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Dibromochloromethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1,2-Trichloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Benzene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
trans-1,3-Dichloropropene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Bromoform 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
4-Methyl-2-Pentanone 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
2-Hexanone 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Tetrachloroethene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
1,1,2,2-Tetrachloroethane 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Toluene 10	13 U	15 U	15 J	11 U	13 U	14 U	14 U
Chlorobenzene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Ethylbenzene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Styrene 10	13 U	15 U	16 U	11 U	13 U	14 U	14 U
Total Xylenes 10	13 U	15 U	13 J	11 U	13 U	14 U	14 U
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:	79	65	63	93	79	72	69
Associated Method Blank:	69666	69666	69666	69666	69666	69666	69684
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:	-	-	-	-	-	-	-

Site: TEST PIT SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 3
Summary Table

SAMPLE LOCATION:		MEPSXX1XX101XX	MEPSXX2XX101XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX	SRPSXX3XX401XX	SRPSXX4XX201XX
LAB NUMBER:		BNASS2*1 #	BNASS2*2 #	BNASS2*9 #	BNASS2*10 #	BNASS2*11 #	BNASS2*12 #	BNASS2*13 #
DATE SAMPLED:		11/05/92	11/05/92	11/04/92	11/04/92	11/04/92	11/04/92	11/05/92
DATE ANALYZED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/14/92
ANALYTE	SOW-3/90 - II CRQL							
Chloromethane	10	-	-	-	-	-	-	-
Bromomethane	10	-	-	-	-	-	-	-
Vinyl Chloride	10	-	-	-	-	-	-	-
Chloroethane	10	-	-	-	-	-	-	-
Methylene Chloride	10	-	-	-	-	-	-	-
Acetone	10	-	-	170 J	-	-	-	-
Carbon Disulfide	10	-	-	-	-	-	-	-
1,1-Dichloroethene	10	-	-	-	-	-	-	-
1,1-Dichloroethane	10	-	-	-	-	-	-	-
1,2-Dichloroethene (total)	10	-	-	-	-	-	-	-
Chloroform	10	-	-	-	-	-	-	-
1,2-Dichloroethane	10	-	-	-	-	-	-	-
2-Butanone	10	-	-	-	-	-	-	-
1,1,1-Trichloroethane	10	-	-	-	-	-	-	-
Carbon Tetrachloride	10	-	-	-	-	-	-	-
Bromodichloromethane	10	-	-	-	-	-	-	-
1,2-Dichloropropane	10	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	10	-	-	-	-	-	-	-
Trichloroethene	10	-	-	-	-	-	-	-
Dibromochloromethane	10	-	-	-	-	-	-	-
1,1,2-Trichloroethane	10	-	-	-	-	-	-	-
Benzene	10	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	10	-	-	-	-	-	-	-
Bromoform	10	-	-	-	-	-	-	-
4-Methyl-2-Pentanone	10	-	-	-	-	-	-	-
2-Hexanone	10	-	-	-	-	-	-	-
Tetrachloroethene	10	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	10	-	-	-	-	-	-	-
Toluene	10	-	-	-	-	-	-	-
Chlorobenzene	10	-	-	-	-	-	-	-
Ethylbenzene	10	-	-	-	-	-	-	-
Styrene	10	-	-	-	-	-	-	-
Total Xylenes	10	-	-	-	-	-	-	-
Dilution Factor:		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:		79	65	63	93	79	72	69
Associated Method Blank:		69666	69666	69666	69666	69666	69666	69684
Associated Equipment Blank:		MEQSXX6XXX01XX	MEQSXX6XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX	SRQSXX5XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		-	-	-	-	-	-	-

Site: TEST PIT SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRQBXX1XXX01XX
LAB NUMBER: BNASW3*19
DATE SAMPLED: 11/11/92
DATE ANALYZED: 11/18/92

ANALYTE	RL	
Chloromethane	1	1 U
Bromomethane	1	1 U
Vinyl Chloride	1	1 U
Chloroethane	1	1 U
Methylene Chloride	1	1 U
Acetone	5	5 U
Carbon Disulfide	1	1 U
1,1-Dichloroethene	1	1 U
1,1-Dichloroethane	1	1 U
1,2-Dichlorethene (total)	1	1 U
Chloroform	1	3
1,2-Dichloroethane	1	1 U
2-Butanone	5	5 U
1,1,1-Trichloroethane	1	1 U
Carbon Tetrachloride	1	1 U
Bromodichloromethane	1	1 U
1,2-Dichloropropane	1	1 U
cis-1,3-Dichloropropene	1	1 U
Trichloroethene	1	1 U
Dibromochloromethane	1	1 U
1,1,2-Trichloroethane	1	1 U
Benzene	1	1 U
trans-1,3-Dichloropropene	1	1 U
Bromoform	1	1 U
4-Methyl-2-Pentanone	5	5 U
2-Hexanone	5	5 U
Tetrachloroethene	1	1 U
1,1,2,2-Tetrachloroethane	1	1 U
Toluene	1	1 U
Chlorobenzene	1	1 U
Ethylbenzene	1	1 U
Styrene	1	1 U
Xylene (total)	1	1 U
1,2-Dibromoethane	1	1 U
1,3-Dichlorobenzene	1	1 U
1,4-Dichlorobenzene	1	1 U
1,2-Dichlorobenzene	1	1 U
1,2-Dibromo-3-Chloropropane	1	1 U

Dilution Factor: 1.0

Associated Method Blank: 06482
Associated Equipment Blank: -
Associated Field Blank: -
Associated Trip Blank: -

Site: FIELD BLANK U: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRQBXX1XXX01XX
LAB NUMBER: BNASW3*19
DATE SAMPLED: 11/11/92

ANALYTE	SOW-3/90 - II CRQL		
Aluminum	200	39.2	B
Antimony	60	14.6	B
Arsenic	10	1.5	U
Barium	200	1.5	U
Beryllium	5	1.6	U
Cadmium	5	4.6	U
Calcium	5000	101	B
Chromium	10	5.3	U
Cobalt	50	5.3	U
Copper	25	4.2	U
Iron	100	26.4	B
Lead	3	1.6	B
Magnesium	5000	9.4	B
Manganese	15	1.5	U
Mercury	0.2	0.10	U
Nickel	40	12.2	U
Potassium	5000	204	U
Selenium	5	1.5	U
Silver	10	2.7	U
Sodium	5000	101	B
Thallium	10	1.5	U
Vanadium	50	1.9	U
Zinc	20	2.9	B
Cyanide	10	10.0	U

Associated Method Blank: PBBW0001
Associated Equipment Blank: -
Associated Field Blank: -

Site: FIELD BLANK *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRQBXX1XXX01XX
LAB NUMBER: QBW019
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/18/92
DATE ANALYZED: 11/26/92

ANALYTE	SOW-2/88 CRQL		
alpha-BHC	0.05	0.052	U
beta-BHC	0.05	0.052	U
delta-BHC	0.05	0.052	U
gamma-BHC (Lindane)	0.05	0.052	U
Heptachlor	0.05	0.052	U
Aldrin	0.05	0.052	U
Heptachlor Epoxide	0.05	0.052	U
Endosulfan I	0.05	0.052	U
Dieldrin	0.1	0.1	U
4,4'-DDE	0.1	0.1	U
Endrin	0.1	0.1	U
Endosulfan II	0.1	0.1	U
4,4'-DDD	0.1	0.1	U
Endosulfan Sulfate	0.1	0.1	U
4,4'-DDT	0.1	0.1	U
Methoxychlor	0.5	0.52	U
Endrin Ketone	0.1	0.1	U
alpha-Chlordane	0.5	0.52	U
gamma-Chlordane	0.5	0.52	U
Toxaphene	1	1	U
Aroclor-1016	0.5	0.52	U
Aroclor-1221	0.5	0.52	U
Aroclor-1232	0.5	0.52	U
Aroclor-1242	0.5	0.52	U
Aroclor-1248	0.5	0.52	U
Aroclor-1254	1	1	U
Aroclor-1260	1	1	U
Dilution Factor:		1.00	

Associated Method Blank: PBLKABW010
Associated Equipment Blank: -
Associated Field Blank: -

Site: FIELD BLANK
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns
J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRQBXX1XXXO1XX
LAB NUMBER: BNASW3*19
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/12/92
DATE ANALYZED: 11/24/92

ANALYTE	SOW-3/90 - II CRQL		
Phenol	10	10	U
bis(2-Chloroethyl)ether	10	10	U
2-Chlorophenol	10	10	U
1,3-Dichlorobenzene	10	10	U
1,4-Dichlorobenzene	10	10	U
1,2-Dichlorobenzene	10	10	U
2-Methylphenol	10	10	U
2,2'-oxybis(1-Chloropropane)	10	10	U
4-Methylphenol	10	10	U
N-Nitroso-di-n-propylamine	10	10	U
Hexachloroethane	10	10	U
Nitrobenzene	10	10	U
Isophorone	10	10	U
2-Nitrophenol	10	10	U
2,4-Dimethylphenol	10	10	U
bis(2-Chloroethoxy)methane	10	10	U
2,4-Dichlorophenol	10	10	U
1,2,4-Trichlorobenzene	10	10	U
Naphthalene	10	10	U
4-Chloroaniline	10	10	U
Hexachlorobutadiene	10	10	U
4-Chloro-3-Methylphenol	10	10	U
2-Methylnaphthalene	10	10	U
Hexachlorocyclopentadiene	10	10	U
2,4,6-Trichlorophenol	10	10	U
2,4,5-Trichlorophenol	25	25	U
2-Chloronaphthalene	10	10	U
2-Nitroaniline	25	25	U
Dimethylphthalate	10	10	U
Acenaphthylene	10	10	U
2,6-Dinitrotoluene	10	10	U

Site: FIELD BLANK
U: Not detected B: Blank contamination D: Diluted result -: Not detected
J: Estimated E: Exceeds calibration range R: Unusable

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRQBXX1XXX01XX
LAB NUMBER: BNASW3*19
DATE SAMPLED: 11/11/92
DATE EXTRACTED: 11/12/92
DATE ANALYZED: 11/24/92

ANALYTE	SOW-3/90 - II CRQL		
3-Nitroaniline	25	25	U
Acenaphthene	10	10	U
2,4-Dinitrophenol	25	25	U
4-Nitrophenol	25	25	U
Dibenzofuran	10	10	U
2,4-Dinitrotoluene	10	10	U
Diethylphthalate	10	10	U
4-Chlorophenyl-phenylether	10	10	U
Fluorene	10	10	U
4-Nitroaniline	25	25	U
4,6-Dinitro-2-methylphenol	25	25	U
N-Nitrosodiphenylamine	10	10	U
4-Bromophenyl-phenylether	10	10	U
Hexachlorobenzene	10	10	U
Pentachlorophenol	25	25	U
Phenanthrene	10	10	U
Anthracene	10	10	U
Carbazole	10	10	U
Di-n-butylphthalate	10	10	U
Fluoranthene	10	10	U
Pyrene	10	10	U
Butylbenzylphthalate	10	10	U
3,3'-Dichlorobenzidine	10	10	U
Benzo(a)Anthracene	10	10	U
Chrysene	10	10	U
bis(2-Ethylhexyl)phthalate	10	10	U
Di-n-octylphthalate	10	10	U
Benzo(b)Fluoranthene	10	10	U
Benzo(k)Fluoranthene	10	10	U
Benzo(a)Pyrene	10	10	U
Indeno(1,2,3-c,d)Pyrene	10	10	U
Dibenz(a,h)Anthracene	10	10	U
Benzo(g,h,i)perylene	10	10	U

Dilution Factor: 1.00

Associated Method Blank: 62780
Associated Equipment Blank: -
Associated Field Blank: -

Site: FIELD BLANK
U: Not detected B: Blank contamination D: Diluted result -: Not detected
J: Estimated E: Exceeds calibration range R: Unusable

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION: SRQSXX3XXX01XX
LAB NUMBER: BNASW3*17
DATE SAMPLED: 11/11/92
DATE ANALYZED: 11/18/92

ANALYTE	RL	
Chloromethane	1	1 U
Bromomethane	1	1 U
Vinyl Chloride	1	1 U
Chloroethane	1	1 U
Methylene Chloride	1	1 U
Acetone	5	5 U
Carbon Disulfide	1	1 U
1,1-Dichloroethene	1	1 U
1,1-Dichloroethane	1	1 U
1,2-Dichlorethene (total)	1	1 U
Chloroform	1	3
1,2-Dichloroethane	1	1 U
2-Butanone	5	5 U
1,1,1-Trichloroethane	1	1 U
Carbon Tetrachloride	1	1 U
Bromodichloromethane	1	1 U
1,2-Dichloropropane	1	1 U
cis-1,3-Dichloropropene	1	1 U
Trichloroethene	1	1 U
Dibromochloromethane	1	1 U
1,1,2-Trichloroethane	1	1 U
Benzene	1	1 U
trans-1,3-Dichloropropene	1	1 U
Bromoform	1	1 U
4-Methyl-2-Pentanone	5	5 U
2-Hexanone	5	5 U
Tetrachloroethene	1	1 U
1,1,2,2-Tetrachloroethane	1	1 U
Toluene	1	1 U
Chlorobenzene	1	1 U
Ethylbenzene	1	1 U
Styrene	1	1 U
Xylene (total)	1	1 U
1,2-Dibromoethane	1	1 U
1,3-Dichlorobenzene	1	1 U
1,4-Dichlorobenzene	1	1 U
1,2-Dichlorobenzene	1	1 U
1,2-Dibromo-3-Chloropropane	1	1 U

Dilution Factor: 1.0

Associated Method Blank: 06482
Associated Equipment Blank: -
Associated Field Blank: -
Associated Trip Blank: -

Site: EQUIPMENT RINSATE U: Not detected

E-50

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	MEQSXX6XXX01XX		SRQSXX3XXX01XX		SRQSXX5XXX01XX	
LAB NUMBER:	BNASW3*2		BNASW3*17		BNASW3*1	
DATE SAMPLED:	11/05/92		11/11/92		11/05/92	
ANALYTE — SOW-3/90 - II — CRQL						
Aluminum 200	17.3	U	17.3	U	17.3	U
Antimony 60	11.3	U	26.7	B	11.3	U
Arsenic 10	1.5	U	1.5	U	1.5	U
Barium 200	1.5	U	1.5	U	1.5	U
Beryllium 5	1.6	U	1.6	U	1.6	U
Cadmium 5	4.6	U	4.6	U	4.6	U
Calcium 5000	189	B	240	B	154	B
Chromium 10	5.3	U	5.3	U	5.3	U
Cobalt 50	5.3	U	5.3	U	5.3	U
Copper 25	4.2	U	4.2	U	4.2	U
Iron 100	3.5	U	3.5	U	23.3	B
Lead 3	1.5	U	1.5	B	1.5	B
Magnesium 5000	66.0	B	6.4	U	18.8	B
Manganese 15	1.5	U	1.5	U	1.5	U
Mercury 0.2	0.10	U	0.11	B	0.10	U
Nickel 40	12.2	U	12.2	U	12.2	U
Potassium 5000	204	U	204	U	204	U
Selenium 5	1.5	U	1.5	U	1.5	U
Silver 10	2.7	U	2.7	U	2.7	U
Sodium 5000	132	B	66.3	B	126	B
Thallium 10	1.5	U	1.5	U	1.5	U
Vanadium 50	1.9	U	1.9	U	1.9	U
Zinc 20	6.5	B	3.5	B	4.2	B
Cyanide 10	10.0	U	10.0	U	10.0	U
Associated Method Blank:	PBBW0001		PBBW0001		PBBW0001	
Associated Equipment Blank:	-		-		-	
Associated Field Blank:	-		-		-	

Site: EQUIPMENT RINSATE *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

Table 1
Laboratory Report of Analysis

		SAMPLE LOCATION:	MEQSXX6XXX01XX		SRQSXX3XXX01XX		SRQSXX5XXX01XX	
		LAB NUMBER:	QBW002		QBW017		QBW001	
		DATE SAMPLED:	11/05/92		11/11/92		11/05/92	
		DATE EXTRACTED:	11/12/92		11/18/92		11/12/92	
		DATE ANALYZED:	11/24/92		11/26/92		11/24/92	
ANALYTE	SOW-2/88	CRQL						
alpha-BHC		0.05	0.05	U	0.053	U	0.05	U
beta-BHC		0.05	0.05	U	0.053	U	0.05	U
delta-BHC		0.05	0.05	U	0.053	U	0.05	U
gamma-BHC (Lindane)		0.05	0.05	U	0.053	U	0.05	U
Heptachlor		0.05	0.05	U	0.053	U	0.05	U
Aldrin		0.05	0.05	U	0.053	U	0.05	U
Heptachlor Epoxide		0.05	0.05	U	0.053	U	0.05	U
Endosulfan I		0.05	0.05	U	0.053	U	0.05	U
Dieldrin		0.1	0.1	U	0.11	U	0.1	U
4,4'-DDE		0.1	0.1	U	0.11	U	0.1	U
Endrin		0.1	0.1	U	0.11	U	0.1	U
Endosulfan II		0.1	0.1	U	0.11	U	0.1	U
4,4'-DDD		0.1	0.1	U	0.11	U	0.1	U
Endosulfan Sulfate		0.1	0.1	U	0.11	U	0.1	U
4,4'-DDT		0.1	0.1	U	0.11	U	0.1	U
Methoxychlor		0.5	0.5	U	0.53	U	0.5	U
Endrin Ketone		0.1	0.1	U	0.11	U	0.1	U
alpha-Chlordane		0.5	0.5	U	0.53	U	0.5	U
gamma-Chlordane		0.5	0.5	U	0.53	U	0.5	U
Toxaphene		1	1	U	1.1	U	1	U
Aroclor-1016		0.5	0.5	U	0.53	U	0.5	U
Aroclor-1221		0.5	0.5	U	0.53	U	0.5	U
Aroclor-1232		0.5	0.5	U	0.53	U	0.5	U
Aroclor-1242		0.5	0.5	U	0.53	U	0.5	U
Aroclor-1248		0.5	0.5	U	0.53	U	0.5	U
Aroclor-1254		1	1	U	1.1	U	1	U
Aroclor-1260		1	1	U	1.1	U	1	U
	Dilution Factor:		1.00		1.00		1.00	

Associated Method Blank:	PBLKABW001	PBLKABW010	PBLKABW001
Associated Equipment Blank:	-	-	-
Associated Field Blank:	-	-	-

Site: EQUIPMENT RINSATE
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns
J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	MEQSXX6XXX01XX	SRQSXX3XXX01XX	SRQSXX4XXX01XX	SRQSXX5XXX01XX
LAB NUMBER:	BNASW3*2	BNASW3*17	BNASW3*25	BNASW3*1
DATE SAMPLED:	11/05/92	11/11/92	12/01/92	11/05/92
DATE EXTRACTED:	11/12/92	11/12/92	12/04/92	11/12/92
DATE ANALYZED:	11/23/92	11/24/92	12/07/92	11/23/92

ANALYTE	SOW-3/90 - II CRQL							
Phenol	10	10	U	10	U	10	U	11	U
bis(2-Chloroethyl)ether	10	10	U	10	U	10	U	11	U
2-Chlorophenol	10	10	U	10	U	10	U	11	U
1,3-Dichlorobenzene	10	10	U	10	U	10	U	11	U
1,4-Dichlorobenzene	10	10	U	10	U	10	U	11	U
1,2-Dichlorobenzene	10	10	U	10	U	10	U	11	U
2-Methylphenol	10	10	U	10	U	10	U	11	U
2,2'-oxybis(1-Chloropropane)	10	10	U	10	U	10	U	11	U
4-Methylphenol	10	10	U	10	U	10	U	11	U
N-Nitroso-di-n-propylamine	10	10	U	10	U	10	U	11	U
Hexachloroethane	10	10	U	10	U	10	U	11	U
Nitrobenzene	10	10	U	10	U	10	U	11	U
Isophorone	10	10	U	10	U	10	U	11	U
2-Nitrophenol	10	10	U	10	U	10	U	11	U
2,4-Dimethylphenol	10	10	U	10	U	10	U	11	U
bis(2-Chloroethoxy)methane	10	10	U	10	U	10	U	11	U
2,4-Dichlorophenol	10	10	U	10	U	10	U	11	U
1,2,4-Trichlorobenzene	10	10	U	10	U	10	U	11	U
Naphthalene	10	10	U	10	U	10	U	11	U
4-Chloroaniline	10	10	U	10	U	10	U	11	U
Hexachlorobutadiene	10	10	U	10	U	10	U	11	U
4-Chloro-3-Methylphenol	10	10	U	10	U	10	U	11	U
2-Methylnaphthalene	10	10	U	10	U	10	U	11	U
Hexachlorocyclopentadiene	10	10	U	10	U	10	U	11	U
2,4,6-Trichlorophenol	10	10	U	10	U	10	U	11	U
2,4,5-Trichlorophenol	25	25	U	25	U	25	U	27	U
2-Chloronaphthalene	10	10	U	10	U	10	U	11	U
2-Nitroaniline	25	25	U	25	U	25	U	27	U
Dimethylphthalate	10	10	U	10	U	10	U	11	U
Acenaphthylene	10	10	U	10	U	10	U	11	U
2,6-Dinitrotoluene	10	10	U	10	U	10	U	11	U

Site: EQUIPMENT RINSATE
U: Not detected B: Blank contamination D: Diluted result -: Not detected
J: Estimated E: Exceeds calibration range R: Unusable

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	MEQSXX6XXX01XX	SRQSXX3XXX01XX	SRQSXX4XXX01XX	SRQSXX5XXX01XX
LAB NUMBER:	BNASW3*2	BNASW3*17	BNASW3*25	BNASW3*1
DATE SAMPLED:	11/05/92	11/11/92	12/01/92	11/05/92
DATE EXTRACTED:	11/12/92	11/12/92	12/04/92	11/12/92
DATE ANALYZED:	11/23/92	11/24/92	12/07/92	11/23/92

ANALYTE	SOW-3/90 - II CRQL							
3-Nitroaniline	25	25	U	25	U	25	U	27	U
Acenaphthene	10	10	U	10	U	10	U	11	U
2,4-Dinitrophenol	25	25	U	25	U	25	U	27	U
4-Nitrophenol	25	25	U	25	U	25	U	27	U
Dibenzofuran	10	10	U	10	U	10	U	11	U
2,4-Dinitrotoluene	10	10	U	10	U	10	U	11	U
Diethylphthalate	10	10	U	10	U	10	U	11	U
4-Chlorophenyl-phenylether	10	10	U	10	U	10	U	11	U
Fluorene	10	10	U	10	U	10	U	11	U
4-Nitroaniline	25	25	U	25	U	25	U	27	U
4,6-Dinitro-2-methylphenol	25	25	U	25	U	25	U	27	U
N-Nitrosodiphenylamine	10	10	U	10	U	10	U	11	U
4-Bromophenyl-phenylether	10	10	U	10	U	10	U	11	U
Hexachlorobenzene	10	10	U	10	U	10	U	11	U
Pentachlorophenol	25	25	U	25	U	25	U	27	U
Phenanthrene	10	10	U	10	U	10	U	11	U
Anthracene	10	10	U	10	U	10	U	11	U
Carbazole	10	10	U	10	U	10	U	11	U
Di-n-butylphthalate	10	10	U	10	U	10	U	11	U
Fluoranthene	10	10	U	10	U	10	U	11	U
Pyrene	10	10	U	10	U	10	U	11	U
Butylbenzylphthalate	10	10	U	10	U	10	U	11	U
3,3'-Dichlorobenzidine	10	10	U	10	U	10	U	11	U
Benzo(a)Anthracene	10	10	U	10	U	10	U	11	U
Chrysene	10	10	U	10	U	10	U	11	U
bis(2-Ethylhexyl)phthalate	10	13	B	10	U	2	JB	14	B
Di-n-octylphthalate	10	10	U	10	U	10	U	11	U
Benzo(b)Fluoranthene	10	10	U	10	U	10	U	11	U
Benzo(k)Fluoranthene	10	10	U	10	U	10	U	11	U
Benzo(a)Pyrene	10	10	U	10	U	10	U	11	U
Indeno(1,2,3-c,d)Pyrene	10	10	U	10	U	10	U	11	U
Dibenz(a,h)Anthracene	10	10	U	10	U	10	U	11	U
Benzo(g,h,i)perylene	10	10	U	10	U	10	U	11	U
Dilution Factor:		1.00		1.00		1.00		1.00	
Associated Method Blank:		62780		62780		62859		62780	
Associated Equipment Blank:		-		-		-		-	
Associated Field Blank:		-		-		-		-	

Site: EQUIPMENT RINSATE
U: Not detected B: Blank contamination D: Diluted result -: Not detected
J: Estimated E: Exceeds calibration range R: Unusable

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:		MEQSXX6XXX01XX	SRQSXX5XXX01XX
LAB NUMBER:		BNASW3*2	BNASW3*1
DATE SAMPLED:		11/05/92	11/05/92
DATE ANALYZED:		11/10/92	11/10/92
ANALYTE	SOW-3/90 - II CRQL		
Chloromethane	10	10 U	10 U
Bromomethane	10	10 U	10 U
Vinyl Chloride	10	10 U	10 U
Chloroethane	10	10 U	10 U
Methylene Chloride	10	10 U	10 U
Acetone	10	10 U	10 U
Carbon Disulfide	10	10 U	10 U
1,1-Dichloroethene	10	10 U	10 U
1,1-Dichloroethane	10	10 U	10 U
1,2-Dichloroethene (total)	10	10 U	10 U
Chloroform	10	10 U	10 U
1,2-Dichloroethane	10	10 U	10 U
2-Butanone	10	10 U	10 U
1,1,1-Trichloroethane	10	10 U	10 U
Carbon Tetrachloride	10	10 U	10 U
Bromodichloromethane	10	10 U	10 U
1,2-Dichloropropane	10	10 U	10 U
cis-1,3-Dichloropropene	10	10 U	10 U
Trichloroethene	10	10 U	10 U
Dibromochloromethane	10	10 U	10 U
1,1,2-Trichloroethane	10	10 U	10 U
Benzene	10	10 U	10 U
trans-1,3-Dichloropropene	10	10 U	10 U
Bromoform	10	10 U	10 U
4-Methyl-2-Pentanone	10	10 U	10 U
2-Hexanone	10	10 U	10 U
Tetrachloroethene	10	10 U	10 U
1,1,2,2-Tetrachloroethane	10	10 U	10 U
Toluene	10	10 U	10 U
Chlorobenzene	10	10 U	10 U
Ethylbenzene	10	10 U	10 U
Styrene	10	10 U	10 U
Total Xylenes	10	10 U	10 U
Dilution Factor:		1.00	1.00
Associated Method Blank:		06405	06405
Associated Equipment Blank:		-	-
Associated Field Blank:		-	-
Associated Trip Blank:		-	-

Site: EQUIPMENT RINSATE
U: Not detected B: Blank contamination D: Diluted result -: Not detected
J: Estimated E: Exceeds calibration range R: Unusable

Table 1
Laboratory Report of Analysis

	SAMPLE LOCATION:	SRQTXX1XXX01XX	SRQTXX2XXX01XX
	LAB NUMBER:	BNASW3*9	BNASW3*20
	DATE SAMPLED:	11/10/92	11/11/92
	DATE ANALYZED:	11/17/92	11/18/92
ANALYTE	RL		
Chloromethane	1	1 U	1 U
Bromomethane	1	1 U	1 U
Vinyl Chloride	1	1 U	1 U
Chloroethane	1	1 U	1 U
Methylene Chloride	1	1 U	1 U
Acetone	5	5 U	5 U
Carbon Disulfide	1	1 U	1 U
1,1-Dichloroethene	1	1 U	1 U
1,1-Dichloroethane	1	1 U	1 U
1,2-Dichlorethene (total)	1	1 U	1 U
Chloroform	1	4	1
1,2-Dichloroethane	1	1 U	1 U
2-Butanone	5	5 U	5 U
1,1,1-Trichloroethane	1	1 U	1 U
Carbon Tetrachloride	1	1 U	1 U
Bromodichloromethane	1	1 U	1 U
1,2-Dichloropropane	1	1 U	1 U
cis-1,3-Dichloropropene	1	1 U	1 U
Trichloroethene	1	1 U	1 U
Dibromochloromethane	1	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U
Benzene	1	1 U	1 U
trans-1,3-Dichloropropene	1	1 U	1 U
Bromoform	1	1 U	1 U
4-Methyl-2-Pentanone	5	5 U	5 U
2-Hexanone	5	5 U	5 U
Tetrachloroethene	1	1 U	1 U
1,1,2,2-Tetrachloroethane	1	1 U	1 U
Toluene	1	1 U	1 U
Chlorobenzene	1	1 U	1 U
Ethylbenzene	1	1 U	1 U
Styrene	1	1 U	1 U
Xylene (total)	1	1 U	1 U
1,2-Dibromoethane	1	1 U	1 U
1,3-Dichlorobenzene	1	1 U	1 U
1,4-Dichlorobenzene	1	1 U	1 U
1,2-Dichlorobenzene	1	1 U	1 U
1,2-Dibromo-3-Chloropropane	1	1 U	1 U
Dilution Factor:		1.0	1.0
Associated Method Blank:		06469	06482
Associated Equipment Blank:		-	-
Associated Field Blank:		-	-
Associated Trip Blank:		-	-

Site: TRIP BLANK U: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	MESDXX1XXX01XX		MESDXX2XXX01XX		MESDXX3XXX01XX		MESDXX4XXX01XD		MESDXX4XXX01XX		SRSDXX1XXX01XX		SRSDXX2XXX01XX		SRSDXX3XXX01XD	
LAB NUMBER:	BNASS2*32 #		BNASS2*33 #		BNASS2*34 #		BNASS2*36 #		BNASS2*35 #		BNASS2*31 #		BNASS2*21 #		BNASS2*23 #	
DATE SAMPLED:	11/11/92		11/11/92		11/11/92		11/11/92		11/11/92		11/11/92		11/10/92		11/10/92	
ANALYTE SOW-3/90 - II CRQL																
Aluminum 40	19700		16300		18500		25500		24400		18600		14700		15600	
Antimony 12	4.4	UN	4.8	UN	3.1	UN	5.6	UN	3.9	UN	3.2	UN	3.6	UN	4.2	UN
Arsenic 2	11.2		9.4		4.8	BS	8.0		10.6		22.5		5.1		9.4	
Barium 40	66.3	B	59.4	B	63.8		89.7	B	82.1		57.7		56.0	B	65.2	B
Beryllium 1	1.1	B	0.69	U	0.78	B	2.0	B	0.97	B	1.0	B	0.84	B	0.99	B
Cadmium 1	1.8	U	2.0	U	1.3	U	2.3	U	1.6	U	1.3	U	1.5	U	1.7	U
Calcium 1000	2280		2130	B	1890		4480		1600	B	1490		1790		2400	
Chromium 2	33.9		30.9		32.4		41.3		40.4		28.7		27.7		28.6	
Cobalt 10	16.1	B	17.8	B	15.7		26.6		20.4		17.4		14.1	B	18.5	
Copper 5	12.1		4.5	B	15.2		10.0	B	10.0		7.6		10.6		9.0	B
Iron 20	31800		44600		26500		32900		32700		28100		18500		22700	
Lead 0.6	24.0		14.7	S	10.3	S	38.1		31.0		68.1		39.5		31.9	
Magnesium 1000	6950		5850		6550		7520		7640		5080		5100		5010	
Manganese 3	378		688		329		617		476		821		201		278	
Mercury 0.04	0.10	UN	0.14	BN	0.07	UN	0.12	UN	0.09	UN	0.07	UN	0.08	UN	0.09	UN
Nickel 8	26.4		23.0		29.8		33.6		34.8		21.0		19.9		19.0	
Potassium 1000	3340		3130		3700		3640		3370		2310		2330		2460	
Selenium 1	0.58	UWN	0.64	UWN	0.42	UWN	0.75	UWN	0.52	UWN	0.43	UWN	0.48	UWN	0.56	BWN
Silver 2	1.0	UN	1.2	UN	0.75	UN	1.3	UN	0.94	UN	0.77	UN	0.86	UN	1.0	UN
Sodium 1000	326	BE	333	BE	302	BE	397	BE	288	BE	190	BE	261	BE	334	BE
Thallium 2	0.58	U	0.64	U	0.42	U	7.5	U	0.52	U	0.43	U	4.8	U	5.5	UW
Vanadium 10	43.3		36.7		43.8		51.7		56.0		42.8		34.0		35.1	
Zinc 4	72.0		69.1		61.6		101		95.2		119		75.1		72.3	
Cyanide 2	1.9	U	2.1	U	1.4	U	2.5	U	1.7	U	1.4	U	1.6	U	1.8	U
Percent Solids:	52		47		72		40		58		70		63		54	
Associated Method Blank:	PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021	
Associated Equipment Blank:	SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX	
Associated Field Blank:	SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SEDIMENT *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	SRSDXX3XXX01XX		SRSDXX4XXX01XX		SRSDXX5XXX01XX		SRSDXX6XXX01XX		SRSDXX7XXX01XX	
LAB NUMBER:	BNASS2*22 #		BNASS2*24 #		BNASS2*25 #		BNASS2*26 #		BNASS2*37 #	
DATE SAMPLED:	11/10/92		11/10/92		11/10/92		11/10/92		11/11/92	
ANALYTE SOW-3/90 - II CRQL										
Aluminum 40	13400		4140		4500		3150		14800	
Antimony 12	4.3	UN	2.9	UN	2.8	UN	2.8	UN	3.4	UN
Arsenic 2	6.7		5.1		3.2		1.2	B	47.0	B
Barium 40	59.0	B	12.6	B	13.7	B	8.6	B	51.7	B
Beryllium 1	0.66	B	0.41	U	0.39	U	0.40	U	1.2	B
Cadmium 1	1.8	U	1.2	U	1.1	U	1.2	U	1.4	U
Calcium 1000	2430		682	B	525	B	644	B	1260	B
Chromium 2	23.3		6.3		7.8		5.4		24.0	
Cobalt 10	14.1	B	3.5	B	5.0	B	3.2	B	18.4	
Copper 5	7.6	B	1.1	U	1.0	U	1.1	U	5.5	B
Iron 20	22300		7000		8410		5090		21300	
Lead 0.6	26.6		7.3	S	4.0	S	1.9	W	273	
Magnesium 1000	4340		1490		1690		1200	B	4090	
Manganese 3	259		93.0		75.4		67.8		657	
Mercury 0.04	0.10	UN	0.06	UN	0.06	UN	0.06	UN	0.07	UN
Nickel 8	17.4		4.7	B	7.2	B	7.6	B	19.9	
Potassium 1000	2050		700	B	964	B	507	B	1780	
Selenium 1	0.57	UWN	0.38	UN	0.37	UN	0.38	UN	0.45	UWN
Silver 2	1.0	UN	0.68	UN	0.67	UN	0.68	UN	0.81	UN
Sodium 1000	274	BE	152	BE	154	BE	115	BE	204	BE
Thallium 2	5.7	U	0.38	U	0.37	U	0.38	U	0.45	U
Vanadium 10	31.0		9.8	B	10.3	B	7.9	B	34.6	
Zinc 4	64.1		17.5		19.0		12.6		56.9	
Cyanide 2	1.9	U	1.3	U	1.2	U	1.3	U	1.5	U
Percent Solids:	53		79		81		80		67	
Associated Method Blank:	PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021	
Associated Equipment Blank:	SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX	
Associated Field Blank:	SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SEDIMENT *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESDXX1XXX01XX		MESDXX2XXX01XX		MESDXX3XXX01XX		MESDXX4XXX01XD		MESDXX4XXX01XX		SRSDXX1XXX01XX		SRSDXX2XXX01XX		SRSDXX3XXX01XD	
LAB NUMBER:	BNASS2*32 #		BNASS2*33 #		BNASS2*34 #		BNASS2*36 #		BNASS2*35 #		BNASS2*31 #		BNASS2*21 #		BNASS2*23 #	
DATE SAMPLED:	11/11/92		11/11/92		11/11/92		11/11/92		11/11/92		11/11/92		11/10/92		11/10/92	
ANALYTE — SOW-3/90 - II CRQL																
Aluminum 40	19700		16300		18500		25500		24400		18600		14700		15600	
Antimony 12		R		R		R		R		R		R		R		R
Arsenic 2	11.2		9.4		4.8	J	8.0		10.6		22.5		5.1		9.4	
Barium 40	66.3	J	59.4	J	63.8		89.7	J	82.1		57.7		56.0	J	65.2	J
Beryllium 1	1.1	J	0.69	U	0.78	J	2.0	J	0.97	J	1.0	J	0.84	J	0.99	J
Cadmium 1	1.8	U	2.0	U	1.3	U	2.3	U	1.6	U	1.3	U	1.5	U	1.7	U
Calcium 1000	2280	J	2130	J	1890	J	4480	J	1600	J	1490		1790		2400	
Chromium 2	33.9		30.9		32.4		41.3		40.4		28.7		27.7		28.6	
Cobalt 10	16.1	J	17.8	J	15.7		26.6		20.4		17.4		14.1	J	18.5	
Copper 5	12.1		4.5	J	15.2		10.0	J	10.0		7.6		10.6		9.0	J
Iron 20	31800		44600		26500		32900		32700		28100		18500		22700	
Lead 0.6	24.0		14.7		10.3		38.1		31.0		68.1		39.5		31.9	
Magnesium 1000	6950		5850		6550		7520		7640		5080		5100		5010	
Manganese 3	378		688		329		617		476		821		201		278	
Mercury 0.04	0.10	UJ	0.14	J	0.07	UJ	0.12	UJ	0.09	UJ	0.07	UJ	0.08	UJ	0.09	UJ
Nickel 8	26.4		23.0		29.8		33.6		34.8		21.0		19.9		19.0	
Potassium 1000	3340		3130		3700		3640		3370		2310		2330		2460	
Selenium 1	0.58	UJ	0.64	UJ	0.42	UJ	0.75	UJ	0.52	UJ	0.43	UJ	0.48	UJ	0.56	J
Silver 2	1.0	UJ	1.2	UJ	0.75	UJ	1.3	UJ	0.94	UJ	0.77	UJ	0.86	UJ	1.0	UJ
Sodium 1000	326	J	333	J	302	J	397	J	288	J	190	J	261	J	334	J
Thallium 2	0.58	U	0.64	U	0.42	U	7.5	U	0.52	U	0.43	U	4.8	U	5.5	UJ
Vanadium 10	43.3	J	36.7	J	43.8	J	51.7	J	56.0	J	42.8	J	34.0	J	35.1	J
Zinc 4	72.0		69.1		61.6		101		95.2		119		75.1		72.3	
Cyanide 2	1.9	U	2.1	U	1.4	U	2.5	U	1.7	U	1.4	U	1.6	U	1.8	U
Percent Solids:	52		47		72		40		58		70		63		54	
Associated Method Blank:	PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021	
Associated Equipment Blank:	SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX	
Associated Field Blank:	SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SEDIMENT *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

Table 2
Validation / Summary Table

SAMPLE LOCATION:	SRSDXX3XXX01XX		SRSDXX4XXX01XX		SRSDXX5XXX01XX		SRSDXX6XXX01XX		SRSDXX7XXX01XX	
LAB NUMBER:	BNASS2*22 #		BNASS2*24 #		BNASS2*25 #		BNASS2*26 #		BNASS2*37 #	
DATE SAMPLED:	11/10/92		11/10/92		11/10/92		11/10/92		11/11/92	
ANALYTE	SOW-3/90 - II CRQL									
Aluminum	40	13400		4140		4500		3150		14800	
Antimony	12		R		R		R		R		R
Arsenic	2	6.7		5.1		3.2		1.2	J	47.0	J
Barium	40	59.0	J	12.6	J	13.7	J	8.6	J	51.7	J
Beryllium	1	0.66	J	0.41	U	0.39	U	0.40	U	1.2	J
Cadmium	1	1.8	U	1.2	U	1.1	U	1.2	U	1.4	U
Calcium	1000	2430		682	J	525	J	644	J	1260	J
Chromium	2	23.3		6.3		7.8		5.4		24.0	
Cobalt	10	14.1	J	3.5	J	5.0	J	3.2	J	18.4	
Copper	5	7.6	J	1.1	U	1.0	U	1.1	U	5.5	J
Iron	20	22300		7000		8410		5090		21300	
Lead	0.6	26.6		7.3		4.0		1.9		273	
Magnesium	1000	4340		1490		1690		1200	J	4090	
Manganese	3	259		93.0		75.4		67.8		657	
Mercury	0.04	0.10	UJ	0.06	UJ	0.06	UJ	0.06	UJ	0.07	UJ
Nickel	8	17.4		4.7	J	7.2	J	7.6	J	19.9	
Potassium	1000	2050		700	J	964	J	507	J	1780	
Selenium	1	0.57	UJ	0.38	UJ	0.37	UJ	0.38	UJ	0.45	UJ
Silver	2	1.0	UJ	0.68	UJ	0.67	UJ	0.68	UJ	0.81	UJ
Sodium	1000	274	J	152	J	154	J	115	J	204	J
Thallium	2	5.7	U	0.38	U	0.37	U	0.38	U	0.45	U
Vanadium	10	31.0	J	9.8	J	10.3	J	7.9	J	34.6	J
Zinc	4	64.1		17.5		19.0		12.6		56.9	
Cyanide	2	1.9	U	1.3	U	1.2	U	1.3	U	1.5	U
Percent Solids:		53		79		81		80		67	
Associated Method Blank:		PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021	
Associated Equipment Blank:		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SEDIMENT *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

Table 3
Summary Table

SAMPLE LOCATION:	MESDXX1XXX01XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:	BNASS2*32 #	BNASS2*33 #	BNASS2*34 #	BNASS2*36 #	BNASS2*35 #	BNASS2*31 #	BNASS2*21 #	BNASS2*23 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
ANALYTE — SOW-3/90 - II — CRQL								
Aluminum 40	19700	16300	18500	25500	24400	18600	14700	15600
Antimony 12	R	R	R	R	R	R	R	R
Arsenic 2	11.2	9.4	4.8 J	8.0	10.6	22.5	5.1	9.4
Barium 40	66.3 J	59.4 J	63.8	89.7 J	82.1	57.7	56.0 J	65.2 J
Beryllium 1	1.1 J	-	0.78 J	2.0 J	0.97 J	1.0 J	0.84 J	0.99 J
Cadmium 1	-	-	-	-	-	-	-	-
Calcium 1000	2280 J	2130 J	1890 J	4480 J	1600 J	1490	1790	2400
Chromium 2	33.9	30.9	32.4	41.3	40.4	28.7	27.7	28.6
Cobalt 10	16.1 J	17.8 J	15.7	26.6	20.4	17.4	14.1 J	18.5
Copper 5	12.1	4.5 J	15.2	10.0 J	10.0	7.6	10.6	9.0 J
Iron 20	31800	44600	26500	32900	32700	28100	18500	22700
Lead 0.6	24.0	14.7	10.3	38.1	31.0	68.1	39.5	31.9
Magnesium 1000	6950	5850	6550	7520	7640	5080	5100	5010
Manganese 3	378	688	329	617	476	821	201	278
Mercury 0.04	-	0.14 J	-	-	-	-	-	-
Nickel 8	26.4	23.0	29.8	33.6	34.8	21.0	19.9	19.0
Potassium 1000	3340	3130	3700	3640	3370	2310	2330	2460
Selenium 1	-	-	-	-	-	-	-	0.56 J
Silver 2	-	-	-	-	-	-	-	-
Sodium 1000	326 J	333 J	302 J	397 J	288 J	190 J	261 J	334 J
Thallium 2	-	-	-	-	-	-	-	-
Vanadium 10	43.3 J	36.7 J	43.8 J	51.7 J	56.0 J	42.8 J	34.0 J	35.1 J
Zinc 4	72.0	69.1	61.6	101	95.2	119	75.1	72.3
Cyanide 2	-	-	-	-	-	-	-	-
Percent Solids:	52	47	72	40	58	70	63	54
Associated Method Blank:	PBBS0021	PBBS0021	PBBS0021	PBBS0021	PBBS0021	PBBS0021	PBBS0021	PBBS0021
Associated Equipment Blank:	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

