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LAWL 1996
ERID # 54328

Voluntary Corrective Action Completion Report for

Potential Release Site
8005
Former Waste Storage Vessel

Field Unit 5
Environmental
Restoration
Project

February 22, 1996
Revised

Approved by: [Signature]
Environmental Health Division

MAY 07 1996

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Los Alamos
NATIONAL LABORATORY

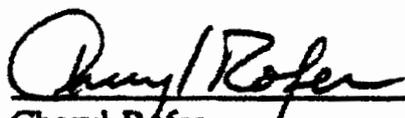
LA-1150-1-96



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CERTIFICATION OF COMPLETION

I certify that all the work pertaining to the voluntary corrective action (VCA) 8-005 has been completed in accordance with the Environmental Protection Agency approved RFI Work Plan for Operable Unit 1157. Based on my personal involvement or inquiry of the person or persons who managed the cleanup at PRS 8-005, a review of all data gathered and a visit to the site, to the best of my knowledge and belief, all criteria of the plan have been met or exceeded. I believe that the completion of this VCA is both protective to human health and the environment. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.


Cheryl Rofer
Field Unit Five Project Leader
Environmental Restoration Project
Los Alamos National Laboratory

9/15/95
Date Signed

TABLE OF CONTENTS

1.0 Description	1
2.0 Corrective Action	2
3.0 References.....	3

LIST OF TABLES

Table 1	Priority Release Site 8-005 Surface Soil Sampling Data.....	6
Table 2	Priority Release Site 8-005 Surface Soil Sampling Data (continued)	7
Table 3	Priority Release Site 8-005 Surface Soil Sampling Data (continued)	8

LIST OF FIGURES

Figure 1.	Location of PRS Groups.....	4
Figure 2.	Location of PRSs in Group 3, abandoned bunker site	5

1.0 DESCRIPTION

Potential Release Site 8-005, a 4 ft. by 4 ft. metal vessel, was an abandoned oven used in the 1950s for crystal growth experiments. The inside of the vessel was contaminated with naphthalene and asbestos. This site is included in the Hazardous and Solid Waste Amendments module to the Los Alamos National Laboratory, Resource Conservation and Recovery Act, EPA I.D. NM0890010515.

This square-shaped storage vessel was located on the ground outside the west end of Building TA-8-2, a machine shop and storage building (see Figures 1 and 2). Group J-16 used the vessel to conduct crystal-growth experiments in the now-abandoned bunker buildings. Crystal growth residue from photographic equipment crystal experiments at Building TA-8-1 (next to TA-8-2) was contained in this storage vessel. Other chemicals used were terphenyl, alpha naphthyl oxazole, styrene, methyl chloroform, and thalious iodide. Residue with a strong camphor-like odor was found at the bottom of the vessel, and sample analysis indicated the presence of naphthalene. There were no visible signs of stained ground around the vessel.

The Johnson Controls Asbestos Abatement team confirmed the presence of asbestos in the form of a gasket and strap on the vessel (LANL 1995, EES-5:95-290). There was also a cord under the vessel which was found to contain asbestos. Field screening indicated that radioactive contaminants and high explosives were not present in or on the