Table 3
Summary Table

SAMPLE LOCATION:		SRSDXX3XXX01XX		SRSDXX4XXX01XX		SRSDXX5XXX01XX		SRSDXX6XXX01XX		SRSDXX7XXX01XX	
LAB NUMBER:		BNASS2*22 #		BNASS2*24 #		BNASS2*25 #		BNASS2*26 #		BNASS2*37 #	
DATE SAMPLED:		11/10/92		11/10/92		11/10/92		11/10/92		11/11/92	
ANALYTE	SOW-3/90 - II CRQL										
Aluminum	40	13400		4140		4500		3150		14800	
Antimony	12		R		R		R		R		R
Arsenic	2	6.7		5.1		3.2		1.2	J	47.0	J
Barium	40	59.0	J	12.6	J	13.7	J	8.6	J	51.7	J
Beryllium	1	0.66	J	-		-		-		1.2	J
Cadmium	1	-		-		-		-		-	
Calcium	1000	2430		682	J	525	J	644	J	1260	J
Chromium	2	23.3		6.3		7.8		5.4		24.0	
Cobalt	10	14.1	J	3.5	J	5.0	J	3.2	J	18.4	
Copper	5	7.6	J	-		-		-		5.5	J
Iron	20	22300		7000		8410		5090		21300	
Lead	0.6	26.6		7.3		4.0		1.9		273	
Magnesium	1000	4340		1490		1690		1200	J	4090	
Manganese	3	259		93.0		75.4		67.8		657	
Mercury	0.04	-		-		-		-		-	
Nickel	8	17.4		4.7	J	7.2	J	7.6	J	19.9	
Potassium	1000	2050		700	J	964	J	507	J	1780	
Selenium	1	-		-		-		-		-	
Silver	2	-		-		-		-		-	
Sodium	1000	274	J	152	J	154	J	115	J	204	J
Thallium	2	-		-		-		-		-	
Vanadium	10	31.0	J	9.8	J	10.3	J	7.9	J	34.6	J
Zinc	4	64.1		17.5		19.0		12.6		56.9	
Cyanide	2	-		-		-		-		-	
Percent Solids:		53		79		81		80		67	
Associated Method Blank:		PBBS0021		PBBS0021		PBBS0021		PBBS0021		PBBS0021	
Associated Equipment Blank:		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SEDIMENT *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	MESDXX1XXX01XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:	QBS032 #	QBS033 #	QBS034 #	QBS036 #	QBS035 #	QBS031 #	QBS021 #	QBS023 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92
DATE ANALYZED:	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92
ANALYTE SOW-2/88 CRQL								
alpha-BHC 8	31 U	34 U	22 U	40 U	28 U	23 U	25 U	30 U
beta-BHC 8	31 U	34 U	22 U	40 U	28 U	23 U	25 U	30 U
delta-BHC 8	31 U	34 U	22 U	40 U	28 U	23 U	25 U	30 U
gamma-BHC (Lindane) 8	31 U	34 U	22 U	40 U	28 U	23 U	25 U	30 U
Heptachlor 8	31 U	34 U	22 U	40 U	28 U	23 U	25 U	30 U
Aldrin 8	31 U	34 U	22 U	40 U	28 U	23 U	25 U	30 U
Heptachlor Epoxide 8	31 U	34 U	22 U	40 U	28 U	23 U	25 U	30 U
Endosulfan I 8	31 U	34 U	22 U	40 U	28 U	23 U	25 U	30 U
Dieldrin 16	62 U	69 U	45 U	80 U	55 U	46 U	51 U	59 U
4,4'-DDE 16	62 U	69 U	45 U	80 U	55 U	46 U	51 U	59 U
Endrin 16	62 U	69 U	45 U	80 U	55 U	46 U	51 U	59 U
Endosulfan II 16	62 U	69 U	45 U	80 U	55 U	46 U	51 U	59 U
4,4'-DDD 16	62 U	69 U	45 U	80 U	55 U	46 U	51 U	59 U
Endosulfan Sulfate 16	62 U	69 U	45 U	80 U	55 U	46 U	51 U	59 U
4,4'-DDT 16	62 U	69 U	45 U	80 U	55 U	46 U	51 U	59 U
Methoxychlor 80	310 U	340 U	220 U	400 U	280 U	230 U	250 U	300 U
Endrin Ketone 16	62 U	69 U	45 U	80 U	55 U	46 U	51 U	59 U
alpha-Chlordane 80	310 U	340 U	220 U	400 U	280 U	230 U	250 U	300 U
gamma-Chlordane 80	310 U	340 U	220 U	400 U	280 U	230 U	250 U	300 U
Toxaphene 160	620 U	690 U	450 U	800 U	550 U	460 U	510 U	590 U
Aroclor-1016 80	310 U	340 U	220 U	400 U	280 U	230 U	250 U	300 U
Aroclor-1221 80	310 U	340 U	220 U	400 U	280 U	230 U	250 U	300 U
Aroclor-1232 80	310 U	340 U	220 U	400 U	280 U	230 U	250 U	300 U
Aroclor-1242 80	310 U	340 U	220 U	400 U	280 U	230 U	250 U	300 U
Aroclor-1248 80	310 U	340 U	220 U	400 U	280 U	230 U	250 U	300 U
Aroclor-1254 160	620 U	690 U	450 U	800 U	550 U	460 U	510 U	590 U
Aroclor-1260 160	620 U	690 U	450 U	800 U	550 U	460 U	510 U	590 U
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:	52	47	72	40	58	70	63	54
Associated Method Blank:	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021
Associated Equipment Blank:	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT
#: Level D Validation J: Estimated R: Unusable P: > 25% difference between columns
U: Not detected B: Blank contamination -: Not detected C: Confirmed by GC/MS

Table 1
Laboratory Report of Analysis

	SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
	LAB NUMBER:	QBS022 #	QBS024 #	QBS025 #	QBS026 #	QBS037 #
	DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
	DATE EXTRACTED:	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92
	DATE ANALYZED:	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92
ANALYTE	SOW-2/88 CRQL					
alpha-BHC	8	30 U	20 U	20 U	20 U	24 U
beta-BHC	8	30 U	20 U	20 U	20 U	24 U
delta-BHC	8	30 U	20 U	20 U	20 U	24 U
gamma-BHC (Lindane)	8	30 U	20 U	20 U	20 U	24 U
Heptachlor	8	30 U	20 U	20 U	20 U	24 U
Aldrin	8	30 U	20 U	20 U	20 U	24 U
Heptachlor Epoxide	8	30 U	20 U	20 U	20 U	24 U
Endosulfan I	8	30 U	20 U	20 U	20 U	24 U
Dieldrin	16	61 U	40 U	39 U	40 U	48 U
4,4'-DDE	16	61 U	40 U	39 U	40 U	48 U
Endrin	16	61 U	40 U	39 U	40 U	48 U
Endosulfan II	16	61 U	40 U	39 U	40 U	48 U
4,4'-DDD	16	61 U	40 U	39 U	40 U	48 U
Endosulfan Sulfate	16	61 U	40 U	39 U	40 U	48 U
4,4'-DDT	16	61 U	40 U	39 U	40 U	48 U
Methoxychlor	80	300 U	200 U	200 U	200 U	240 U
Endrin Ketone	16	61 U	40 U	39 U	40 U	48 U
alpha-Chlordane	80	300 U	200 U	200 U	200 U	240 U
gamma-Chlordane	80	300 U	200 U	200 U	200 U	240 U
Toxaphene	160	610 U	400 U	390 U	400 U	480 U
Aroclor-1016	80	300 U	200 U	200 U	200 U	240 U
Aroclor-1221	80	300 U	200 U	200 U	200 U	240 U
Aroclor-1232	80	300 U	200 U	200 U	200 U	240 U
Aroclor-1242	80	300 U	200 U	200 U	200 U	240 U
Aroclor-1248	80	300 U	200 U	200 U	200 U	240 U
Aroclor-1254	160	610 U	400 U	390 U	400 U	480 U
Aroclor-1260	160	610 U	400 U	390 U	400 U	480 U
Dilution Factor:		1.00	1.00	1.00	1.00	1.00
Percent Solids:		52	79	81	80	67
Associated Method Blank:		PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021
Associated Equipment Blank:		SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT
#: Level D Validation J: Estimated R: Unusable P: > 25% difference between columns
U: Not detected B: Blank contamination -: Not detected C: Confirmed by GC/MS

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESDXX1XXX01XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:	QBS032 #	QBS033 #	QBS034 #	QBS036 #	QBS035 #	QBS031 #	QBS021 #	QBS023 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92
DATE ANALYZED:	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92
ANALYTE SOW-2/88 CRQL								
alpha-BHC 8	31 UJ	34 UJ	22 UJ	40 UJ	28 UJ	23 UJ	25 UJ	30 UJ
beta-BHC 8	31 UJ	34 UJ	22 UJ	40 UJ	28 UJ	23 UJ	25 UJ	30 UJ
delta-BHC 8	31 UJ	34 UJ	22 UJ	40 UJ	28 UJ	23 UJ	25 UJ	30 UJ
gamma-BHC (Lindane) 8	31 UJ	34 UJ	22 UJ	40 UJ	28 UJ	23 UJ	25 UJ	30 UJ
Heptachlor 8	31 UJ	34 UJ	22 UJ	40 UJ	28 UJ	23 UJ	25 UJ	30 UJ
Aldrin 8	31 UJ	34 UJ	22 UJ	40 UJ	28 UJ	23 UJ	25 UJ	30 UJ
Heptachlor Epoxide 8	31 UJ	34 UJ	22 UJ	40 UJ	28 UJ	23 UJ	25 UJ	30 UJ
Endosulfan I 8	31 UJ	34 UJ	22 UJ	40 UJ	28 UJ	23 UJ	25 UJ	30 UJ
Dieldrin 16	62 UJ	69 UJ	45 UJ	80 UJ	55 UJ	46 UJ	51 UJ	59 UJ
4,4'-DDE 16	62 UJ	69 UJ	45 UJ	80 UJ	55 UJ	46 UJ	51 UJ	59 UJ
Endrin 16	62 UJ	69 UJ	45 UJ	80 UJ	55 UJ	46 UJ	51 UJ	59 UJ
Endosulfan II 16	62 UJ	69 UJ	45 UJ	80 UJ	55 UJ	46 UJ	51 UJ	59 UJ
4,4'-DDD 16	62 UJ	69 UJ	45 UJ	80 UJ	55 UJ	46 UJ	51 UJ	59 UJ
Endosulfan Sulfate 16	62 UJ	69 UJ	45 UJ	80 UJ	55 UJ	46 UJ	51 UJ	59 UJ
4,4'-DDT 16	62 UJ	69 UJ	45 UJ	80 UJ	55 UJ	46 UJ	51 UJ	59 UJ
Methoxychlor 80	310 UJ	340 UJ	220 UJ	400 UJ	280 UJ	230 UJ	250 UJ	300 UJ
Endrin Ketone 16	62 UJ	69 UJ	45 UJ	80 UJ	55 UJ	46 UJ	51 UJ	59 UJ
alpha-Chlordane 80	310 UJ	340 UJ	220 UJ	400 UJ	280 UJ	230 UJ	250 UJ	300 UJ
gamma-Chlordane 80	310 UJ	340 UJ	220 UJ	400 UJ	280 UJ	230 UJ	250 UJ	300 UJ
Toxaphene 160	620 UJ	690 UJ	450 UJ	800 UJ	550 UJ	460 UJ	510 UJ	590 UJ
Aroclor-1016 80	310 UJ	340 UJ	220 UJ	400 UJ	280 UJ	230 UJ	250 UJ	300 UJ
Aroclor-1221 80	310 UJ	340 UJ	220 UJ	400 UJ	280 UJ	230 UJ	250 UJ	300 UJ
Aroclor-1232 80	310 UJ	340 UJ	220 UJ	400 UJ	280 UJ	230 UJ	250 UJ	300 UJ
Aroclor-1242 80	310 UJ	340 UJ	220 UJ	400 UJ	280 UJ	230 UJ	250 UJ	300 UJ
Aroclor-1248 80	310 UJ	340 UJ	220 UJ	400 UJ	280 UJ	230 UJ	250 UJ	300 UJ
Aroclor-1254 160	620 UJ	690 UJ	450 UJ	800 UJ	550 UJ	460 UJ	510 UJ	590 UJ
Aroclor-1260 160	620 UJ	690 UJ	450 UJ	800 UJ	550 UJ	460 UJ	510 UJ	590 UJ
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:	52	47	72	40	58	70	63	54
Associated Method Blank:	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021
Associated Equipment Blank:	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT
#: Level D Validation J: Estimated R: Unusable P: > 25% difference between columns
U: Not detected B: Blank contamination -: Not detected C: Confirmed by GC/MS

Table 2
Validation / Summary Table

SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
LAB NUMBER:	QBS022 #	QBS024 #	QBS025 #	QBS026 #	QBS037 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92
DATE ANALYZED:	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92

ANALYTE	SOW-2/88 CRQL				
alpha-BHC	8	30 UJ	20 UJ	20 UJ	20 UJ	24 UJ
beta-BHC	8	30 UJ	20 UJ	20 UJ	20 UJ	24 UJ
delta-BHC	8	30 UJ	20 UJ	20 UJ	20 UJ	24 UJ
gamma-BHC (Lindane)	8	30 UJ	20 UJ	20 UJ	20 UJ	24 UJ
Heptachlor	8	30 UJ	20 UJ	20 UJ	20 UJ	24 UJ
Aldrin	8	30 UJ	20 UJ	20 UJ	20 UJ	24 UJ
Heptachlor Epoxide	8	30 UJ	20 UJ	20 UJ	20 UJ	24 UJ
Endosulfan I	8	30 UJ	20 UJ	20 UJ	20 UJ	24 UJ
Dieldrin	16	61 UJ	40 UJ	39 UJ	40 UJ	48 UJ
4,4'-DDE	16	61 UJ	40 UJ	39 UJ	40 UJ	48 UJ
Endrin	16	61 UJ	40 UJ	39 UJ	40 UJ	48 UJ
Endosulfan II	16	61 UJ	40 UJ	39 UJ	40 UJ	48 UJ
4,4'-DDD	16	61 UJ	40 UJ	39 UJ	40 UJ	48 UJ
Endosulfan Sulfate	16	61 UJ	40 UJ	39 UJ	40 UJ	48 UJ
4,4'-DDT	16	61 UJ	40 UJ	39 UJ	40 UJ	48 UJ
Methoxychlor	80	300 UJ	200 UJ	200 UJ	200 UJ	240 UJ
Endrin Ketone	16	61 UJ	40 UJ	39 UJ	40 UJ	48 UJ
alpha-Chlordane	80	300 UJ	200 UJ	200 UJ	200 UJ	240 UJ
gamma-Chlordane	80	300 UJ	200 UJ	200 UJ	200 UJ	240 UJ
Toxaphene	160	610 UJ	400 UJ	390 UJ	400 UJ	480 UJ
Aroclor-1016	80	300 UJ	200 UJ	200 UJ	200 UJ	240 UJ
Aroclor-1221	80	300 UJ	200 UJ	200 UJ	200 UJ	240 UJ
Aroclor-1232	80	300 UJ	200 UJ	200 UJ	200 UJ	240 UJ
Aroclor-1242	80	300 UJ	200 UJ	200 UJ	200 UJ	240 UJ
Aroclor-1248	80	300 UJ	200 UJ	200 UJ	200 UJ	240 UJ
Aroclor-1254	160	610 UJ	400 UJ	390 UJ	400 UJ	480 UJ
Aroclor-1260	160	610 UJ	400 UJ	390 UJ	400 UJ	480 UJ
Dilution Factor:		1.00	1.00	1.00	1.00	1.00
Percent Solids:		52	79	81	80	67

Associated Method Blank:	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021
Associated Equipment Blank:	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT
#: Level D Validation J: Estimated R: Unusable P: > 25% difference between columns
U: Not detected B: Blank contamination -: Not detected C: Confirmed by GC/MS

Table 3
Summary Table

SAMPLE LOCATION:	MESDXX1XXX01XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:	QBS032 #	QBS033 #	QBS034 #	QBS036 #	QBS035 #	QBS031 #	QBS021 #	QBS023 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92
DATE ANALYZED:	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92
ANALYTE SOW-2/88 CRQL								
alpha-BHC 8	-	-	-	-	-	-	-	-
beta-BHC 8	-	-	-	-	-	-	-	-
delta-BHC 8	-	-	-	-	-	-	-	-
gamma-BHC (Lindane) 8	-	-	-	-	-	-	-	-
Heptachlor 8	-	-	-	-	-	-	-	-
Aldrin 8	-	-	-	-	-	-	-	-
Heptachlor Epoxide 8	-	-	-	-	-	-	-	-
Endosulfan I 8	-	-	-	-	-	-	-	-
Dieldrin 16	-	-	-	-	-	-	-	-
4,4'-DDE 16	-	-	-	-	-	-	-	-
Endrin 16	-	-	-	-	-	-	-	-
Endosulfan II 16	-	-	-	-	-	-	-	-
4,4'-DDD 16	-	-	-	-	-	-	-	-
Endosulfan Sulfate 16	-	-	-	-	-	-	-	-
4,4'-DDT 16	-	-	-	-	-	-	-	-
Methoxychlor 80	-	-	-	-	-	-	-	-
Endrin Ketone 16	-	-	-	-	-	-	-	-
alpha-Chlordane 80	-	-	-	-	-	-	-	-
gamma-Chlordane 80	-	-	-	-	-	-	-	-
Toxaphene 160	-	-	-	-	-	-	-	-
Aroclor-1016 80	-	-	-	-	-	-	-	-
Aroclor-1221 80	-	-	-	-	-	-	-	-
Aroclor-1232 80	-	-	-	-	-	-	-	-
Aroclor-1242 80	-	-	-	-	-	-	-	-
Aroclor-1248 80	-	-	-	-	-	-	-	-
Aroclor-1254 160	-	-	-	-	-	-	-	-
Aroclor-1260 160	-	-	-	-	-	-	-	-
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:	52	47	72	40	58	70	63	54
Associated Method Blank:	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021
Associated Equipment Blank:	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT
#: Level D Validation J: Estimated R: Unusable P: > 25% difference between columns
U: Not detected B: Blank contamination -: Not detected C: Confirmed by GC/MS

PROJECT: NASB

Pesticides/PCBs Soil Analysis (ug/kg)

01/20/93

Table 3
Summary Table

		SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
		LAB NUMBER:	QBS022 #	QBS024 #	QBS025 #	QBS026 #	QBS037 #
		DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
		DATE EXTRACTED:	11/23/92	11/23/92	11/23/92	11/23/92	11/23/92
		DATE ANALYZED:	12/03/92	12/03/92	12/03/92	12/03/92	12/03/92
ANALYTE	SOW-2/88	CRQL					
alpha-BHC		8	-	-	-	-	-
beta-BHC		8	-	-	-	-	-
delta-BHC		8	-	-	-	-	-
gamma-BHC (Lindane)		8	-	-	-	-	-
Heptachlor		8	-	-	-	-	-
Aldrin		8	-	-	-	-	-
Heptachlor Epoxide		8	-	-	-	-	-
Endosulfan I		8	-	-	-	-	-
Dieldrin		16	-	-	-	-	-
4,4'-DDE		16	-	-	-	-	-
Endrin		16	-	-	-	-	-
Endosulfan II		16	-	-	-	-	-
4,4'-DDD		16	-	-	-	-	-
Endosulfan Sulfate		16	-	-	-	-	-
4,4'-DDT		16	-	-	-	-	-
Methoxychlor		80	-	-	-	-	-
Endrin Ketone		16	-	-	-	-	-
alpha-Chlordane		80	-	-	-	-	-
gamma-Chlordane		80	-	-	-	-	-
Toxaphene		160	-	-	-	-	-
Aroclor-1016		80	-	-	-	-	-
Aroclor-1221		80	-	-	-	-	-
Aroclor-1232		80	-	-	-	-	-
Aroclor-1242		80	-	-	-	-	-
Aroclor-1248		80	-	-	-	-	-
Aroclor-1254		160	-	-	-	-	-
Aroclor-1260		160	-	-	-	-	-
Dilution Factor:			1.00	1.00	1.00	1.00	1.00
Percent Solids:			52	79	81	80	67
Associated Method Blank:			PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021	PBLKABS021
Associated Equipment Blank:			SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:			SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT
#: Level D Validation J: Estimated R: Unusable P: > 25% difference between columns
U: Not detected B: Blank contamination -: Not detected C: Confirmed by GC/MS

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:		MESDXX1XXX02XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:		BNASS2*38 #	BNASS2*33 #	BNASS2*34 #	BNASS2*36 #	BNASS2*35 #	BNASS2*31 #	BNASS2*21 #	BNASS2*23 #
DATE SAMPLED:		12/01/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:		12/04/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:		12/07/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE	SOW-3/90 - II CRQL								
Phenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
bis(2-Chloroethyl)ether	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Chlorophenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
1,3-Dichlorobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
1,4-Dichlorobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
1,2-Dichlorobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Methylphenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,2'-oxybis(1-Chloropropane)	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
4-Methylphenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
N-Nitroso-di-n-propylamine	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Hexachloroethane	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Nitrobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Isophorone	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Nitrophenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4-Dimethylphenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
bis(2-Chloroethoxy)methane	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4-Dichlorophenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
1,2,4-Trichlorobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Naphthalene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
4-Chloroaniline	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Hexachlorobutadiene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
4-Chl ro-3-Methylphenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Methylnaphthalene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Hexachl rocyclopentadiene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4,6-Trichlorophenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4,5-Trichlorophenol	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
2-Chloronaphthalene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Nitroaniline	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
Dimethylphthalate	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Acenaphthylene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,6-Dinitrotoluene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U

Site: SEDIMENT
#: L vel D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Tabl 1
Laboratory Report of Analysis

SAMPLE LOCATION:		MESDXX1XXX02XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:		BNASS2*38 #	BNASS2*33 #	BNASS2*34 #	BNASS2*36 #	BNASS2*35 #	BNASS2*31 #	BNASS2*21 #	BNASS2*23 #
DATE SAMPLED:		12/01/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:		12/04/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:		12/07/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE SOW-3/90 - II	CRQL								
3-Nitroaniline	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
Acenaphthene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4-Dinitrophenol	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
4-Nitrophenol	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
Dibenzofuran	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4-Dinitrotoluene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Diethylphthalate	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
4-Chlorophenyl-phenylether	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Fluorene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
4-Nitroaniline	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
4,6-Dinitr -2-methylphenol	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
N-Nitrosodiphenylamine	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
4-Bromophenyl-phenylether	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Hexachlorobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Pentachlorophenol	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
Phenanthrene	330	580 U	680 U	510 U	560 U	3900 U	500 U	300 J	3400 U
Anthracene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Carbazole	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Di-n-butylphthalate	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Fluoranthene	330	81 J	680 U	510 U	560 U	3900 U	500 U	450 J	260 J
Pyrene	330	96 J	680 U	510 U	560 U	3900 U	500 U	400 J	170 J
Butylbenzylphthalate	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
3,3'-Dichlorobenzidine	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Benzo(a)Anthracene	330	580 U	680 U	510 U	560 U	3900 U	500 U	240 J	3400 U
Chrysene	330	83 J	680 U	510 U	560 U	3900 U	500 U	270 J	3400 U
bis(2-Ethylhexyl)phthalate	330	300 JB	380 JB	99 JB	140 JB	320 JB	160 JB	200 JB	250 JB
Di-n-octylphthalate	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Benzo(b)Fluoranthene	330	580 U	680 U	510 U	560 U	3900 U	500 U	320 J	3400 U
Benzo(k)Fluoranth ne	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Benzo(a)Pyrene	330	580 U	680 U	510 U	560 U	3900 U	500 U	230 J	3400 U
Indeno(1,2,3-c,d)Pyrene	330	580 U	680 U	510 U	560 U	3900 U	500 U	200 J	3400 U
Dibenz(a,h)Anthracene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Benzo(g,h,i)perylene	330	580 U	680 U	510 U	560 U	3900 U	500 U	160 J	3400 U
Dilution Factor:		1.00	1.00	1.00	1.00	5.00	1.00	1.00	5.00
Percent Solids:		57	49	65	60	43	67	54	48
Associated Method Blank:		62862	62838	62838	62838	62838	62838	62838	62838
Associated Equipment Blank:		SRQSXX4XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:		-	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT

#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable

U: Not detected B: Blank contamination D: Diluted result -: Not detected

E-70

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
LAB NUMBER:	BNASS2*22 #	BNASS2*24 #	BNASS2*25 #	BNASS2*26 #	BNASS2*37 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92

ANALYTE	SOW-3/90 - II CRQL									
Phenol	330	720	U	440	U	450	U	420	U	540	U
bis(2-Chloroethyl)ether	330	720	U	440	U	450	U	420	U	540	U
2-Chlorophenol	330	720	U	440	U	450	U	420	U	540	U
1,3-Dichlorobenzene	330	720	U	440	U	450	U	420	U	540	U
1,4-Dichlorobenzene	330	720	U	440	U	450	U	420	U	540	U
1,2-Dichlorobenzene	330	720	U	440	U	450	U	420	U	540	U
2-Methylphenol	330	720	U	440	U	450	U	420	U	540	U
2,2'-oxybis(1-Chloropropane)	330	720	U	440	U	450	U	420	U	540	U
4-Methylphenol	330	720	U	440	U	450	U	420	U	540	U
N-Nitroso-di-n-propylamine	330	720	U	440	U	450	U	420	U	540	U
Hexachloroethane	330	720	U	440	U	450	U	420	U	540	U
Nitrobenzene	330	720	U	440	U	450	U	420	U	540	U
Isophorone	330	720	U	440	U	450	U	420	U	540	U
2-Nitrophenol	330	720	U	440	U	450	U	420	U	540	U
2,4-Dimethylphenol	330	720	U	440	U	450	U	420	U	540	U
bis(2-Chloroethoxy)methane	330	720	U	440	U	450	U	420	U	540	U
2,4-Dichlorophenol	330	720	U	440	U	450	U	420	U	540	U
1,2,4-Trichlorobenzene	330	720	U	440	U	450	U	420	U	540	U
Naphthalene	330	720	U	440	U	450	U	420	U	540	U
4-Chloroaniline	330	720	U	440	U	450	U	420	U	540	U
Hexachlorobutadiene	330	720	U	440	U	450	U	420	U	540	U
4-Chl r -3-Methylphenol	330	720	U	440	U	450	U	420	U	540	U
2-Methylnaphthalene	330	720	U	440	U	450	U	420	U	540	U
Hexachlorocyclopentadiene	330	720	U	440	U	450	U	420	U	540	U
2,4,6-Trichlorophenol	330	720	U	440	U	450	U	420	U	540	U
2,4,5-Trichlorophenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
2-Chloronaphthalene	330	720	U	440	U	450	U	420	U	540	U
2-Nitroaniline	800	1700	U	1100	U	1100	U	1000	U	1300	U
Dimethylphthalat	330	720	U	440	U	450	U	420	U	540	U
Acenaphthylene	330	720	U	440	U	450	U	420	U	540	U
2,6-Dinitrotoluene	330	720	U	440	U	450	U	420	U	540	U

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Tabl 1
Laboratory Report of Analysis

SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
LAB NUMBER:	BNASS2*22 #	BNASS2*24 #	BNASS2*25 #	BNASS2*26 #	BNASS2*37 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92

ANALYTE	SOW-3/90 - II CRQL									
3-Nitroaniline	800	1700	U	1100	U	1100	U	1000	U	1300	U
Acenaphthene	330	720	U	440	U	450	U	420	U	540	U
2,4-Dinitrophenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
4-Nitrophenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
Dibenzofuran	330	720	U	440	U	450	U	420	U	540	U
2,4-Dinitrotoluene	330	720	U	440	U	450	U	420	U	540	U
Diethylphthalat	330	720	U	440	U	450	U	420	U	540	U
4-Chlorophenyl-phenylether	330	720	U	440	U	450	U	420	U	540	U
Fluorene	330	720	U	440	U	450	U	420	U	540	U
4-Nitroaniline	800	1700	U	1100	U	1100	U	1000	U	1300	U
4,6-Dinitro-2-methylphenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
N-Nitrosodiphenylamine	330	720	U	440	U	450	U	420	U	540	U
4-Bromophenyl-phenylether	330	720	U	440	U	450	U	420	U	540	U
Hexachlorobenzen	330	720	U	440	U	450	U	420	U	540	U
Pentachlorophenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
Phenanthrene	330	130	J	440	U	450	U	420	U	540	U
Anthracene	330	720	U	440	U	450	U	420	U	540	U
Carbazole	330	720	U	440	U	450	U	420	U	540	U
Di-n-butylphthalate	330	720	U	440	U	450	U	420	U	540	U
Fluoranthene	330	180	J	440	U	45	J	420	U	540	U
Pyrene	330	190	J	440	U	65	J	420	U	540	U
Butylbenzylphthalate	330	720	U	440	U	450	U	420	U	540	U
3,3'-Dichlorobenzidine	330	720	U	440	U	450	U	420	U	540	U
Benzo(a)Anthracene	330	110	J	440	U	450	U	420	U	540	U
Chrysene	330	130	J	440	U	450	U	420	U	540	U
bis(2-Ethylhexyl)phthalate	330	400	JB	130	JB	130	JB	120	JB	140	JB
Di-n-octylphthalate	330	720	U	440	U	450	U	420	U	540	U
Benzo(b)Fluoranthene	330	150	J	440	U	450	U	420	U	540	U
Benzo(k)Fluoranthene	330	720	U	440	U	450	U	420	U	540	U
Benzo(a)Pyrene	330	110	J	440	U	450	U	420	U	540	U
Indeno(1,2,3-c,d)Pyrene	330	720	U	440	U	450	U	420	U	540	U
Dibenz(a,h)Anthracene	330	720	U	440	U	450	U	420	U	540	U
Benzo(g,h,i)perylene	330	720	U	440	U	450	U	420	U	540	U
Dilution Factor:		1.00		1.00		1.00		1.00		1.00	
Percent Solids:		46		75		73		78		62	
Associated Method Blank:		62838		62838		62838		62838		62838	
Associated Equipment Blank:		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 2
Validation / Summary Table

SAMPLE LOCATION:		MESDXX1XXX02XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:		BNASS2*38 #	BNASS2*33 #	BNASS2*34 #	BNASS2*36 #	BNASS2*35 #	BNASS2*31 #	BNASS2*21 #	BNASS2*23 #
DATE SAMPLED:		12/01/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:		12/04/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:		12/07/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE	SOW-3/90 - II CRQL								
Phenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
bis(2-Chloroethyl)ether	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Chlorophenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
1,3-Dichlorobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
1,4-Dichlorobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
1,2-Dichlorobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Methylphenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,2'-oxybis(1-Chloropropane)	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
4-Methylphenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
N-Nitroso-di-n-propylamine	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Hexachloroethane	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Nitrobenzen	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Isophorone	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Nitrophenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4-Dimethylphenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
bis(2-Chloroethoxy)methane	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4-Dichlorophenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
1,2,4-Trichlorobenzene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Naphthalene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
4-Chl roaniline	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Hexachlorobutadiene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
4-Chloro-3-Methylphenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Methylnaphthal ne	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Hexachlorocyclopentadiene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4,6-Trichlorophenol	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,4,5-Trichlorophenol	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
2-Chl ronaphthal ne	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2-Nitroaniline	800	1500 U	1700 U	1300 U	1400 U	9700 U	1200 U	1500 U	8300 U
Dimethylphthalate	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
Acenaphthylene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U
2,6-Dinitrotoluene	330	580 U	680 U	510 U	560 U	3900 U	500 U	610 U	3400 U

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESDXX1XXX02XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:	BNASS2*38 #	BNASS2*33 #	BNASS2*34 #	BNASS2*36 #	BNASS2*35 #	BNASS2*31 #	BNASS2*21 #	BNASS2*23 #
DATE SAMPLED:	12/01/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	12/04/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:	12/07/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92

ANALYTE	SOW-3/90 - II CRQL															
3-Nitroaniline	800	1500	U	1700	U	1300	U	1400	U	9700	U	1200	U	1500	U	8300	U
Acenaphthene	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
2,4-Dinitrophenol	800	1500	U	1700	U	1300	U	1400	U	9700	U	1200	U	1500	U	8300	U
4-Nitrophenol	800	1500	U	1700	U	1300	U	1400	U	9700	U	1200	U	1500	U	8300	U
Dibenzofuran	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
2,4-Dinitrotoluene	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Diethylphthalate	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
4-Chlorophenyl-phenylether	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Fluorene	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
4-Nitroaniline	800	1500	U	1700	U	1300	U	1400	U	9700	U	1200	U	1500	U	8300	U
4,6-Dinitro-2-methylphenol	800	1500	U	1700	U	1300	U	1400	U	9700	U	1200	U	1500	U	8300	U
N-Nitrosodiphenylamine	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
4-Bromophenyl-phenylether	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Hexachlorobenzene	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Pentachlorophenol	800	1500	U	1700	U	1300	U	1400	U	9700	U	1200	U	1500	U	8300	U
Phenanthrene	330	580	U	680	U	510	U	560	U	3900	U	500	U	300	J	3400	U
Anthracene	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Carbazole	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Di-n-butylphthalate	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Fluoranthene	330	81	J	680	U	510	U	560	U	3900	U	500	U	450	J	260	J
Pyrene	330	96	J	680	U	510	U	560	U	3900	U	500	U	400	J	170	J
Butylbenzylphthalate	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
3,3'-Dichlorobenzidine	330	580	UJ	680	UJ	510	UJ	560	UJ	3900	U	500	UJ	610	UJ	3400	U
Benz (a)Anthracene	330	580	U	680	U	510	U	560	U	3900	U	500	U	240	J	3400	U
Chrysene	330	83	J	680	U	510	U	560	U	3900	U	500	U	270	J	3400	U
bis(2-Ethylhexyl)phthalate	330	580	U	680	U	510	U	560	U	3900	U	500	U	270	U	3400	U
Di-n-octylphthalate	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Benzo(b)Fluoranth ne	330	580	U	680	U	510	U	560	U	3900	U	500	U	320	J	3400	U
Benzo(k)Fluoranthene	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Benzo(a)Pyrene	330	580	U	680	U	510	U	560	U	3900	U	500	U	230	J	3400	U
Indeno(1,2,3-c,d)Pyrene	330	580	U	680	U	510	U	560	U	3900	U	500	U	200	J	3400	U
Dibenz(a,h)Anthracene	330	580	U	680	U	510	U	560	U	3900	U	500	U	610	U	3400	U
Benzo(g,h,i)perylene	330	580	U	680	U	510	U	560	U	3900	U	500	U	160	J	3400	U

Dilution Factor:	1.00	1.00	1.00	1.00	5.00	1.00	1.00	5.00
Percent Solids:	57	49	65	60	43	67	54	48
Associated Method Blank:	62862	62838	62838	62838	62838	62838	62838	62838
Associated Equipment Blank:	SRQSXX4XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:	-	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 2
Validation / Summary Tabl

SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
LAB NUMBER:	BNASS2*22 #	BNASS2*24 #	BNASS2*25 #	BNASS2*26 #	BNASS2*37 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92

ANALYTE	SOW-3/90 - II CRQL										
Phenol	330	720	U	440	U	450	U	420	U	540	UJ
bis(2-Chloroethyl)ether	330	720	U	440	U	450	U	420	U	540	U
2-Chlorophenol	330	720	U	440	U	450	U	420	U	540	U
1,3-Dichlorobenzene	330	720	U	440	U	450	U	420	U	540	U
1,4-Dichlorobenzene	330	720	U	440	U	450	U	420	U	540	U
1,2-Dichlorobenzene	330	720	U	440	U	450	U	420	U	540	U
2-Methylphenol	330	720	U	440	U	450	U	420	U	540	U
2,2'-oxybis(1-Chl ropropane)	330	720	U	440	U	450	U	420	U	540	U
4-Methylphenol	330	720	U	440	U	450	U	420	U	540	U
N-Nitroso-di-n-propylamine	330	720	U	440	U	450	U	420	U	540	U
Hexachloroethane	330	720	U	440	U	450	U	420	U	540	U
Nitrobenzene	330	720	U	440	U	450	U	420	U	540	U
Isophorone	330	720	U	440	U	450	U	420	U	540	U
2-Nitrophenol	330	720	U	440	U	450	U	420	U	540	U
2,4-Dimethylphenol	330	720	U	440	U	450	U	420	U	540	U
bis(2-Chloroethoxy)methane	330	720	U	440	U	450	U	420	U	540	U
2,4-Dichlorophenol	330	720	U	440	U	450	U	420	U	540	U
1,2,4-Trichlorobenzene	330	720	U	440	U	450	U	420	U	540	U
Naphthalene	330	720	U	440	U	450	U	420	U	540	U
4-Chloroaniline	330	720	U	440	U	450	U	420	U	540	U
Hexachlorobutadiene	330	720	U	440	U	450	U	420	U	540	U
4-Chloro-3-Methylphenol	330	720	U	440	U	450	U	420	U	540	U
2-Methylnaphthalene	330	720	U	440	U	450	U	420	U	540	U
Hexachlorocyclopentadiene	330	720	U	440	U	450	U	420	U	540	U
2,4,6-Trichlorophenol	330	720	U	440	U	450	U	420	U	540	U
2,4,5-Trichlorophenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
2-Chloronaphthalene	330	720	U	440	U	450	U	420	U	540	U
2-Nitroaniline	800	1700	U	1100	U	1100	U	1000	U	1300	U
Dimethylphthalate	330	720	U	440	U	450	U	420	U	540	U
Acenaphthylene	330	720	U	440	U	450	U	420	U	540	U
2,6-Dinitrotoluene	330	720	U	440	U	450	U	420	U	540	U

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Tabl 2
Validation / Summary Table

SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
LAB NUMBER:	BNASS2*22 #	BNASS2*24 #	BNASS2*25 #	BNASS2*26 #	BNASS2*37 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92

ANALYTE	SOW-3/90 - II CRQL									
3-Nitroaniline	800	1700	U	1100	U	1100	U	1000	U	1300	U
Acenaphthene	330	720	U	440	U	450	U	420	U	540	U
2,4-Dinitrophenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
4-Nitrophenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
Dibenzofuran	330	720	U	440	U	450	U	420	U	540	U
2,4-Dinitrotoluene	330	720	U	440	U	450	U	420	U	540	U
Diethylphthalate	330	720	U	440	U	450	U	420	U	540	U
4-Chlorophenyl-phenylether	330	720	U	440	U	450	U	420	U	540	U
Fluorene	330	720	U	440	U	450	U	420	U	540	U
4-Nitroaniline	800	1700	U	1100	U	1100	U	1000	U	1300	U
4,6-Dinitr -2-methylphenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
N-Nitrosodiphenylamine	330	720	U	440	U	450	U	420	U	540	U
4-Bromophenyl-phenylether	330	720	U	440	U	450	U	420	U	540	U
Hexachlorobenzene	330	720	U	440	U	450	U	420	U	540	U
Pentachlorophenol	800	1700	U	1100	U	1100	U	1000	U	1300	U
Phenanthrene	330	130	J	440	U	450	U	420	U	540	U
Anthracene	330	720	U	440	U	450	U	420	U	540	U
Carbazole	330	720	U	440	U	450	U	420	U	540	U
Di-n-butylphthalate	330	720	U	440	U	450	U	420	U	540	U
Fluoranthene	330	180	J	440	U	45	J	420	U	540	U
Pyrene	330	190	J	440	U	65	J	420	U	540	U
Butylbenzylphthalate	330	720	U	440	U	450	U	420	U	540	U
3,3'-Dichlorobenzidine	330	720	UJ	440	UJ	450	UJ	420	UJ	540	U
Benzo(a)Anthracene	330	110	J	440	U	450	U	420	U	540	U
Chrysene	330	130	J	440	U	450	U	420	U	540	U
bis(2-Ethylhexyl)phthalate	330	720	U	440	U	450	U	420	U	540	U
Di-n-octylphthalate	330	720	U	440	U	450	U	420	U	540	U
Benzo(b)Fluoranthene	330	150	J	440	U	450	U	420	U	540	U
Benzo(k)Fluoranthene	330	720	U	440	U	450	U	420	U	540	U
Benzo(a)Pyrene	330	110	J	440	U	450	U	420	U	540	U
Indeno(1,2,3-c,d)Pyrene	330	720	U	440	U	450	U	420	U	540	U
Dibenz(a,h)Anthracene	330	720	U	440	U	450	U	420	U	540	U
Benzo(g,h,i)perylene	330	720	U	440	U	450	U	420	U	540	U
Dilution Factor:		1.00		1.00		1.00		1.00		1.00	
Percent Solids:		46		75		73		78		62	
Associated Method Blank:		62838		62838		62838		62838		62838	
Associated Equipment Blank:		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 3
Summary Table

SAMPLE LOCATION:	MESDXX1XXX02XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:	BNASS2*38 #	BNASS2*33 #	BNASS2*34 #	BNASS2*36 #	BNASS2*35 #	BNASS2*31 #	BNASS2*21 #	BNASS2*23 #
DATE SAMPLED:	12/01/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	12/04/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:	12/07/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE SOW-3/90 - II CRQL								
Phenol 330	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether 330	-	-	-	-	-	-	-	-
2-Chlorophenol 330	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene 330	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene 330	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene 330	-	-	-	-	-	-	-	-
2-Methylphenol 330	-	-	-	-	-	-	-	-
2,2'- xybis(1-Chloropropane) 330	-	-	-	-	-	-	-	-
4-Methylphenol 330	-	-	-	-	-	-	-	-
N-Nitroso-di-n-propylamine 330	-	-	-	-	-	-	-	-
Hexachloroethane 330	-	-	-	-	-	-	-	-
Nitrobenzene 330	-	-	-	-	-	-	-	-
Isophorone 330	-	-	-	-	-	-	-	-
2-Nitrophenol 330	-	-	-	-	-	-	-	-
2,4-Dimethylphenol 330	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane 330	-	-	-	-	-	-	-	-
2,4-Dichlorophenol 330	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene 330	-	-	-	-	-	-	-	-
Naphthalene 330	-	-	-	-	-	-	-	-
4-Chloroanilin 330	-	-	-	-	-	-	-	-
Hexachlorobutadiene 330	-	-	-	-	-	-	-	-
4-Chl ro-3-Methylphenol 330	-	-	-	-	-	-	-	-
2-Methylnaphthalene 330	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene 330	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol 330	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol 800	-	-	-	-	-	-	-	-
2-Chloronaphthalene 330	-	-	-	-	-	-	-	-
2-Nitroaniline 800	-	-	-	-	-	-	-	-
Dimethylphthalate 330	-	-	-	-	-	-	-	-
Acenaphthylene 330	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene 330	-	-	-	-	-	-	-	-

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Tabl 3
Summary Tabl

SAMPLE LOCATION:	MESDXX1XXX02XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:	BNASS2*38 #	BNASS2*33 #	BNASS2*34 #	BNASS2*36 #	BNASS2*35 #	BNASS2*31 #	BNASS2*21 #	BNASS2*23 #
DATE SAMPLED:	12/01/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	12/04/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:	12/07/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE SOW-3/90 - II CRQL								
3-Nitroaniline 800	-	-	-	-	-	-	-	-
Acenaphthene 330	-	-	-	-	-	-	-	-
2,4-Dinitrophenol 800	-	-	-	-	-	-	-	-
4-Nitrophenol 800	-	-	-	-	-	-	-	-
Dibenzofuran 330	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene 330	-	-	-	-	-	-	-	-
Diethylphthalate 330	-	-	-	-	-	-	-	-
4-Chlorophenyl-phenylether 330	-	-	-	-	-	-	-	-
Fluorene 330	-	-	-	-	-	-	-	-
4-Nitroaniline 800	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol 800	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine 330	-	-	-	-	-	-	-	-
4-Bromophenyl-phenylether 330	-	-	-	-	-	-	-	-
Hexachlorobenzene 330	-	-	-	-	-	-	-	-
Pentachlorophenol 800	-	-	-	-	-	-	-	-
Phenanthrene 330	-	-	-	-	-	-	300 J	-
Anthracene 330	-	-	-	-	-	-	-	-
Carbazole 330	-	-	-	-	-	-	-	-
Di-n-butylphthalate 330	-	-	-	-	-	-	-	-
Fluoranthene 330	81 J	-	-	-	-	-	450 J	260 J
Pyrene 330	96 J	-	-	-	-	-	400 J	170 J
Butylbenzylphthalate 330	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine 330	-	-	-	-	-	-	-	-
Benzo(a)Anthracene 330	-	-	-	-	-	-	240 J	-
Chrysene 330	83 J	-	-	-	-	-	270 J	-
bis(2-Ethylhexyl)phthalate 330	-	-	-	-	-	-	-	-
Di-n-octylphthalate 330	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene 330	-	-	-	-	-	-	320 J	-
Benzo(k)Fluoranthene 330	-	-	-	-	-	-	-	-
Benzo(a)Pyrene 330	-	-	-	-	-	-	230 J	-
Indeno(1,2,3-c,d)Pyrene 330	-	-	-	-	-	-	200 J	-
Dibenz(a,h)Anthracene 330	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene 330	-	-	-	-	-	-	160 J	-
Dilution Factor:	1.00	1.00	1.00	1.00	5.00	1.00	1.00	5.00
Percent Solids:	57	49	65	60	43	67	54	48
Associated Method Blank:	62862	62838	62838	62838	62838	62838	62838	62838
Associated Equipment Blank:	SRQSXX4XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:	-	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatil Organic Soil Analysis (ug/kg)

01/20/93

Table 3
Summary Tabl

SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
LAB NUMBER:	BNASS2*22 #	BNASS2*24 #	BNASS2*25 #	BNASS2*26 #	BNASS2*37 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
DATE ANALYZED:	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE SOW-3/90 - II	CRQL				
Phenol	330	-	-	-	-	-
bis(2-Chloroethyl)ether	330	-	-	-	-	-
2-Chl rophenol	330	-	-	-	-	-
1,3-Dichlorobenzene	330	-	-	-	-	-
1,4-Dichlorobenzene	330	-	-	-	-	-
1,2-Dichlorobenzene	330	-	-	-	-	-
2-Methylphenol	330	-	-	-	-	-
2,2'-oxybis(1-Chloropropane)	330	-	-	-	-	-
4-Methylphenol	330	-	-	-	-	-
N-Nitroso-di-n-propylamine	330	-	-	-	-	-
Hexachloroethane	330	-	-	-	-	-
Nitrobenzene	330	-	-	-	-	-
Isophorone	330	-	-	-	-	-
2-Nitrophenol	330	-	-	-	-	-
2,4-Dimethylphenol	330	-	-	-	-	-
bis(2-Chloroethoxy)methane	330	-	-	-	-	-
2,4-Dichlorophenol	330	-	-	-	-	-
1,2,4-Trichlorobenzene	330	-	-	-	-	-
Naphthalene	330	-	-	-	-	-
4-Chloroaniline	330	-	-	-	-	-
Hexachlorobutadiene	330	-	-	-	-	-
4-Chloro-3-Methylphenol	330	-	-	-	-	-
2-Methylnaphthalene	330	-	-	-	-	-
Hexachlorocyclopentadiene	330	-	-	-	-	-
2,4,6-Trichlorophenol	330	-	-	-	-	-
2,4,5-Trichlorophenol	800	-	-	-	-	-
2-Chloronaphthalene	330	-	-	-	-	-
2-Nitroaniline	800	-	-	-	-	-
Dimethylphthalat	330	-	-	-	-	-
Acenaphthylene	330	-	-	-	-	-
2,6-Dinitrotoluene	330	-	-	-	-	-

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 3
Summary Table

		SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
		LAB NUMBER:	BNASS2*22 #	BNASS2*24 #	BNASS2*25 #	BNASS2*26 #	BNASS2*37 #
		DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
		DATE EXTRACTED:	11/17/92	11/17/92	11/17/92	11/17/92	11/17/92
		DATE ANALYZED:	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE	SOW-3/90 - II	CRQL					
3-Nitroaniline		800	-	-	-	-	-
Acenaphthene		330	-	-	-	-	-
2,4-Dinitrophenol		800	-	-	-	-	-
4-Nitrophenol		800	-	-	-	-	-
Dibenzofuran		330	-	-	-	-	-
2,4-Dinitrotoluene		330	-	-	-	-	-
Diethylphthalate		330	-	-	-	-	-
4-Chlorophenyl-phenylether		330	-	-	-	-	-
Fluorene		330	-	-	-	-	-
4-Nitroaniline		800	-	-	-	-	-
4,6-Dinitro-2-methylphenol		800	-	-	-	-	-
N-Nitrosodiphenylamine		330	-	-	-	-	-
4-Bromophenyl-phenylether		330	-	-	-	-	-
Hexachlorobenzene		330	-	-	-	-	-
Pentachlorophenol		800	-	-	-	-	-
Phenanthrene		330	130 J	-	-	-	-
Anthracene		330	-	-	-	-	-
Carbazole		330	-	-	-	-	-
Di-n-butylphthalate		330	-	-	-	-	-
Fluoranthene		330	180 J	-	45 J	-	-
Pyrene		330	190 J	-	65 J	-	-
Butylbenzylphthalate		330	-	-	-	-	-
3,3'-Dichlorobenzidine		330	-	-	-	-	-
Benzo(a)Anthracene		330	110 J	-	-	-	-
Chrysene		330	130 J	-	-	-	-
bis(2-Ethylhexyl)phthalate		330	-	-	-	-	-
Di-n-octylphthalate		330	-	-	-	-	-
Benzo(b)Fluoranthene		330	150 J	-	-	-	-
Benzo(k)Fluoranthene		330	-	-	-	-	-
Benzo(a)Pyrene		330	110 J	-	-	-	-
Indeno(1,2,3-c,d)Pyrene		330	-	-	-	-	-
Dibenz(a,h)Anthracene		330	-	-	-	-	-
Benzo(g,h,i)perylene		330	-	-	-	-	-
Dilution Factor:			1.00	1.00	1.00	1.00	1.00
Percent Solids:			46	75	73	78	62
Associated Method Blank:			62838	62838	62838	62838	62838
Associated Equipment Blank:			SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:			SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Volatile Organic Soil Analysis (ug/kg)

01/20/93

Table 1
Laboratory Report f Analysis

SAMPLE LOCATION:		MESDXX1XXX01XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:		BNASS2*32 #	BNASS2*33 #	BNASS2*34 #	BNASS2*36 #	BNASS2*35 #	BNASS2*31 #	BNASS2*21 #	BNASS2*23 #
DATE SAMPLED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE ANALYZED:		11/15/92	11/15/92	11/15/92	11/15/92	11/15/92	11/15/92	11/14/92	11/14/92
ANALYTE	SOW-3/90 - II CRQL								
Chl romethane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Bromomethane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Vinyl Chloride	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Chl roethane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Methylene Chloride	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Acetone	10	120	46	28	17 U	23 U	15 U	26 B	90 B
Carbon Disulfid	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,1-Dichloroethene	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,1-Dichloroethane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,2-Dichloro thene (total)	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Chloroform	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,2-Dichloro thane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
2-Butanone	10	33	20 U	15 U	17 U	23 U	15 U	19 U	17 J
1,1,1-Trichloroethane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	9 J
Carbon Tetrachloride	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Bromodichloromethane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,2-Dichloropropane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
cis-1,3-Dichloropropene	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Trichloroethene	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Dibromochloromethane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,1,2-Trichloroethane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Benzene	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
trans-1,3-Dichl r propene	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Bromoform	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
4-Methyl-2-Pentanone	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
2-Hexanone	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Tetrachloroethene	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,1,2,2-Tetrachloroethane	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
T luene	10	4 J	20 U	2 J	17 U	23 U	15 U	19 U	9 J
Chlorobenzene	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Ethylbenzene	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Styrene	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Total Xylenes	10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Dilution Factor:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:		53	49	65	60	43	67	54	48
Associated Method Blank:		69700	69700	69700	69700	69700	69700	69684	69684
Associated Equipment Blank:		SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		-	-	-	-	-	-	-	-

Sit : SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

ANALYTE	SOW-3/90 - II CRQL					
SAMPLE LOCATION:		SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
LAB NUMBER:		BNASS2*22 #	BNASS2*24 #	BNASS2*25 #	BNASS2*26 #	BNASS2*37 #
DATE SAMPLED:		11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE ANALYZED:		11/14/92	11/15/92	11/15/92	11/15/92	11/15/92
Chloromethane	10	22 U	13 U	14 U	13 U	15 U
Bromomethane	10	22 U	13 U	14 U	13 U	15 U
Vinyl Chloride	10	22 U	13 U	14 U	13 U	15 U
Chloroethane	10	22 U	13 U	14 U	13 U	15 U
Methylene Chloride	10	22 U	13 U	14 U	13 U	15 U
Acetone	10	81 B	13 U	14 U	13 U	15 U
Carbon Disulfide	10	22 U	13 U	14 U	13 U	15 U
1,1-Dichloroethene	10	22 U	13 U	14 U	13 U	15 U
1,1-Dichloroethane	10	22 U	13 U	14 U	13 U	15 U
1,2-Dichloroethene (total)	10	22 U	13 U	14 U	13 U	15 U
Chloroform	10	22 U	13 U	14 U	13 U	15 U
1,2-Dichloroethan	10	22 U	13 U	14 U	13 U	15 U
2-Butanone	10	18 J	13 U	14 U	13 U	15 U
1,1,1-Trichl roethane	10	22 U	13 U	14 U	13 U	15 U
Carbon Tetrachloride	10	22 U	13 U	14 U	13 U	15 U
Bromodichloromethane	10	22 U	13 U	14 U	13 U	15 U
1,2-Dichloropropane	10	22 U	13 U	14 U	13 U	15 U
cis-1,3-Dichloropropene	10	22 U	13 U	14 U	13 U	15 U
Trichloroethene	10	22 U	13 U	14 U	13 U	15 U
Dibromochloromethane	10	22 U	13 U	14 U	13 U	15 U
1,1,2-Trichloroethane	10	22 U	13 U	14 U	13 U	15 U
Benzene	10	22 U	13 U	14 U	13 U	15 U
trans-1,3-Dichloropropene	10	22 U	13 U	14 U	13 U	15 U
Bromoform	10	22 U	13 U	14 U	13 U	15 U
4-Methyl-2-Pentanone	10	22 U	13 U	14 U	13 U	15 U
2-Hexanone	10	22 U	13 U	14 U	13 U	15 U
Tetrachloroethene	10	22 U	13 U	14 U	13 U	15 U
1,1,2,2-Tetrachloroethane	10	22 U	13 U	14 U	13 U	15 U
Toluene	10	3 J	13 U	14 U	13 U	15 U
Chlorobenzene	10	22 U	13 U	14 U	13 U	15 U
Ethylbenzene	10	22 U	13 U	14 U	13 U	15 U
Styrene	10	22 U	13 U	14 U	13 U	15 U
Total Xylenes	10	22 U	13 U	14 U	13 U	15 U
Dilution Factor:		1.00	1.00	1.00	1.00	1.00
Percent Solids:		46	75	73	78	67
Associated Method Blank:		69684	69700	69700	69700	69700
Associated Equipment Blank:		SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		-	-	-	-	-

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

E-82

PROJECT: NASB

Volatile Organic Soil Analysis (ug/kg)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESDXX1XXX01XX	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XD	MESDXX4XXX01XX	SRSDXX1XXX01XX	SRSDXX2XXX01XX	SRSDXX3XXX01XD
LAB NUMBER:	BNASS2*32 #	BNASS2*33 #	BNASS2*34 #	BNASS2*36 #	BNASS2*35 #	BNASS2*31 #	BNASS2*21 #	BNASS2*23 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE ANALYZED:	11/15/92	11/15/92	11/15/92	11/15/92	11/15/92	11/15/92	11/14/92	11/14/92
ANALYTE SOW-3/90 - II CRQL								
Chloromethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Bromomethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Vinyl Chloride 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Chloroethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Methylene Chloride 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Acetone 10	120 J	46 J	28 J	17 UJ	23 UJ	15 UJ	26 U	90 J
Carbon Disulfide 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,1-Dichloroethene 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,1-Dichloroethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,2-Dichloroethene (total) 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Chloroform 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,2-Dichloroethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
2-Butanone 10	33 J	20 U	15 U	17 U	23 U	15 U	19 U	17 J
1,1,1-Trichloroethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	9 J
Carbon Tetrachloride 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Bromodichloromethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,2-Dichloropropane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
cis-1,3-Dichloropropene 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Trichloroethene 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Dibromochloromethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,1,2-Trichloroethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Benzene 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
trans-1,3-Dichloropropene 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Bromoform 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
4-Methyl-2-Pentanone 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
2-Hexanone 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Tetrachloroethene 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
1,1,2,2-Tetrachl roethane 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
T luene 10	4 J	20 U	2 J	17 U	23 U	15 U	19 U	9 J
Chlorobenzene 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Ethylbenzene 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Styrene 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
T tal Xylenes 10	19 U	20 U	15 U	17 U	23 U	15 U	19 U	21 U
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:	53	49	65	60	43	67	54	48
Ass ciated Method Blank:	69700	69700	69700	69700	69700	69700	69684	69684
Associated Equipment Blank:	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:	-	-	-	-	-	-	-	-

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Volatile Organic Soil Analysis (ug/kg)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:		SRSDXX3XXX01XX		SRSDXX4XXX01XX		SRSDXX5XXX01XX		SRSDXX6XXX01XX		SRSDXX7XXX01XX	
LAB NUMBER:		BNASS2*22 #		BNASS2*24 #		BNASS2*25 #		BNASS2*26 #		BNASS2*37 #	
DATE SAMPLED:		11/10/92		11/10/92		11/10/92		11/10/92		11/11/92	
DATE ANALYZED:		11/14/92		11/15/92		11/15/92		11/15/92		11/15/92	
ANALYTE	SOW-3/90 - II CRQL										
Chloromethan	10	22	U	13	UJ	14	U	13	U	15	U
Bromomethane	10	22	U	13	UJ	14	U	13	U	15	U
Vinyl Chloride	10	22	U	13	UJ	14	U	13	U	15	U
Chloroethan	10	22	U	13	UJ	14	U	13	U	15	U
Methylene Chloride	10	22	U	13	UJ	14	U	13	U	15	U
Acetone	10	81	U	13	UJ	14	UJ	13	UJ	15	UJ
Carbon Disulfide	10	22	U	13	UJ	14	U	13	U	15	U
1,1-Dichloroethene	10	22	U	13	UJ	14	U	13	U	15	U
1,1-Dichloroethane	10	22	U	13	UJ	14	U	13	U	15	U
1,2-Dichloroethene (total)	10	22	U	13	UJ	14	U	13	U	15	U
Chloroform	10	22	U	13	UJ	14	U	13	U	15	U
1,2-Dichloroethane	10	22	U	13	UJ	14	U	13	U	15	U
2-Butanone	10	18	J	13	UJ	14	U	13	U	15	U
1,1,1-Trichloroethane	10	22	U	13	UJ	14	U	13	U	15	U
Carbon Tetrachloride	10	22	U	13	UJ	14	U	13	U	15	U
Bromodichloromethane	10	22	U	13	UJ	14	U	13	U	15	U
1,2-Dichloropropane	10	22	U	13	UJ	14	U	13	U	15	U
cis-1,3-Dichloropropene	10	22	U	13	UJ	14	U	13	U	15	U
Trichloroethene	10	22	U	13	UJ	14	U	13	U	15	U
Dibromochloromethane	10	22	U	13	UJ	14	U	13	U	15	U
1,1,2-Trichloroethane	10	22	U	13	UJ	14	U	13	U	15	U
Benzene	10	22	U	13	UJ	14	U	13	U	15	U
trans-1,3-Dichloropropene	10	22	U	13	UJ	14	U	13	U	15	U
Bromoform	10	22	U	13	UJ	14	U	13	U	15	U
4-Methyl-2-P ntanone	10	22	U	13	UJ	14	U	13	U	15	U
2-Hexanone	10	22	U	13	UJ	14	U	13	U	15	U
Tetrachloroethene	10	22	U	13	UJ	14	U	13	U	15	U
1,1,2,2-Tetrachloroethane	10	22	U	13	UJ	14	U	13	U	15	U
Toluene	10	3	J	13	UJ	14	U	13	U	15	U
Chlorobenzen	10	22	U	13	UJ	14	U	13	U	15	U
Ethylbenzene	10	22	U	13	UJ	14	U	13	U	15	U
Styrene	10	22	U	13	UJ	14	U	13	U	15	U
Total Xylenes	10	22	U	13	UJ	14	U	13	U	15	U
Dilution Factor:		1.00		1.00		1.00		1.00		1.00	
Percent Solids:		46		75		73		78		67	
Associated Method Blank:		69684		69700		69700		69700		69700	
Associated Equipment Blank:		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX		SRQSXX3XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	
Associated Trip Blank:		-		-		-		-		-	

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Volatile Organic Soil Analysis (ug/kg)

01/20/93

Tabl 3
Summary Table

ANALYTE	SOW-3/90 - II CRQL	MESDXX1XXX01XX BNASS2*32 # 11/11/92 11/15/92	MESDXX2XXX01XX BNASS2*33 # 11/11/92 11/15/92	MESDXX3XXX01XX BNASS2*34 # 11/11/92 11/15/92	MESDXX4XXX01XD BNASS2*36 # 11/11/92 11/15/92	MESDXX4XXX01XX BNASS2*35 # 11/11/92 11/15/92	SRSDXX1XXX01XX BNASS2*31 # 11/11/92 11/15/92	SRSDXX2XXX01XX BNASS2*21 # 11/10/92 11/14/92	SRSDXX3XXX01XD BNASS2*23 # 11/10/92 11/14/92
Chloromethane	10	-	-	-	-	-	-	-	-
Bromomethane	10	-	-	-	-	-	-	-	-
Vinyl Chloride	10	-	-	-	-	-	-	-	-
Chloroethane	10	-	-	-	-	-	-	-	-
Methylene Chloride	10	-	-	-	-	-	-	-	-
Acetone	10	120 J	46 J	28 J	-	-	-	-	-
Carbon Disulfide	10	-	-	-	-	-	-	-	90 J
1,1-Dichloroethene	10	-	-	-	-	-	-	-	-
1,1-Dichloroethane	10	-	-	-	-	-	-	-	-
1,2-Dichloroethene (total)	10	-	-	-	-	-	-	-	-
Chloroform	10	-	-	-	-	-	-	-	-
1,2-Dichloroethane	10	-	-	-	-	-	-	-	-
2-Butanone	10	33 J	-	-	-	-	-	-	-
1,1,1-Trichl roethane	10	-	-	-	-	-	-	-	17 J
Carbon Tetrachloride	10	-	-	-	-	-	-	-	9 J
Bromodichloromethane	10	-	-	-	-	-	-	-	-
1,2-Dichloropropane	10	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	10	-	-	-	-	-	-	-	-
Trichloroethene	10	-	-	-	-	-	-	-	-
Dibromochloromethane	10	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	10	-	-	-	-	-	-	-	-
Benzene	10	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	10	-	-	-	-	-	-	-	-
Bromoform	10	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone	10	-	-	-	-	-	-	-	-
2-Hexanone	10	-	-	-	-	-	-	-	-
Tetrachloroethen	10	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachl roethane	10	-	-	-	-	-	-	-	-
T luene	10	4 J	-	2 J	-	-	-	-	-
Chlorobenzene	10	-	-	-	-	-	-	-	9 J
Ethylbenzene	10	-	-	-	-	-	-	-	-
Styrene	10	-	-	-	-	-	-	-	-
Total Xylenes	10	-	-	-	-	-	-	-	-
Dilution Factor:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:		53	49	65	60	43	67	54	48
Associated Method Blank:		69700	69700	69700	69700	69700	69700	69684	69684
Associated Equipment Blank:		SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		-	-	-	-	-	-	-	-

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Volatile Organic Soil Analysis (ug/kg)

01/20/93

Tabl 3
Summary Table

		SAMPLE LOCATION:	SRSDXX3XXX01XX	SRSDXX4XXX01XX	SRSDXX5XXX01XX	SRSDXX6XXX01XX	SRSDXX7XXX01XX
		LAB NUMBER:	BNASS2*22 #	BNASS2*24 #	BNASS2*25 #	BNASS2*26 #	BNASS2*37 #
		DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
		DATE ANALYZED:	11/14/92	11/15/92	11/15/92	11/15/92	11/15/92
ANALYTE	SOW-3/90 - II CRQL						
Chloromethane	10		-	-	-	-	-
Bromomethane	10		-	-	-	-	-
Vinyl Chloride	10		-	-	-	-	-
Chloroethane	10		-	-	-	-	-
Methylene Chloride	10		-	-	-	-	-
Acetone	10		-	-	-	-	-
Carbon Disulfide	10		-	-	-	-	-
1,1-Dichloroethene	10		-	-	-	-	-
1,1-Dichloroethane	10		-	-	-	-	-
1,2-Dichloroethene (total)	10		-	-	-	-	-
Chloroform	10		-	-	-	-	-
1,2-Dichloroethane	10		-	-	-	-	-
2-Butanone	10		18 J	-	-	-	-
1,1,1-Trichloroethane	10		-	-	-	-	-
Carbon Tetrachloride	10		-	-	-	-	-
Bromodichloromethane	10		-	-	-	-	-
1,2-Dichloropropane	10		-	-	-	-	-
cis-1,3-Dichloropropene	10		-	-	-	-	-
Trichloroethene	10		-	-	-	-	-
Dibromochloromethane	10		-	-	-	-	-
1,1,2-Trichloroethane	10		-	-	-	-	-
Benzene	10		-	-	-	-	-
trans-1,3-Dichl ropropene	10		-	-	-	-	-
Bromoform	10		-	-	-	-	-
4-Methyl-2-Pentanone	10		-	-	-	-	-
2-Hexanone	10		-	-	-	-	-
Tetrachloroethene	10		-	-	-	-	-
1,1,2,2-Tetrachloroethane	10		-	-	-	-	-
Toluene	10		3 J	-	-	-	-
Chlorobenzene	10		-	-	-	-	-
Ethylbenzene	10		-	-	-	-	-
Styrene	10		-	-	-	-	-
Total Xylenes	10		-	-	-	-	-
Dilution Factor:			1.00	1.00	1.00	1.00	1.00
Percent Solids:			46	75	73	78	67
Associated Method Blank:			69684	69700	69700	69700	69700
Associated Equipment Blank:			SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX
Associated Field Blank:			SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:			-	-	-	-	-

Site: SEDIMENT
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Miscellaneous Soil Analysis

19-Jan-93

Table 1
Laboratory Report of Analysis

	SAMPLE LOCATION:	MESSXX4XXX01XX	MESSXX5XXX01XX
	LAB NUMBER:	BNASS2*7	BNASS2*8
	DATE SAMPLED:	11/05/92	11/05/92
ANALYTE	RL		
ASBESTOS	1%	NFAD	NFAD
Associated Method Blank:		-	-
Ass ciated Equipment Blank:		-	-
Associated Field Blank:		-	-

Site: SURFACE SOIL

NFAD: No fibrous asbestos detected

Table 2
Validation / Summary Table

	SAMPLE LOCATION:	MESSXX4XXX01XX	MESSXX5XXX01XX
	LAB NUMBER:	BNASS2*7	BNASS2*8
	DATE SAMPLED:	11/05/92	11/05/92
ANALYTE	RL		
ASBESTOS	1%	NFAD	NFAD
Associated Method Blank:		-	-
Associated Equipment Blank:		-	-
Associated Field Blank:		-	-

Site: SURFACE SOIL

NFAD: No fibrous asbestos detected

Table 3
Summary Table

	SAMPLE LOCATION:	MESSXX4XXX01XX	MESSXX5XXX01XX
	LAB NUMBER:	BNASS2*7	BNASS2*8
	DATE SAMPLED:	11/05/92	11/05/92
ANALYTE	RL		
ASBESTOS	1%	NFAD	NFAD
Associated Method Blank:		-	-
Associated Equipment Blank:		-	-
Associated Field Blank:		-	-

Site: SURFACE SOIL NFAD: No fibrous asbestos detected

PROJECT: NASB

Inorganic Soil Analysis (mg/kg)

01/19/93

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	BNASS2*4 #	BNASS2*3 #	BNASS2*5 #	BNASS2*6 #	BNASS2*14 #	BNASS2*15 #	BNASS2*16 #	BNASS2*17 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92

ANALYTE	SOW-3/90 - II CRQL																			
Aluminum	40	6900		6660		21100		22900		9100		6690		7030		8890				
Antimony	12	2.6	UN	2.5	UN	3.6	UN	3.2	UN	2.9	UN	4.2	UN	3.6	UN	3.8	UN			
Arsenic	2	1.9	B	2.2		5.6		7.5		1.5	B	1.2	B	2.4	B	2.6	B			
Barium	40	21.1	B	17.5	B	52.9	B	50.5	B	24.2	B	62.7	B	15.3	B	18.1	B			
Beryllium	1	0.36	U	0.36	U	0.68	B	1.0	B	0.42	U	0.60	U	0.51	U	0.53	U			
Cadmium	1	1.0	UN	1.0	UN	1.5	UN	1.3	UN	1.2	UN	1.7	UN	1.5	UN	1.5	UN			
Calcium	1000	978	B	926	B	719	B	914	B	435	B	2730		495	B	576	B			
Chromium	2	13.3		10.6		33.2		31.6		10.3		11.1		11.1		13.7				
Cobalt	10	4.6	B	5.6	B	11.4	B	10.1	B	3.3	B	5.2	B	3.1	B	5.4	B			
Copper	5	7.7		6.3		10.9		9.3		2.9	B	78.8		5.6	B	5.0	B			
Iron	20	10800		8920		28700		27200		11200		13900		9620		12900				
Lead	0.6	8.9	SN*	10.0	WN*	27.2	WN*	24.2	WN*	12.8	WN*	30.1	WN*	21.0	SN*	21.4	WN*			
Magnesium	1000	2240		2100		5140		4630		1530		2310		2040		2590				
Manganese	3	175		170		258		293		174		182		74.3		97.4				
Mercury	0.04	0.06	U	0.06	U	0.11	B	0.10	B	0.11	B	0.16	B	0.18		0.14	B			
Nickel	8	11.5		10.9		19.4		21.2		6.1	B	6.6	B	5.0	B	8.2	B			
Potassium	1000	1090	B	1060	B	1950		1780		634	B	1110	B	850	B	1180	B			
Selenium	1	0.34	U	0.34	UW	0.48	UW	0.42	UW	0.39	U	0.56	U	0.50	B	0.50	U			
Silver	2	0.61	U	0.60	U	0.87	U	0.75	U	0.70	U	1.0	U	0.86	U	0.90	U			
Sodium	1000	163	BE	148	BE	231	BE	198	BE	136	BE	283	BE	205	BE	274	BE			
Thallium	2	0.34	U	0.34	U	0.48	U	0.42	U	0.39	U	0.56	U	0.48	U	0.50	UW			
Vanadium	10	22.1		21.6		46.2		43.0		21.4		19.0		19.5		24.7				
Zinc	4	32.2	E	27.8	E	105	E	74.3	E	41.5	E	178	E	38.7	E	39.9	E			
Cyanide	2	2.3	U	2.2	U	3.2	U	2.8	U	2.6	U	3.7	U	3.2	U	3.3	U			
Percent Solids:		88		89		62		72		77		54		63		60				
Associated Method Blank:		PBBS001		PBBS001		PBBS001		PBBS001		PBBS001		PBBS001		PBBS001		PBBS001				
Associated Equipment Blank:		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX				
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX				

Site: SURFACE SOIL *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

PROJECT: NASB

Inorganic Soil Analysis (mg/kg)

01/19/93

Table 1
Laboratory Report of Analysis

		SAMPLE LOCATION:	SRSSXX4XXX01XX		SRSSXX5XXX01XX		SRSSXX6XXX01XX	
		LAB NUMBER:	BNASS2*18 #		BNASS2*19 #		BNASS2*20 #	
		DATE SAMPLED:	11/06/92		11/06/92		11/06/92	
ANALYTE	SOW-3/90 - II CRQL							
Aluminum	40		13800		8090		13600	
Antimony	12		3.2	UN	3.6	UN	3.7	UN
Arsenic	2		6.5		1.3	B	2.8	B
Barium	40		59.1		31.2	B	78.4	
Beryllium	1		0.45	U	0.51	U	0.52	U
Cadmium	1		1.3	UN	1.5	UN	2.1	N
Calcium	1000		3310		2350		2830	
Chromium	2		27.0		11.2		20.3	
Cobalt	10		9.6	B	4.8	B	7.8	B
Copper	5		13.0		6.0	B	13.8	
Iron	20		19200		9970		17000	
Lead	0.6		1250	SN*	10.5	WN*	27.8	SN*
Magnesium	1000		4200		2280		3150	
Manganese	3		312		105		386	
Mercury	0.04		0.82		0.14	B	0.22	
Nickel	8		15.7		8.7	B	14.8	
Potassium	1000		1690		1020	B	1780	
Selenium	1		0.42	UW	0.48	U	0.49	U
Silver	2		0.75	U	0.86	U	0.88	U
Sodium	1000		276	BE	290	BE	245	BE
Thallium	2		0.42	U	0.48	UW	0.49	U
Vanadium	10		35.8		19.6		30.3	
Zinc	4		131	E	38.5	E	330	E
Cyanide	2		2.8	U	3.2	U	3.3	U
		Percent Solids:	72		63		62	
		Ass ciated Method Blank:	PBBS001		PBBS001		PBBS001	
		Associated Equipment Blank:	MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX	
		Associated Field Blank:	SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SURFACE SOIL *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

PROJECT: NASB

Inorganic Soil Analysis (mg/kg)

01/19/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	BNASS2*4 #	BNASS2*3 #	BNASS2*5 #	BNASS2*6 #	BNASS2*14 #	BNASS2*15 #	BNASS2*16 #	BNASS2*17 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
ANALYTE — SOW-3/90 - II — CRQL								
Aluminum 40	6900 J	6660 J	21100 J	22900 J	9100 J	6690 J	7030 J	8890 J
Antimony 12	2.6 UJ	2.5 UJ	3.6 UJ	3.2 UJ	2.9 UJ	4.2 UJ	3.6 UJ	3.8 UJ
Arsenic 2	1.9 J	2.2	5.6	7.5	1.5 J	1.2 J	2.4 J	2.6 J
Barium 40	21.1 J	17.5 J	52.9 J	50.5 J	24.2 J	62.7 J	15.3 J	18.1 J
Beryllium 1	0.36 U	0.36 U	0.68 J	1.0 J	0.42 U	0.60 U	0.51 U	0.53 U
Cadmium 1	1.0 U	1.0 U	1.5 U	1.3 U	1.2 U	1.7 U	1.5 U	1.5 U
Calcium 1000	978 J	926 J	719 J	914 J	435 J	2730	495 J	576 J
Chromium 2	13.3	10.6	33.2	31.6	10.3	11.1	11.1	13.7
Cobalt 10	4.6 U	5.6 J	11.4 J	10.1 J	3.3 U	5.2 U	3.1 U	5.4 J
Copper 5	7.7	6.3	10.9	9.3	2.9 J	78.8	5.6 J	5.0 J
Iron 20	10800	8920	28700	27200	11200	13900	9620	12900
Lead 0.6	8.9 J	10.0 J	27.2 J	24.2 J	12.8 J	30.1 J	21.0 J	21.4 J
Magnesium 1000	2240	2100	5140	4630	1530	2310	2040	2590
Manganese 3	175	170	258	293	174	182	74.3	97.4
Mercury 0.04	0.06 U	0.06 U	0.11 J	0.10 J	0.11 J	0.16 J	0.18	0.14 J
Nickel 8	11.5	10.9	19.4	21.2	6.1 J	6.6 J	5.0 J	8.2 J
Potassium 1000	1090 J	1060 J	1950	1780	634 J	1110 J	850 J	1180 J
Selenium 1	0.34 U	0.34 UJ	0.48 UJ	0.42 UJ	0.39 U	0.56 U	0.50 J	0.50 U
Silver 2	0.61 U	0.60 U	0.87 U	0.75 U	0.70 U	1.0 U	0.86 U	0.90 U
Sodium 1000	163 J	148 J	231 J	198 J	136 J	283 J	205 J	274 J
Thallium 2	0.34 U	0.34 U	0.48 U	0.42 U	0.39 U	0.56 U	0.48 U	0.50 U
Vanadium 10	22.1	21.6	46.2	43.0	21.4	19.0	19.5	24.7
Zinc 4	32.2 J	27.8 J	105 J	74.3 J	41.5 J	178 J	38.7 J	39.9 J
Cyanide 2	2.3 U	2.2 U	3.2 U	2.8 U	2.6 U	3.7 U	3.2 U	3.3 U
Percent Solids:	88	89	62	72	77	54	63	60
Associated Method Blank:	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE SOIL *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

PROJECT: NASB

Inorganic Soil Analysis (mg/kg)

01/19/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	SRSSXX4XXX01XX		SRSSXX5XXX01XX		SRSSXX6XXX01XX	
LAB NUMBER:	BNASS2*18 #		BNASS2*19 #		BNASS2*20 #	
DATE SAMPLED:	11/06/92		11/06/92		11/06/92	
ANALYTE — SOW-3/90 - II CRQL						
Aluminum 40	13800	J	8090	J	13600	J
Antimony 12	3.2	UJ	3.6	UJ	3.7	UJ
Arsenic 2	6.5		1.3	J	2.8	J
Barium 40	59.1		31.2	J	78.4	
Beryllium 1	0.45	U	0.51	U	0.52	U
Cadmium 1	1.3	U	1.5	U	2.1	J
Calcium 1000	3310		2350		2830	
Chromium 2	27.0		11.2		20.3	
Cobalt 10	9.6	J	4.8	J	7.8	J
Copper 5	13.0		6.0	J	13.8	
Iron 20	19200		9970		17000	
Lead 0.6	1250	J	10.5	J	27.8	J
Magnesium 1000	4200		2280		3150	
Manganese 3	312		105		386	
Mercury 0.04	0.82		0.14	J	0.22	
Nickel 8	15.7		8.7	J	14.8	
Potassium 1000	1690		1020	J	1780	
Selenium 1	0.42	UJ	0.48	U	0.49	U
Silver 2	0.75	U	0.86	U	0.88	U
Sodium 1000	276	J	290	J	245	J
Thallium 2	0.42	U	0.48	U	0.49	U
Vanadium 10	35.8		19.6		30.3	
Zinc 4	131	J	38.5	J	330	J
Cyanide 2	2.8	U	3.2	U	3.3	U
Percent Solids:	72		63		62	
Associated Method Blank:	PBBS001		PBBS001		PBBS001	
Associated Equipment Blank:	MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX	
Associated Field Blank:	SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SURFACE SOIL *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

PROJECT: NASB

Inorganic Soil Analysis (mg/kg)

01/19/93

Table 3
Summary Table

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	BNASS2*4 #	BNASS2*3 #	BNASS2*5 #	BNASS2*6 #	BNASS2*14 #	BNASS2*15 #	BNASS2*16 #	BNASS2*17 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
ANALYTE — SOW-3/90 - II — CRQL								
Aluminum 40	6900 J	6660 J	21100 J	22900 J	9100 J	6690 J	7030 J	8890 J
Antimony 12	-	-	-	-	-	-	-	-
Arsenic 2	1.9 J	2.2	5.6	7.5	1.5 J	1.2 J	2.4 J	2.6 J
Barium 40	21.1 J	17.5 J	52.9 J	50.5 J	24.2 J	62.7 J	15.3 J	18.1 J
Beryllium 1	-	-	0.68 J	1.0 J	-	-	-	-
Cadmium 1	-	-	-	-	-	-	-	-
Calcium 1000	978 J	926 J	719 J	914 J	435 J	2730	495 J	576 J
Chromium 2	13.3	10.6	33.2	31.6	10.3	11.1	11.1	13.7
Cobalt 10	-	5.6 J	11.4 J	10.1 J	-	-	-	5.4 J
Copper 5	7.7	6.3	10.9	9.3	2.9 J	78.8	5.6 J	5.0 J
Iron 20	10800	8920	28700	27200	11200	13900	9620	12900
Lead 0.6	8.9 J	10.0 J	27.2 J	24.2 J	12.8 J	30.1 J	21.0 J	21.4 J
Magnesium 1000	2240	2100	5140	4630	1530	2310	2040	2590
Manganese 3	175	170	258	293	174	182	74.3	97.4
Mercury 0.04	-	-	0.11 J	0.10 J	0.11 J	0.16 J	0.18	0.14 J
Nickel 8	11.5	10.9	19.4	21.2	6.1 J	6.6 J	5.0 J	8.2 J
Potassium 1000	1090 J	1060 J	1950	1780	634 J	1110 J	850 J	1180 J
Selenium 1	-	-	-	-	-	-	0.50 J	-
Silver 2	-	-	-	-	-	-	-	-
Sodium 1000	163 J	148 J	231 J	198 J	136 J	283 J	205 J	274 J
Thallium 2	-	-	-	-	-	-	-	-
Vanadium 10	22.1	21.6	46.2	43.0	21.4	19.0	19.5	24.7
Zinc 4	32.2 J	27.8 J	105 J	74.3 J	41.5 J	178 J	38.7 J	39.9 J
Cyanide 2	-	-	-	-	-	-	-	-
Percent Solids:	88	89	62	72	77	54	63	60
Associated Method Blank:	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001	PBBS001
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE SOIL *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

PROJECT: NASB

Inorganic Soil Analysis (mg/kg)

01/19/93

Table 3
Summary Table

SAMPLE LOCATION:		SRSSXX4XXX01XX		SRSSXX5XXX01XX		SRSSXX6XXX01XX	
LAB NUMBER:		BNASS2*18 #		BNASS2*19 #		BNASS2*20 #	
DATE SAMPLED:		11/06/92		11/06/92		11/06/92	
ANALYTE	SOW-3/90 - II CRQL						
Aluminum	40	13800	J	8090	J	13600	J
Antimony	12	-		-		-	
Arsenic	2	6.5		1.3	J	2.8	J
Barium	40	59.1		31.2	J	78.4	
Beryllium	1	-		-		-	
Cadmium	1	-		-		2.1	J
Calcium	1000	3310		2350		2830	
Chromium	2	27.0		11.2		20.3	
Cobalt	10	9.6	J	4.8	J	7.8	J
Copper	5	13.0		6.0	J	13.8	
Iron	20	19200		9970		17000	
Lead	0.6	1250	J	10.5	J	27.8	J
Magnesium	1000	4200		2280		3150	
Manganese	3	312		105		386	
Mercury	0.04	0.82		0.14	J	0.22	
Nickel	8	15.7		8.7	J	14.8	
Potassium	1000	1690		1020	J	1780	
Selenium	1	-		-		-	
Silver	2	-		-		-	
Sodium	1000	276	J	290	J	245	J
Thallium	2	-		-		-	
Vanadium	10	35.8		19.6		30.3	
Zinc	4	131	J	38.5	J	330	J
Cyanide	2	-		-		-	
Percent Solids:		72		63		62	
Ass ciated Method Blank:		PBBS001		PBBS001		PBBS001	
Associated Equipment Blank:		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SURFACE SOIL *: Duplicate analysis not met +: Coefficient <0.995
#: Level D Validation J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met

PROJECT: NASB

Pesticides/PCBs Soil Analysis (ug/kg)

01/20/93

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:		MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD
LAB NUMBER:		QBS004 #	QBS003 #	QBS005 #	QBS005 D #	QBS006 #	QBS014 #	QBS015 #	QBS016 #
DATE SAMPLED:		11/05/92	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:		11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92
DATE ANALYZED:		12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE	SOW-2/88 CRQL								
alpha-BHC	8	18 U	18 U	25 U	130 U	22 U	21 U	30 U	25 U
beta-BHC	8	18 U	18 U	25 U	130 U	22 U	21 U	30 U	25 U
delta-BHC	8	18 U	18 U	25 U	130 U	22 U	21 U	30 U	25 U
gamma-BHC (Lindane)	8	18 U	18 U	25 U	130 U	22 U	21 U	30 U	25 U
Heptachlor	8	18 U	18 U	25 U	130 U	22 U	21 U	30 U	25 U
Aldrin	8	18 U	18 U	25 U	130 U	22 U	21 U	30 U	25 U
Heptachlor Epoxide	8	18 U	18 U	25 U	130 U	22 U	21 U	30 U	25 U
Endosulfan I	8	18 U	18 U	25 U	130 U	22 U	21 U	30 U	25 U
Dieldrin	16	35 U	35 U	50 U	250 U	44 U	41 U	59 U	51 U
4,4'-DDE	16	7 J	7 J	230	250 JD	44 U	41 U	14 J	51 U
Endrin	16	35 U	35 U	50 U	250 U	44 U	41 U	59 U	51 U
Endosulfan II	16	35 U	35 U	50 U	250 U	44 U	41 U	59 U	51 U
4,4'-DDD	16	35 U	35 U	50 U	250 U	44 U	41 U	59 U	51 U
Endosulfan Sulfate	16	35 U	35 U	50 U	250 U	44 U	41 U	59 U	51 U
4,4'-DDT	16	32 J	38	1600 E	1800 D	44 U	41 U	29 J	51 U
Methoxychlor	80	180 U	180 U	250 U	1300 U	220 U	210 U	300 U	250 U
Endrin Ketone	16	35 U	35 U	50 U	250 U	44 U	41 U	59 U	51 U
alpha-Chlordane	80	180 U	180 U	250 U	1300 U	220 U	210 U	300 U	250 U
gamma-Chlordane	80	180 U	180 U	250 U	1300 U	220 U	210 U	300 U	250 U
Toxaphene	160	350 U	350 U	500 U	2500 U	440 U	410 U	590 U	510 U
Aroclor-1016	80	180 U	180 U	250 U	1300 U	220 U	210 U	300 U	250 U
Aroclor-1221	80	180 U	180 U	250 U	1300 U	220 U	210 U	300 U	250 U
Aroclor-1232	80	180 U	180 U	250 U	1300 U	220 U	210 U	300 U	250 U
Aroclor-1242	80	180 U	180 U	250 U	1300 U	220 U	210 U	300 U	250 U
Aroclor-1248	80	180 U	180 U	250 U	1300 U	220 U	210 U	300 U	250 U
Aroclor-1254	160	350 U	350 U	500 U	2500 U	440 U	410 U	590 U	510 U
Aroclor-1260	160	350 U	350 U	500 U	2500 U	440 U	410 U	590 U	510 U
Dilution Factor:		1.00	1.00	1.00	5.00	1.00	1.00	1.00	1.00
Percent Solids:		88	89	62	62	72	77	54	63
Associated Method Blank:		PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001
Associated Equipment Blank:		MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

PROJECT: NASB

Pesticides/PCBs Soil Analysis (ug/kg)

01/20/93

Table 1
Laboratory Report f Analysis

SAMPLE LOCATION:		SRSSXX3XXX01XX				SRSSXX4XXX01XX				SRSSXX5XXX01XX				SRSSXX6XXX01XX	
LAB NUMBER:		QBS017 #				QBS018 #				QBS019 #				QBS020 #	
DATE SAMPLED:		11/06/92				11/06/92				11/06/92				11/06/92	
DATE EXTRACTED:		11/18/92				11/18/92				11/18/92				11/18/92	
DATE ANALYZED:		12/01/92				12/01/92				12/01/92				12/01/92	
ANALYTE	SOW-2/88	CRQL													
alpha-BHC		8	26	U		22	U			25	U			26	U
beta-BHC		8	26	U		22	U			25	U			26	U
delta-BHC		8	26	U		22	U			25	U			26	U
gamma-BHC (Lindane)		8	26	U		22	U			25	U			26	U
Heptachlor		8	26	U		22	U			25	U			26	U
Aldrin		8	26	U		22	U			25	U			26	U
Heptachlor Epoxide		8	26	U		22	U			25	U			26	U
Endosulfan I		8	26	U		22	U			25	U			26	U
Dieldrin		16	52	U		44	U			51	U			52	U
4,4'-DDE		16	52	U		150				51	U			65	
Endrin		16	52	U		44	U			51	U			52	U
Endosulfan II		16	52	U		44	U			51	U			52	U
4,4'-DDD		16	52	U		44	U			51	U			52	U
Endosulfan Sulfate		16	52	U		44	U			51	U			52	U
4,4'-DDT		16	52	U		460				51	U			100	
Methoxychlor		80	260	U		220	U			250	U			260	U
Endrin Ketone		16	52	U		44	U			51	U			52	U
alpha-Chlordane		80	260	U		220	U			250	U			260	U
gamma-Chlordane		80	260	U		220	U			250	U			260	U
Toxaphene		160	520	U		440	U			510	U			520	U
Aroclor-1016		80	260	U		220	U			250	U			260	U
Aroclor-1221		80	260	U		220	U			250	U			260	U
Aroclor-1232		80	260	U		220	U			250	U			260	U
Aroclor-1242		80	260	U		220	U			250	U			260	U
Aroclor-1248		80	260	U		220	U			250	U			260	U
Aroclor-1254		160	520	U		440	U			510	U			520	U
Aroclor-1260		160	520	U		440	U			510	U			520	U
Dilution Factor:			1.00			1.00				1.00				1.00	
Percent Solids:			60			72				63				61	
Associated Method Blank:			PBLKABS001			PBLKABS001				PBLKABS001				PBLKABS001	
Associated Equipment Blank:			MEQSXX6XXX01XX			MEQSXX6XXX01XX				MEQSXX6XXX01XX				MEQSXX6XXX01XX	
Associated Field Blank:			SRQBXX1XXX01XX			SRQBXX1XXX01XX				SRQBXX1XXX01XX				SRQBXX1XXX01XX	

Site: SURFACE SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

PROJECT: NASB

Pesticides/PCBs Soil Analysis (ug/kg)

01/20/93

Tabl 2
Validation / Summary Table

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	QBS004 #	QBS003 #	QBS005 #	QBS006 #	QBS014 #	QBS015 #	QBS016 #	QBS017 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92
DATE ANALYZED:	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92

ANALYTE	SOW-2/88 CRQL																
alpha-BHC	8	18	UJ	18	UJ	25	UJ	22	UJ	21	UJ	30	UJ	25	UJ	26	UJ
beta-BHC	8	18	UJ	18	UJ	25	UJ	22	UJ	21	UJ	30	UJ	25	UJ	26	UJ
delta-BHC	8	18	UJ	18	UJ	25	UJ	22	UJ	21	UJ	30	UJ	25	UJ	26	UJ
gamma-BHC (Lindane)	8	18	UJ	18	UJ	25	UJ	22	UJ	21	UJ	30	UJ	25	UJ	26	UJ
Heptachlor	8	18	UJ	18	UJ	25	UJ	22	UJ	21	UJ	30	UJ	25	UJ	26	UJ
Aldrin	8	18	UJ	18	UJ	25	UJ	22	UJ	21	UJ	30	UJ	25	UJ	26	UJ
Heptachlor Epoxide	8	18	UJ	18	UJ	25	UJ	22	UJ	21	UJ	30	UJ	25	UJ	26	UJ
Endosulfan I	8	18	UJ	18	UJ	25	UJ	22	UJ	21	UJ	30	UJ	25	UJ	26	UJ
Dieldrin	16	35	UJ	35	UJ	50	UJ	44	UJ	41	UJ	59	UJ	51	UJ	52	UJ
4,4'-DDE	16	7	J	7	J	250	J	44	UJ	41	UJ	14	J	51	UJ	52	UJ
Endrin	16	35	UJ	35	UJ	50	UJ	44	UJ	41	UJ	59	UJ	51	UJ	52	UJ
Endosulfan II	16	35	UJ	35	UJ	50	UJ	44	UJ	41	UJ	59	UJ	51	UJ	52	UJ
4,4'-DDD	16	35	UJ	35	UJ	50	UJ	44	UJ	41	UJ	59	UJ	51	UJ	52	UJ
Endosulfan Sulfate	16	35	UJ	35	UJ	50	UJ	44	UJ	41	UJ	59	UJ	51	UJ	52	UJ
4,4'-DDT	16	32	J	38	J	1800	J	44	UJ	41	UJ	29	J	51	UJ	52	UJ
Methoxychlor	80	180	UJ	180	UJ	250	UJ	220	UJ	210	UJ	300	UJ	250	UJ	260	UJ
Endrin Ketone	16	35	UJ	35	UJ	50	UJ	44	UJ	41	UJ	59	UJ	51	UJ	52	UJ
alpha-Chlordane	80	180	UJ	180	UJ	250	UJ	220	UJ	210	UJ	300	UJ	250	UJ	260	UJ
gamma-Chlordan	80	180	UJ	180	UJ	250	UJ	220	UJ	210	UJ	300	UJ	250	UJ	260	UJ
Toxaphene	160	350	UJ	350	UJ	500	UJ	440	UJ	410	UJ	590	UJ	510	UJ	520	UJ
Aroclor-1016	80	180	UJ	180	UJ	250	UJ	220	UJ	210	UJ	300	UJ	250	UJ	260	UJ
Aroclor-1221	80	180	UJ	180	UJ	250	UJ	220	UJ	210	UJ	300	UJ	250	UJ	260	UJ
Aroclor-1232	80	180	UJ	180	UJ	250	UJ	220	UJ	210	UJ	300	UJ	250	UJ	260	UJ
Aroclor-1242	80	180	UJ	180	UJ	250	UJ	220	UJ	210	UJ	300	UJ	250	UJ	260	UJ
Aroclor-1248	80	180	UJ	180	UJ	250	UJ	220	UJ	210	UJ	300	UJ	250	UJ	260	UJ
Aroclor-1254	160	350	UJ	350	UJ	500	UJ	440	UJ	410	UJ	590	UJ	510	UJ	520	UJ
Aroclor-1260	160	350	UJ	350	UJ	500	UJ	440	UJ	410	UJ	590	UJ	510	UJ	520	UJ
Dilution Factor:		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Percent Solids:		88		89		62		72		77		54		63		60	
Associated Method Blank:		PBLKABS001		PBLKABS001		PBLKABS001		PBLKABS001		PBLKABS001		PBLKABS001		PBLKABS001		PBLKABS001	
Associated Equipment Blank:		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SURFACE SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 2
Validation / Summary Table

SAMPLE LOCATION:	SRSSXX4XXX01XX	SRSSXX5XXX01XX	SRSSXX6XXX01XX
LAB NUMBER:	QBS018 #	QBS019 #	QBS020 #
DATE SAMPLED:	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:	11/18/92	11/18/92	11/18/92
DATE ANALYZED:	12/01/92	12/01/92	12/01/92

ANALYTE	SOW-2/88 CRQL					
alpha-BHC	8	22	UJ	25	UJ	26	UJ
beta-BHC	8	22	UJ	25	UJ	26	UJ
delta-BHC	8	22	UJ	25	UJ	26	UJ
gamma-BHC (Lindane)	8	22	UJ	25	UJ	26	UJ
Heptachlor	8	22	UJ	25	UJ	26	UJ
Aldrin	8	22	UJ	25	UJ	26	UJ
Heptachlor Epoxide	8	22	UJ	25	UJ	26	UJ
Endosulfan I	8	22	UJ	25	UJ	26	UJ
Dieldrin	16	44	UJ	51	UJ	52	UJ
4,4'-DDE	16	150	J	51	UJ	65	J
Endrin	16	44	UJ	51	UJ	52	UJ
Endosulfan II	16	44	UJ	51	UJ	52	UJ
4,4'-DDD	16	44	UJ	51	UJ	52	UJ
Endosulfan Sulfat	16	44	UJ	51	UJ	52	UJ
4,4'-DDT	16	460	J	51	UJ	100	J
Methoxychlor	80	220	UJ	250	UJ	260	UJ
Endrin Ketone	16	44	UJ	51	UJ	52	UJ
alpha-Chlordane	80	220	UJ	250	UJ	260	UJ
gamma-Chlordane	80	220	UJ	250	UJ	260	UJ
T xaphene	160	440	UJ	510	UJ	520	UJ
Aroclor-1016	80	220	UJ	250	UJ	260	UJ
Aroclor-1221	80	220	UJ	250	UJ	260	UJ
Aroclor-1232	80	220	UJ	250	UJ	260	UJ
Aroclor-1242	80	220	UJ	250	UJ	260	UJ
Aroclor-1248	80	220	UJ	250	UJ	260	UJ
Aroclor-1254	160	440	UJ	510	UJ	520	UJ
Aroclor-1260	160	440	UJ	510	UJ	520	UJ
Dilution Factor:		1.00		1.00		1.00	
Percent Solids:		72		63		61	

Associated Method Blank:	PBLKABS001	PBLKABS001	PBLKABS001
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

PROJECT: NASB

Pesticides/PCBs Soil Analysis (ug/kg)

01/20/93

Tabl 3
Summary Table

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	QBS004 #	QBS003 #	QBS005 #	QBS006 #	QBS014 #	QBS015 #	QBS016 #	QBS017 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92
DATE ANALYZED:	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92	12/01/92
ANALYTE SOW-2/88 CRQL								
alpha-BHC 8	-	-	-	-	-	-	-	-
beta-BHC 8	-	-	-	-	-	-	-	-
delta-BHC 8	-	-	-	-	-	-	-	-
gamma-BHC (Lindane) 8	-	-	-	-	-	-	-	-
Heptachlor 8	-	-	-	-	-	-	-	-
Aldrin 8	-	-	-	-	-	-	-	-
Heptachlor Epoxide 8	-	-	-	-	-	-	-	-
Endosulfan I 8	-	-	-	-	-	-	-	-
Dieldrin 16	-	-	-	-	-	-	-	-
4,4'-DDE 16	7 J	7 J	250 J	-	-	14 J	-	-
Endrin 16	-	-	-	-	-	-	-	-
Endosulfan II 16	-	-	-	-	-	-	-	-
4,4'-DDD 16	-	-	-	-	-	-	-	-
Endosulfan Sulfate 16	-	-	-	-	-	-	-	-
4,4'-DDT 16	32 J	38 J	1800 J	-	-	29 J	-	-
Methoxychlor 80	-	-	-	-	-	-	-	-
Endrin Ketone 16	-	-	-	-	-	-	-	-
alpha-Chlordane 80	-	-	-	-	-	-	-	-
gamma-Chlordane 80	-	-	-	-	-	-	-	-
Toxaphene 160	-	-	-	-	-	-	-	-
Aroclor-1016 80	-	-	-	-	-	-	-	-
Aroclor-1221 80	-	-	-	-	-	-	-	-
Aroclor-1232 80	-	-	-	-	-	-	-	-
Aroclor-1242 80	-	-	-	-	-	-	-	-
Aroclor-1248 80	-	-	-	-	-	-	-	-
Aroclor-1254 160	-	-	-	-	-	-	-	-
Aroclor-1260 160	-	-	-	-	-	-	-	-
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:	88	89	62	72	77	54	63	60
Associated Method Blank:	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001	PBLKABS001
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

PROJECT: NASB

Pesticides/PCBs Soil Analysis (ug/kg)

01/20/93

Table 3
Summary Tabl

	SAMPLE LOCATION:	SRSSXX4XXX01XX	SRSSXX5XXX01XX	SRSSXX6XXX01XX
	LAB NUMBER:	QBS018 #	QBS019 #	QBS020 #
	DATE SAMPLED:	11/06/92	11/06/92	11/06/92
	DATE EXTRACTED:	11/18/92	11/18/92	11/18/92
	DATE ANALYZED:	12/01/92	12/01/92	12/01/92
ANALYTE	SOW-2/88 CRQL			
alpha-BHC	8	-	-	-
beta-BHC	8	-	-	-
delta-BHC	8	-	-	-
gamma-BHC (Lindane)	8	-	-	-
Heptachlor	8	-	-	-
Aldrin	8	-	-	-
Heptachlor Epoxide	8	-	-	-
Endosulfan I	8	-	-	-
Dieldrin	16	-	-	-
4,4'-DDE	16	150 J	-	65 J
Endrin	16	-	-	-
Endosulfan II	16	-	-	-
4,4'-DDD	16	-	-	-
Endosulfan Sulfate	16	-	-	-
4,4'-DDT	16	460 J	-	100 J
Methoxychlor	80	-	-	-
Endrin Ketone	16	-	-	-
alpha-Chlordane	80	-	-	-
gamma-Chlordane	80	-	-	-
T xaphene	160	-	-	-
Aroclor-1016	80	-	-	-
Aroclor-1221	80	-	-	-
Aroclor-1232	80	-	-	-
Aroclor-1242	80	-	-	-
Aroclor-1248	80	-	-	-
Aroclor-1254	160	-	-	-
Aroclor-1260	160	-	-	-
Dilution Factor:		1.00	1.00	1.00
Percent Solids:		72	63	61
Associated Method Blank:		PBLKABS001	PBLKABS001	PBLKABS001
Associated Equipment Blank:		MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE SOIL
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:		MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:		BNASS2*4	BNASS2*3	BNASS2*5	BNASS2*6	BNASS2*14	BNASS2*15	BNASS2*16	BNASS2*17
DATE SAMPLED:		11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:		11/27/92	11/27/92	11/28/92	11/27/92	11/28/92	11/28/92	11/28/92	11/28/92
ANALYTE	SOW-3/90 - II CRQL								
Phenol	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
bis(2-Chloroethyl)ether	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2-Chlorophenol	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
1,3-Dichlorobenzene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
1,4-Dichlorobenzene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
1,2-Dichlorobenzene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2-Methylphenol	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2,2'-oxybis(1-Chloropropane)	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
4-Methylphenol	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
N-Nitroso-di-n-propylamine	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Hexachloroethane	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Nitrobenzene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Isophorone	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2-Nitrophenol	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2,4-Dimethylphenol	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
bis(2-Chloroethoxy)methane	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2,4-Dichlorophenol	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
1,2,4-Trichlorobenzene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Naphthalene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
4-Chloroaniline	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Hexachlorobutadiene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
4-Chloro-3-Methylphenol	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2-Methylnaphthalene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Hexachlorocyclopentadiene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2,4,6-Trichloroph nol	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2,4,5-Trichlorophenol	800	950 U	1900 U	6700 U	1200 U	5300 U	7300 U	6800 U	6600 U
2-Chloronaphthalene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2-Nitroaniline	800	950 U	1900 U	6700 U	1200 U	5300 U	7300 U	6800 U	6600 U
Dimethylphthalate	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Acenaphthylene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2,6-Dinitrotoluene	330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U

Sit : SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:		MESSXX1XX101XD		MESSXX1XX101XX		MESSXX2XXX01XX		MESSXX3XXX01XX		SRSSXX1XXX01XX		SRSSXX2XXX01XX		SRSSXX3XXX01XD		SRSSXX3XXX01XX	
LAB NUMBER:		BNASS2*4		BNASS2*3		BNASS2*5		BNASS2*6		BNASS2*14		BNASS2*15		BNASS2*16		BNASS2*17	
DATE SAMPLED:		11/05/92		11/05/92		11/05/92		11/05/92		11/06/92		11/06/92		11/06/92		11/06/92	
DATE EXTRACTED:		11/11/92		11/11/92		11/11/92		11/11/92		11/11/92		11/11/92		11/11/92		11/11/92	
DATE ANALYZED:		11/27/92		11/27/92		11/28/92		11/27/92		11/28/92		11/28/92		11/28/92		11/28/92	
ANALYTE	SOW-3/90 - II CRQL																
3-Nitroaniline	800	950	U	1900	U	6700	U	1200	U	5300	U	7300	U	6800	U	6600	U
Acenaphthene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2,4-Dinitrophenol	800	950	U	1900	U	6700	U	1200	U	5300	U	7300	U	6800	U	6600	U
4-Nitrophenol	800	950	U	1900	U	6700	U	1200	U	5300	U	7300	U	6600	U	6600	U
Dibenzofuran	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2,4-Dinitrotoluene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Diethylphthalate	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
4-Chl rophenyl-phenylether	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Fluorene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
4-Nitroaniline	800	950	U	1900	U	6700	U	1200	U	5300	U	7300	U	6800	U	6600	U
4,6-Dinitro-2-methylphenol	800	950	U	1900	U	6700	U	1200	U	5300	U	7300	U	6800	U	6600	U
N-Nitrosodiphenylamine	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
4-Bromophenyl-phenylether	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Hexachlorobenzene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Pentachlorophenol	800	950	U	1900	U	6700	U	1200	U	5300	U	7300	U	6800	U	6600	U
Phenanthrene	330	230	J	110	J	450	J	500	U	2100	U	2900	U	2700	U	2600	U
Anthracene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Carbazole	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Di-n-butylphthalate	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Fluoranthene	330	380		150	J	1400	J	500	U	2100	U	2900	U	2700	U	2600	U
Pyrene	330	410		190	J	1000	J	500	U	2100	U	2900	U	2700	U	2600	U
Butylbenzylphthalate	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
3,3'-Dichlorobenzidine	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Benzo(a)Anthracene	330	230	J	93	J	740	J	500	U	2100	U	2900	U	2700	U	2600	U
Chrysene	330	290	J	140	J	710	J	500	U	2100	U	2900	U	2700	U	2600	U
bis(2-Ethylhexyl)phthalate	330	150	JB	140	JB	480	JB	240	JB	180	JB	260	JB	300	JB	480	JB
Di-n-octylphthalate	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Benzo(b)Fluoranthene	330	280	J	130	J	830	J	500	U	2100	U	2900	U	2700	U	2600	U
Benzo(k)Fluoranthene	330	91	J	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Benzo(a)Pyrene	330	220	J	83	J	530	J	500	U	2100	U	2900	U	2700	U	2600	U
Indeno(1,2,3-c,d)Pyrene	330	160	J	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Dibenz(a,h)Anthracene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Benzo(g,h,i)perylene	330	170	J	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Dilution Factor:		1.00		2.00		5.00		1.00		5.00		5.00		5.00		5.00	
Percent Solids:		88		89		62		77		78		57		61		63	
Associated Method Blank:		62811		62811		62811		62811		62811		62811		62811		62811	
Associated Equipment Blank:		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:		SRSSXX4XXX01XX		SRSSXX5XXX01XX		SRSSXX6XXX01XX		
LAB NUMBER:		BNASS2*18		BNASS2*19		BNASS2*20		
DATE SAMPLED:		11/06/92		11/06/92		11/06/92		
DATE EXTRACTED:		11/11/92		11/11/92		11/11/92		
DATE ANALYZED:		11/28/92		11/28/92		11/28/92		
ANALYTE	SOW-3/90 - II CRQL							
Phenol	330	2500	U	530	U	500	U	
bis(2-Chloroethyl)ether	330	2500	U	530	U	500	U	
2-Chlorophenol	330	2500	U	530	U	500	U	
1,3-Dichlorobenzene	330	2500	U	530	U	500	U	
1,4-Dichlorobenzene	330	2500	U	530	U	500	U	
1,2-Dichlorobenzene	330	2500	U	530	U	500	U	
2-Methylphenol	330	2500	U	530	U	500	U	
2,2'- xybis(1-Chloropropane)	330	2500	U	530	U	500	U	
4-Methylphenol	330	2500	U	530	U	500	U	
N-Nitroso-di-n-propylamine	330	2500	U	530	U	500	U	
Hexachloroethane	330	2500	U	530	U	500	U	
Nitrobenzene	330	2500	U	530	U	500	U	
Isophorone	330	2500	U	530	U	500	U	
2-Nitrophenol	330	2500	U	530	U	500	U	
2,4-Dimethylphenol	330	2500	U	530	U	500	U	
bis(2-Chloroethoxy)methane	330	2500	U	530	U	500	U	
2,4-Dichlorophenol	330	2500	U	530	U	500	U	
1,2,4-Trichlorobenzene	330	2500	U	530	U	500	U	
Naphthalene	330	2500	U	530	U	500	U	
4-Chloroaniline	330	2500	U	530	U	500	U	
Hexachlorobutadiene	330	2500	U	530	U	500	U	
4-Chlor -3-Methylphenol	330	2500	U	530	U	500	U	
2-Methylnaphthalene	330	2500	U	530	U	500	U	
Hexachlorocyclopentadiene	330	2500	U	530	U	500	U	
2,4,6-Trichlorophenol	330	2500	U	530	U	500	U	
2,4,5-Trichlorophenol	800	6200	U	1300	U	1200	U	
2-Chloronaphthalene	330	2500	U	530	U	500	U	
2-Nitroaniline	800	6200	U	1300	U	1200	U	
Dimethylphthalat	330	2500	U	530	U	500	U	
Acenaphthylene	330	2500	U	530	U	500	U	
2,6-Dinitrotoluene	330	2500	U	530	U	500	U	

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report f Analysis

SAMPLE LOCATION:		SRSSXX4XXX01XX		SRSSXX5XXX01XX		SRSSXX6XXX01XX	
LAB NUMBER:		BNASS2*18		BNASS2*19		BNASS2*20	
DATE SAMPLED:		11/06/92		11/06/92		11/06/92	
DATE EXTRACTED:		11/11/92		11/11/92		11/11/92	
DATE ANALYZED:		11/28/92		11/28/92		11/28/92	
ANALYTE	SOW-3/90 - II CRQL						
3-Nitroaniline	800	6200	U	1300	U	1200	U
Acenaphthene	330	2500	U	530	U	500	U
2,4-Dinitrophenol	800	6200	U	1300	U	1200	U
4-Nitrophenol	800	6200	U	1300	U	1200	U
Dibenz furan	330	2500	U	530	U	500	U
2,4-Dinitrotoluene	330	2500	U	530	U	500	U
Diethylphthalate	330	2500	U	530	U	500	U
4-Chlorophenyl-phenylether	330	2500	U	530	U	500	U
Fluorene	330	2500	U	530	U	500	U
4-Nitroaniline	800	6200	U	1300	U	1200	U
4,6-Dinitro-2-methylphenol	800	6200	U	1300	U	1200	U
N-Nitrosodiphenylamine	330	2500	U	530	U	500	U
4-Bromophenyl-phenylether	330	2500	U	530	U	500	U
Hexachlorobenzen	330	2500	U	530	U	500	U
Pentachlorophenol	800	6200	U	1300	U	1200	U
Phenanthrene	330	2500	U	530	U	290	J
Anthracene	330	2500	U	530	U	500	U
Carbazole	330	2500	U	530	U	500	U
Di-n-butylphthalate	330	2500	U	530	U	500	U
Fluoranthene	330	2500	U	530	U	840	
Pyrene	330	2500	U	530	U	770	
Butylbenzylphthalate	330	2500	U	530	U	500	U
3,3'-Dichlorobenzidine	330	2500	U	530	U	500	U
Benzo(a)Anthracene	330	2500	U	530	U	410	J
Chrysene	330	2500	U	530	U	490	J
bis(2-Ethylhexyl)phthalate	330	3800	B	110	JB	190	JB
Di-n-octylphthalate	330	2500	U	530	U	500	U
Benzo(b)Fluoranthene	330	2500	U	530	U	580	
Benz (k)Fluoranthene	330	2500	U	530	U	100	J
Benzo(a)Pyren	330	2500	U	530	U	510	
Indeno(1,2,3-c,d)Pyrene	330	2500	U	530	U	330	J
Dibenz(a,h)Anthracene	330	2500	U	530	U	500	U
Benzo(g,h,i)perylene	330	2500	U	530	U	440	J
Dilution Factor:		5.00		1.00		1.00	
Percent Solids:		77		63		77	
Associated Method Blank:		62811		62811		62811	
Associated Equipment Blank:		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	BNASS2*4	BNASS2*3	BNASS2*5	BNASS2*6	BNASS2*14	BNASS2*15	BNASS2*16	BNASS2*17
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/27/92	11/27/92	11/28/92	11/27/92	11/28/92	11/28/92	11/28/92	11/28/92

ANALYTE	SOW-3/90 - II CRQL																
Phenol	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
bis(2-Chloroethyl)ether	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2-Chlorophenol	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
1,3-Dichlorobenzene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
1,4-Dichlorobenzene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
1,2-Dichlorobenzene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2-Methylphenol	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2,2'-oxybis(1-Chloropropane)	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
4-Methylphen l	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
N-Nitr so-di-n-propylamine	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Hexachloroethane	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Nitrobenzene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Isophorone	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2-Nitrophenol	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2,4-Dimethylphenol	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
bis(2-Chloroethoxy)methane	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2,4-Dichlorophenol	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
1,2,4-Trichlorobenzene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Naphthalen	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
4-Chloroaniline	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Hexachlorobutadiene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
4-Chloro-3-Methylphenol	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2-Methylnaphthalene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Hexachlorocyclopentadiene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2,4,6-Trichlorophenol	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2,4,5-Trichlorophenol	800	950	U	1900	U	6700	U	1200	U	5300	U	7300	U	6800	U	6600	U
2-Chloronaphthalene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2-Nitroaniline	800	950	U	1900	U	6700	U	1200	U	5300	U	7300	U	6800	U	6600	U
Dimethylphthalat	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
Acenaphthylene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U
2,6-Dinitrotoluene	330	380	U	750	U	2700	U	500	U	2100	U	2900	U	2700	U	2600	U

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	BNASS2*4	BNASS2*3	BNASS2*5	BNASS2*6	BNASS2*14	BNASS2*15	BNASS2*16	BNASS2*17
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/27/92	11/27/92	11/28/92	11/27/92	11/28/92	11/28/92	11/28/92	11/28/92
ANALYTE SOW-3/90 - II CRQL								
3-Nitroaniline 800	950 U	1900 U	6700 U	1200 U	5300 U	7300 U	6800 U	6600 U
Acenaphthene 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2,4-Dinitrophenol 800	950 U	1900 U	6700 U	1200 U	5300 U	7300 U	6800 U	6600 U
4-Nitrophenol 800	950 U	1900 U	6700 U	1200 U	5300 U	7300 U	6600 U	6600 U
Dibenzofuran 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
2,4-Dinitrotoluene 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Diethylphthalate 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
4-Chlorophenyl-phenylether 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Fluorene 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
4-Nitroaniline 800	950 U	1900 U	6700 U	1200 U	5300 U	7300 U	6800 U	6600 U
4,6-Dinitr -2-methylphenol 800	950 U	1900 U	6700 U	1200 U	5300 U	7300 U	6800 U	6600 U
N-Nitrosodiphenylamine 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
4-Bromophenyl-phenylether 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Hexachlorobenzen 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Pentachlorophenol 800	950 U	1900 U	6700 U	1200 U	5300 U	7300 U	6800 U	6600 U
Phenanthrene 330	230 J	110 J	450 J	500 U	2100 U	2900 U	2700 U	2600 U
Anthracene 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Carbazole 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Di-n-butylphthalate 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Fluoranthene 330	380	150 J	1400 J	500 U	2100 U	2900 U	2700 U	2600 U
Pyrene 330	410	190 J	1000 J	500 U	2100 U	2900 U	2700 U	2600 U
Butylbenzylphthalate 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
3,3'-Dichlorobenzidine 330	380 UJ	750 UJ	2700 UJ	500 UJ	2100 UJ	2900 UJ	2700 UJ	2600 UJ
Benzo(a)Anthracene 330	230 J	93 J	740 J	500 U	2100 U	2900 U	2700 U	2600 U
Chrysene 330	290 J	140 J	710 J	500 U	2100 U	2900 U	2700 U	2600 U
bis(2-Ethylhexyl)phthalate 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Di-n-octylphthalate 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Benzo(b)Fluoranthene 330	280 J	130 J	830 J	500 U	2100 U	2900 U	2700 U	2600 U
Benzo(k)Fluoranthene 330	91 J	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Benzo(a)Pyrene 330	220 J	83 J	530 J	500 U	2100 U	2900 U	2700 U	2600 U
Indeno(1,2,3-c,d)Pyrene 330	160 J	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Dibenz(a,h)Anthracene 330	380 U	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Benzo(g,h,i)peryl ne 330	170 J	750 U	2700 U	500 U	2100 U	2900 U	2700 U	2600 U
Dilution Factor:	1.00	2.00	5.00	1.00	5.00	5.00	5.00	5.00
Percent Solids:	88	89	62	77	78	57	61	63
Associated Method Blank:	62811	62811	62811	62811	62811	62811	62811	62811
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE SOIL
#: L vel D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	SRSSXX4XXX01XX	SRSSXX5XXX01XX	SRSSXX6XXX01XX
LAB NUMBER:	BNASS2*18	BNASS2*19	BNASS2*20
DATE SAMPLED:	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/28/92	11/28/92	11/28/92

ANALYTE	SOW-3/90 - II CRQL						
Phenol	330	2500	U	530	U	500	U
bis(2-Chloroethyl)ether	330	2500	U	530	U	500	U
2-Chlorophenol	330	2500	U	530	U	500	U
1,3-Dichlorobenzene	330	2500	U	530	U	500	U
1,4-Dichlorobenzene	330	2500	U	530	U	500	U
1,2-Dichlorobenzene	330	2500	U	530	U	500	U
2-Methylphenol	330	2500	U	530	U	500	U
2,2'-oxybis(1-Chloropropane)	330	2500	U	530	U	500	U
4-Methylphenol	330	2500	U	530	U	500	U
N-Nitroso-di-n-propylamine	330	2500	U	530	U	500	U
Hexachloroethan	330	2500	U	530	U	500	U
Nitrobenzene	330	2500	U	530	U	500	U
Isophorone	330	2500	U	530	U	500	U
2-Nitrophenol	330	2500	U	530	U	500	U
2,4-Dimethylphenol	330	2500	U	530	U	500	U
bis(2-Chloroethoxy)methane	330	2500	U	530	U	500	U
2,4-Dichlorophenol	330	2500	U	530	U	500	U
1,2,4-Trichlorobenzene	330	2500	U	530	U	500	U
Naphthalene	330	2500	U	530	U	500	U
4-Chloroaniline	330	2500	U	530	U	500	U
Hexachlorobutadiene	330	2500	U	530	U	500	U
4-Chloro-3-Methylphenol	330	2500	U	530	U	500	U
2-Methylnaphthalene	330	2500	U	530	U	500	U
Hexachlorocyclopentadiene	330	2500	U	530	U	500	U
2,4,6-Trichlorophenol	330	2500	U	530	U	500	U
2,4,5-Trichlorophenol	800	6200	U	1300	U	1200	U
2-Chloronaphthalene	330	2500	U	530	U	500	U
2-Nitroaniline	800	6200	U	1300	U	1200	U
Dimethylphthalate	330	2500	U	530	U	500	U
Acenaphthylene	330	2500	U	530	U	500	U
2,6-Dinitrotoluene	330	2500	U	530	U	500	U

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Semiv latile Organic Soil Analysis (ug/kg)

Table 2
Validation / Summary Tabl

SAMPLE LOCATION:		SRSSXX4XXX01XX		SRSSXX5XXX01XX		SRSSXX6XXX01XX	
LAB NUMBER:		BNASS2*18		BNASS2*19		BNASS2*20	
DATE SAMPLED:		11/06/92		11/06/92		11/06/92	
DATE EXTRACTED:		11/11/92		11/11/92		11/11/92	
DATE ANALYZED:		11/28/92		11/28/92		11/28/92	
ANALYTE	SOW-3/90 - II CRQL						
3-Nitroaniline	800	6200	U	1300	U	1200	U
Acenaphthene	330	2500	U	530	U	500	U
2,4-Dinitrophenol	800	6200	U	1300	U	1200	U
4-Nitrophenol	800	6200	U	1300	U	1200	U
Dibenzofuran	330	2500	U	530	U	500	U
2,4-Dinitrotoluene	330	2500	U	530	U	500	U
Diethylphthalat	330	2500	U	530	U	500	U
4-Chlorophenyl-phenylether	330	2500	U	530	U	500	U
Fluorene	330	2500	U	530	U	500	U
4-Nitroanilin	800	6200	U	1300	U	1200	U
4,6-Dinitro-2-methylphenol	800	6200	U	1300	U	1200	U
N-Nitrosodiphenylamine	330	2500	U	530	U	500	U
4-Bromophenyl-phenylether	330	2500	U	530	U	500	U
Hexachlorobenzene	330	2500	U	530	U	500	U
Pentachlorophenol	800	6200	U	1300	U	1200	U
Phenanthrene	330	2500	U	530	U	290	J
Anthracene	330	2500	U	530	U	500	U
Carbazole	330	2500	U	530	U	500	U
Di-n-butylphthalate	330	2500	U	530	U	500	U
Fluoranthene	330	2500	U	530	U	840	
Pyrene	330	2500	U	530	U	770	
Butylbenzylphthalate	330	2500	U	530	U	500	U
3,3'-Dichlorobenzidine	330	2500	UJ	530	UJ	500	UJ
Benz (a)Anthracene	330	2500	U	530	U	410	J
Chrysene	330	2500	U	530	U	490	J
bis(2-Ethylhexyl)phthalate	330	3800		530	U	500	U
Di-n-octylphthalate	330	2500	U	530	U	500	U
Benzo(b)Fluoranthene	330	2500	U	530	U	580	
Benzo(k)Fluoranthene	330	2500	U	530	U	100	J
Benzo(a)Pyrene	330	2500	U	530	U	510	
Indeno(1,2,3-c,d)Pyrene	330	2500	U	530	U	330	J
Dibenz(a,h)Anthracene	330	2500	U	530	U	500	U
Benzo(g,h,i)perylene	330	2500	U	530	U	440	J
Dilution Factor:		5.00		1.00		1.00	
Percent Solids:		77		63		77	
Ass ciated Method Blank:		62811		62811		62811	
Associated Equipment Blank:		MEQSXX6XXX01XX		MEQSXX6XXX01XX		MEQSXX6XXX01XX	
Associated Field Blank:		SRQBXX1XXX01XX		SRQBXX1XXX01XX		SRQBXX1XXX01XX	

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not det cted B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 3
Summary Tabl

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	BNASS2*4	BNASS2*3	BNASS2*5	BNASS2*6	BNASS2*14	BNASS2*15	BNASS2*16	BNASS2*17
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/27/92	11/27/92	11/28/92	11/27/92	11/28/92	11/28/92	11/28/92	11/28/92
ANALYTE SOW-3/90 - II	CRQL							
Phenol	330	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	330	-	-	-	-	-	-	-
2-Chlorophenol	330	-	-	-	-	-	-	-
1,3-Dichlorobenzene	330	-	-	-	-	-	-	-
1,4-Dichlorobenzene	330	-	-	-	-	-	-	-
1,2-Dichlorobenzene	330	-	-	-	-	-	-	-
2-Methylphen l	330	-	-	-	-	-	-	-
2,2'-oxybis(1-Chloropropane)	330	-	-	-	-	-	-	-
4-Methylphenol	330	-	-	-	-	-	-	-
N-Nitroso-di-n-propylamine	330	-	-	-	-	-	-	-
Hexachloroethane	330	-	-	-	-	-	-	-
Nitrobenzene	330	-	-	-	-	-	-	-
Isophorone	330	-	-	-	-	-	-	-
2-Nitrophenol	330	-	-	-	-	-	-	-
2,4-Dimethylphenol	330	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	330	-	-	-	-	-	-	-
2,4-Dichlorophenol	330	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	330	-	-	-	-	-	-	-
Naphthalene	330	-	-	-	-	-	-	-
4-Chloroaniline	330	-	-	-	-	-	-	-
Hexachlorobutadiene	330	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	330	-	-	-	-	-	-	-
2-Methylnaphthalene	330	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	330	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	330	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	800	-	-	-	-	-	-	-
2-Chloronaphthalene	330	-	-	-	-	-	-	-
2-Nitroaniline	800	-	-	-	-	-	-	-
Dimethylphthalate	330	-	-	-	-	-	-	-
Acenaphthylene	330	-	-	-	-	-	-	-
2,6-Dinitrotoluene	330	-	-	-	-	-	-	-

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Soil Analysis (ug/kg)

01/20/93

Table 3
Summary Table

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	BNASS2*4	BNASS2*3	BNASS2*5	BNASS2*6	BNASS2*14	BNASS2*15	BNASS2*16	BNASS2*17
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/27/92	11/27/92	11/28/92	11/27/92	11/28/92	11/28/92	11/28/92	11/28/92
ANALYTE SOW-3/90 - II CRQL								
3-Nitroaniline 800	-	-	-	-	-	-	-	-
Acenaphthene 330	-	-	-	-	-	-	-	-
2,4-Dinitrophenol 800	-	-	-	-	-	-	-	-
4-Nitrophenol 800	-	-	-	-	-	-	-	-
Dibenzofuran 330	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene 330	-	-	-	-	-	-	-	-
Diethylphthalat 330	-	-	-	-	-	-	-	-
4-Chlorophenyl-phenylether 330	-	-	-	-	-	-	-	-
Fluorene 330	-	-	-	-	-	-	-	-
4-Nitroaniline 800	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol 800	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine 330	-	-	-	-	-	-	-	-
4-Bromophenyl-phenylether 330	-	-	-	-	-	-	-	-
Hexachlorobenzene 330	-	-	-	-	-	-	-	-
Pentachlorophenol 800	-	-	-	-	-	-	-	-
Phenanthrene 330	230 J	110 J	450 J	-	-	-	-	-
Anthracene 330	-	-	-	-	-	-	-	-
Carbazole 330	-	-	-	-	-	-	-	-
Di-n-butylphthalate 330	-	-	-	-	-	-	-	-
Fluoranthen 330	380	150 J	1400 J	-	-	-	-	-
Pyrene 330	410	190 J	1000 J	-	-	-	-	-
Butylbenzylphthalate 330	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine 330	-	-	-	-	-	-	-	-
Benzo(a)Anthracene 330	230 J	93 J	740 J	-	-	-	-	-
Chrysene 330	290 J	140 J	710 J	-	-	-	-	-
bis(2-Ethylhexyl)phthalate 330	-	-	-	-	-	-	-	-
Di-n-octylphthalate 330	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene 330	280 J	130 J	830 J	-	-	-	-	-
Benzo(k)Fluoranthene 330	91 J	-	-	-	-	-	-	-
Benzo(a)Pyrene 330	220 J	83 J	530 J	-	-	-	-	-
Indeno(1,2,3-c,d)Pyrene 330	160 J	-	-	-	-	-	-	-
Dibenz(a,h)Anthracene 330	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene 330	170 J	-	-	-	-	-	-	-
Dilution Factor:	1.00	2.00	5.00	1.00	5.00	5.00	5.00	5.00
Percent Solids:	88	89	62	77	78	57	61	63
Associated Method Blank:	62811	62811	62811	62811	62811	62811	62811	62811
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE SOIL
#: Level D Validati n J: Estimated E: Exceeds calibration range R: Unusable
U: Not det cted B: Blank contamination D: Diluted result -: Not detected

Table 3
Summary Table

	SAMPLE LOCATION:	SRSSXX4XXX01XX	SRSSXX5XXX01XX	SRSSXX6XXX01XX
	LAB NUMBER:	BNASS2*18	BNASS2*19	BNASS2*20
	DATE SAMPLED:	11/06/92	11/06/92	11/06/92
	DATE EXTRACTED:	11/11/92	11/11/92	11/11/92
	DATE ANALYZED:	11/28/92	11/28/92	11/28/92
ANALYTE	SOW-3/90 - II CRQL			
Phenol	330	-	-	-
bis(2-Chloroethyl)ether	330	-	-	-
2-Chl rophenol	330	-	-	-
1,3-Dichlorobenzene	330	-	-	-
1,4-Dichlorobenzene	330	-	-	-
1,2-Dichlorobenzene	330	-	-	-
2-Methylphenol	330	-	-	-
2,2'-oxybis(1-Chloropropane)	330	-	-	-
4-Methylphenol	330	-	-	-
N-Nitroso-di-n-propylamine	330	-	-	-
Hexachloroethane	330	-	-	-
Nitrobenzene	330	-	-	-
Isophorone	330	-	-	-
2-Nitrophenol	330	-	-	-
2,4-Dimethylphenol	330	-	-	-
bis(2-Chloroethoxy)methane	330	-	-	-
2,4-Dichlorophenol	330	-	-	-
1,2,4-Trichlorobenzene	330	-	-	-
Naphthalene	330	-	-	-
4-Chloroaniline	330	-	-	-
Hexachlorobutadiene	330	-	-	-
4-Chloro-3-Methylphenol	330	-	-	-
2-Methylnaphthalene	330	-	-	-
Hexachlorocyclopentadiene	330	-	-	-
2,4,6-Trichlorophenol	330	-	-	-
2,4,5-Trichlorophenol	800	-	-	-
2-Chloronaphthalene	330	-	-	-
2-Nitroaniline	800	-	-	-
Dimethylphthalate	330	-	-	-
Acenaphthylene	330	-	-	-
2,6-Dinitrotoluene	330	-	-	-

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 3
Summary Table

SAMPLE LOCATION:	SRSSXX4XXX01XX	SRSSXX5XXX01XX	SRSSXX6XXX01XX
LAB NUMBER:	BNASS2*18	BNASS2*19	BNASS2*20
DATE SAMPLED:	11/06/92	11/06/92	11/06/92
DATE EXTRACTED:	11/11/92	11/11/92	11/11/92
DATE ANALYZED:	11/28/92	11/28/92	11/28/92

ANALYTE	SOW-3/90 - II CRQL			
3-Nitroaniline	800	-	-	-
Acenaphthene	330	-	-	-
2,4-Dinitrophenol	800	-	-	-
4-Nitrophen l	800	-	-	-
Dibenzofuran	330	-	-	-
2,4-Dinitrotoluene	330	-	-	-
Diethylphthalate	330	-	-	-
4-Chlorophenyl-phenylether	330	-	-	-
Fluorene	330	-	-	-
4-Nitroaniline	800	-	-	-
4,6-Dinitro-2-methylphenol	800	-	-	-
N-Nitrosodiphenylamine	330	-	-	-
4-Bromophenyl-phenylether	330	-	-	-
Hexachlorobenzene	330	-	-	-
Pentachl rophenol	800	-	-	-
Phenanthrene	330	-	-	290 J
Anthracene	330	-	-	-
Carbazol	330	-	-	-
Di-n-butylphthalate	330	-	-	-
Fluoranthene	330	-	-	840
Pyrene	330	-	-	770
Butylbenzylphthalate	330	-	-	-
3,3'-Dichlorobenzidine	330	-	-	-
Benzo(a)Anthracene	330	-	-	410 J
Chrysene	330	-	-	490 J
bis(2-Ethylhexyl)phthalate	330	3800	-	-
Di-n-octylphthalate	330	-	-	-
Benzo(b)Fluoranthene	330	-	-	580
Benzo(k)Fluoranthene	330	-	-	100 J
Benzo(a)Pyrene	330	-	-	510
Indeno(1,2,3-c,d)Pyrene	330	-	-	330 J
Dibenz(a,h)Anthracene	330	-	-	-
Benzo(g,h,i)perylene	330	-	-	440 J
Dilution Factor:		5.00	1.00	1.00
Percent Solids:		77	63	77
Ass ciated Method Blank:		62811	62811	62811
Associated Equipment Blank:		MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Volatile Organic Soil Analysis (ug/kg)

01/20/93

Tabl 1
Laboratory Report f Analysis

		SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
		LAB NUMBER:	BNASS2*4 #	BNASS2*3 #	BNASS2*5 #	BNASS2*6 #	BNASS2*14 #	BNASS2*15 #	BNASS2*16 #	BNASS2*17 #
		DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
		DATE ANALYZED:	11/11/92	11/11/92	11/11/92	11/11/92	11/12/92	11/14/92	11/14/92	11/14/92
ANALYTE	SOW-3/90 - II	CRQL								
Chloromethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Bromomethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Vinyl Chloride		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Chloroethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Methylene Chloride		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Acetone		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Carbon Disulfide		10	11 U	11 U	16 U	15 U	13 U	18 U	8 JB	16 U
1,1-Dichloroethene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,1-Dichloroethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,2-Dichloroethene (total)		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Chloroform		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,2-Dichloroethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
2-Butanone		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,1,1-Trichlor ethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Carbon Tetrachloride		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Bromodichloromethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,2-Dichloropropane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
cis-1,3-Dichloropropene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Trichloroethene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Dibromochloromethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,1,2-Trichloroethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Benzene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
trans-1,3-Dichloropropene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Bromoform		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
4-Methyl-2-Pentanone		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
2-Hexanone		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Tetrachloroethene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,1,2,2-Tetrachl roethane		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Toluene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Chlorobenzene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Ethylbenzene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Styrene		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Total Xylenes		10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Dilution Factor:			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:			88	89	62	67	78	57	61	64
Associated Method Blank:			69666	69666	69666	69666	69666	69684	69684	69684
Associated Equipment Blank:			MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:			SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:			-	-	-	-	-	-	-	-

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

		SAMPLE LOCATION:	SRSSXX4XXX01XX	SRSSXX5XXX01XX	SRSSXX6XXX01XX
		LAB NUMBER:	BNASS2*18 #	BNASS2*19 #	BNASS2*20 #
		DATE SAMPLED:	11/06/92	11/06/92	11/06/92
		DATE ANALYZED:	11/14/92	11/14/92	11/14/92
ANALYTE	SOW-3/90 - II CRQL				
Chloromethane	10		15 U	16 U	15 U
Bromomethane	10		15 U	16 U	15 U
Vinyl Chloride	10		15 U	16 U	15 U
Chloroethane	10		15 U	16 U	15 U
Methylene Chloride	10		15 U	16 U	15 U
Acetone	10		15 U	16 B	13 JB
Carbon Disulfide	10		15 U	16 U	15 U
1,1-Dichloroethene	10		15 U	16 U	15 U
1,1-Dichloroethane	10		15 U	16 U	15 U
1,2-Dichloroethene (total)	10		15 U	16 U	15 U
Chl roform	10		15 U	16 U	15 U
1,2-Dichloroethane	10		15 U	16 U	15 U
2-Butanone	10		15 U	16 U	15 U
1,1,1-Trichloroethane	10		15 U	16 U	5 J
Carbon Tetrachloride	10		15 U	16 U	15 U
Bromodichloromethane	10		15 U	16 U	15 U
1,2-Dichloropropane	10		15 U	16 U	15 U
cis-1,3-Dichloropropene	10		15 U	16 U	15 U
Trichloroethene	10		15 U	16 U	15 U
Dibromochloromethane	10		15 U	16 U	15 U
1,1,2-Trichloroethane	10		15 U	16 U	15 U
Benzene	10		15 U	16 U	15 U
trans-1,3-Dichloropropene	10		15 U	16 U	15 U
Bromoform	10		15 U	16 U	15 U
4-Methyl-2-Pentanone	10		15 U	16 U	15 U
2-Hexanone	10		15 U	16 U	15 U
Tetrachloroethene	10		15 U	16 U	15 U
1,1,2,2-Tetrachloroethane	10		15 U	16 U	15 U
Toluene	10		15 U	16 U	2 J
Chlorobenzene	10		15 U	16 U	15 U
Ethylbenzene	10		15 U	16 U	15 U
Styrene	10		15 U	16 U	15 U
Total Xylenes	10		15 U	16 U	15 U
		Dilution Factor:	1.00	1.00	1.00
		Percent Solids:	67	63	67
		Associated Method Blank:	69684	69684	69684
		Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
		Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
		Associated Trip Blank:	-	-	-

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not d tected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Volatile Organic Soil Analysis (ug/kg)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
LAB NUMBER:	BNASS2*4 #	BNASS2*3 #	BNASS2*5 #	BNASS2*6 #	BNASS2*14 #	BNASS2*15 #	BNASS2*16 #	BNASS2*17 #
DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
DATE ANALYZED:	11/11/92	11/11/92	11/11/92	11/11/92	11/12/92	11/14/92	11/14/92	11/14/92
ANALYTE SOW-3/90 - II CRQL								
Chloromethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Bromomethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Vinyl Chloride 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Chloroethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Methylene Chloride 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Acetone 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Carbon Disulfide 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,1-Dichloroethene 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,1-Dichloroethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,2-Dichloroethene (total) 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Chloroform 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,2-Dichloroethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
2-Butanone 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,1,1-Trichloroethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Carbon Tetrachloride 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Bromodichloromethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,2-Dichloropropane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
cis-1,3-Dichloropropene 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Trichloroethene 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Dibromochloromethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,1,2-Trichloroethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Benzen 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
trans-1,3-Dichlor propene 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Bromoform 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
4-Methyl-2-Pentanone 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
2-Hexanone 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Tetrachloroethene 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
1,1,2,2-Tetrachloroethane 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Toluene 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Chlorobenzene 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Ethylbenzene 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Styrene 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Total Xylenes 10	11 U	11 U	16 U	15 U	13 U	18 U	16 U	16 U
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:	88	89	62	67	78	57	61	64
Associated Method Blank:	69666	69666	69666	69666	69666	69684	69684	69684
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:	-	-	-	-	-	-	-	-

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Tabl 2
Validation / Summary Table

SAMPLE LOCATION:	SRSSXX4XXX01XX	SRSSXX5XXX01XX	SRSSXX6XXX01XX
LAB NUMBER:	BNASS2*18 #	BNASS2*19 #	BNASS2*20 #
DATE SAMPLED:	11/06/92	11/06/92	11/06/92
DATE ANALYZED:	11/14/92	11/14/92	11/14/92

ANALYTE	SOW-3/90 - II CRQL					
Chloromethane	10	15	U	16	U	15	U
Bromomethane	10	15	U	16	U	15	U
Vinyl Chloride	10	15	U	16	U	15	U
Chloroethane	10	15	U	16	U	15	U
Methylene Chloride	10	15	U	16	U	15	U
Acetone	10	15	U	16	U	13	U
Carbon Disulfide	10	15	U	16	U	15	U
1,1-Dichloroethene	10	15	U	16	U	15	U
1,1-Dichloroethane	10	15	U	16	U	15	U
1,2-Dichloroethene (total)	10	15	U	16	U	15	U
Chloroform	10	15	U	16	U	15	U
1,2-Dichloroethane	10	15	U	16	U	15	U
2-Butanone	10	15	U	16	U	15	U
1,1,1-Trichl r ethane	10	15	U	16	U	5	J
Carbon Tetrachloride	10	15	U	16	U	15	U
Bromodichloromethane	10	15	U	16	U	15	U
1,2-Dichloropropane	10	15	U	16	U	15	U
cis-1,3-Dichloropropene	10	15	U	16	U	15	U
Trichloroethene	10	15	U	16	U	15	U
Dibromochloromethane	10	15	U	16	U	15	U
1,1,2-Trichloroethane	10	15	U	16	U	15	U
Benzene	10	15	U	16	U	15	U
trans-1,3-Dichloropropene	10	15	U	16	U	15	U
Bromoform	10	15	U	16	U	15	U
4-Methyl-2-Pentanone	10	15	U	16	U	15	U
2-Hexanone	10	15	U	16	U	15	U
Tetrachloroethen	10	15	U	16	U	15	U
1,1,2,2-Tetrachl roethane	10	15	U	16	U	15	U
Toluene	10	15	U	16	U	2	J
Chlorobenzene	10	15	U	16	U	15	U
Ethylbenzene	10	15	U	16	U	15	U
Styrene	10	15	U	16	U	15	U
Total Xylenes	10	15	U	16	U	15	U

Dilution Factor:	1.00	1.00	1.00
Percent Solids:	67	63	67
Associated Method Blank:	69684	69684	69684
Associated Equipment Blank:	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:	-	-	-

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Volatile Organic Soil Analysis (ug/kg)

01/20/93

Tabl 3
Summary Tabl

	SAMPLE LOCATION:	MESSXX1XX101XD	MESSXX1XX101XX	MESSXX2XXX01XX	MESSXX3XXX01XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX	SRSSXX3XXX01XD	SRSSXX3XXX01XX
	LAB NUMBER:	BNASS2*4 #	BNASS2*3 #	BNASS2*5 #	BNASS2*6 #	BNASS2*14 #	BNASS2*15 #	BNASS2*16 #	BNASS2*17 #
	DATE SAMPLED:	11/05/92	11/05/92	11/05/92	11/05/92	11/06/92	11/06/92	11/06/92	11/06/92
	DATE ANALYZED:	11/11/92	11/11/92	11/11/92	11/11/92	11/12/92	11/14/92	11/14/92	11/14/92
ANALYTE	SOW-3/90 - II CRQL								
Chloromethane	10	-	-	-	-	-	-	-	-
Bromomethane	10	-	-	-	-	-	-	-	-
Vinyl Chloride	10	-	-	-	-	-	-	-	-
Chloroethane	10	-	-	-	-	-	-	-	-
Methylene Chloride	10	-	-	-	-	-	-	-	-
Acetone	10	-	-	-	-	-	-	-	-
Carbon Disulfide	10	-	-	-	-	-	-	-	-
1,1-Dichloroethene	10	-	-	-	-	-	-	-	-
1,1-Dichloroethane	10	-	-	-	-	-	-	-	-
1,2-Dichloroethene (total)	10	-	-	-	-	-	-	-	-
Chloroform	10	-	-	-	-	-	-	-	-
1,2-Dichloroethane	10	-	-	-	-	-	-	-	-
2-Butanone	10	-	-	-	-	-	-	-	-
1,1,1-Trichloro thane	10	-	-	-	-	-	-	-	-
Carbon Tetrachloride	10	-	-	-	-	-	-	-	-
Bromodichloromethane	10	-	-	-	-	-	-	-	-
1,2-Dichloropropane	10	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	10	-	-	-	-	-	-	-	-
Trichloroethene	10	-	-	-	-	-	-	-	-
Dibromochloromethane	10	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	10	-	-	-	-	-	-	-	-
Benzene	10	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	10	-	-	-	-	-	-	-	-
Bromoform	10	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone	10	-	-	-	-	-	-	-	-
2-Hexanone	10	-	-	-	-	-	-	-	-
Tetrachloroethene	10	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	10	-	-	-	-	-	-	-	-
Toluene	10	-	-	-	-	-	-	-	-
Chlorobenzene	10	-	-	-	-	-	-	-	-
Ethylbenzene	10	-	-	-	-	-	-	-	-
Styrene	10	-	-	-	-	-	-	-	-
Total Xylenes	10	-	-	-	-	-	-	-	-
Dilution Factor:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Solids:		88	89	62	67	78	57	61	64
Associated Method Blank:		69666	69666	69666	69666	69666	69684	69684	69684
Associated Equipment Blank:		MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		-	-	-	-	-	-	-	-

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Volatile Organic Soil Analysis (ug/kg)

01/20/93

Table 3
Summary Table

		SAMPLE LOCATION:	SRSSXX4XXX01XX	SRSSXX5XXX01XX	SRSSXX6XXX01XX
		LAB NUMBER:	BNASS2*18 #	BNASS2*19 #	BNASS2*20 #
		DATE SAMPLED:	11/06/92	11/06/92	11/06/92
		DATE ANALYZED:	11/14/92	11/14/92	11/14/92
ANALYTE	SOW-3/90 - II	CRQL			
Chloromethane		10	-	-	-
Bromomethane		10	-	-	-
Vinyl Chloride		10	-	-	-
Chloroethane		10	-	-	-
Methylene Chloride		10	-	-	-
Ac tone		10	-	-	-
Carbon Disulfide		10	-	-	-
1,1-Dichloroethene		10	-	-	-
1,1-Dichloroethane		10	-	-	-
1,2-Dichloroethene (total)		10	-	-	-
Chlor form		10	-	-	-
1,2-Dichloroethane		10	-	-	-
2-Butanone		10	-	-	-
1,1,1-Trichloroethane		10	-	-	5 J
Carbon Tetrachloride		10	-	-	-
Bromodichloromethane		10	-	-	-
1,2-Dichloropropane		10	-	-	-
cis-1,3-Dichloropropene		10	-	-	-
Trichloroethene		10	-	-	-
Dibromochloromethane		10	-	-	-
1,1,2-Trichloroethane		10	-	-	-
Benzene		10	-	-	-
trans-1,3-Dichl ropropene		10	-	-	-
Bromoform		10	-	-	-
4-Methyl-2-Pentanone		10	-	-	-
2-Hexanone		10	-	-	-
Tetrachloroethene		10	-	-	-
1,1,2,2-Tetrachloroethane		10	-	-	-
Toluene		10	-	-	2 J
Chlorobenzene		10	-	-	-
Ethylbenzene		10	-	-	-
Styrene		10	-	-	-
T tal Xylenes		10	-	-	-
Dilution Factor:			1.00	1.00	1.00
Percent Solids:			67	63	67
Associated Method Blank:			69684	69684	69684
Associated Equipment Blank:			MEQSXX6XXX01XX	MEQSXX6XXX01XX	MEQSXX6XXX01XX
Associated Field Blank:			SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:			-	-	-

Site: SURFACE SOIL
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report of Analysis

ANALYTE	RL	MESWXX1XXX01XX BNASW3*11 11/11/92 11/18/92	MESWXX2XXX01XX BNASW3*12 11/11/92 11/18/92	MESWXX3XXX01XX BNASW3*13 11/11/92 11/18/92	MESWXX4XXX01XD BNASW3*15 11/11/92 11/18/92	MESWXX4XXX01XX BNASW3*14 11/11/92 11/17/92	SRSWXX1XXX01XX BNASW3*10 11/11/92 11/18/92	SRSWXX2XXX01XX BNASW3*3 11/10/92 11/17/92	SRSWXX3XXX01XD BNASW3*5 11/10/92 11/17/92
Chloromethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	5	5 U	5 U	10	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichlor ethene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorethene (total)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-Pentanone	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylene (total)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dilution Factor:		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Associated Method Blank:		06482	06482	06482	06469	06482	06482	06469	06469
Associated Equipment Blank:		-	-	-	-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX1XXX01XX	SRQTXX1XXX01XX

Site: SURFACE WATER U: Not detected J: Estimated

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:		SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:		BNASW3*4	BNASW3*6	BNASW3*7	BNASW3*8	BNASW3*16
DATE SAMPLED:		11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE ANALYZED:		11/17/92	11/17/92	11/17/92	11/17/92	11/18/92
ANALYTE	RL					
Chloromethane	1	1 U	1 U	1 U	1 U	1 U
Bromomethane	1	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1	1 U	1 U	1 U	1 U	1 U
Chloroethane	1	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	1	1 U	1 U	1 U	1 U	1 U
Acetone	5	5 U	5 U	5 U	2 J	5 U
Carbon Disulfide	1	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	1	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	1	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorethene (total)	1	1 U	1 U	1 U	1 U	1 U
Chloroform	1	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	1	1 U	1 U	1 U	1 U	1 U
2-Butanone	5	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	1	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	1	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	1	1 U	1 U	1 U	1 U	1 U
Trichloroethene	1	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	1	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U
Benzene	1	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	1	1 U	1 U	1 U	1 U	1 U
Bromoform	1	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-Pentanone	5	5 U	5 U	5 U	5 U	5 U
2-Hexanone	5	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	1	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1	1 U	1 U	1 U	1 U	1 U
Toluene	1	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	1	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	1	1 U	1 U	1 U	1 U	1 U
Styrene	1	1 U	1 U	1 U	1 U	1 U
Xylene (total)	1	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane	1	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	1	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	1	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	1	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-Chloropropane	1	1 U	1 U	1 U	1 U	1 U
Dilution Factor:		1.0	1.0	1.0	1.0	1.0
Associated Method Blank:		06469	06469	06469	06469	06482
Associated Equipment Blank:		-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		SRQTXX1XXX01XX	SRQTXX1XXX01XX	SRQTXX1XXX01XX	SRQTXX1XXX01XX	SRQTXX2XXX01XX

Site: SURFACE WATER U: Not detected J: Estimated

Table 2
Validation / Summary Table

SAMPLE LOCATION:		MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:		BNASW3*11	BNASW3*12	BNASW3*13	BNASW3*15	BNASW3*14	BNASW3*10	BNASW3*3	BNASW3*5
DATE SAMPLED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE ANALYZED:		11/18/92	11/18/92	11/18/92	11/18/92	11/17/92	11/18/92	11/17/92	11/17/92
ANALYTE	RL								
Chloromethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromomethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Vinyl Chloride	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Chloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Methylene Chloride	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Acetone	5	5 UJ	5 UJ	10 J	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Carbon Disulfide	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1-Dichloroethene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1-Dichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,2-Dichlorethene (total)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Chloroform	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,2-Dichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
2-Butanone	5	R	R	R	R	R	R	R	R
1,1,1-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Carbon Tetrachloride	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromodichloromethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,2-Dichloropropane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
cis-1,3-Dichloropropene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Trichloroethene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Dibromochloromethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Benzene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
trans-1,3-Dichloropropene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Bromoform	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
4-Methyl-2-Pentanone	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
2-Hexanone	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ
Tetrachloroethene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,1,2,2-Tetrachloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Toluene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Chlorobenzen	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Ethylbenzene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Styrene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
Xylene (total)	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ
1,2-Dibromoethane	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
1,3-Dichlorobenzene	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
1,4-Dichlorobenzene	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
1,2-Dichlorobenzene	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
1,2-Dibromo-3-Chloropropane	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Dilution Factor:		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Associated Method Blank:		06482	06482	06482	06482	06469	06482	06469	06469
Associated Equipment Blank:		-	-	-	-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX1XXX01XX	SRQTXX1XXX01XX

Site: SURFACE WATER U: Not detected J: Estimated R: Unusable

PROJECT: NASB

Low Level Volatile Aqueous Analysis (ug/L)

19-Jan-93

Tabl 2
Validation / Summary Table

SAMPLE LOCATION:		SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX	SRDWXX1XXX01XX
LAB NUMBER:		BNASW3*4	BNASW3*6	BNASW3*7	BNASW3*8	BNASW3*16	BNASW3*18
DATE SAMPLED:		11/10/92	11/10/92	11/10/92	11/10/92	11/11/92	11/11/92
DATE ANALYZED:		11/17/92	11/17/92	11/17/92	11/17/92	11/18/92	11/18/92
ANALYTE	RL						
Chloromethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Bromomethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Vinyl Chloride	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Chloroethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Methylene Chloride	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Aceton	5	5 UJ	5 UJ	5 UJ	2 J	5 UJ	5 UJ
Carbon Disulfide	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
1,1-Dichl roethene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
1,1-Dichloroethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
1,2-Dichl rethene (total)	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Chloroform	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
1,2-Dichl r ethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
2-Butanone	5	R	R	R	R	R	R
1,1,1-Trichloroethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Carbon Tetrachloride	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Bromodichloromethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
1,2-Dichl ropropane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
cis-1,3-Dichloropropene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Trichloroethene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Dibromochloromethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
1,1,2-Trichl roethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Benzene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
trans-1,3-Dichloropropene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Bromoform	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
4-Methyl-2-Pentanone	5	5 UJ	5 U	5 UJ	5 U	5 U	5 U
2-Hexanone	5	5 UJ	5 U	5 UJ	5 U	5 U	5 U
Tetrachloroethene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Toluene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Chlorobenzene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Ethylbenzene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Styrene	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
Xylene (total)	1	1 UJ	1 U	1 UJ	1 U	1 U	1 U
1,2-Dibromo thane	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
1,3-Dichlorobenzene	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
1,4-Dichl robenzene	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
1,2-Dichlorobenzene	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
1,2-Dibromo-3-Chloropropane	1	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
Dilution Factor:		1.0	1.0	1.0	1.0	1.0	1.0
Associated Method Blank:		06469	06469	06469	06469	06482	06482
Associated Equipment Blank:		-	-	-	-	-	-
Associated Fi ld Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		SRQTXX1XXX01XX	SRQTXX1XXX01XX	SRQTXX1XXX01XX	SRQTXX1XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX

Site: SURFACE WATER

U: Not detected J: Estimated R: Unusable

Low Level Volati[illegible]eous Analysis (ug/L)

19-Jan-93

Tabl 3
Summary Table

ANALYTE	RL	MESWXX1XXX01XX BNASW3*11 11/11/92 11/18/92	MESWXX2XXX01XX BNASW3*12 11/11/92 11/18/92	MESWXX3XXX01XX BNASW3*13 11/11/92 11/18/92	MESWXX4XXX01XD BNASW3*15 11/11/92 11/18/92	MESWXX4XXX01XX BNASW3*14 11/11/92 11/17/92	SRSWXX1XXX01XX BNASW3*10 11/11/92 11/18/92	SRSWXX2XXX01XX BNASW3*3 11/10/92 11/17/92	SRSWXX3XXX01XD BNASW3*5 11/10/92 11/17/92
Chloromethane	1	-	-	-	-	-	-	-	-
Bromomethane	1	-	-	-	-	-	-	-	-
Vinyl Chloride	1	-	-	-	-	-	-	-	-
Chloroethane	1	-	-	-	-	-	-	-	-
Methylene Chloride	1	-	-	-	-	-	-	-	-
Acetone	5	-	-	-	-	-	-	-	-
Carbon Disulfide	1	-	-	10 J	-	-	-	-	-
1,1-Dichloroethene	1	-	-	-	-	-	-	-	-
1,1-Dichloroethane	1	-	-	-	-	-	-	-	-
1,2-Dichlorethene (total)	1	-	-	-	-	-	-	-	-
Chloroform	1	-	-	-	-	-	-	-	-
1,2-Dichloroethane	1	-	-	-	-	-	-	-	-
2-Butanone	5	R	R	R	R	R	R	R	R
1,1,1-Trichloroethane	1	-	-	-	-	-	-	-	-
Carbon Tetrachloride	1	-	-	-	-	-	-	-	-
Bromodichloromethane	1	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	1	-	-	-	-	-	-	-	-
Trichloroethene	1	-	-	-	-	-	-	-	-
Dibromochloromethane	1	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	1	-	-	-	-	-	-	-	-
Benzene	1	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	1	-	-	-	-	-	-	-	-
Bromoform	1	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone	5	-	-	-	-	-	-	-	-
2-Hexanone	5	-	-	-	-	-	-	-	-
Tetrachloroethene	1	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	1	-	-	-	-	-	-	-	-
Toluene	1	-	-	-	-	-	-	-	-
Chlorobenzene	1	-	-	-	-	-	-	-	-
Ethylbenzene	1	-	-	-	-	-	-	-	-
Styrene	1	-	-	-	-	-	-	-	-
Xylene (total)	1	-	-	-	-	-	-	-	-
1,2-Dibromoethane	1	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	1	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	1	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	1	-	-	-	-	-	-	-	-
1,2-Dibromo-3-Chloropropane	1	-	-	-	-	-	-	-	-
Dilution Factor:		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Associated Method Blank:		06482	06482	06482	06482	06469	06482	06469	06469
Associated Equipment Blank:		-	-	-	-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX	SRQTXX1XXX01XX	SRQTXX1XXX01XX

Site: SURFACE WATER

J: Estimated R: Unusable -: Not detected

PROJECT: NASB

Low Level Volatile Aqueous Analysis (ug/L)

19-Jan-93

Table 3
Summary Table

SAMPLE LOCATION:		SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX	SRDWXX1XXX01XX
LAB NUMBER:		BNASW3*4	BNASW3*6	BNASW3*7	BNASW3*8	BNASW3*16	BNASW3*18
DATE SAMPLED:		11/10/92	11/10/92	11/10/92	11/10/92	11/11/92	11/11/92
DATE ANALYZED:		11/17/92	11/17/92	11/17/92	11/17/92	11/18/92	11/18/92
ANALYTE	RL						
Chloromethane	1	-	-	-	-	-	-
Bromomethane	1	-	-	-	-	-	-
Vinyl Chloride	1	-	-	-	-	-	-
Chloroethane	1	-	-	-	-	-	-
Methylene Chloride	1	-	-	-	-	-	-
Acetone	5	-	-	-	2 J	-	-
Carbon Disulfide	1	-	-	-	-	-	-
1,1-Dichloroethene	1	-	-	-	-	-	-
1,1-Dichloroethane	1	-	-	-	-	-	-
1,2-Dichlorethene (total)	1	-	-	-	-	-	-
Chloroform	1	-	-	-	-	-	-
1,2-Dichloroethane	1	-	-	-	-	-	-
2-Butanone	5	R	R	R	R	R	R
1,1,1-Trichloroethane	1	-	-	-	-	-	-
Carbon Tetrachloride	1	-	-	-	-	-	-
Bromodichloromethane	1	-	-	-	-	-	-
1,2-Dichl ropropane	1	-	-	-	-	-	-
cis-1,3-Dichloropropene	1	-	-	-	-	-	-
Trichloroeth ne	1	-	-	-	-	-	-
Dibromochloromethane	1	-	-	-	-	-	-
1,1,2-Trichl roethane	1	-	-	-	-	-	-
Benzene	1	-	-	-	-	-	-
trans-1,3-Dichloropropene	1	-	-	-	-	-	-
Bromoform	1	-	-	-	-	-	-
4-Methyl-2-Pentanone	5	-	-	-	-	-	-
2-Hexanone	5	-	-	-	-	-	-
Tetrachloroethene	1	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	1	-	-	-	-	-	-
Toluene	1	-	-	-	-	-	-
Chlorobenzene	1	-	-	-	-	-	-
Ethylbenzene	1	-	-	-	-	-	-
Styrene	1	-	-	-	-	-	-
Xylene (total)	1	-	-	-	-	-	-
1,2-Dibromoethane	1	-	-	-	-	-	-
1,3-Dichlorobenzene	1	-	-	-	-	-	-
1,4-Dichlorobenzene	1	-	-	-	-	-	-
1,2-Dichlorobenzene	1	-	-	-	-	-	-
1,2-Dibromo-3-Chloropropane	1	-	-	-	-	-	-
Dilution Factor:		1.0	1.0	1.0	1.0	1.0	1.0
Associated Method Blank:		06469	06469	06469	06469	06482	06482
Associated Equipment Blank:		-	-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX
Associated Trip Blank:		SRQTXX1XXX01XX	SRQTXX1XXX01XX	SRQTXX1XXX01XX	SRQTXX1XXX01XX	SRQTXX2XXX01XX	SRQTXX2XXX01XX

Site: SURFACE WATER

J: Estimated R: Unusable -: Not detected

PROJECT: NASB

Inorganic Aqueous Analysis (ug/L)

01/19/93

Table 1
Laboratory Report f Analysis

SAMPLE LOCATION:		MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:		BNASW3*11	BNASW3*12	BNASW3*13	BNASW3*15	BNASW3*14	BNASW3*10	BNASW3*3	BNASW3*5
DATE SAMPLED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
ANALYTE	SOW-3/90 - II CRQL								
Aluminum	200	4330	336	4590	2250	1660	89.1 B	134000	1540
Antimony	60	50.3 B	12.2 B	11.3 U	15.2 B	11.3 U	14.2 B	11.3 U	11.3 U
Arsenic	10	13.8	1.5 U	2.2 B	1.5 U	1.5 U	3.4 B	20.0	4.8 B
Barium	200	31.8 B	1.5 U	31.8 B	12.1 B	10.3 B	4.9 B	542	15.7 B
Beryllium	5	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	7.8	1.6 U
Cadmium	5	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Calcium	5000	22000	1600 B	1810 B	2030 B	1850 B	6660	22900	8420
Chromium	10	7.7 B	5.3 U	6.3 B	5.8 B	5.3 U	5.3 U	219	5.3 U
Cobalt	50	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	73.9	5.3 U
Copper	25	4.2 U	4.2 U	8.2 B	4.2 U	4.2 U	4.2 U	79.2	4.2 U
Iron	100	60900	2010	7270	2360	1760	429	158000	10000
Lead	3	2.6 B	1.5 U	3.4	1.9 B	1.5 U	2.1 B	188	2.8 B
Magnesium	5000	10900	1490 B	2660 B	2360 B	2200 B	2100 B	43600	2440 B
Manganese	15	1750	69.1	285	78.2	61.1	82.3	1960	332
Mercury	0.2	0.10 U	0.10 U	0.11 B	0.11 B	0.10 U	0.10 U	0.25	0.10 U
Nickel	40	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	150	12.2 U
Potassium	5000	3520 B	976 B	1590 B	804 B	608 B	1100 B	23500	1600 B
Selenium	5	1.5 UW	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	15.0 U	1.5 U
Silver	10	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
Sodium	5000	7530	3160 B	3910 B	3940 B	3810 B	4710 B	7090	5390
Thallium	10	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Vanadium	50	9.8 B	1.9 U	7.9 B	4.0 B	3.9 B	1.9 U	269	3.2 B
Zinc	20	23.1	3.1 B	32.0	15.8 B	10.2 B	4.7 B	544	11.0 B
Cyanide	10	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Associated Method Blank:		PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001
Associated Equipment Blank:		-	-	-	-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

PROJECT: NASB

Inorganic Aqueous Analysis (ug/L)

01/19/93

Table 1
Laboratory Report f Analysis

SAMPLE LOCATION:	SRSWXX3XXX01XX		SRSWXX4XXX01XX		SRSWXX5XXX01XX		SRSWXX6XXX01XX		SRSWXX7XXX01XX	
LAB NUMBER:	BNASW3*4		BNASW3*6		BNASW3*7		BNASW3*8		BNASW3*16	
DATE SAMPLED:	11/10/92		11/10/92		11/10/92		11/10/92		11/11/92	
ANALYTE SOW-3/90 - II CRQL										
Aluminum 200	12200		68.2	B	75.6	B	86.8	B	9840	
Antimony 60	11.3	U	14.3	B	11.3	U	14.2	B	11.3	U
Arsenic 10	10.8		1.5	U	1.5	U	1.5	U	7.8	B
Barium 200	67.7	B	4.9	B	4.9	B	4.9	B	43.0	B
Beryllium 5	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
Cadmium 5	4.6	U	4.6	U	4.6	U	4.6	U	4.6	U
Calcium 5000	10500		6070		6720		6490		4640	B
Chromium 10	18.9		5.3	U	5.3	U	5.3	U	14.5	
Cobalt 50	9.5	B	5.3	U	5.3	U	5.3	U	6.6	B
Copper 25	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U
Iron 100	31200		393		842		483		11300	
Lead 3	16.6		1.5	U	1.5	U	1.5	U	21.9	
Magnesium 5000	5610		1890	B	2140	B	1900	B	4590	B
Manganese 15	639		74.7		91.7		80.9		454	
Mercury 0.2	0.11	B	0.10	U	0.10	U	0.10	U	0.10	U
Nickel 40	12.6	B	12.2	U	12.2	U	12.2	U	12.2	U
Potassium 5000	3430	B	1070	B	1450	B	1110	B	2390	B
Selenium 5	1.5	UW	1.5	U	1.5	U	1.5	U	1.5	UW
Silver 10	2.7	U	2.7	U	2.7	U	3.6	B	2.7	U
Sodium 5000	5860		4340	B	5470		3800	B	5710	
Thallium 10	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Vanadium 50	24.5	B	1.9	U	1.9	U	1.9	U	18.4	B
Zinc 20	51.8		2.9	B	2.3	B	1.1	B	39.5	
Cyanide 10	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

Associated Method Blank:	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001
Associated Equipment Blank:	-	-	-	-	-
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

PROJECT: NASB

Inorganic Aqueous Analysis (ug/L)

01/19/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:		MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:		BNASW3*11	BNASW3*12	BNASW3*13	BNASW3*15	BNASW3*14	BNASW3*10	BNASW3*3	BNASW3*5
DATE SAMPLED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
ANALYTE	SOW-3/90 - II CRQL								
Aluminum	200	4330	336	4590	2250	1660	89.1 J	134000	1540 J
Antimony	60	50.3 U	12.2 U	11.3 U	15.2 U	11.3 U	14.2 U	11.3 U	11.3 U
Arsenic	10	13.8	1.5 U	2.2 J	1.5 U	1.5 U	3.4 J	20.0	4.8 J
Barium	200	31.8 J	1.5 U	31.8 J	12.1 J	10.3 J	4.9 J	542	15.7 J
Beryllium	5	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	7.8	1.6 U
Cadmium	5	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Calcium	5000	22000 J	1600 J	1810 J	2030 J	1850 J	6660 J	22900 J	8420 J
Chromium	10	7.7 J	5.3 U	6.3 J	5.8 J	5.3 U	5.3 U	219	5.3 U
Cobalt	50	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	5.3 U	73.9	5.3 U
Copper	25	4.2 U	4.2 U	8.2 J	4.2 U	4.2 U	4.2 U	79.2	4.2 U
Iron	100	60900 J	2010 J	7270 J	2360 J	1760 J	429 J	158000 J	10000 J
Lead	3	2.6 U	1.5 U	3.4 U	1.9 U	1.5 U	2.1 U	188	2.8 UJ
Magnesium	5000	10900	1490 J	2660 J	2360 J	2200 J	2100 J	43600	2440 J
Manganese	15	1750	69.1	285	78.2	61.1	82.3	1960	332 J
Mercury	0.2	0.10 U	0.10 U	0.11 J	0.11 J	0.10 U	0.10 U	0.25	0.10 U
Nickel	40	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	150	12.2 U
Potassium	5000	3520 J	976 J	1590 J	804 J	608 J	1100 J	23500	1600 J
Selenium	5	1.5 UJ	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	15.0 U	1.5 U
Silver	10	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
Sodium	5000	7530	3160 J	3910 J	3940 J	3810 J	4710 J	7090	5390
Thallium	10	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Vanadium	50	9.8 U	1.9 U	7.9 U	4.0 U	3.9 U	1.9 U	269	3.2 U
Zinc	20	23.1	3.1 U	32.0	15.8 U	10.2 U	4.7 U	544	11.0 UJ
Cyanide	10	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Associated Method Blank:		PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001
Associated Equipment Blank:		-	-	-	-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

Table 2
Validation / Summary Table

SAMPLE LOCATION:		SRSWXX3XXX01XX		SRSWXX4XXX01XX		SRSWXX5XXX01XX		SRSWXX6XXX01XX		SRSWXX7XXX01XX	
LAB NUMBER:		BNASW3*4		BNASW3*6		BNASW3*7		BNASW3*8		BNASW3*16	
DATE SAMPLED:		11/10/92		11/10/92		11/10/92		11/10/92		11/11/92	
ANALYTE	SOW-3/90 - II CRQL										
Aluminum	200	12200	J	68.2	J	75.6	J	86.8	J	9840	
Antimony	60	11.3	U	14.3	U	11.3	U	14.2	U	11.3	U
Arsenic	10	10.8		1.5	U	1.5	U	1.5	U	7.8	J
Barium	200	67.7	J	4.9	J	4.9	J	4.9	J	43.0	J
Beryllium	5	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
Cadmium	5	4.6	U	4.6	U	4.6	U	4.6	U	4.6	U
Calcium	5000	10500	J	6070	J	6720	J	6490	J	4640	J
Chromium	10	18.9		5.3	U	5.3	U	5.3	U	14.5	
Cobalt	50	9.5	J	5.3	U	5.3	U	5.3	U	6.6	J
Copper	25	4.2	U	4.2	U	4.2	U	4.2	U	4.2	U
Iron	100	31200	J	393	J	842	J	483	J	11300	J
Lead	3	16.6	J	1.5	U	1.5	U	1.5	U	21.9	
Magnesium	5000	5610		1890	J	2140	J	1900	J	4590	J
Manganese	15	639	J	74.7		91.7		80.9		454	
Mercury	0.2	0.11	J	0.10	U	0.10	U	0.10	U	0.10	U
Nickel	40	12.6	J	12.2	U	12.2	U	12.2	U	12.2	U
P tassium	5000	3430	J	1070	J	1450	J	1110	J	2390	J
Selenium	5	1.5	UJ	1.5	U	1.5	U	1.5	U	1.5	UJ
Silver	10	2.7	U	2.7	U	2.7	U	3.6	U	2.7	U
Sodium	5000	5860		4340	J	5470		3800	J	5710	
Thallium	10	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Vanadium	50	24.5	U	1.9	U	1.9	U	1.9	U	18.4	U
Zinc	20	51.8	J	2.9	U	2.3	U	1.1	U	39.5	
Cyanide	10	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

Associated Method Blank:	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001
Associated Equipment Blank:	-	-	-	-	-
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

PROJECT: NASB

Inorganic Aqueous Analysis (ug/L)

01/19/93

Table 3
Summary Tabl

SAMPLE LOCATION:		MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:		BNASW3*11	BNASW3*12	BNASW3*13	BNASW3*15	BNASW3*14	BNASW3*10	BNASW3*3	BNASW3*5
DATE SAMPLED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
ANALYTE	SOW-3/90 - II CRQL								
Aluminum	200	4330	336	4590	2250	1660	89.1 J	134000	1540 J
Antimony	60	-	-	-	-	-	-	-	-
Arsenic	10	13.8	-	2.2 J	-	-	3.4 J	20.0	4.8 J
Barium	200	31.8 J	-	31.8 J	12.1 J	10.3 J	4.9 J	542	15.7 J
Beryllium	5	-	-	-	-	-	-	7.8	-
Cadmium	5	-	-	-	-	-	-	-	-
Calcium	5000	22000 J	1600 J	1810 J	2030 J	1850 J	6660 J	22900 J	8420 J
Chromium	10	7.7 J	-	6.3 J	5.8 J	-	-	219	-
Cobalt	50	-	-	-	-	-	-	73.9	-
Copper	25	-	-	8.2 J	-	-	-	79.2	-
Iron	100	60900 J	2010 J	7270 J	2360 J	1760 J	429 J	158000 J	10000 J
Lead	3	-	-	-	-	-	-	188	-
Magnesium	5000	10900	1490 J	2660 J	2360 J	2200 J	2100 J	43600	2440 J
Manganese	15	1750	69.1	285	78.2	61.1	82.3	1960	332 J
Mercury	0.2	-	-	0.11 J	0.11 J	-	-	0.25	-
Nickel	40	-	-	-	-	-	-	150	-
Potassium	5000	3520 J	976 J	1590 J	804 J	608 J	1100 J	23500	1600 J
Selenium	5	-	-	-	-	-	-	-	-
Silver	10	-	-	-	-	-	-	-	-
Sodium	5000	7530	3160 J	3910 J	3940 J	3810 J	4710 J	7090	5390
Thallium	10	-	-	-	-	-	-	-	-
Vanadium	50	-	-	-	-	-	-	269	-
Zinc	20	23.1	-	32.0	-	-	-	544	-
Cyanide	10	-	-	-	-	-	-	-	-
Associated Method Blank:		PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001
Associated Equipment Blank:		-	-	-	-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER *: Duplicate analysis not met +: Coefficient <0.995
U: Not detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

PROJECT: NASB

Inorganic Aqueous Analysis (ug/L)

01/19/93

Tabl 3
Summary Table

SAMPLE LOCATION:		SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:		BNASW3*4	BNASW3*6	BNASW3*7	BNASW3*8	BNASW3*16
DATE SAMPLED:		11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
ANALYTE	SOW-3/90 - II CRQL					
Aluminum	200	12200 J	68.2 J	75.6 J	86.8 J	9840
Antimony	60	-	-	-	-	-
Arsenic	10	10.8	-	-	-	7.8 J
Barium	200	67.7 J	4.9 J	4.9 J	4.9 J	43.0 J
Beryllium	5	-	-	-	-	-
Cadmium	5	-	-	-	-	-
Calcium	5000	10500 J	6070 J	6720 J	6490 J	4640 J
Chromium	10	18.9	-	-	-	14.5
Cobalt	50	9.5 J	-	-	-	6.6 J
Copper	25	-	-	-	-	-
Iron	100	31200 J	393 J	842 J	483 J	11300 J
Lead	3	16.6 J	-	-	-	21.9
Magnesium	5000	5610	1890 J	2140 J	1900 J	4590 J
Manganese	15	639 J	74.7	91.7	80.9	454
Mercury	0.2	0.11 J	-	-	-	-
Nickel	40	12.6 J	-	-	-	-
Potassium	5000	3430 J	1070 J	1450 J	1110 J	2390 J
Selenium	5	-	-	-	-	-
Silver	10	-	-	-	-	-
Sodium	5000	5860	4340 J	5470	3800 J	5710
Thallium	10	-	-	-	-	-
Vanadium	50	-	-	-	-	-
Zinc	20	51.8 J	-	-	-	39.5
Cyanide	10	-	-	-	-	-
Ass ciated Method Blank:		PBBW0001	PBBW0001	PBBW0001	PBBW0001	PBBW0001
Associated Equipment Blank:		-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER *: Duplicate analysis not met +: Coefficient <0.995
U: N t detected E: Interference N: Spike recovery not met W: Post digestion spike not met
J: Estimated M: Duplicated injection precision not met S: Method of standard additions B: Less than CRQL

PROJECT: NASB

Pesticides/PCBs Aqueous Analysis (ug/L)

01/20/93

Table 1
Laboratory Report of Analysis

		SAMPLE LOCATION:	MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
		LAB NUMBER:	QBW011 #	QBW012 #	QBW013 #	QBW015 #	QBW014 #	QBW010 #	QBW003 #	QBW005 #
		DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
		DATE EXTRACTED:	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/17/92	11/17/92
		DATE ANALYZED:	11/26/92	11/26/92	11/26/92	11/26/92	11/26/92	11/26/92	11/25/92	11/25/92
ANALYTE	SOW-2/88 CRQL									
alpha-BHC	0.05		0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
beta-BHC	0.05		0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
delta-BHC	0.05		0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
gamma-BHC (Lindane)	0.05		0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Heptachlor	0.05		0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Aldrin	0.05		0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Heptachlor Epoxide	0.05		0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Endosulfan I	0.05		0.051	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Dieldrin	0.1		0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
4,4'-DDE	0.1		0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
Endrin	0.1		0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
Endosulfan II	0.1		0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
4,4'-DDD	0.1		0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
Endosulfan Sulfate	0.1		0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
4,4'-DDT	0.1		0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
Methoxychlor	0.5		0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Endrin Ketone	0.1		0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
alpha-Chlordane	0.5		0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
gamma-Chlordane	0.5		0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Toxaphene	1		1 U	1.1 U	1 U	1 U	1 U	1 U	1.2 U	1 U
Aroclor-1016	0.5		0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1221	0.5		0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1232	0.5		0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1242	0.5		0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1248	0.5		0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1254	1		1 U	1.1 U	1 U	1 U	1 U	1 U	1.2 U	1 U
Aroclor-1260	1		1 U	1.1 U	1 U	1 U	1 U	1 U	1.2 U	1 U
		Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Associated Method Blank:	PBLKABW010	PBLKABW010	PBLKABW010	PBLKABW010	PBLKABW010	PBLKABW010	PBLKBBW001	PBLKBBW001
		Associated Equipment Blank:	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	-	-
		Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

PROJECT: NASB

Pesticides/PCBs Aqueous Analysis (ug/L)

01/20/93

Table 1
Laboratory Report of Analysis

		SAMPLE LOCATION:	SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
		LAB NUMBER:	QBW004 #	QBW006 #	QBW007 #	QBW008 #	QBW016 #
		DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
		DATE EXTRACTED:	11/17/92	11/17/92	11/17/92	11/17/92	11/18/92
		DATE ANALYZED:	11/25/92	11/25/92	11/25/92	11/25/92	11/26/92
ANALYTE	SOW-2/88	CRQL					
alpha-BHC		0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
beta-BHC		0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
delta-BHC		0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
gamma-BHC (Lindane)		0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Heptachlor		0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Aldrin		0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Heptachlor Epoxide		0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Endosulfan I		0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Dieldrin		0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
4,4'-DDE		0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
Endrin		0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
Endosulfan II		0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
4,4'-DDD		0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
Endosulfan Sulfate		0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
4,4'-DDT		0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
Methoxychlor		0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Endrin Ketone		0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
alpha-Chlordane		0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
gamma-Chlordane		0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Toxaphene		1	1.1 U	1 U	1 U	1 U	1 U
Aroclor-1016		0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1221		0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1232		0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1242		0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1248		0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1254		1	1.1 U	1 U	1 U	1 U	1 U
Aroclor-1260		1	1.1 U	1 U	1 U	1 U	1 U
		Dilution Factor:	1.00	1.00	1.00	1.00	1.00

Associated Method Blank:	PBLKBBW001	PBLKBBW001	PBLKBBW001	PBLKBBW001	PBLKABW010
Associated Equipment Blank:	-	-	-	-	SRQSXX3XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: L vel D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

PROJECT: NASB

Pesticides/PCBs Aqueous Analysis (ug/L)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:	QBW011 #	QBW012 #	QBW013 #	QBW015 #	QBW014 #	QBW010 #	QBW003 #	QBW005 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/17/92	11/17/92
DATE ANALYZED:	11/26/92	11/26/92	11/26/92	11/26/92	11/26/92	11/26/92	11/25/92	11/25/92

ANALYTE	SOW-2/88 CRQL								
alpha-BHC	0.05	0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
beta-BHC	0.05	0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
delta-BHC	0.05	0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
gamma-BHC (Lindane)	0.05	0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Heptachlor	0.05	0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Aldrin	0.05	0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Heptachlor Epoxide	0.05	0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Endosulfan I	0.05	0.051 U	0.056 U	0.05 U	0.051 U	0.05 U	0.051 U	0.058 U	0.051 U
Dieldrin	0.1	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
4,4'-DDE	0.1	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
Endrin	0.1	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
Endosulfan II	0.1	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
4,4'-DDD	0.1	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
Endosulfan Sulfate	0.1	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
4,4'-DDT	0.1	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
Methoxychlor	0.5	0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Endrin Ketone	0.1	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12 U	0.1 U
alpha-Chlordane	0.5	0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
gamma-Chlordane	0.5	0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Toxaphene	1	1 U	1.1 U	1 U	1 U	1 U	1 U	1.2 U	1 U
Aroclor-1016	0.5	0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1221	0.5	0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1232	0.5	0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1242	0.5	0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1248	0.5	0.51 U	0.56 U	0.5 U	0.51 U	0.5 U	0.51 U	0.58 U	0.51 U
Aroclor-1254	1	1 U	1.1 U	1 U	1 U	1 U	1 U	1.2 U	1 U
Aroclor-1260	1	1 U	1.1 U	1 U	1 U	1 U	1 U	1.2 U	1 U
Dilution Factor:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Ass ciated Method Blank:	PBLKABW010	PBLKABW010	PBLKABW010	PBLKABW010	PBLKABW010	PBLKABW010	PBLKBBW001	PBLKBBW001
Associated Equipment Blank:	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	-	-
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 2
Validation / Summary Table

SAMPLE LOCATION:		SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:		QBW004 #	QBW006 #	QBW007 #	QBW008 #	QBW016 #
DATE SAMPLED:		11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:		11/17/92	11/17/92	11/17/92	11/17/92	11/18/92
DATE ANALYZED:		11/25/92	11/25/92	11/25/92	11/25/92	11/26/92
ANALYTE	SOW-2/88 CRQL					
alpha-BHC	0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
beta-BHC	0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
delta-BHC	0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
gamma-BHC (Lindane)	0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Heptachlor	0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Aldrin	0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Heptachlor Epoxide	0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Endosulfan I	0.05	0.053 U	0.051 U	0.051 U	0.052 U	0.052 U
Dieldrin	0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
4,4'-DDE	0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
Endrin	0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
Endosulfan II	0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
4,4'-DDD	0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
Endosulfan Sulfate	0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
4,4'-DDT	0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
Methoxychlor	0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Endrin Ketone	0.1	0.11 U	0.1 U	0.1 U	0.1 U	0.11 U
alpha-Chlordane	0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
gamma-Chlordane	0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
T xaphen	1	1.1 U	1 U	1 U	1 U	1 U
Aroclor-1016	0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1221	0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1232	0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1242	0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1248	0.5	0.53 U	0.51 U	0.51 U	0.52 U	0.52 U
Aroclor-1254	1	1.1 U	1 U	1 U	1 U	1 U
Aroclor-1260	1	1.1 U	1 U	1 U	1 U	1 U
Dilution Factor:		1.00	1.00	1.00	1.00	1.00

Associated Method Blank:	PBLKBBW001	PBLKBBW001	PBLKBBW001	PBLKBBW001	PBLKABW010
Associated Equipment Blank:	-	-	-	-	SRQSXX3XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

Table 3
Summary Table

SAMPLE LOCATION:	MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:	QBW011 #	QBW012 #	QBW013 #	QBW015 #	QBW014 #	QBW010 #	QBW003 #	QBW005 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/18/92	11/17/92	11/17/92
DATE ANALYZED:	11/26/92	11/26/92	11/26/92	11/26/92	11/26/92	11/26/92	11/25/92	11/25/92
ANALYTE SOW-2/88 CRQL								
alpha-BHC 0.05	-	-	-	-	-	-	-	-
beta-BHC 0.05	-	-	-	-	-	-	-	-
delta-BHC 0.05	-	-	-	-	-	-	-	-
gamma-BHC (Lindane) 0.05	-	-	-	-	-	-	-	-
Heptachlor 0.05	-	-	-	-	-	-	-	-
Aldrin 0.05	-	-	-	-	-	-	-	-
Heptachlor Epoxide 0.05	-	-	-	-	-	-	-	-
Endosulfan I 0.05	-	-	-	-	-	-	-	-
Dieldrin 0.1	-	-	-	-	-	-	-	-
4,4'-DDE 0.1	-	-	-	-	-	-	-	-
Endrin 0.1	-	-	-	-	-	-	-	-
Endosulfan II 0.1	-	-	-	-	-	-	-	-
4,4'-DDD 0.1	-	-	-	-	-	-	-	-
Endosulfan Sulfate 0.1	-	-	-	-	-	-	-	-
4,4'-DDT 0.1	-	-	-	-	-	-	-	-
Methoxychlor 0.5	-	-	-	-	-	-	-	-
Endrin Ketone 0.1	-	-	-	-	-	-	-	-
alpha-Chlordane 0.5	-	-	-	-	-	-	-	-
gamma-Chlordane 0.5	-	-	-	-	-	-	-	-
Toxaphene 1	-	-	-	-	-	-	-	-
Aroclor-1016 0.5	-	-	-	-	-	-	-	-
Aroclor-1221 0.5	-	-	-	-	-	-	-	-
Aroclor-1232 0.5	-	-	-	-	-	-	-	-
Aroclor-1242 0.5	-	-	-	-	-	-	-	-
Aroclor-1248 0.5	-	-	-	-	-	-	-	-
Aroclor-1254 1	-	-	-	-	-	-	-	-
Aroclor-1260 1	-	-	-	-	-	-	-	-
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Associated Method Blank:	PBLKABW010	PBLKABW010	PBLKABW010	PBLKABW010	PBLKABW010	PBLKABW010	PBLKBBW001	PBLKBBW001
Associated Equipment Blank:	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	SRQSXX3XXX01XX	-	-
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

PROJECT: NASB

Pesticides/PCBs Aqueous Analysis (ug/L)

01/20/93

Table 3
Summary Table

SAMPLE LOCATION:	SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:	QBW004 #	QBW006 #	QBW007 #	QBW008 #	QBW016 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/17/92	11/17/92	11/17/92	11/17/92	11/18/92
DATE ANALYZED:	11/25/92	11/25/92	11/25/92	11/25/92	11/26/92
ANALYTE SOW-2/88 CRQL					
alpha-BHC 0.05	-	-	-	-	-
beta-BHC 0.05	-	-	-	-	-
delta-BHC 0.05	-	-	-	-	-
gamma-BHC (Lindane) 0.05	-	-	-	-	-
Heptachlor 0.05	-	-	-	-	-
Aldrin 0.05	-	-	-	-	-
Heptachlor Epoxide 0.05	-	-	-	-	-
Endosulfan I 0.05	-	-	-	-	-
Dieldrin 0.1	-	-	-	-	-
4,4'-DDE 0.1	-	-	-	-	-
Endrin 0.1	-	-	-	-	-
Endosulfan II 0.1	-	-	-	-	-
4,4'-DDD 0.1	-	-	-	-	-
Endosulfan Sulfate 0.1	-	-	-	-	-
4,4'-DDT 0.1	-	-	-	-	-
Methoxychlor 0.5	-	-	-	-	-
Endrin Keton 0.1	-	-	-	-	-
alpha-Chlordane 0.5	-	-	-	-	-
gamma-Chlordane 0.5	-	-	-	-	-
Toxaphene 1	-	-	-	-	-
Arocl r-1016 0.5	-	-	-	-	-
Ar clor-1221 0.5	-	-	-	-	-
Arocl r-1232 0.5	-	-	-	-	-
Aroclor-1242 0.5	-	-	-	-	-
Aroclor-1248 0.5	-	-	-	-	-
Aroclor-1254 1	-	-	-	-	-
Aroclor-1260 1	-	-	-	-	-
Dilution Factor:	1.00	1.00	1.00	1.00	1.00

Associated Method Blank:	PBLKBBW001	PBLKBBW001	PBLKBBW001	PBLKBBW001	PBLKABW010
Associated Equipment Blank:	-	-	-	-	SRQSXX3XXX01XX
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated D: Diluted result -: Not detected C: Confirmed by GC/MS
U: Not detected B: Blank contamination R: Unusable P: > 25% difference between columns

PROJECT: NASB

Semivolatile Organic Aqueous Analysis (ug/L)

01/20/93

Table 1
Laboratory Report f Analysis

SAMPLE LOCATION:		MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX
LAB NUMBER:		BNASW3*11 #	BNASW3*12 #	BNASW3*13 #	BNASW3*15 #	BNASW3*14 #	BNASW3*10 #	BNASW3*10 D #	BNASW3*3 #
DATE SAMPLED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92
DATE EXTRACTED:		11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:		11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/23/92
ANALYTE	SOW-3/90 - II CRQL								
Phenol	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
bis(2-Chloroethyl)ether	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2-Chlorophenol	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
1,3-Dichlorobenzene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
1,4-Dichlorobenzene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
1,2-Dichlorobenzene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2-Methylphenol	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2,2'-oxybis(1-Chloropropane)	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
4-Methylphenol	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
N-Nitroso-di-n-propylamine	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Hexachloroethane	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Nitrobenzene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Isophorone	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2-Nitrophenol	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2,4-Dimethylphenol	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
bis(2-Chloroethoxy)methane	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2,4-Dichlorophenol	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
1,2,4-Trichlorobenzene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Naphthalene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
4-Chloroaniline	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Hexachlorobutadiene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
4-Chloro-3-Methylphenol	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2-Methylnaphthalene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Hexachlorocyclopentadiene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2,4,6-Trichlorophenol	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2,4,5-Trichlorophenol	25	25 U	25 U	25 U	25 U	25 U	25 U	500 U	25 U
2-Chloronaphthalene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U	25 U	500 U	25 U
Dimethylphthalate	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Acenaphthylene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2,6-Dinitrotoluene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatil Organic Aqueous Analysis (ug/L)

01/20/93

Table 1
Laboratory Report f Analysis

	SAMPLE LOCATION:	MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX
	LAB NUMBER:	BNASW3*11 #	BNASW3*12 #	BNASW3*13 #	BNASW3*15 #	BNASW3*14 #	BNASW3*10 #	BNASW3*10 D #	BNASW3*3 #
	DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92
	DATE EXTRACTED:	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
	DATE ANALYZED:	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/23/92
ANALYTE	SOW-3/90 - II CRQL								
3-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U	25 U	500 U	25 U
Acenaphthene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2,4-Dinitrophenol	25	25 U	25 U	25 U	25 U	25 U	25 U	500 U	25 U
4-Nitrophenol	25	25 U	25 U	25 U	25 U	25 U	25 U	500 U	25 U
Dibenzofuran	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
2,4-Dinitrotoluene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Diethylphthalat	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
4-Chl rophenyl-phenylether	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Fluorene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
4-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U	25 U	500 U	25 U
4,6-Dinitro-2-methylphenol	25	25 U	25 U	25 U	25 U	25 U	25 U	500 U	25 U
N-Nitr sodiphenylamine	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
4-Bromophenyl-phenylether	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Hexachlorobenzen	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Pentachl rophenol	25	25 U	25 U	25 U	25 U	25 U	25 U	500 U	25 U
Phenanthrene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Anthracene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Carbazole	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Di-n-butylphthalate	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Fluoranthene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Pyrene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Butylbenzylphthalate	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
3,3'-Dichlorobenzidine	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Benzo(a)Anthracene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Chrysene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
bis(2-Ethylhexyl)phthalate	10	7 JB	16 B	4 JB	8 JB	16 B	380 BE	400 DB	24 B
Di-n- ctylphthalate	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Benzo(b)Fluoranthene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Benzo(k)Fluoranthene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Benzo(a)Pyren	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Indeno(1,2,3-c,d)Pyrene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Dibenz(a,h)Anthracene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Benzo(g,h,i)perylene	10	10 U	10 U	10 U	10 U	10 U	10 U	200 U	10 U
Dilution Factor:		1.00	1.00	1.00	1.00	1.00	1.00	20.0	1.00
Associated Method Blank:		62780	62780	62780	62780	62780	62780	62780	62780
Associated Equipment Blank:		-	-	-	-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Aqueous Analysis (ug/L)

01/20/93

Table 1
Laboratory Report of Analysis

SAMPLE LOCATION:	SRSWXX3XXX01XD	SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:	BNASW3*5 #	BNASW3*4 #	BNASW3*6 #	BNASW3*7 #	BNASW3*8 #	BNASW3*16 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:	11/24/92	11/23/92	11/24/92	11/24/92	11/24/92	11/24/92
ANALYTE SOW-3/90 - II CRQL						
Phenol 10	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether 10	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol 10	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol 10	10 U	10 U	10 U	10 U	10 U	10 U
2,2'-oxybis(1-Chloropropane) 10	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol 10	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine 10	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane 10	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone 10	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitrophenol 10	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol 10	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane 10	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol 10	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene 10	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline 10	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene 10	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-Methylphenol 10	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene 10	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene 10	10 U	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol 10	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol 25	25 U	25 U	25 U	25 U	25 U	25 U
2-Chloronaphthalene 10	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline 25	25 U	25 U	25 U	25 U	25 U	25 U
Dimethylphthalate 10	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene 10	10 U	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene 10	10 U	10 U	10 U	10 U	10 U	10 U

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 1
Laboratory Report f Analysis

SAMPLE LOCATION:	SRSWXX3XXX01XD	SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:	BNASW3*5 #	BNASW3*4 #	BNASW3*6 #	BNASW3*7 #	BNASW3*8 #	BNASW3*16 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:	11/24/92	11/23/92	11/24/92	11/24/92	11/24/92	11/24/92

ANALYTE	SOW-3/90 - II CRQL											
3-Nitr aniline	25	25	U	25	U	25	U	25	U	25	U	25	U
Acenaphthene	10	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	25	25	U	25	U	25	U	25	U	25	U	25	U
4-Nitrophenol	25	25	U	25	U	25	U	25	U	25	U	25	U
Dibenzofuran	10	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	10	U	10	U	10	U	10	U	10	U	10	U
Diethylphthalat	10	10	U	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	10	U	10	U	10	U	10	U	10	U	10	U
Fluorene	10	10	U	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline	25	25	U	25	U	25	U	25	U	25	U	25	U
4,6-Dinitro-2-methylphenol	25	0.00	U	25	U	25	U	25	U	25	U	25	U
N-Nitrosodiphenylamine	10	10	U	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	10	U	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	10	U	10	U	10	U	10	U	10	U	10	U
Pentachl rophenol	25	25	U	25	U	25	U	25	U	25	U	25	U
Phenanthrene	10	10	U	10	U	10	U	10	U	10	U	10	U
Anthracene	10	10	U	10	U	10	U	10	U	10	U	10	U
Carbazole	10	10	U	10	U	10	U	10	U	10	U	10	U
Di-n-butylphthalate	10	10	U	10	U	10	U	10	U	10	U	10	U
Fluoranthene	10	10	U	10	U	10	U	10	U	10	U	10	U
Pyrene	10	10	U	10	U	10	U	10	U	10	U	10	U
Butylbenzylphthalate	10	10	U	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(a)Anthracene	10	10	U	10	U	10	U	10	U	10	U	10	U
Chrysene	10	10	U	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	16	B	15	B	17	B	3	JB	8	JB	8	JB
Di-n-octylphthalate	10	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(b)Fluoranthene	10	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(k)Fluoranthene	10	10	U	10	U	10	U	10	U	10	U	10	U
Benzo(a)Pyrene	10	10	U	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-c,d)Pyrene	10	10	U	10	U	10	U	10	U	10	U	10	U
Dibenz(a,h)Anthracene	10	10	U	10	U	10	U	10	U	10	U	10	U
Benz (g,h,i)perylene	10	10	U	10	U	10	U	10	U	10	U	10	U
Dilution Factor:		1.00		1.00		1.00		1.00		1.00		1.00	

Associated Method Blank:	62780	62780	62780	62780	62780	62780
Associated Equipment Blank:	-	-	-	-	-	-
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Aqueous Analysis (ug/L)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:	MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:	BNASW3*11 #	BNASW3*12 #	BNASW3*13 #	BNASW3*15 #	BNASW3*14 #	BNASW3*10 #	BNASW3*3 #	BNASW3*5 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/23/92	11/24/92
ANALYTE SOW-3/90 - II CRQL								
Phenol 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,2'-oxybis(1-Chl ropropane) 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitrophenol 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-Methylphenol 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol 25	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2-Chloronaphthalene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline 25	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Dimethylphthalate 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene 10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Aqueous Analysis (ug/L)

01/20/93

Table 2
Validation / Summary Tabl

SAMPLE LOCATION:	MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:	BNASW3*11 #	BNASW3*12 #	BNASW3*13 #	BNASW3*15 #	BNASW3*14 #	BNASW3*10 #	BNASW3*3 #	BNASW3*5 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/23/92	11/24/92

ANALYTE	SOW-3/90 - II CRQL								
3-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Acenaphthene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	25	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol	25	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Dibenzofuran	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrotoluene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di thylphthalate	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	25	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
N-Nitrosodiphenylamine	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Bromophenyl-phenylether	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	25	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Phenanthrene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Butylbenzylphthalate	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)Anthracene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	10	10 U	16 U	10 U	10 U	16 U	400	24	16 U
Di-n-octylphthalate	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benz (b)Fluoranthene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)Fluoranthene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)Pyrene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-c,d)Pyrene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)Anthracene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dilution Factor:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Associated Method Blank:		62780	62780	62780	62780	62780	62780	62780	62780
Associated Equipment Blank:		-	-	-	-	-	-	-	-
Associated Field Blank:		SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Aqueous Analysis (ug/L)

01/20/93

Table 2
Validation / Summary Table

SAMPLE LOCATION:		SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:		BNASW3*4 #	BNASW3*6 #	BNASW3*7 #	BNASW3*8 #	BNASW3*16 #
DATE SAMPLED:		11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:		11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:		11/23/92	11/24/92	11/24/92	11/24/92	11/24/92
ANALYTE	SOW-3/90 - II CRQL					
Phenol	10	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	10	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	10	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	10	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	10	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	10	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	10	10 U	10 U	10 U	10 U	10 U
2,2'-oxybis(1-Chloropropane)	10	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	10	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	10	10 U	10 U	10 U	10 U	10 U
Hexachloroethan	10	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	10	10 U	10 U	10 U	10 U	10 U
Isophorone	10	10 U	10 U	10 U	10 U	10 U
2-Nitrophenol	10	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	10	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	10	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	10	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	10	10 U	10 U	10 U	10 U	10 U
Naphthalene	10	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	10	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	10	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-Methylphenol	10	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	10	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	10	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	10	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	25	25 U	25 U	25 U	25 U	25 U
2-Chloronaphthalene	10	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U
Dimethylphthalate	10	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	10	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	10	10 U	10 U	10 U	10 U	10 U

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatil Organic Aqueous Analysis (ug/L)

01/20/93

Tabl 2
Validation / Summary Table

SAMPLE LOCATION:	SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:	BNASW3*4 #	BNASW3*6 #	BNASW3*7 #	BNASW3*8 #	BNASW3*16 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:	11/23/92	11/24/92	11/24/92	11/24/92	11/24/92

ANALYTE	SOW-3/90 - II CRQL					
3-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U
Acenaphthene	10	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	25	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol	25	25 U	25 U	25 U	25 U	25 U
Dibenzofuran	10	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrotoluene	10	10 U	10 U	10 U	10 U	10 U
Diethylphthalate	10	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	10	10 U	10 U	10 U	10 U	10 U
Fluorene	10	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U
4,6-Dinitr -2-methylphenol	25	25 U	25 U	25 U	25 U	25 U
N-Nitrosodiphenylamine	10	10 U	10 U	10 U	10 U	10 U
4-Bromophenyl-phenylether	10	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	10	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	25	25 U	25 U	25 U	25 U	25 U
Phenanthrene	10	10 U	10 U	10 U	10 U	10 U
Anthrac ne	10	10 U	10 U	10 U	10 U	10 U
Carbazole	10	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	10	10 U	10 U	10 U	10 U	10 U
Fluoranthene	10	10 U	10 U	10 U	10 U	10 U
Pyrene	10	10 U	10 U	10 U	10 U	10 U
Butylbenzylphthalate	10	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	10	10 U	10 U	10 U	10 U	10 UJ
Benzo(a)Anthracene	10	10 U	10 U	10 U	10 U	10 U
Chrysene	10	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	10	15 U	17 U	10 U	10 U	10 U
Di-n- ctylphthalate	10	10 U	10 U	10 U	10 U	10 U
Benzo(b)Fluoranthene	10	10 U	10 U	10 U	10 U	10 U
Benzo(k)Fluoranthene	10	10 U	10 U	10 U	10 U	10 U
Benzo(a)Pyrene	10	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-c,d)Pyrene	10	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)Anthracene	10	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	10	10 U	10 U	10 U	10 U	10 U
Dilution Factor:		1.00	1.00	1.00	1.00	1.00

Associated Method Blank:	62780	62780	62780	62780	62780
Associated Equipment Blank:	-	-	-	-	-
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Aqueous Analysis (ug/L)

01/20/93

Table 3
Summary Tabl

SAMPLE LOCATION:		MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:		BNASW3*11 #	BNASW3*12 #	BNASW3*13 #	BNASW3*15 #	BNASW3*14 #	BNASW3*10 #	BNASW3*3 #	BNASW3*5 #
DATE SAMPLED:		11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:		11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:		11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/23/92	11/24/92
ANALYTE	SOW-3/90 - II CRQL								
Phenol	10	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	10	-	-	-	-	-	-	-	-
2-Chlorophenol	10	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	10	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	10	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	10	-	-	-	-	-	-	-	-
2-Methylphenol	10	-	-	-	-	-	-	-	-
2,2'-oxybis(1-Chloropropane)	10	-	-	-	-	-	-	-	-
4-Methylphenol	10	-	-	-	-	-	-	-	-
N-Nitroso-di-n-propylamine	10	-	-	-	-	-	-	-	-
Hexachloroethane	10	-	-	-	-	-	-	-	-
Nitrobenzene	10	-	-	-	-	-	-	-	-
Isophorone	10	-	-	-	-	-	-	-	-
2-Nitrophenol	10	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	10	-	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	10	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	10	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	10	-	-	-	-	-	-	-	-
Naphthalene	10	-	-	-	-	-	-	-	-
4-Chloroaniline	10	-	-	-	-	-	-	-	-
Hexachlorobutadiene	10	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	10	-	-	-	-	-	-	-	-
2-Methylnaphthalene	10	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	10	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	10	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	25	-	-	-	-	-	-	-	-
2-Chloronaphthalene	10	-	-	-	-	-	-	-	-
2-Nitroaniline	25	-	-	-	-	-	-	-	-
Dimethylphthalate	10	-	-	-	-	-	-	-	-
Acenaphthylene	10	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	10	-	-	-	-	-	-	-	-

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatil Organic Aqueous Analysis (ug/L)

01/20/93

Table 3
Summary Table

SAMPLE LOCATION:	MESWXX1XXX01XX	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XD	MESWXX4XXX01XX	SRSWXX1XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XD
LAB NUMBER:	BNASW3*11 #	BNASW3*12 #	BNASW3*13 #	BNASW3*15 #	BNASW3*14 #	BNASW3*10 #	BNASW3*3 #	BNASW3*5 #
DATE SAMPLED:	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/11/92	11/10/92	11/10/92
DATE EXTRACTED:	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/24/92	11/23/92	11/24/92
ANALYTE SOW-3/90 - II CRQL								
3-Nitroaniline 25	-	-	-	-	-	-	-	-
Acenaphthene 10	-	-	-	-	-	-	-	-
2,4-Dinitrophenol 25	-	-	-	-	-	-	-	-
4-Nitrophenol 25	-	-	-	-	-	-	-	-
Dibenzofuran 10	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene 10	-	-	-	-	-	-	-	-
Diethylphthalate 10	-	-	-	-	-	-	-	-
4-Chlorophenyl-phenylether 10	-	-	-	-	-	-	-	-
Fluorene 10	-	-	-	-	-	-	-	-
4-Nitroaniline 25	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol 25	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine 10	-	-	-	-	-	-	-	-
4-Bromophenyl-phenylether 10	-	-	-	-	-	-	-	-
Hexachlorobenzene 10	-	-	-	-	-	-	-	-
Pentachlorophenol 25	-	-	-	-	-	-	-	-
Phenanthrene 10	-	-	-	-	-	-	-	-
Anthracene 10	-	-	-	-	-	-	-	-
Carbazole 10	-	-	-	-	-	-	-	-
Di-n-butylphthalate 10	-	-	-	-	-	-	-	-
Fluoranthene 10	-	-	-	-	-	-	-	-
Pyrene 10	-	-	-	-	-	-	-	-
Butylbenzylphthalate 10	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine 10	-	-	-	-	-	-	-	-
Benzo(a)Anthracene 10	-	-	-	-	-	-	-	-
Chrysene 10	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate 10	-	-	-	-	-	400	24	-
Di-n-octylphthalate 10	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene 10	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene 10	-	-	-	-	-	-	-	-
Benzo(a)Pyrene 10	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)Pyrene 10	-	-	-	-	-	-	-	-
Dibenz(a,h)Anthracene 10	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene 10	-	-	-	-	-	-	-	-
Dilution Factor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Associated Method Blank:	62780	62780	62780	62780	62780	62780	62780	62780
Associated Equipment Blank:	-	-	-	-	-	-	-	-
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

Table 3
Summary Table

SAMPLE LOCATION:	SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:	BNASW3*4 #	BNASW3*6 #	BNASW3*7 #	BNASW3*8 #	BNASW3*16 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:	11/23/92	11/24/92	11/24/92	11/24/92	11/24/92
ANALYTE — SOW-3/90 - II — CRQL					
Phenol — 10	-	-	-	-	-
bis(2-Chloroethyl)ether — 10	-	-	-	-	-
2-Chlorophenol — 10	-	-	-	-	-
1,3-Dichlorobenzene — 10	-	-	-	-	-
1,4-Dichlorobenzene — 10	-	-	-	-	-
1,2-Dichlorobenzene — 10	-	-	-	-	-
2-Methylphenol — 10	-	-	-	-	-
2,2'-oxybis(1-Chl ropropane) — 10	-	-	-	-	-
4-Methylphenol — 10	-	-	-	-	-
N-Nitroso-di-n-propylamine — 10	-	-	-	-	-
Hexachloroethane — 10	-	-	-	-	-
Nitrobenzene — 10	-	-	-	-	-
Isophorone — 10	-	-	-	-	-
2-Nitrophenol — 10	-	-	-	-	-
2,4-Dimethylphenol — 10	-	-	-	-	-
bis(2-Chloroethoxy)methane — 10	-	-	-	-	-
2,4-Dichlorophenol — 10	-	-	-	-	-
1,2,4-Trichlorobenzene — 10	-	-	-	-	-
Naphthalene — 10	-	-	-	-	-
4-Chloroanilin — 10	-	-	-	-	-
Hexachlorobutadiene — 10	-	-	-	-	-
4-Chloro-3-Methylphenol — 10	-	-	-	-	-
2-Methylnaphthalene — 10	-	-	-	-	-
Hexachlorocyclopentadiene — 10	-	-	-	-	-
2,4,6-Trichlorophenol — 10	-	-	-	-	-
2,4,5-Trichlorophenol — 25	-	-	-	-	-
2-Chloronaphthalene — 10	-	-	-	-	-
2-Nitroaniline — 25	-	-	-	-	-
Dimethylphthalate — 10	-	-	-	-	-
Acenaphthylene — 10	-	-	-	-	-
2,6-Dinitrotoluene — 10	-	-	-	-	-

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

PROJECT: NASB

Semivolatile Organic Aqueous Analysis (ug/L)

01/20/93

Table 3
Summary Table

SAMPLE LOCATION:	SRSWXX3XXX01XX	SRSWXX4XXX01XX	SRSWXX5XXX01XX	SRSWXX6XXX01XX	SRSWXX7XXX01XX
LAB NUMBER:	BNASW3*4 #	BNASW3*6 #	BNASW3*7 #	BNASW3*8 #	BNASW3*16 #
DATE SAMPLED:	11/10/92	11/10/92	11/10/92	11/10/92	11/11/92
DATE EXTRACTED:	11/12/92	11/12/92	11/12/92	11/12/92	11/12/92
DATE ANALYZED:	11/23/92	11/24/92	11/24/92	11/24/92	11/24/92
ANALYTE SOW-3/90 - II CRQL					
3-Nitroaniline 25	-	-	-	-	-
Acenaphthene 10	-	-	-	-	-
2,4-Dinitrophenol 25	-	-	-	-	-
4-Nitrophenol 25	-	-	-	-	-
Dibenzofuran 10	-	-	-	-	-
2,4-Dinitrotoluene 10	-	-	-	-	-
Diethylphthalat 10	-	-	-	-	-
4-Chlorophenyl-phenylether 10	-	-	-	-	-
Fluorene 10	-	-	-	-	-
4-Nitroaniline 25	-	-	-	-	-
4,6-Dinitro-2-methylphenol 25	-	-	-	-	-
N-Nitrosodiphenylamine 10	-	-	-	-	-
4-Bromophenyl-phenylether 10	-	-	-	-	-
Hexachlorobenzene 10	-	-	-	-	-
Pentachlorophenol 25	-	-	-	-	-
Phenanthrene 10	-	-	-	-	-
Anthracene 10	-	-	-	-	-
Carbazole 10	-	-	-	-	-
Di-n-butylphthalate 10	-	-	-	-	-
Fluoranthene 10	-	-	-	-	-
Pyren 10	-	-	-	-	-
Butylbenzylphthalate 10	-	-	-	-	-
3,3'-Dichlorobenzidine 10	-	-	-	-	-
Benzo(a)Anthracene 10	-	-	-	-	-
Chrysene 10	-	-	-	-	-
bis(2-Ethylhexyl)phthalate 10	-	-	-	-	-
Di-n-octylphthalate 10	-	-	-	-	-
Benzo(b)Fluoranthene 10	-	-	-	-	-
Benzo(k)Fluoranthene 10	-	-	-	-	-
Benzo(a)Pyrene 10	-	-	-	-	-
Indeno(1,2,3-c,d)Pyrene 10	-	-	-	-	-
Dibenz(a,h)Anthracene 10	-	-	-	-	-
Benzo(g,h,i)peryl ne 10	-	-	-	-	-
Dilution Factor:	1.00	1.00	1.00	1.00	1.00
Associated Method Blank:	62780	62780	62780	62780	62780
Associated Equipment Blank:	-	-	-	-	-
Associated Field Blank:	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX	SRQBXX1XXX01XX

Site: SURFACE WATER
#: Level D Validation J: Estimated E: Exceeds calibration range R: Unusable
U: Not detected B: Blank contamination D: Diluted result -: Not detected

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-103
SOIL (ug/kg)

SEMIVOLATILE

	MESDXX1XXX02XX
2-Cyclohexen-1-one	220 JN
Benzaldehyde,4-hydroxy-	176 JN
Benzaldehyde,4-hydroxy-3-methoxy-	192 JN
Hexadecanoic Acid	400 JN
Nonacosane	3800 JN
Unknown Alkane	8100 J(3)
Stigmast-5-en-3-ol,(3.beta.24s)-	6600 JN
Unknowns	22000 J

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-104
SOIL (ug/kg)

SEMIVOLATILE

	MEPSXX2XX101XX	MESSXX1XX101XX	MESSXX1XX101XD	MESSXX2XXX01XX
Unknown Alkane	1020 J	900 J	800 J	5800 J
Tricosane	440 JN			
Docosanoic Acid	540 JN			
Nonacosane	680 JN	780 JN	720 JN	11000 JN
Heptacosane		400 JN		8200 JN
Unknown	7600 J(3)	1300 J(2)	2000 J(3)	24000 J(7)
2-Cyclohexen-1-one		190 JN	180 JN	
Decanedioic Acid, Didecyl Ester				1100 JN

	MESSXX3XXX01XX	SRPSXX1XX301XX	SRPSXX1XX401XX	SRPSXX2XX201XX
.Alpha.-Pinene, (-)-	800 JN			
Hexadecanoic Acid	440 JN			
9,12-Octadecadienoic Acid, M	380 JN			
Heptacosane	7300 JN(2)			
Eicosanoic Acid-	980 JN			
Docosanoic Acid	2600 JN			
Nonacosane	2000 JN			1600 JN
Unknown Alkane	2000 J			1100 J
Stigmast-5-EN-3ol, (3.Beta.,	4400 JN			
Unknown	20000 J(6)		4400 J(5)	8400 J(5)
Ethanol, 2,2'-oxybis-		340000 JN		
Ethanol, 2,2'-[1,2-Ethanediylbis-(oxy)]Bis-		30000 JN		
Benzaldehyde			82 JN	

	SRPSXX3XX401XX	SRPSXX4XX201XX	SRSSXX1XXX01XX	SRSSXX2XXX01XX
2-Cyclohexen-1-one	340 JN			
Nonacosane	700 JN		9400 JN	22000 JN
Unknown	8300 J(6)	3800 J(5)	29000 J(8)	39000 J(8)
Phenanthrene,1,2,3,4,4a,9,1		340 JN		
9-Octadecenoic Acid (2)-		360 JN		
Stigmast-5-EN-3ol,(3-Beta.,		1300 JN	2200 JN	
Unknown Alkane			6000 J	15000 J
Heptacosane				9200 JN

	SRSSXX3XXX01XD	SRSSXX3XXX01XX	SRSSXX4XXX01XX	SRSSXX5XXX01XX
.Alpha.-Pinene,(-)	1100 JN	660 JN		920 JN
2-.Beta.-Pinene	2400 JN			
Heptacosane	10400 JN			2400 JN
Nonacosane	20000 JN	22000 JN	15000 JN	2800 JN
Unknown Alkane	9600 J	10400 J	6200 J	3200 J
Unknown	28000 J(6)	48000 J(8)	21000 J(6)	4600 J(3)
Stigmast-5-EN-3ol,(3.Beta.,	6800 JN			
9-Hexadecanoic Acid				340 JN
Hexadecanoic Acid				580 JN

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-104
SOIL (ug/kg)

SEMIVOLATILE cont.

	SRSSXX6XXX01XX
Nonacosane	3600 JN
Unknown Alkane	2600 J
Unknown	10400 J(6)

NO SEMIVOLATILE TICs WERE IDENTIFIED IN THE FOLLOWING SAMPLES:

MEPSXX1XX101XX

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-109
SOIL (ug/kg)

VOLATILE

	SRPSXX4XX201XX	SRSDXX3XXX01XX	SRSDXX3XXX01XD
Trimethyl Silanol	5 J	22 J	
Alpha-Pinene(-)-			27 JN

NO VOLATILE TICs WERE IDENTIFIED IN THE FOLLOWING SAMPLES:

SRSSXX2XXX01XX SRSSXX5XXX01XX
SRSSXX3XXX01XD SRSSXX6XXX01XX
SRSSXX3XXX01XX SRSDXX2XXX01XX
SRSSXX4XXX01XX

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-110
AQUEOUS (ug/L)

SEMIVOLATILE

	SRQSXX5XXX01XX	MEQSXX6XXX01XX	SRSWXX2XXX01XX	SRSWXX3XXX01XX
1-Hexanol, 2-ethyl-	7 JN	2 JN		
Hexanoic Acid, 2-ethyl	59 JN	56 JN		
9-Octadecenoicacid (Z)-	22 JN			
9-Hexadecenoic Acid		28 JN		
7-Oxabicyclo[4.1.0]heptane			3 JN	
Cyclohexanol				40 JN
Benzene,1-methyl-4-(1-methylethyl)-				3 JN
Camphor				3 JN

	SRSWXX3XXX01XD	SRSWXX5XXX01XX	SRSWXX1XXX01XX	MESWXX1XXX01XX
Fenchone	2 JN			
Camphor	4 JN			
Unknown Alkane	4 JN			3 JN
Cyclohexanol		10 JN	30 JN	
2-Cyclohexen-1-ol				2 JN
1,2-Cyclohexanediol				2 JN

	MESWXX2XXX01XX	MESWXX3XXX01XX	MESWXX4XXX01XX	MESWXX4XXX01XD
2-Cyclohexen-1-ol	2 JN	4 JN		
2-Cyclohexen-1-one	2 JN		2 JN	
7-Oxabicyclo[4.1.0]heptane		4 JN		3 JN
.Alpha.-Pinene,(-)-		11 JN		
endo-Borneol		3 JN		
l-.alpha.-Terpineol		5 JN		
1-Cyclohexanedimethanol		5 JN		

	SRSWXX7XXX01XX	SRQSXX3XXX01XX	SRQBXX1XXX01XX
Cyclohexanol	62 JN		
1-Hexanol,2-ethyl-		5 JN	4 JN
Octadecanoic Acid, butylester		10 JN	

NO SEMIVOLATILE TICs WERE IDENTIFIED IN THE FOLLOWING SAMPLES:

SRSWXX4XXX01XX SRSWXX1XXX01XXDL
SRSWXX6XXX01XX SRDWXX1XXX01XX

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-111
AQUEOUS (ug/L)

SEMIVOLATILE

	SRQSXX4XXX01XX
Hexanal,2-ethyl-	10 JN
1-Hexanol,2-ethyl-	300 JN
Hexanoic Acid, 2-ethyl-	18 JN
Unknown	23 J(5)

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-112
SOIL (ug/kg)

SEMIVOLATILE

	SRSDXX2XXX01XX	SRSDXX3XXX01XX	SRSDXX3XXX01XD	SRSDXX5XXX01XX
Naphthalene, 1,2,3,4-Tetrahydro-1,6-dimethyl-4(1-methylethyl)-, (1s-cis)-	320 JN	560 JN	760 JN	
Hexadecanoic Acid	480 JN	720 JN		98 JN
1-4a.beta.-Dimethyl-7-isopropyl-1,2,3,4,4a,9,10,10a.alpha.-octahydrophenanthrene	1100 JN	1200 JN		
Phenanthrene,1-methyl-7-(1-methylethyl)-	11000 JN			
Cyclohexane,1-methyl-4-(1-methylethyl)-,cis			1000 JN	
Heptacosane	4800 JN	11000 JN		
Unknown Alkane	7400 J(2)	5600 J	64000 J(4)	1700 J(3)
Stigmast-5-en-3-ol,(3.beta.,24s)-	11000 JN	7400 JN	17000 JN	
.5.Alpha.-Stigmast-3-one	1100 JN			
Tricosane		1500 JN		
.3-Eicosene,(E)-		5200 JN		
Nonacosane		15000 JN		
9-Hexadecenoic Acid				520 JN
Oxacyclohexadecan-2-one,16-methyl-				120 JN

	MESDXX2XXX01XX	MESDXX3XXX01XX	MESDXX4XXX01XX	MESDXX4XXX01XD
Hexadecanoic Acid	800 JN	120 JN		740 JN
Unknown Alkane	13000 J(3)	340 J		15000 J(3)
Tricyclene	400 JN			
.Alpha.-Pinene,(-)-	2400 JN	240 JN		
Camphene	2400 JN	280 JN		
2-.Beta.-Pinene	520 JN			
.Delta.3-Carene	660 JN			
endo-Borneol	340 JN			
Exobornyl Acetate	4000 JN			
trans-Caryophyllene	240 JN			
Stigmast-5-en-ol,(3.beta.,24s)-	7200 JN	1800 JN		4000 JN
Sandaracopimaradiene Isomer		1100 JN(2)		
Benzene,1-Methyl-2-(1-methylethyl)-			900 JN	
1,4a.beta.-Dimethyl-7-Isopropyl-1,2,3,4,4a,9,10,10a.alpha.-Octahydrophenanthrene				
Triacontane			2200 JN	
Nonahexacontanoic Acid			2600 JN	
Benzaldehyde,4-hydroxy-3-methoxy			9000 JN	
Tricosane				260 JN
Docosanoic Acid				1700 JN
				1400 JN

br112s

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-112
SOIL (ug/kg)

SEMIVOLATILE cont.

	SRSDXX7XXX01XX
.Alpha.-Pinene,(-)-	820 JN
Camphene	180 JN
2-.Beta.-Pinene	240 JN
trans-Caryophyllene	110 JN
Hexadecanoic Acid	200 JN
Unknown Alkane	7000 J
3-Eicosene,(E)-	3000 JN
Nonahexacontanoic Acid	660 JN
Heptacosane	4000 JN
Stigmast-5-en-3-ol,(3.beta.,24s)-	2800 JN

NO SEMIVOLATILE TICs WERE IDENTIFIED IN THE FOLLOWING SAMPLES:

SRSDXX4XXX01XX
SRSDXX6XXX01XX
SRSDXX1XXX01XX

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-113
SOIL (ug/kg)

VOLATILE

	MESSXX3XXX01XX	SRPSXX1XX301XXX	SRPSXX1XX401XX
Ethanol	9 JN	530 JN	6 JN
Hexane	12 JN		
Alpha-Pinene,(-)-	9 JN		
2-Propanol		19 JN	
1,3-Dioxolane,2-Methyl-		23 JN	
Cyclohexanol		33 JN	

NO VOLATILE TICs WERE IDENTIFIED IN THE FOLLOWING SAMPLES:

MEPSXX1XX101XX	MESSXX1XXX01XD	SRPSXX3XX401XX
MEPSXX2XX101XX	MESSXX2XXX01XX	SRSSXX1XXX01XX
MESSXX1XX101XX	SRPSXX2XX201XX	

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

br113s

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-114
AQUEOUS (ug/L)

VOLATILE

	SRQSXX5XXX01XX
Hexanal,2-ethyl-	5 JN

NO VOLATILE TICs WERE IDENTIFIED IN THE FOLLOWING SAMPLES:

MEQSXX6XXX01XX

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-115
SOIL (ug/kg)

VOLATILE

	MESDXX1XXX01XX	MESDXX2XXX01XX	MESDXX3XXX01XX
Silanol,Trimethyl-	33 JN	7 JN	6 JN

NO VOLATILE TICs WERE IDENTIFIED IN THE FOLLOWING SAMPLES:

SRSDXX5XXX01XX SRSDXX1XXX01XX
SRSDXX7XXX01XX MESDXX4XXX01XX
SRSDXX4XXX01XX MESDXX4XXX01XD
SRSDXX6XXX01XX

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

TENTATIVELY IDENTIFIED COMPOUND (TIC) SUMMARY
FOR NASB; FILE: 7126-117
AQUEOUS (ug/L)

VOLATILE

	MESWXX3XXX01XX	SRQTXX2XXX01XX
1,3-Butadiene,2-Methyl-	10 JN	
Acetaldehyde		1 JN

NO VOLATILE TICs WERE IDENTIFIED IN THE FOLLOWING SAMPLES:

SRSWXX3XXX01XX	SRSWXX6XXX01XX	MESWXX2XXX01XX	SRQSXX3XXX01XX
SRSWXX3XXX01XD	SRQTXX1XXX01XX	MESWXX4XXX01XX	SRDWXX1XXX01XX
SRSWXX4XXX01XX	SRSWXX1XXX01XX	MESWXX4XXX01XD	SRQBXX1XXX01XX
SRSWXX5XXX01XX	MESWXX1XXX01XX	MESWXX7XXX01XX	

J: Estimated N: Presumptive Evidence A: Aldol-Condensation Product

APPENDIX F

REGULATORY/TECHNICAL REVIEW COMMITTEE COMMENTS ON DRAFT SITE INSPECTION REPORT AND NAVY RESPONSES

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

July 20, 1993

Mr. James Shafer
Northern Division
Naval Facilities Engineering Command
Code 1821/JS
10 Industrial Hwy., Mail Stop #82
Lester, PA 19113-2090

Re: Draft Site Inspection
Swampy Road Debris Site
Merriconeag Extension Debris Site
NAS Brunswick

Dear Jim:

The United States Environmental Protection Agency (EPA) has reviewed the document entitled "Draft Site Inspection, Swampy Road Debris Site, Merriconeag Extension Debris Site, Naval Air Station Brunswick, Brunswick, Maine" dated June 1993.

This report concludes that there are no site-related contaminants which exceed background levels at either the Swampy Road or Merriconeag Extension Debris Sites. The report further recommends that the only action needed at either of these sites is the removal of surface debris. In general, EPA will not make a final determination on this recommendation until the Navy responds to our comments. However, based on the information presented in the Draft Site Investigation report EPA believes that additional sampling may be necessary at the Swampy Road Debris Site to better define a possible lead problem that may be associated with dumping in the area.

Once the Navy has provided a response to EPA's comments, which are included in Attachment I to this letter, we recommend that the parties discuss whether Remedial Investigations are warranted at these sites. If at such time, there is no reason to initiate a Remedial Investigation, the Navy will have to prepare a Decision Document justifying that no further actions are warranted under the CERCLA authority. This document will require approval from EPA prior to finalization. If a Decision Document is signed and approved, any debris removal that takes place will not be carried out under CERCLA authority and will not be subject to the terms of the Federal Facility Agreement.

SAVE IT!

If you have any questions regarding this letter or EPA's comments, please contact me at (617)573-5785.

Sincerely,

Meghan F. Cassidy

Meghan F. Cassidy
Remedial Project Manager

cc: Nancy Beardsley/ME DEP
Jim Caruthers/NASB
Bob McGirr/ABB Environmental
Susan Weddle/BASCE
Sam Butcher/Harpswell Community Rep.
Rene Bernier/Topsham Community Rep.
Bob Lim/EPA

ATTACHMENT I

The following comments pertain to the document entitled "Draft Site Inspection, Swampy Road Debris Site, Merriconeag Extension Debris Site" dated June 1993. The report was submitted by the Department of the Navy for the Naval Air Station Brunswick in Brunswick, Maine.

1. Page E-2, ¶ 1: The discussion regarding "background" levels is unclear as it is written. The text states "Analysis of surface and subsurface soils indicated the presence of localized areas of chemicals at concentrations above site background levels." The next statement says "However, the detected concentrations are typically within background concentrations ..." Clearly indicate what is/is not background, and indicate how background was established and evaluated against on-site concentrations.

2. Page E-2, ¶ 1: Add the following after the first sentence in this paragraph.

   "In addition to visual surface inspections and the magnetometer surveys, a total of eight test pits for both debris sites were excavated on areas with anomalous magnetometer readings."

3. Section 2.0, **Identification of Site-Specific Applicable or Relevant and Appropriate Requirements (ARARs):** It is unclear why this section is included so early in the text of this report and why such a detailed ARARs analysis was done at the SI stage. Typically, the level of detail included in this section is not appropriate for an SI. At a minimum, this section should be placed after the more pertinent site-specific (Sites 15 & 16) information.

4. Page 2-5, Table 2-1: The statement in the last sentence of the last column of this table "HAs are established for one-day and ten-day exposure durations" needs to be revised as HAs are established for lifetime, longer-term, ten-day and one-day exposure durations.

5. Page 2-9 through 2-14, Table 2-2: Add the words "Longer-term" on the column of Health Advisories between 10-day and lifetime.

6. Page 2-15, ¶ 2, last sentence: The statement "The state MCL/MEG values are also included in Table 2-2" is inappropriate, because only state MEG values are listed in Table 2-2.

7. Page 2-16, ¶ 2, last two sentences: The statements "The AWQC for carcinogens, zero, are not considered applicable or relevant and appropriate because they can not be measured. This policy is consistent with the zero value for MCLGs under the SDWA.", are not appropriate because AWQC for carcinogens are not set at zero but MCLGs are. AWQC are standards, MCLGs are health goals. Clarify the text.

8. Page 3-3, Figure 3-1: The symbols "MAG-PT1", "MAG-PT2", and "MAG-PT3" are shown on the figure map but are not defined in either the Figure legend or the text.

9. Page 3-4, Figure 3-2: A visible debris area is indicated in Figure 3-2 approximately 50 feet southeast of the survey zone. Explain why the magnetometer survey did not cover the area surrounding this debris area.

10. Page 3-4, Figure 3-2: The symbols "MAG-PT1", "MAG-PT2", and "MAG-PT3" are shown on the figure map but are not defined in either the Figure legend or the text.

11. Page 3-11, ¶ 2: The text should provide the rationale for sampling the "mucky wet flood zone west of the stream".

12. Page 3-11, second paragraph: The statement "These samples would then be expected to have unusually high concentrations of inorganics consistent with values for organic-rich waters and clay (see Section 3.8)" is not clearly or adequately discussed in either Section 3.8 or 3.4. Provide additional rationale.

13. Page 3-11, ¶ 3, 1st sentence: The word "samples" is mis-spelled. It should be "sampled".

14. Page 3-12, last paragraph: The text refers to the CLP as the <u>Control</u> Laboratory Program; this should be corrected to indicate that it is the <u>Contract</u> Laboratory Program. (It is correctly referred to in the list of abbreviations and acronyms).

15. Page 3-12, last paragraph: Delete the comma after TCL in the phrase "...VOCs, TCL, semivolatile organic compounds (SVOCs), ..."

16. Page 3-13, ¶ 1: The text should include a brief explanation why hardness is measured.

17. Page 3-15, Table 3-1: The word "hardness" appears in the table below the heading "Asbestos". This appears to be an error. Also, clarify whether the number of samples appearing under th "Asbestos" heading relate to asbestos or hardness.

18. Pages 3-16 and 3-17, Table 3-2: This table should represent actual sampling. The text indicates that hardness was not included in the analyses, with the exception of one sample. This and any other observed discrepancies should be corrected.

19. Pages 3-27 through 3-36: The text uses laboratory assigned samples numbers when discussing results of the analyses. These laboratory numbers should be omitted from the text and actual sample locations, as shown on the figures, must be included.

20. Page 3-32, last paragraph: The text states that the holding times were exceeded for the extraction of soil. Identify the correct holding times.

21. Page 3-41, Footnote Nos. 1 and 2: Provide the locations (not laboratory assigned identification numbers) for the sand and silt/clay samples used to define background.

22. Page 3-42, ¶ 1: Background concentrations for PAHs have been established or requested for several specific sites at NAS Brunswick in the past. Specifically, PAHs have been present in soils at Sites 1 and 3, Site 8 and Site 9. Background concentrations from these sites must be presented and referred to as background instead of or in conjunction with literature values.

23. Page 3-44, ¶ 1, last sentence: This sentence refers to duplicate samples for SW-4/SD-4. Results from both samples must be presented and compared before assuming that using the highest concentrations for each analyte as a background value is justified.

24. Page 3-44, ¶ 3: The text should indicate where the "background" sediment PAH values were collected. Also, at this time EPA believes that there are other PAH sediment values (Site 8, Site 9) that should be considered when calculating background sediment values for PAH.

25. Page 4-8, first paragraph: Describe the location of well MW-Golf-1 in relation to TP-5 and show its location on Figure 4-1.

26. Page 4-11, ¶ 1: The text refers to 18,000 ug/kg carcinogenic PAH as a clean-up level which was used at Site 8. A clean-up level of 18,000 ug/kg was never agreed to for remediation at Site 8. Reference to this level in the text should be deleted and the levels of cPAH found at Sites 15 and 16 compared to background levels, and if appropriate preliminary risk calculations must be made to determine if the concentrations found pose a possible risk.

27. Page 4-12, ¶ 2: It appears that lead levels in soil, surface water and sediment samples exceed background levels in the northern portion of the Swampy Road Debris Site. Given that lead is observed in all media in this general area, lead cannot be immediately dismissed as a background issue. More attention and discussion regarding the presence of lead needs to be included.

28. Page 4-16, ¶ 1: The text should indicate the rationale for selecting location SD-7 as a sampling location since it in conjunction with SD-1 resulted in two background (upstream locations).

29. Page 4-16, ¶ 2: The text must include an explanation as to why BEHP might be present in the samples if it is not a site-related contaminant. Is this compound a common laboratory contaminant? Specify the result of validation on the sample where the BEHP was detected.

30. Page 4-17, ¶ 2: Provide an explanation regarding the presence of lead at higher than background levels.

31. Page 4-17, ¶ 1, and page 5-12, ¶ 2: If surface water is not used for potable purposes, it is not appropriate to compare the contaminant concentrations to drinking water MCLs or SMCLSs.

32. Page 5-4, ¶ 1: The end of this paragraph indicates that magnetometer target areas were typified by the presence of assorted surficial debris materials. However, according to Table 5-1, no surface debris was observed at either TP-1 or TP-3 areas. Clarify this apparent discrepancy.

33. Page 5-7, ¶ 3: The third and fourth sentence of this paragraph which refer to a clean-up level for cPAH that was established for Site 8 must be deleted from the text. As stated previously, the parties did not come to consensus on a clean-up level at Site 8 and since the selected remedy for Site 8 results in the removal of PAH contaminated surface soils at Site 8 the issue was never fully resolved. Therefore preliminary risk calculations should be made to determine whether the cPAH levels presented in this report present any risk.

34. Page 5-9, ¶ 2: Provide additional detail in the text as to how localized dumping of trash may have resulted in the presence of 4,4'-DDT at SS-2.

35. Page 5-12, ¶ 2: It is not appropriate to compare surface water that is not a source of potable water to MCLs. Instead the surface water should compared to AWQC. Delete any reference to comparison to MCLs and ensure that the appropriate AWQC are used for comparison.

36. Page 6-1, ¶ 1: Add "cation exchange capacity" to applicable physico-chemical properties for inorganic constituents.

37. Page 6-2, second paragraph, and page 6-3, Table 6-1: Table 6-1 lists only the volatile and semi-volatile organic compounds, but the text (first sentence, second paragraph) implies physico-chemical properties for <u>all</u> contaminants found at the site are listed in the Table. Please correct this apparent discrepancy.

38. Page 6-10, ¶ 2, 2nd sentence: This sentence indicates that the absence of pesticides in the Swampy Road Debris Site sediment is a result of adsorption and mobility. The text should also indicate that the lack of any pesticides may be because pesticides were not widely used in the area.

39. Page 7-1, 2nd bullet: The conclusion presented here indicates that inorganics in surface and subsurface soils at the Swampy Road Debris Site were consistent with background concentrations. However, the discussion on page 4-12 indicates that there were some detections of lead in soils that exceeded background. This conclusion must be revised to reflect actual analytical results.

40. Page 7-2, 1st bullet: The conclusion presented here indicates that no contaminants were detected above background levels in stream sediments of the main stream channel. However, according to pages 4-16 and 4-17 lead was detected above background levels. This conclusion must be revised to reflect actual analytical results.

41. Section 7.2, **Merriconeag Extension Debris Site**: The conclusions presented in this section should include a statement regarding the presence of the asbestos pipe located at this site and a recommendation that this material be removed as a separate action by an asbestos contractor.

42. Page 7-3, 2nd bullet: The text indicates that analytical results did not detect concentrations of contaminants above background levels. However, according to page 5-10 "exceedances of site background concentrations for inorganics were noted in the soil samples". The conclusions presented must be revised to be consistent with actual results.

Response to U.S. Environmental Protection Agency Comments
Dated July 20, 1993

1. The text makes the distinction between those concentrations considered to represent **site-specific** background conditions and those considered representative of **NAS Brunswick** background or background established elsewhere (literature) as "background". While site-specific background samples were designated for sediments and surface waters, no such background samples were collected for soils. In the absence of site-specific background soil values, soil samples previously collected and analyzed from other locations on the base were evaluated to establish NAS Brunswick background conditions. This section of the Executive Summary also references the appropriate section for detailed information. The text has been expanded to clarify these distinctions.

2. The text recommended in the comment has been added.

3. The discussion of ARARs is located consistent with EPA guidance for RI reports. In response to this comment, the ARARs discussion has been moved into an appendix.

4. The sentence has been revised as suggested.

5. The change recommended in the comment has been made.

6. The text and the table have been revised to be in agreement.

7. The text has been clarified.

8. The symbols have been added to the figure legend and have been clarified in the text.

9. This small debris area appears to be the result of disposal by people driving down the dead-end access road and dumping household trash along the north slope. This area was found after the magnetometer survey was completed (see page 5-9) and was thus not included in that survey. However, once it was discovered, it was included as a surface soil sampling location (SS-2). This information has been added to the document.

10. The symbols have been added to the figure legend.

11. As stated on page 4-18 of the Site Inspection Work Plan, "Final sampling locations will be developed based on...the presence of any discolored (orange or rusty) wet areas adjacent to the stream (e.g. leachate seeps)." Locations SW-2/SD-2 and SW-3/SD-3 were chosen based on this rationale as well as

their locations being downslope of areas containing large amounts of refuse. The text has been modified to include this information.

12. Additional rationale has been provided.

13. The typographical error has been corrected.

14. The sentence has been corrected in accordance with this comment.

15. The comma has been deleted.

16. Hardness was specified in the SI Work Plan because it is a typical analysis performed on drinking waters and is sometimes useful for the interpretation of other analytical data. This information has been added to the text.

17. The table has been corrected to show the number of samples collected and analyzed for hardness.

18. The table has been amended to note that hardness was, with one exception, calculated from the calcium and magnesium values, rather than measured in the laboratory. The remainder of the table is correct as presented.

19. The use of the sample identification numbers, which were assigned by ABB-ES in the field and not by the analytical laboratory, is the least ambiguous way of identifying the particular samples being discussed. For ease in interpreting the sample identification numbers, the first two pages of Appendix D have been repeated in this section.

20. The NEESA holding time for extractions for pesticides/PCBs is 10 days from the date of sampling. This information has been added to the text.

21. A more intelligible explanation of the locations of the samples used for calculation of background concentrations has been added to the table.

22. Background concentrations for PAHs in **soils** at other IRP sites at NAS Brunswick have not specifically been identified in earlier documents. PAHs in **sediments** at locations considered to represent background conditions have been evaluated in earlier studies and are summarized in the last paragraph of Subsection 3.8.

23. Duplicate samples were collected at location SW-4/SD-4 at the Merriconeag Extension Debris Site, which was sampled as the background location. Data for both samples are presented in Appendix D. The higher of the two values for each analyte was selected as the site background concentration. This approach is consistent with typical practices for risk assessments, in that when

duplicate samples are collected, the higher of the two values for each analyte is used for evaluation.

This approach is also the most sensible one. If the lower of the two values were used, then each analyte would, in the other sample, always exceed background. Similarly, if an average value is calculated from the two values for each analyte, then the higher concentration for each analyte would again always exceed this average background value. Again, the data would indicate exceedances of background concentrations at the background location.

Additionally, the use of a single location to define site background concentrations is very conservative. Because site background concentrations vary over some range of values, and that all of these values, by definition, are background, only exceedances of the maximum value truly reflect an exceedance of background conditions. Therefore, the likelihood that the single background location selected at these sites contains the highest background concentration for every analyte is minuscule. A more extensive background sampling program would inevitably result in levels higher than those assumed to represent background on the basis of a single location.

24. The two background sediment samples were collected from Mere Brook on the western side of NAS Brunswick. BK1 was collected at the base boundary, and the second sample (BK2) was collected from the brook just west of the runways (E.C. Jordan, 1990, Figure 6-28). Although these two samples were referenced in the text, these values were not used to "screen" any PAH data. This information has been added to the text.

25. MW-Golf-1 has been added to Figure 4-1.

26. The text has been revised to read: "...or material that was burned on site. Observed levels of total carcinogenic PAHs (cPAHs) (benzo(a)anthracene, benzo(b) fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene) ranged up to 2,420 μg/kg. The maximum total cPAH concentration is therefore nearly an order of magnitude lower than the concentration of 18,000 μg/kg cPAH calculated during earlier investigations at NAS Brunswick Site 8 as corresponding to an incremental human health risk of 10^{-5} for a hypothetical future residential exposure (E.C. Jordan Co., 1990; E.C. Jordan Co., 1992b). The calculation used standard USEPA values for all variables. This calculated incremental carcinogenic health risk is at the middle of the USEPA target risk range of 10^{-4} to 10^{-6}. Therefore, the levels of cPAHs observed in these soils are considered to be well below levels of concern calculated as being protective of human health. The values observed ..."

27. The lead levels were not attributed to background concentrations; in fact, the text in the referenced paragraph specifically notes that inorganics exceeding

NAS Brunswick background concentrations were noted in every soil sample. In soils, lead was detected at concentrations exceeding NAS Brunswick background concentrations in every soil sample except that from TP-4 (Figure 4-2). Background lead concentrations at the base have been documented as ranging up to 6 mg/kg in sands to 16 mg/kg in silts/clays (Table 3-6, formerly Table 3-5) With one exception, lead concentrations at the Swampy Road site ranged from 10.5 mg/kg to 44.4 mg/kg. These levels are therefore about two to seven times NAS Brunswick background concentrations and may or may not indicate site-related contamination. Sample SS-4 was specifically noted in the text as having a lead concentration of 1,250J mg/kg. The cause of this high value is not known.

The only surface water and sediment samples at Swampy Road in which lead exceeded site background levels were from SW-7/SD-7 (Figure 4-3). This is also discussed in the text. However, the location of SW-7/SD-7 is **upstream** of the debris site, as the text also notes, and not "in the northern portion of the Swampy Road Debris Site" as the comment alleges. All surface water samples adjacent to and downstream of the debris site had lead concentrations below site background levels. As the text explains, the surface water lead concentration (21.9 μg/L) at SW-7 exceeds the SDWA Action Level (15 μg/L), but (as USEPA Comment 35 notes), comparison to SDWA MCLs (or Action Levels) is not appropriate because the stream is not used as potable water. The SW-7 lead concentration exceeds the chronic AWQC of 3.2 μg/L, but not the acute AWQC of 83 μg/L. The three other surface water samples from the main channel (SW4, SW5, and SW6) were all non-detect for lead. The text has been revised to add this information.

28. Both locations SD-7 and SD-1 were identified in the SI Work Plan as being locations representative of background conditions.

29. As already noted in the text, Bis(2-ethylhexyl)phthalate (BEHP) (and all other phthalates) is recognized by the USEPA as a common laboratory contaminant (USEPA, 1988; *Region I Laboratory Data Validation: Functional Guidelines for Evaluating Organic Analysis;* USEPA, 1989; *Risk Assessment Guidance for Superfund)*. The text concludes that BEHP and acetone are not site-related contaminants, but are instead sampling and/or laboratory artifacts. Additionally, the text notes that the lone BEHP detection was in the upstream (background) surface water sample. Furthermore, BEHP is widely recognized as a ubiquitous contaminant of virtually all soil and water ecosystems (Casarett and Doull, 1986; *Toxicology: The Basic Science of Poisons*). For these reasons, the BEHP is interpreted as being an artifact and not a site-related contaminant.

30. Please see response to comment 27. In addition, it must be emphasized that background, or non-site-related, concentrations of inorganics have not been well characterized as a result of an extensive sampling and analytical program.

The level of effort required for an extensive sampling program is not considered appropriate, given the chemical concentrations observed at these sites. It is entirely possible that the concentrations observed are representative of background conditions, not above background as the data currently suggest. Without more information, the levels observed cannot be explained beyond what is currently in the document.

31. We agree that MCLs should not be considered as ARARs; they were used only as a means of providing a framework within which to evaluate the values. However, given the confusion that this creates, the reference to MCLs has been deleted and references to AWQC clarified.

32. Surface debris was not observed at either TP-1 or TP-3. This paragraph has been revised to address this inconsistency.

33. This text has been revised to more accurately reflect the calculations that had previously been performed for Site 8. See response to Comment No. 26.

34. The text has been revised to address this comment. The speculation is that materials contaminated with 4,4'-DDT, for example cans or spraying equipment, may have been dumped here.

35. Please see response to comment 31.

36. "Cation exchange capacity" has been added as requested in the comment.

37. Table 6-1 is entitled "Physico-Chemical Properties of Organic Site Contaminants" and therefore presents information on **organic** compounds detected at the sites, not all compounds (which would include inorganic analytes) detected. The text has been revised to clarify this point.

38. The text has been revised in accordance with this comment.

39. The second bullet has been revised to read: "Surface and subsurface soils do not contain site-related VOCs and have only low levels of SVOCs and pesticides consistent with NAS Brunswick background levels and published concentrations for uncontaminated soils. A limited number of inorganics were detected at concentrations above those considered to represent base background conditions."

40. This bullet has been revised to read: "Stream sediments collected from the main channel of the unnamed stream adjacent to and downstream of the debris did not contain contaminants above background levels. One sediment sample upstream of the observed debris contained the inorganics arsenic, beryllium, cobalt, lead, and sodium at concentrations above site background levels."

41. The following bullet has been added: "Two lengths of asbestos-cement piping are located on the ground surface. Two samples collected from beneath the piping showed no evidence of asbestos. This piping should be disposed as solid waste in accordance with all applicable laws."

42. The bullet has been revised to read: "Surface and subsurface soil sample analyses detected no VOCs. Several SVOCs were detected at concentrations similar to or lower than those presented in the literature as representative of uncontaminated conditions. Two samples had detectable concentrations of pesticides, one at a level interpreted as a residual concentration from former spraying and one detection that may reflect disposal of pesticides or pesticide-containing materials. No PCBs were detected. Four or more inorganic analytes were detected in every soil sample at levels above those previously established for NAS Brunswick as representative of background conditions."

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN R. McKERNAN, JR.
GOVERNOR

DEAN C. MARRI
COMMISSIONER

DEBRAH RICHARD
DEPUTY COMMISSIONER

July 29, 1993

Mr. James Shafer
Project Manager, Code 1821
Department of the Navy, Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mailstop 82
Lester, Penn. 19112-2090

Dear Jim:

The Maine Department of Environmental Protection has received and reviewed the Draft Site Inspection for the Swampy Road Debris Site and the Merriconeag Extension Debris Site dated June 1993 located at the Naval Air Station, in Brunswick, Maine. The Department's comments are provided below.

Please call me if you have any questions or comments.

Sincerely,

SLR for Nancy Beardsley

Nancy Beardsley
Project Manager, Federal Facilities Unit
Office of the Commissioner

cc: Meghan Cassidy, USEPA
Jim Caruthers, NAS Brunswick
Carolyn Lepage, R.G. Gerber Inc.
Steve Mitchell, ABB ES
Rene Bernier, Topsham
Sam Butcher, Harpswell
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General Comments:
The scales on the figures showing sampling locations and geophysical surveys need to be drawn at the same scale. The legend scale should match the scale bar for each figure.

Executive Summary:
Page E-1, last sentence.
Please clarify the meaning of the last sentence on page E-1. What disposal predates establishment of the NAS? A better description is found on page 4-2.

Section 2
Page 2-1
Is this the appropriate position in an SI Report for a discussion of ARARs?

Section 2.2.1
Page 2-16, Second paragraph.
The discussion on AWQC is very confusing. You may want to rewrite the second paragraph. Because the defection limit is below the AWQC for carcinogens does not render AWQC not applicable or appropriate and relevant to these sites.

Section 3
Figure 3-3
Please provide a plan showing the stream upstream of SWI/SD1.

Section 3.4 Surface Water and Sediment Sampling
Page 3-11, Second paragraph.
Explain the rational for the sampling procedure used to collect samples SW-2/SD-2 and SW-3/SD-3. What information did you get for sampling the mucky sediments and associated groundwater? How will the results of the sampling be interpreted? Why was this approach used at only two locations? Should the other sampling locations have been sampled in this manner?

Section 3.8
Table 3-5
Some of the background sample locations as found in the "Draft Final RI Report" appear to be located in areas or downgradient of areas that have been delineated as areas of known contamination. Can you supply justification for these background locations noted in the 'Notes' section of Table 3-5? MW077105171 is not shown on any plan.

Page 3-42
Please justify SD-1/SW-1 as a background location. It is not clear what SD-1/SW-1 is downstream of.

Section 4
Page 4-5
Explain the relatively higher vertical gradient at the Swampy Road Site compared to the Merriconeag Road Extension Debris Site. Does the higher vertical gradient imply more ferris material at depth?

Page 4-9
Please supply the laboratory results of the oily substance found in TP-1.

Figures 4-2, 4-3, and 4-4
Please include all concentrations equal to or greater than background concentrations. There appears to be some inorganic data missing from these figures for SW-1, SW-4, SW-5, SW-6, SD-3, SS-1, SS-3D, TP-1-3, TP-2-2, TP-3-4, TP-4-2.

Page 4-11
Because SVOCs were detected in TP-3 at four feet deep and in SS-6 at the surface, this may indicate a source area nearby. Please submit additional information to determine if the concentrations detected are site-related contaminants of concern.

Page 4-17, first paragraph. This paragraph is wholly confusing and should be rewritten.

Page 4-17, and 4-18 second paragraph.
The ME DEP does not select a specific exposure in the AWQCs. The most stringent number for a specific contaminant is used as the AWQC. Therefore, arsenic, barium, beryllium, copper, lead, manganese, mercury, nickel, and zinc all have one or more exceedences. How is the sample for DW-1 being interpreted? A comparison to AWQC is not appropriate for drinking water.

Page 4-18
Results from SW-2/SD-2 and SW-3/SD-3.
The text states that you cannot compare these results to the other locations due to the sampling procedures, and comparisons to MCLs and AWQCs is not appropriate. It is not appropriate to dismiss the data.

Section 5 Merriconeag Extension Debris Site Investigation

Section 5.4.1 Magnetometer Survey
Does the magnetic data suggest the presence of ferrous debris is just at the surface, or is it suggesting it extends below the surface?

Page 5-4
What was the depth of effective penetration of the metal detector compared to the magnetometer?

Figure 5-1
This figure shows more than three areas where the contours appear to be detecting ferris material. Why were only three areas selected for testpit investigations?

Area B does not appear to have significant contours defining this area. Why was this area selected over other areas?

Testpit one (TP-1), shown on figure 5-2, does not appear to have been completed within the Area A, shown on Figure 55-1. Was there a limiting factor preventing a testpit from being placed within Area A?

Page 5-7, first paragraph.
How can an expected area of 20 feet by 20 feet be properly evaluated with 20 foot by 20 foot grid stations? If the anomaly was only detected at one station how can the approximate area of extent be 20 feet by 20 feet?

Page 5-7, second paragraph.
Please clarify why a groundwater sample was not collected for TP-3.

Figure 5-2
Please identify the location of TP-3 on this figure.

Page 5-9, second paragraph.
Surface soil sample SS-2 was collected downslope of observed debris. How far away from the debris was this sample taken? Could there be areas of higher concentrations near the debris? Is this area associated with magnetic contours near the edge of the magnetic survey on Figure 5-1?

Page 5-10, second paragraph.
A more accurate conclusion may be that no asbestos fibers were observed in the soil sample submitted for observation.

Page 5-12, second paragraph.
Background concentrations for inorganics.
Table 3-7 shows the results for MESWXX4D not MESWXX4 as indicated in the table. Please correct Table 3-7 and Figure 5-3.

Figure 5-3
Inorganics were detected in SW4/SD4. Please make the appropriate changes.

Section 7.0 Summary and Conclusions

Section 7.1 Swampy Road Debris Site
Second bullet, page 7-2.
Inorganics, found in surface water, that exceeded AWQC included: arsenic (all but two samples), barium (all samples), beryllium (one sample), Copper (one sample), iron (all samples), lead (two samples), manganese (three samples), mercury (two samples), nickel (one sample), and zinc (one sample).

Section 7.2 Merriconeag Extension Debris Site
Fourth bullet, page 7-3.
AWQC values were exceeded for iron, manganese, and mercury.

Response to Maine Department of Environmental Protection Comments
Dated July 29, 1993

General Comments

All figures were drafted at a scale of 1" = 100'. During reproduction for binding, these scales varied somewhat. The scale bars are accurate for these figures and approximately equal for geophysics and sampling location figures. The nominal scaling factor has been deleted to avoid confusion.

Page E-1, last sentence

This sentence has been revised to read: "It appears that debris disposal began prior to the establishment of the NAS in 1942 and has continued sporadically since then."

Section 2

The ARARs discussion has been moved to an appendix.

Section 2.2.1

The second paragraph has been revised for clarity.

Section 3
Figure 3-3

The unnamed stream does not exist upstream of SW-1/SD-1. The stream originates at Swampy Road immediately west of the SW-1/SD-1 sampling location. A very shallow swale which is grassed and used as a driving range for the golf course is just west of the road. A culvert extends underneath the road to drain this swale and essentially forms the head of this stream. (Please note that the culvert underneath the roadway was replaced with a newer one between the time of the sampling (November 1992) and August 1993.) The stream channel may at one time have existed further upstream, before the golf course began using this area.

Section 3.4 Surface Water and Sediment Sampling
Page 3-11, Second Paragraph

The rationale for collecting samples SW-2/SD-2 and SW-3/SD-3 is explained in the response to USEPA Comment No. 11. As noted in the text, the analytical results from these samples, especially the aqueous samples, are difficult to interpret because of the nature in which the samples were collected. The samples from the main channel are more appropriately compared to standards, criteria, etc.

Section 3.8
Table 3-6 (formerly Table 3-5)

As noted elsewhere, the samples from MW-908 may have been impacted by the incinerator ash landfill and have therefore been removed from the background calculations. All samples used in the calculation of background levels were reviewed for appropriateness; several others were also deleted from consideration, and other samples previously collected on base were added. As a result, the maximum reported values in sand decreased for aluminum, calcium, chromium, copper, iron, magnesium, manganese, nickel, potassium, vanadium, and zinc. The comparisons to NAS Brunswick background concentrations have been revised as a result of these changes. Sample MW07705071 was incorrectly labelled as MW077105071; this has been corrected.

Page 3-42

The SD-1/SW-1 location was selected as a site-specific background location because it is upstream of the Swampy Road Debris Site along the unnamed stream. This location is at the head of the stream, which starts at the culvert which runs underneath Swampy Road.

Section 4

Page 4-5

On individual days, the magnetic base station values measured at the Swampy Road Debris Site are not very different from those measured at the Merriconeag Extension Debris Site (see Tables 4-1 and 5-1). These measurements are taken to record the natural diurnal variations that occur during the course of the survey. The degree of natural diurnal variation observed at both sites was not considered large enough to force a correction to the data.

The relative magnitude of the readings, in gammas/meter, are also shown on the two tables. The values reported for the target areas at the Swampy Road Debris Site vary over a broader range than do those at the Merriconeag Extension Debris Site. As with all magnetometer surveys of this type, the magnitudes of the values are a function of the depth, type, and mass of material causing the anomaly. Unfortunately, all of these variables are unknown at both sites. Therefore, the exact cause of the difference in magnitudes can only be speculated. However, the amount of surficial debris observed at the Swampy Road Debris Site was much greater than that observed at the Merriconeag Extension Debris Site. Based on the results of test-pitting conducted at both sites, the amount of buried ferrous material is also substantially greater at the Swampy Road Debris Site. Therefore, the larger magnetometer anomalies are consistent with the amounts of both surficial and buried debris, as observed by test-pitting, at the Swampy Road Debris Site.

Page 4-9

The sample of the oily substance collected in TP-1 at 3 feet bgs was assigned an identification code of "SRPSXX1XX301XX". Results are summarized on Figure 4-2 and presented in Appendix D using this ID. The text and figure were clarified as to the identification of this sample.

Figures 4-2, 4-3, and 4-4

These figures present all organic detections and those inorganic detections greater than either site-specific or NAS Brunswick background concentrations, as explained in the text. The figure legends have been expanded to note that only inorganics above background are presented. In reviewing these figures, we found that the cadmium concentration of 2.1J mg/kg for TP-1 at 3 feet was omitted from Figure 4-2, and the manganese concentration of 91.7 μg/L at SW-5 was omitted from Figure 4-3. These figures have been corrected. No other data was found to be missing, as the comment suggests.

Page 4-11

As already noted in the text, the SVOC detections at TP-3 and SS-6 may be the result of dumping of burned material or burning of material on-site. These compounds may be site-related, even though they are at levels considered in the literature to represent background. The first paragraph on page 4-11 has been rewritten for clarity.

Page 4-17, first paragraph

This paragraph has been deleted.

Page 4-17 and 4-18, second paragraph

The Navy disagrees that the most stringent AWQC should be indiscriminately applied to all sites. The different AWQC were developed specifically to address certain situations. At these sites, there is no human exposure to the water or to fish; therefore, AWQC developed for the protection of human health are not applicable. However, because the unnamed streams do support at least some aquatic life, the values have been compared to the chronic AWQC for the protection of freshwater aquatic life, which are appropriate and more conservative than the corresponding concentrations for acute exposures.

As the document notes, the sample labeled DW-1 is from an old, possibly domestic well located in the streambed. No records describing the construction of this well are available; therefore, it is not known if this well samples surface water, shallow groundwater, deeper groundwater, or whatever. Regardless of well construction, there is no human exposure to water in the abandoned well. As USEPA comment 27 notes, comparison of water data to MCLs is inappropriate if there is no human exposure. Similarly, comparison the AWQC is also probably inappropriate, given the uncertainty over the well construction. However, the comparison to AWQC for protection of

freshwater aquatic was left in the document to provide a framework within which the data may be interpreted.

Page 4-18
Results from SW-2/SD-2 and SW-3/SD-3.

The data were not dismissed, as the comment suggests. The data are presented in the text and appendices. However, comparison to regulatory standards or other values is not appropriate, given the nature of these samples, as previously noted. These samples are not considered to be representative of the sediments, and especially the surface water, in the unnamed stream, because of the manner in which they were collected. No background samples were collected in a similar fashion, so comparison is impossible. This interstitial water is not used as a potable water supply, so comparison to MCLs is inappropriate, as noted in the text and reaffirmed by USEPA in comments on this document. Comparison to AWQC is similarly not appropriate, because the conditions represented by these samples are not those which would support fish or freshwater aquatic life, which the AWQC address.

Section 5 Merriconeag Extension Debris Site Investigation
Section 5.4.1 Magnetometer Survey

As stated in this section, magnetic data suggest the presence of ferrous material at the site. Because test-pitting was also conducted at this site, we established that ferrous material is apparently not buried at Areas A, B, and C. The magnetically high values presented in Figure 5-1 along the face of the dam can be explained by the ferrous material (drum culverts, concrete with re-bar, etc.) readily observed on the ground surface. Therefore, the magnetic data are consistent with the observed surficial debris, and the test pits excavated detected no buried metallic debris, but the data do not absolutely rule out the possibility of buried ferrous debris.

Page 5-4

The nature of these instruments is such that a "depth of effective penetration" cannot really be stated. In general, however, the sensitivity of the magnetometer is greater than that of the metal detector. Due to the heterogeneity of typical landfill materials, it is difficult to determine depth and mass of objects from the magnetometer data. The observed relative amplitude of anomalies are a function of mass and depth, both of which are typically unknown. As noted in the report, however, the magnetometer reading at the location of TP-3 is believed to anomalous. Also, please refer to other comments and responses which discuss the geophysical methods used.

Figure 5-1

The geophysical anomalies at the face of the dam were attributed to surficial ferrous materials and were therefore not investigated further. Other anomalies were attributed to surface debris associated with a survival training

camp and, therefore, no test pits were dug. This left three areas for test-pitting. The number and locations of test pits were established with full concurrence from the on-site DEP representative.

Area B was selected because of the lack of significant geophysical targets at this site as well as the presence of drum lids.

TP-1 was excavated directly over the magnetometer anomaly. The anomalous reading was observed at one location only, and not at any adjacent locations, suggesting that the reading may have been erroneous. The test pit covered an area of approximately 10 feet by 20 feet. There were no limiting factors.

Page 5-7, first paragraph.

The data from Area C are interpreted as possibly representing an anomalous reading. That possibility is supported by the magnitude of the reading and the fact that adjacent geophysical grid locations showed no anomaly.

Page 5-7, second paragraph

Groundwater samples were not identified for collection in the Work Plan, and groundwater is not typically collected from test pits because of the difficulty in collecting representative samples.

Figure 5-2

TP-3 has been added to this figure.

Page 5-9, second paragraph

SS-2 was collected from within the area of surface debris on the downslope side of this area. The location of SS-2 was based on an assessment of surface conditions and topography. The magnetic contours near the edge of the magnetic survey on Figure 5-1 may also be an artifact of the software plotting routine. A review of the data indicates that the plotted anomaly is due to a very slight difference in reading at only one station compared to background readings in this area. Because the plotting software extrapolates data from individual grid readings, the values on the outside of the survey area, in particular, typically exhibit "edge effects" and are generally not as reliable as those from within the survey area.

Page 5-10, second paragraph

While this comment is certainly true, it is equally true of every sample ever collected and analyzed for any parameter, not simply these two samples. In this case, two soil samples collected underneath the piping were analyzed for asbestos. Asbestos was not found in either sample. Given that there are only two pipe sections about nine feet long, the extrapolation of the results of the two samples to the soil underneath the piping is consistent with the setting. The magnitude of this extrapolation of sample data to a larger area is

considerably smaller than that "typically" associated with environmental samples.

Page 5-12, second paragraph
Background concentrations for inorganics.

As described in the text (page 3-44), at the Merriconeag Extension Debris Site, the background samples for surface water and sediment were each collected in duplicate. The higher of the two concentrations was used as the site background concentration. Therefore, values from either sample may be in the table. Table 3-8 (formerly Table 3-7) was revised to add a footnote clarifying this. Figure 5-3 is correct as shown.

Figure 5-3

As discussed in the text (Subsection 3.8), and as noted in earlier responses, concentrations of inorganics at SW-4/SD-4 at the Merriconeag Site were interpreted as representative of site background conditions. Only inorganics data in excess of site background (for surface waters and sediments) or in excess of NAS Brunswick background (for soils) are shown on the site-specific figures. Therefore, because the SW-4/SD-4 samples were defined as background, no inorganics exceeded background for these samples. The inorganics data for these samples are presented in Appendix D and in Table 3-8 (formerly Table 3-7) as part of the discussion on background conditions. The Section 5 figures are correct, except that the sample identifications for the sample and duplicate at SS-1 on Figure 5-2 were reversed. The figure has been corrected.

Section 7.0 Summary and Conclusions

Section 7.1 Swampy Road Debris Site
Second bullet, page 7-2

Please refer to earlier comments and responses that address the issue of background conditions and comparisons to regulatory standards.

Section 7.2 Merriconeag Extension Debris Site
Fourth Bullet, page 7-3.

As discussed in the document and in responses to previous comments, the surface water data have been compared to chronic AWQC For Protection of Freshwater Aquatic Life, because this is considered to be appropriate. Comparison to AWQC For Protection of Human Health is not appropriate for these sites because there is no human consumption of water or fish from these streams. There is no manganese AWQC for protection of aquatic life, so a comparison cannot be made. Background mercury levels at this site, as defined by SW-4, are 0.11J μg/L, which exceeds the chronic AWQC For Protection of Freshwater Aquatic Life by nearly an order of magnitude. (It is noted, however, that this concentration is below both the AWQC For Protection of Human Health of 0.14μg/L and the MCL of 2 μg/L, but

because there is no human exposure to this water this comparison is not made in the text.) No detections of mercury in the three other surface water samples greater than the site-specific background concentration were observed; therefore, no **site-related** exceedance of the mercury chronic AWQC For Protection of Freshwater Aquatic Life was observed. It is also noted that the CRDL for mercury is 0.2 μg/L, therefore, even the detection limit of CLP analyses exceed this AWQC by more than an order of magnitude. This bullet has been clarified.

ROBERT G.
GERBER, INC.

Consulting Geotechnical Engineers and Geologists

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207-865-6138

July 28, 1993
File #965

Ms. Loukie Lofchie
Brunswick Area Citizens for a Safe Environment
P. O. Box 245
Brunswick, ME 04011

Subject: Review of "Draft Site Inspection, Swampy Road Debris Site and Merriconeag Extension Debris Site", Naval Air Station Brunswick, Brunswick, Maine, June 1993.

Dear Ms. Lofchie:

As requested by the Brunswick Area Citizens for a Safe Environment (BACSE), Robert G. Gerber, Inc., has reviewed the "Draft Site Inspection, Swampy Road Debris Site and Merriconeag Extension Debris Site" report for Naval Air Station Brunswick, Brunswick, Maine, dated June 1993. The document was prepared by ABB Environmental Services, Inc. (ABB) for the U. S. Department of the Navy for the Naval Air Station Brunswick (NASB) located in Brunswick, Maine. The subject document is intended to describe the inspection of the two potential hazardous waste disposal sites, and evaluate the potential migration and environmental impact of contaminants detected at the sites.

The two sites described in the subject document were reported to the Navy in 1990 by an NASB employee who observed refuse at the two locations. The Swampy Road Debris Site is located along the banks of an unnamed stream within the NASB golf course. The Merriconeag Extension Debris Site is situated along a dirt road that joins Merriconeag Road southeast if the golf course. Both sites are located near the southern end of the base. Investigations of the sites were conducted according to a "Draft Final Site Inspection Work Plan" dated May 1992. We had prepared comments on the March 1992 "Draft Site Inspection Work Plan", which were transmitted to the Navy in our letter to you dated April 15, 1992. Several issues we raised in our April 1992 letter remain. Our comments on the subject document are as follows:

1. **Page E-1.** The final sentence on the page states that disposal of waste at the Swampy Road Site appears to predate establishment of NASB, implying that the Navy has not disposed of any waste at the site since the 1940s. The statement should be revised to indicate that disposal appears to have begun before establishment of NASB, and has occurred sporadically since (see pages 4-1 and 4-2).

2. **Page 3-2 - 3-5.** The lateral extent of the reported disposal activities was delineated using magnetometry. The instrument used detected magnetic anomalies possibly caused by buried ferrous materials. As we indicated in our April 1992 letter, a magnetometer survey would not

be sufficient to delineate buried non-metallic wastes or provide information concerning potential groundwater contamination. In our April 1992 letter, we recommended the use of terrain conductivity as a second geophysical method to further delineate the edge of solid waste disposal and measure any significant changes in groundwater conductivity that might indicate groundwater contamination. Why wasn't a second geophysical method capable of detecting non-metallic debris used at either site? Until additional appropriate investigations are conducted at the sites, the extent of the buried material remains unknown.

3. **Page 3-4.** The extent of the magnetometer survey shown on Figure 3-2 does not include an area delineated as a "visible debris area". Why was that area excluded from the magnetometer survey?

4. **Page 3-6.** Logs for only four of the five test pits at the Swampy Road site are included in Appendix A. The log for TP-5 is missing. It is also not clear what the criteria for selecting soil samples for analysis was, as we are uncertain what "exhibited the most likely sources of contamination" means (staining, odor, proximity to debris?).

5. **Page 3-7.** What are MW-Golf-1 and MW-Golf-2 shown on Figure 3-3? There is no explanation of their symbol in the figure legend, and the naming convention, MW, implies they are monitoring wells.

6. **Page 3-38 - 3-42.** It is preferable to determine background concentrations on a site-specific basis, rather than use the base-wide background concentrations established during previous remedial investigation (RI) studies. The base-wide background concentrations of inorganic constituents in sandy lithologies were based on samples collected at only four locations (see pages 5-12 through 5-15 in the August 1990 Draft Final RI Report by E. C. Jordan). One of these background samples was collected from MW-908, which we now know is located adjacent to the Building 201 septic system and downgradient from the Site 9 incinerator ash landfill (refer to ABB's June 1993 Technical Memorandum for Site 9). It would appear that MW-908 does not meet the criteria that a background sample be collected in an area upgradiant of, and unaffected by, a facility, disposal area, or other source.

If base-wide background information is to be used, the data should truly represent background conditions and concentrations. Furthermore, it does not seem appropriate that the maximum values for parameters (see page 3-42) measured at off-site background locations be established as background. Rather, concentrations exceeding the mean plus one standard deviation should be evaluated as outliers requiring further scrutiny.

7. **Page 3-42.** What is the justification for using 1,000 ug/kg as background for pesticides? We were unable to readily find the information in the March 1992 E. C. Jordan Feasibility Study concerning determination of background concentrations for pesticides at NASB. The

estimated concentrations of up to 1,000 ug/kg as indicators of residual from former NASB practices seems excessive, particularly since the permissible exposure levels for a number of pesticides are considerably lower than 1,000 ug/kg, and 500 ug/kg was proposed as a cleanup target for the Building 95 removal action.

8. Page 4-1. The term "coastal sediments" is not one that is usually used to describe surficial deposits at NASB. Please elaborate further concerning the nature of the deposit.

9. Page 4-2. The stream bank in the area of test pits TP-3 and TP-4 is described as "unnaturally built out into the stream gully as a result of this dumping". What is the volume of material disposed in the area?

10. Page 4-3. Where is the well used to supply potable water to the clubhouse relative to the debris disposal area? How deep is the well, and what geologic material is it in? It would be helpful if the analytical results for the clubhouse well were presented in the SI report, as it is unclear if the previous results were all non-detects or if concentrations detected were below proposed background levels (see comment 6 above).

11. Page 4-4. The hydrogeologic interpretation lacks site-specific information, as well as the basis for assuming that flow directions and rates derived elsewhere on NASB are applicable. Why weren't water level data, well construction information, and analytical results presented for MW-Golf-1 and MW-Golf-2, and the clubhouse drinking water supply well included and interpreted?

12. Page 4-9. Acetone is a common laboratory contaminant. Did the appropriate blanks indicate acetone was likely to be a laboratory contaminant in the sample collected at the 3-foot interval in TP-1?

13. Pages 4-10 and 4-15. The analytical results shown on Figures 4-2 and 4-4 indicate mercury was detected in both soil and water samples. What is the source of the mercury, as the background concentrations presented in Table 3-5 on page 3-40 indicate background concentrations of mercury in sandy soils at NASB are non-detect?

14. Page 4-11. The concentration of total PAHs (polynuclear aromatic hydrocarbons) of 925J ug/kg at TP-3 does not indicate a typical background concentration of PAHs at NASB because the sample was collected at a depth of 4 feet, rather than at or just below the ground surface.

15. Page 5-3. What is the basis for stating the groundwater surface is shallow? How deep is it and where was the information derived? Only one of the test pit logs in Appendix A describes the soil encountered as saturated.

16. Page 5-9. The concentration of 1,800J ug/kg for 4,4-DDT at SS-1 is not within the Building 95 removal action cleanup standard of 500 ug/kg. It is over 3 times the cleanup level. See also comment 7 above concerning assumed acceptable background concentrations of pesticides.

17. Pages 7-1 - 7-4. The first conclusion in Section 7.1 should be revised to indicate the "magnetometer readings do not suggest the presence of large amounts of buried ferrous material". Since only the magnetometer survey was performed, and a limited number of test pits were installed, one should not conclude that only surface dumping took place. See comment 2 above. The conclusions in Section 7.2 should be similarly revised. Refer to comment 6 above concerning the need for site-specific background information in order to conclude levels of contaminants are not site-related.

18. Pages 7-2 and 7-4. While the proposed remedy to remove the surface debris appears to address one of BACSE's objectives to reduce the number of "sites" unavailable for future use should the Navy ever close the Base, additional work must be performed to adequately define the extent of the buried debris so it can also be removed. Historical air photos, geophysical methods (such as terrain conductivity), and other means should be utilized to delineate with more certainty the extent of debris. The buried material and surrounding environmental media must also be evaluated and characterized further to ensure long-term monitoring, institutional controls, and other measures are not necessary once the buried material is removed. A work plan covering the removal action, including confirmatory sampling, should be submitted to members of the Technical Review Committee for review and comment.

19. General Comment. We were unable to find any description of the evaluation of radioactive hazards at either site. Please provide specific information concerning how radioactive hazards were evaluated. At a minimum, monitoring for radioactive hazards should be part of the Site Safety Plan to protect site workers' health and safety. If the radioactive hazards have not been evaluated, they should be before any additional work is conducted at either site, and the monitoring methods and results should be communicated to the members of the Technical Review Committee.

Please do not hesitate to give us a call if you have any questions on the comments above.

Sincerely,
Robert G. Gerber, Inc.

Carolyn A. Lepage

STATE OF MAINE
CAROLYN A. LEPAGE
#202
CERTIFIED GEOLOGIST

Carolyn A. Lepage, C. G.
Director of Operations

Response to Brunswick Area Citizens for a Safe Environment Comments
Dated July 28, 1993

1. This sentence has been revised to read: "It appears that debris disposal began prior to establishment of the NAS in 1942 and has continued sporadically since then."

2. An electromagnetic (EM) survey was not conducted at the sites based on (1) the reported history of disposal activities, (2) an understanding of site/basewide subsurface conditions, (3) an understanding of site surface conditions, and most importantly; (4) an understanding of EM method limitations as they pertain to site conditions. Criteria against conducting an EM survey are as follows:

   - The Presumpscot Formation is a glacio-marine deposit and is present across the base. Due to its depositional environment and organic content, this deposit would be expected to exhibit high conductance. Conductive subsurface soils will mask the effects of leachate and/or conductive wastes.

   - Soils at the base are generally laterally and vertically heterogeneous.

   - The southwestern portion of the Merriconeag Extension survey area is a tidal zone. Soils probably contain brackish pore water which would most likely mask the presence of leachate and/or conductive wastes.

   - Refuse and debris generally contains adequate quantities of ferrous materials to cause detectable deviations in the earth's magnetic field.

     Technical note: Groundwater conductivity is not directly measured in an EM survey. The measured terrain conductivity value is roughly a weighted average of the effects of soil, soil moisture, rock, and groundwater (i.e. subsurface media) through the effective depth range of the EM-31 at a particular ground location. It is also a function of the dipole mode employed and the depth of each contributing subsurface medium. Potential groundwater contamination (leachate) can be determined most reliably when subsurface soils are vertically and laterally homogeneous, display relatively low conductance, terrain is flat, and if groundwater is relatively shallow.

3. Please see the response to USEPA comment number 9.

4. The log for TP-5 has been added to the appendices. At the time of the test pitting, the magnetic anomaly at this location was interpreted as resulting

from the steel cover over the well MW-Golf-1. Old trash, which may also have contributed to the magnetic anomaly, was observed on the ground surface. Test pit TP-5 was terminated at two feet bgs after the first backhoe bucket was excavated. Soils at this location consisted of a thin (approximately 4 inch) duff and refuse layer over well-drained, natural soils. Because the magnetic anomaly was apparently caused by the well cover and/or the surface debris, and because native soils were observed at shallow depth, the test pit was not excavated deeper. Additionally, SS-5, located immediately downslope from TP-5, was collected to characterize soils in this area.

In general, samples were collected for laboratory analysis on the basis of photoionization (PI) meter readings, visual appearance (staining), and professional judgement. The criteria for sample selection were specified in the Work Plan (page 4-12). The contractor (ABB-ES) typically makes these on-site decisions; at the Merriconeag Extension Debris Site, these decisions were made after consultation with the MEDEP representative. No regulatory representatives were present during test-pitting at the Swampy Road site.

5. MW-Golf-1 and MW-Golf-2 are the designations assigned to two water supply wells used by the golf course. These wells were originally sampled in October 1989 as part of the sampling program associated with sites 1, 2, and 3, during the so-called Round IV sampling episode, conducted in response to a regulatory agency request.

6. We agree that it is preferable to use site-specific background concentrations instead of base-wide values. However, as noted on page 3-42 of the text, this SI program was too small to justify the collection of a statistically valid number of site-specific background samples at these two debris sites. Therefore, background values for NAS Brunswick were used. The background values were summarized from analytical data previously reported (August 1990 RI) for NAS Brunswick and were based on 12 samples from eight locations (see Note 1 and Source listed in Table 3-6 [formerly Table 3-5]), not four samples as stated in this comment. Two of the samples were from soil boring (SB) 908, in which monitoring well (MW) 908 was installed. The two samples from this boring were from 10 feet and 18 feet depth below ground surface, and the water table was approximately 9 feet bgs when the boring was installed. Therefore, these two samples could have been impacted by leachate from the incinerator ash landfill, although probably not by the septic system which is primarily cross-gradient. Table 3-6 (formerly Table 3-5) has been revised to reflect the values generated after deleting the two samples from MW-908 and other samples that may also have been impacted by other sites. Additional samples were added to this review in order to have a more representative data set. Overall, the maximum detected concentrations in sand decreased for 11 inorganics. The rest of the document has been revised to be consistent with the revised background values.

Secondly, the use of maximum **detected** background concentration is an appropriate, and even conservative, methodology. Because only a very small number of samples considered to be representative of background conditions at NAS Brunswick have been collected, and fewer still have been collected at these two particular sites, it is a virtual certainty that the maximum concentration of each analyte actually existing on base (or on site) is greater than has been measured. If a very large number of background samples were collected, therefore, the maximum detected concentration of all analytes would therefore increase, and these higher values would still be representative of background. Given that only 10 samples, rather than hundreds of samples, have been used in the NAS Brunswick background evaluation, the existing database almost certainly understates actual background concentrations. Lastly, there is no reason to assume that the data are normally distributed, such that the mean plus one standard might be a valid statistical representation of background conditions. The data set is too small to statistically evaluate. Please also refer to responses to USEPA and MEDEP comments.

7. As stated in the text, the background concentration for pesticides was "estimated to be less than 1,000 μg/kg", not 1,000 μg/kg as stated in the comment. The source of this information was referenced as the Feasibility Study (E.C. Jordan Co., 1992). Specifically, the information was presented in the discussion of the Orion Street Landfill - South: Site 2, on page 3-3. The text has been revised to more explicitly address this issue. The pesticide detections at the Swampy Road site ranged up to 460J μg/kg and were attributed to residuals resulting from past applications. This range was also noted as being less than the target cleanup level for Building 95 of 500 μg/kg. At the Merriconeag Extension Debris Site, two pesticides were detected. Detections of 4,4'-DDE, which ranged only up to 250J μg/kg, were attributed to background and were also noted as being below the cleanup level for Building 95. However, the detection of 4,4'-DDT at a concentration of 1,800 J μg/kg in one sample was not attributed to background and was noted as possibly relating to trash observed in that area.

8. The first sentence of the second paragraph has been revised to read "...coastal sediments of the Presumpscot Formation."

9. A **very rough estimate** of the volume of material deposited in the area of TP-3 and TP-4 has been made based on the test-pit results and the current configuration of the stream banks both upstream and downstream of this area. The area apparently filled is approximately 100 feet long by 50 feet wide. TP-3 had a maximum fill depth of 3 feet; TP-4 had about 1.5 feet of fill. At an average fill depth of 2.5 feet, over an area of 5,000 feet^2, the fill material would occupy a volume of 12,500 feet^3 or approximately 460 yards^3. On the basis of the test pits, this fill material consists primarily of an organic-rich silty sand.

10. MW-Golf-2, as shown on Figure 3-3, is the well used to supply potable water to the golf course clubhouse. According to the information supplied by NAS Brunswick staff, this well replaced MW-Golf-1 in 1981 as the potable water source. Drilling records for MW-Golf-2 indicate sand to approximately 20 feet bgs, clay to 77 feet bgs, and rock from 87 feet to the bottom of the well at 180 feet bgs. The well casing extends to 97 feet bgs.

11. As the document notes, direct hydrogeologic observations were not made at these sites. Instead, these conditions were estimated from others on base, in particular those from Site 3. Site 3 is the nearest IRP site and is also located on a perennial stream. Because of the amount of information already known about hydrogeologic conditions on-base, the extrapolation of that information to these two sites is reasonable.

    Water level and analytical data from MW-Golf-1 and MW-Golf-2 were not considered in the interpretation of hydrogeologic conditions. Information regarding construction of MW-Golf-1 could not be located, and MW-Golf-2 is a bedrock well that is cased to 97 feet bgs (see previous response). Because MW-Golf-2, and possibly MW-Golf-1, does not terminate at the water table, groundwater elevation data would obviously not be appropriate for use in constructing water table maps.

    Analytical results for MW-Golf-1 and MW-Golf-2 are contained in Appendix K of the Draft Final RI Report, 1990. The wells were sampled in October, 1989. Because these wells are screened at considerable depth below the water table, and because groundwater flow at the Swampy Road Debris Site is estimated to flow southeasterly, away from these two wells, this analytical data is not considered relevant to this document.

12. As noted in the text and the comment, acetone (as well as toluene, phthalates, 2-butanone, and methylene chloride) has been identified by the USEPA as a common laboratory contaminant. In fact, acetone contamination in method blanks associated with surface soil and sediment samples from Swampy Road was observed (see Section 3.7). The acetone detection in TP-1 passed data validation and was therefore presented in the text. However, as discussed in the text, the lone detection of acetone is not considered to represent site-related contamination.

13. Mercury was detected in the soils at concentrations ranging from non-detect (CRDL = 0.04 mg/kg) to 0.82 mg/kg, with the vast majority of the samples containing about 0.12 mg/kg. The two liquid samples with detectable concentrations of mercury were those sampled from the mucky zone away from the stream channel (see Subsection 3.4); the reported mercury concentrations likely reflect mercury adsorbed onto suspended matter and not dissolved in the liquid. In fact, the apparent presence of mercury in the liquid samples, but not in the associated sediment samples, is extremely unexpected,

given its strong tendency to sorb to sediments. Mercury was not detected in water samples from the main channel. The soil concentrations are higher than those associated with background at NAS Brunswick, as noted in the comment, although, with one exception, they are well within the range of 0.01 to 0.54 mg/kg published in the literature for sandy surface soils (no reference could be found for stream sediments) (Kabata-Pendias A., 1986, *Trace Elements in Soils and Plants*). All of the detected concentrations were within the values published for southeastern Maine of 0.2 to 1.3 mg/kg (Shacklette and Boerngen, 1984, *Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States*). Furthermore, mercury is very strongly sorbed to sediments, much more so than to typical soils (*IRP Toxicology Guide, Volume 5*) and therefore, background concentrations in sediments would likely be much higher than in soils.

Mercury is commonly used in fungicides, pesticides, bactericides, and disinfectants (*Kirk-Othmer Concise Encyclopedia of Chemical Technology*, 1985). Hence, it is also possible that the mercury concentrations in the sediments are the result, wholly or in part, of past and/or current uses of such products at the golf course. Therefore, the concentrations observed in the sediments could either be naturally occurring or anthropogenic. The discussion on the sediment inorganic analytical data in Subsection 4.4.2 has been expanded to include the information presented above.

14. The detection of PAHs at a total concentration of 925J μg/kg at TP-3 was not compared to background conditions at NAS Brunswick. In fact, the two PAH detections in soils at this site were specifically noted as possibly being related to burned materials that may have been dumped here or to material that was burned on site. It was noted, however, that the levels observed are well below both concentrations previously calculated as being protective of public health using a hypothetical future residential scenario and concentrations measured in uncontaminated soils as published in the literature.

15. The average elevation of 11 exploration locations at the Merriconeag Extension Debris Site is approximately 17 feet above mean sea level (MSL). The average elevation of the four explorations at which water was detected is approximately 13 feet above MSL. Therefore, it is expected that at the other explorations, the water table is only about four feet deeper.

16. The document is accurate as written. As noted previously, the 4,4'-DDT concentration of 1,800J μg/kg at SS-2 was not attributed to background conditions or stated to be less than the target cleanup level for Building 95. Those statements apply only to those results from SS-1. It was stated that the pesticide detections at SS-2, including that of 4,4'-DDT, may be related to the presence of trash.

17. The first bullet has been revised to read "...The magnetometer readings do not suggest the presence of large amounts of buried ferrous material..." In lieu of a terrain conductivity survey, removal of surficial debris, followed by an additional magnetometer survey, would better establish the presence or absence of buried materials. Please see changes to remaining bullets as a result of USEPA comments.

18. It is agreed that buried debris, if any, as well as surface debris should be removed as "good housekeeping". However, the data indicate that such action is not required by CERCLA, due to the absence of site-related hazardous materials at levels of concern. The data clearly do not indicate the need for other efforts, such as long-term monitoring or institutional controls. A Work Plan to direct trash removal is unnecessary and will not be generated.

19. Limited radiation monitoring was conducted at these two sites, using a radiation meter and personal radiation badges (dosimeters). The radiation meter readings were at background levels at both sites. The results of the personal dosimeters are retained in the medical records of individual field staff but are not available for external distribution.

APPENDIX G

REGULATORY/TECHNICAL REVIEW COMMITTEE COMMENTS ON DRAFT FINAL SITE INSPECTION REPORT AND NAVY RESPONSES

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

September 16, 1993

Mr. James Shafer
Northern Division
Naval Facilities Engineering Command
Code 1821/JS
10 Industrial Hwy., Mail Stop #82
Lester, PA 19113-2090

Re: Draft Final Site Inspection
Swampy Road Debris Site
Merriconeag Extension Debris Site
NAS Brunswick

Dear Jim:

The United States Environmental Protection Agency (EPA) has reviewed the document entitled "Draft Final Site Inspection, Swampy Road Debris Site, Merriconeag Extension Debris Site, Naval Air Station Brunswick, Maine" dated August 1993. EPA's comments are included in Attachment I of this letter.

The report concludes that no significant contamination exists at either the Swampy Road or Merriconeag Extension Debris Site. It also recommends that action needed at either of the sites would be debris removal. In general, the EPA is satisfied with the Navy's response to comments. However before a No Remedial Further Action decision can be made on the Swampy Road Debris Site, the EPA suggests additional sampling near the elevated lead detection at SS-4 to confirm that the No Futher Remedial Action decision is justified. The EPA concurs with the Navy's recommendation that No Further Remedial Action is warranted at the Merriconeag Extension Debris Site.

Once the Navy has provided a response to EPA's comments, we recommend that the parties discuss the process of producing a No Further Action Decision Document. The Navy will have to prepare this document justifying that no further actions are warranted under CERCLA authority. This document will require EPA approval prior to finalization. Should a Decision Document be signed and approved, any debris removal that takes place will not be carried out under CERCLA authority and will not be subject to the terms of the Federal Facility Agreement.

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If you have any questions regarding this letter or EPA's comments, please contact me at (617) 223-5521.

Sincerely,

Robert Lim

Robert Lim
Remedial Project Manager

cc: Nancy Beardsley/ME DEP
Jim Caruthers/NASB
Bob McGirr/ABB Environmental
Susan Weddle/BASCE
Sam Butcher/Harpswell Community Rep.
Rene Bernier/Topsham Community Rep.

ATTACHMENT I

The following comments pertain to the document entitled "Draft Final Site Inspection, Swampy Road Debris Site, Merriconeag Extension Debris Site" dated August 1993. The report was submitted by the Department of the Navy for the Naval Air Station Brunswick in Brunswick, Maine.

1. ES-2, ¶ 1 - Conclusion that disposal of asbestos concrete piping under applicable laws would occur at the Merriconeag Extension Debris Site is missing from the Executive Summary. Add conclusion to summary text.

2. pg A-3 - As discussed in the Response to Comments, MCLs are not ARARs for the surface water and should therefore be removed from Table A-1. In general, ARARs tables should reflect site-specific regulations and non site-specific regulations should be removed.

3. pg F-4 - Although the Navy has responded to all of EPA's comments, the page with EPA comments #7-17 is missing. Replace missing EPA comment page.

Response to U.S. Environmental Protection Agency Comments
Dated September 16, 1993

1. ES-2, Paragraph 1. The text has been modified to include the recommendation that the asbestos concrete piping be disposed in accordance with applicable laws.

2. Page A-3. The Safe Drinking Water Act has been deleted from Table A-1 and the title of Table A-2 has been changed to accurately reflect the fact that MCLs are not ARARs for the surface water.

3. Page F-4. The missing pages from the original EPA comment letter have been inserted into Appendix F.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN R. McKERNAN, JR.
GOVERNOR

DEAN C. MARRIOTT
COMMISSIONER

DEBRAH RICHARD
DEPUTY COMMISSIONER

September 30, 1993

Mr. Francisco LaGreca
Project Manager, Code 1821
Department of the Navy, Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mailstop 82
Lester, Penn. 19112-2090

Dear Mr. LaGreca:

The Maine Department of Environmental Protection has received and reviewed the "Draft Final Site Inspection Swampy Road Debris Site Merriconeag Extension Debris Site", dated August 1993, Naval Air Station Brunswick, Brunswick, Maine. The Department's comments are provided below.

The Department agrees that the Navy must remove surface debris at both sites. The Department believes that it is very important to perform another magnetometer survey at both sites after the debris is removed to confirm that all debris has been removed. The Department made this comment in a letter to James Shafer, dated August 3, 1993, but these comments were not addressed in Appendix F of this Report. The comments from that letter are restated below.

1. After removal of all debris at both sites, a magnetometer survey must be performed again to determine that all metal debris has been removed and that nothing is buried at these sites.

2. What is the proposed method of disposal for removed debris?

New Comments

3. Page 3-3, Figure 3-2: The area marked "Found after Magnetometer Survey' must be surveyed with a magnetometer after the visible debris is removed.

4. Page 3-8, second paragraph: It is still not clear why samples were collected from the mucky wet flood zone west of the stream. No rationale was provided in the Navy's response to comments. Please provide a rationale to explain why this sampling technique was used, especially since the Navy argues that these results cannot be compared to MCLS or AWQC.

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5. Page 3-9, second paragraph: The text now includes an explanation for why hardness was analyzed in the surface water samples. However, this surface water is not used for drinking water purposes. What useful information did th hardness analysis or more accurately, the hardness calculations, provide?

6. Page 3-34, third paragraph: Provide an explanation about the BEHP detected at background location SW-1.

7. Page 3-32, Table 3-6: The table shows that the maximum concentration for Beryllium in sand is 0.9 mg/kg. Laboratory results for MW-705, 6-8 feet, indicate that the maximum concentration for Beryllium is 0.33 mg/kg. Please clarify.

8. Page 3-32, Table 3-6: The Department again questions the appropriateness of some of the background sampling locations used in this Report. A site map for Site 2 from the Draft Final RI Report shows that MW-233 and MW-211A are located only a few feet from the landfill boundary. The groundwater contours in this area indicate that groundwater flowing from the landfill could influence MW-233. If this were the case, MW-233 would not be an appropriate location for a background sample.

The boring log from MW-211A does not mention if any analytical samples were collected from 7-9' or from 17-19'. The log indicated that solid split spoon samples were collected from 5-7', 10-12', and 15-17'. Boring log comments indicated that analytical samples were collected at 5-7' and 15-17'. The boring log notes the "**black staining angular rock fragments and wood fragments**" were collected in the sample from 5-7'. Please clarify these discrepancies. Was the black staining described in the log ever identified? If this sampling location is being impacted by landfilled material, it should not be considered as a background sample.

Boring log MW-208 is not included in Appendix of the Draft Final RI.

Boring log MW-705 does not indicate that a sample was collected from 6-8'.

Boring log MW-807 indicates that a "black, fine tar substance" was collected from 4-4.5'. Was the tar substance ever identified? Is this location really representative of background conditions?

Boring log MW-808 does not indicate that a sample was collected from 23-25'.

9. Page 4-8, third paragraph: Because of the lead levels detected SS-4, this area should be resampled.

10. Page 4-12, fourth paragraph: What are the three other water samples referred to in the statement ,"The three other water samples from the main channel downstream of SW-7 were all non-detect for lead.". Surface water samples from SW-2 and SW-3 were not taken from the stream channel, but from the mucky flood zone and the Navy argues that they are not stream samples.

11. Page 5-7, first paragraph: Verify if there is a surface source for the 4,4'-DDT detected at 1,800J ppb at SS-2.

Response to Navy Comments

12. Figures 4-2, 4-3, and 4-4: Information provided on these figures should include concentration equal to or greater than background concentrations. The following information should be added to the Figures:

LOC	Al	As	Ba	Cd	Co	Cu	Mg	Mn	Se	Zn
SW-1								82.3		
SW-4		10.8	4.9							
SW-5			4.9							
SW-6			4.9							
SD-3						7.6				
SS-1	9100									
SS-3D									0.5	
TP-1-3					4.5				22.4	86.7
TP-2-2					3.0		3720			
TP-3-4							3740			
TP-4-2					4.2					

13. Page 4-17, and 4-18, second paragraph: The Department's Bureau of Water Quality Control (BWQC) regulations concerning AWQC require that surface water sample results be compared to all exposures for the protection of human health and freshwater aquatic life. It may be useful to have a conference call with Bureau of Water Quality staff present.

14. Page 4-18: Results from SW-2/SD-2 and SW-3/SD-3: It appears that the water collected at these locations should be considered as surface water. Sediment collected at these locations should be considered to be surface water sediment samples. During periods of medium to high flow, all areas

within the flood plain of the stream would be considered to be sediment associated with the stream bed. Interstitial water would be considered to be water associated with the stream sediments (surface water). The Field Data Records, included in Appendix C of this Report, indicate that the water samples were collected from a seep, indicating that the water is surface water. If the field personnel did not believe that the water sample was taken from a seep, another classification should have been noted in the Field Record.

Can the Navy please provide supporting evidence that the sediments found in SD-2 and SD-3, do not support fish or aquatic life. Aquatic life, in particular, benthic organisms, depend on stream sediment for a substrate. During certain periods of the year these areas will most likely support aquatic life. It is the Department's position that the results of SW-2 and SW-3 should be compared to AWQC.

15. Page 5-9, Figure 5-3: If SW-/SD-4 were defined as a background location, please justify why the results were compared to SW/SD-4D, instead of to SW/SD-4?

Please call me if you have any questions or comments.

Sincerely,

Nancy Beardsley

Nancy Beardsley
Project Manager, Federal Facilities Unit
Office of the Commissioner

cc: Meghan Cassidy, USEPA
Jim Caruthers, NAS Brunswick
Carolyn Lepage, R.G. Gerber Inc.
Bob McGirr, ABB ES
Rene Bernier, Topsham
Sam Butcher, Harpswell
Susan Weddle, Brunswick
Brunswick Topsham Water District
Mark Hyland, DEP
Marianne Hubert, DEP
Troy Smith, DEP

Response to Maine Department of Environmental Protection Comments
Dated September 30, 1993

1. The Navy agrees to conduct a confirmational magnetometer survey of the two sites after the debris has been removed.

2. The debris removed will be disposed in accordance with current base practices. Based on observations, it is expected that the debris will be disposed of as solid waste; however, if any debris is suspected of containing hazardous materials, it will be separated, tested for hazardous materials, and disposed of as hazardous materials if so indicated. The asbestos concrete piping will be disposed of in accordance with asbestos regulations.

New Comments

3. Page 3-3, Figure 3-2. As part of the debris removal program, this area will have the debris removed. Additionally, the confirmational magnetometer survey will be extended to include this area.

4. Page 3-8, 2nd paragraph. Samples were collected from SW/SD-2 and SW/SD-3 areas for the purpose of characterizing the area downslope from the observed debris. It was a judgment call on the part of the sampler in consideration of site conditions and the intent as stated in the Work Plan. These samples were collected in a different manner than that described in the Work Plan for stream samples.

   The seep areas themselves did not have enough surface water to allow sample collection as is normally done with stream samples. Therefore, depressions were excavated to allow for the naturally occurring seep liquids to accumulate and allow for sampling to occur. Due to the disturbance to these areas caused by this scooping action, seep liquid was left to equilibrate one day prior to sampling. Because of the nature of collection of this sample, comparison to AWQC is not appropriate.

5. Page 3-9, 2nd paragraph. As noted in the earlier response, the hardness tests were specified in the SI Work Plan (ABB-ES, 1992a). Because of a laboratory error, only one sample was analyzed for hardness. The other hardness calculations were done in order to be in compliance with the Work Plan. Hardness tests were included in the Work Plan because the USEPA required them to be performed (Letter of April 8, 1992 from Meghan Cassidy

to Jim Shafer, comment 3). Hardness data is sometimes needed for comparison of data to regulatory standards which are hardness-dependent.

6. Page 3-34, 3rd paragraph. The presence of BEHP in an analytical sample is not unexpected, even in one from an upgradient location. BEHP is a general-purpose plasticizer for many polymers; phthalates are recognized as being ubiquitous. "It has become clear that the phthalate ester plasticizers are general contaminants of virtually all soil and water ecosystems; it has become very difficult to analyze any soil or water sample without detecting the presence of phthalate esters." (*Casarett and Doull's Toxicology: The Basic Science of Poisons*, 1986). Furthermore, because of their widespread use, phthalates are formally recognized by the USEPA as common laboratory contaminants (USEPA, 1988, and others). This information has been summarized in the text.

7. Page 3-32, Table 3-6. The table shows the maximum concentration for Beryllium in sand at 0.9 mg/kg. This value was obtained from a sample collected from MW-211A at a depth of between 5'-to-7'. The value at this depth is correct, but based on MEDEP comment #8, the values for background inorganic sand values have been recalculated excluding the values from MW-211A.

8. Page 3-32, Table 3-6. Because of the possibility that the referenced samples may have been impacted by contamination, even though they are upgradient of sites, Table 3-6 has been revised excluding sand values from MW-211A and MW-233. Other figures and text have been revised as appropriate. Because of regulatory comments on background calculations, only three samples remain in the background data set. This reduced data set will be used as background conditions for these two sites; however, a larger data set may be assembled in the future in order to better understand background conditions at NAS Brunswick.

The boring log for MW-208 may not be included in Appendix B of the Draft Final RI, but laboratory values for this boring are included in Appendix K of that report. The samples collected from MW-208 at the 108-110' and 110-112' intervals have analytical data presented on page K-113 of Appendix K.

One of the sampling intervals for a sample collected from MW-705 is incorrectly listed; the proper interval is 5'-7' (not 6'-8' as stated on Table 3-6). This error has been corrected.

The inorganic sample value used from MW-807 has been excluded in the revised Table 3-6.

Four analytical samples were collected during the drilling of MW-808. Apparently the fourth sample was not noted as being collected in the field

boring log. However, on p. K-118 of Appendix K of the Draft Final RI Report, a sample with the designation "MW08808231" has reported laboratory results; these were the values used in compiling Table 3-6.

9. Page 4-8, 3rd paragraph. The area at SS-4 is proposed to be re-sampled and analyzed for TAL inorganics after removal of debris unless evidence generated during the debris removal indicates that re-sampling is not necessary.

10. Page 4-12, 4th paragraph. The three other surface water samples from the main channel are SW-4, SW-5, and SW-6.

11. Page 5-7, 1st paragraph. A site visit was conducted on Oct. 7, 1993 at the Merriconeag Extension Debris Site for the purpose of determining if there was an apparent surface source for the 4,4'-DDT detected at the SS-2 location. A detailed inspection of the area did not locate an obvious source of the pesticide contamination. This area does not appear to have received material for a number of years. This observation is based on the apparent age of the small amount of debris which includes rotted planking, boards, rusted cans, some plastic sheeting, metal pieces, and material that resembles parachute sheeting. The area nearby has been used for a number of years as a training area to teach survival skills.

12. Figures 4-2, 4-3, and 4-4. Only inorganics which exceed background are presented in these figures; site-specific and NAS Brunswick background values are presented in Tables 3-8 and 3-6, respectively. All values noted in the comment are equal to but not in exceedance of background, are already shown on the appropriate figure, or were misread in the analytical appendices by the commenter. No change.

13. Page 4-17 and 4-18, 2nd paragraph. Comment noted.

14. Page 4-18. As explained in an earlier response, the SW-2 and SW-3 liquid samples are not considered appropriate for comparison to AWQC because artificial depressions were made in the sediment and allowed to fill with interstitial water. The sediments are technically within the flood plain of the stream, although they are likely under water for only brief periods of the year. The sediments from these two locations may support aquatic life for the brief periods of submergence; the Navy has not asserted otherwise.

15. Page 5-9, Figure 5-3. As has been previously stated in the text and in several earlier responses, the higher of the two values from the SW/SD-4 duplicate pair were used to represent site-specific background values at the Merriconeag Extension Debris Site.

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September 10, 1993
File #965

Ms. Louise Lofchie
Brunswick Area Citizens for a Safe Environment
P. O. Box 24
Brunswick, ME 04011

Subject: Review of "Draft Final Site Inspection Report, Swampy Road Debris Site and Merriconeag Extension Debris Site", Naval Air Station Brunswick, Brunswick, Maine, June 1993.

Dear Ms. Lofchie:

As requested by the Brunswick Area Citizens for a Safe Environment (BACSE), Robert G. Gerber, Inc., has reviewed the document, "Draft Final Site Inspection Report, Swampy Road Debris Site and Merriconeag Extension Debris Site" dated August 1993. The document was prepared by ABB Environmental Services, Inc. (ABB) for the U. S. Department of the Navy for the Naval Air Station Brunswick (NASB) located in Brunswick, Maine. The subject document is intended to describe the inspection of the two potential hazardous waste disposal sites, and evaluate the potential migration and environmental impact of contaminants detected at the sites.

The two sites described in the subject document were reported to the Navy in 1990 by an NASB employee who observed refuse at the two locations. The Swampy Road Debris Site is located along the banks of an unnamed stream within the NASB golf course. The Merriconeag Extension Debris Site is situated along a dirt road that joins Merriconeag Road southeast if the golf course. Both sites are located near the southern end of the base. Investigations of the sites were conducted according to a "Draft Final Site Inspection Work Plan" dated May 1992. We had prepared comments on the March 1992 "Draft Site Inspection Work Plan", which were transmitted to the Navy in our letter to you dated April 15, 1992.

Results of the site inspection were initially reported in the "Draft Site Inspection Report, Swampy Road Debris Site and Merriconeag Extension Debris Site" dated June 1993. Our comments on that document were included in our letter to you dated July 28, 1993. Several issues we raised in our April 1992 letter remained and were reiterated in our July 1993 letter. The Navy's response to our July 1993 comments (as well as comments from the U.S. Environmental Protection Agency (EPA) and the Maine Department of Environmental Protection) is included in Appendix F of the subject document.

Our comments on the subject document, "Draft Final Site Inspection Report, Swampy Road Debris Site and Merriconeag Extension Debris Site" dated August 1993, are as follows:

1. **Pages 3-1 - 3-4.** The lateral extent of the reported disposal activities was delineated using magnetometry. The instrument used detected magnetic anomalies possibly caused by buried ferrous materials. As we indicated in our April 1992 letter, a magnetometer survey would not be sufficient to delineate buried non-metallic wastes or provide information concerning potential groundwater contamination. In our April 1992 letter, we recommended the use of terrain conductivity as a second geophysical method to further delineate the edge of solid waste disposal and measure any significant changes in groundwater conductivity that might indicate groundwater contamination. We reiterated that comment in our July 1993 letter, along with the question of why a second geophysical method (not necessarily terrain conductivity) capable of detecting non-metallic debris wasn't used at either site. The response to our July 1993 comment listed several reasons why an electromagnetic (EM) survey was not conducted. While we understand there are often site-specific reasons for not choosing EM as a confirmatory or supplemental geophysical method, our larger question concerning the use of a second geophysical method capable of detecting non-metallic wastes remains. As we stated in our previous comments, until additional appropriate investigations are conducted at the sites, the extent of the buried material remains unknown.

2. **Page 3-3.** The extent of the magnetometer survey shown on Figure 3-2 does not include an area delineated as a "visible debris area". In response to our related July 1993 comment, the Navy indicated that the area was discovered after the magnetometer survey had been completed, but that a surface soil sample (SS-2) was collected later at the location. At a minimum, the area should be evaluated by geophysical methods to determine the possible extent of buried debris in order to determine the need for additional action.

3. **Page 3-5.** The symbol for MW-Golf-1 and MW-Golf-2 shown on Figure 3-3 should be added to the figure legend. In addition, there should be brief description (depth, stratigraphy, etc.) of the wells in the report, perhaps in Section 4.3 concerning the hydrogeology of the site. The report should also include a brief explanation (in Section 4.3, for example) of why water level and water quality data from the wells were not considered relevant to interpreting the hydrogeologic setting of the site.

4. **Pages 3-30.** We still feel it does not seem appropriate that the maximum values for parameters measured at off-site background locations be established as background. Rather, concentrations exceeding the mean plus one standard deviation should be evaluated as outliers requiring further scrutiny.

5. **Page 3-42.** We still believe that the estimated concentrations of up to 1,000 ug/kg as indicators of residual (or background) resulting from former NASB practices appears to be excessive, particularly since the permissible exposure levels for a number of pesticides are considerably lower than 1,000 ug/kg, and 500 ug/kg was proposed as a cleanup target for the Building 95 removal action.

6. **Pages 4-7 - 4-10, F-32 and F-33.** In response to our July 1993 comment concerning the detection of mercury in both soil and water samples as shown on Figures 4-2 and 4-4, the Navy responded in Appendix F that the presence of mercury in the liquid samples, but not in associated sediment samples, was "extremely unexpected", and agreed "soil concentrations are higher than those associated with background at NAS Brunswick". The Navy continued that at least one sample exceeded the range published in the literature for sandy surface soils. These analytical results may indicate a local source for mercury, and the Navy also stated on pages 4-9 and F-33 that the "concentrations observed in the sediments could either be naturally occurring or anthropogenic. The Navy should conduct additional investigations to evaluate possible sources of mercury.

7. **Page 5-7.** The detection of 4,4'-DDT at a concentration of 1,800 J ug/kg from a sample (SS-2) collected at the Merriconeag Extension Debris Site is described as possibly resulting from localized dumping of trash. Additional sampling of that area should be conducted, particularly since the holding times for the pesticide samples were exceeded (see page 3-27). The Navy should also clarify what affect exceeding the sample holding time had with regard to the conclusion that "On the basis of all sampling data, 4,4'-DDT is clearly not widespread at these levels".

8. **Page 7-2.** As we suggested in our July 1993 letter, the conclusions in Section 7.2 should also be revised to indicate that buried ferrous material was not detected by the magnetometer.

9. **Pages 7-2 and 7-3.** Given the concerns regarding pesticides and mercury at the sites (see comments 6 and 7 above), as well as the limitations of the methods utilized to delineate the extent of buried debris (see comments 1 and 2 above), additional investigations must be conducted at the sites to justify doing nothing more than removing surface debris as a remedial action.

10. **Pages F-4 - F-6.** Our copy of the subject document was missing the pages from the EPA's letter listing comments 7-17 and 22-34.

11. Page F-34. In response to our July 1993 comment concerning a description of the evaluation of radioactive hazards at either site, the Navy stated that "limited" radiation monitoring was conducted using a radiation meter and personal radiation badges. Why was the monitoring considered "limited", and what was the detection capability of the radiation monitor used on-site?

Please do not hesitate to give us a call if you have any questions on the comments above.

Sincerely,
Robert G. Gerber, Inc.

Carolyn A. Lepage

Carolyn A. Lepage, C. G.
Director of Operations

STATE OF MAINE
CAROLYN A. LEPAGE
8808
CERTIFIED GEOLOGIST

Response to Brunswick Area Citizens for a Safe Environment Comments
Dated September 14, 1993

1. Pages 3-1 - 3-4. It is not clear what non-metallic wastes of concern might be present at these locations. The Navy proposes that the need for a secondary geophysical method be discussed in more detail after the surficial debris is removed and a second magnetometer survey conducted.

2. Page 3-3. The area indicated are Figure 3-2 will also be surveyed by geophysical techniques after the surficial debris is removed.

3. Page 3-5. The symbols for MW-Golf-1 and MW-Golf-2 have been added to the figure.

   A brief description of these wells has been added to the appropriate section in the report. This includes well information, a discussion of past sampling data for the two wells, and why these wells were not considered in interpreting the hydrogeologic setting of the site.

4. Page 3-30. Comment noted.

5. Page 3-42. Comment noted.

6. Pages 4-7 - 4-10, F-32 and F-33. The text states that a single mercury value exceeded the range specified in one literature citation. It was further noted that even the highest mercury concentration observed at this site is still well within published values for mercury in southeastern Maine. Potential sources of mercury will be sought during the removal of debris in this area; however, it is very likely that no "source" of mercury may be found.

7. Page 5-7. Please see the response to MEDEP comment 11. The extraction of the samples at 12 to 13 days after the date of collection, instead of within 10 days as data validation specifies, is estimated to have a negligible impact on the data, because of the stability of pesticide compounds.

8. Page 7-2. The first bullet in Subsection 7.2 has been revised to specifically note ferrous material.

9. Pages 7-2 and 7-3. It is not agreed that the pesticide and mercury concentrations and frequencies of detection warrant any further sampling and analysis efforts. The nature of additional evaluations at these sites, if any, will

be discussed after the debris has been removed and the confirmatory magnetometer survey completed.

10. Pages F-4 - F-6. The missing pages have been inserted.

11. Page F-34. The term "limited" was used to imply only that monitoring was used during one portion of the field work (test pitting) but not during all field activities.

The instrument used during radiation monitoring is called the Radiation Alert Monitor 4 instrument and senses ionizing radiation by means of a Geiger-Mueller tube. The meter reads from 0 to 50 mR/hr or 0 to 50,000 CPM (counts per minute) depending on the range that the instrument is set to. About 5 to 25 CPM, at random intervals, can be expected from naturally occurring background radiation, depending on a person's location and altitude. The instrument measures alpha, beta, gamma, and x-ray radiation. The level of radiation for gamma and x-rays is measured in milliRoentgens per hour (mR/hr), and alpha and beta radiation are measured in CPM.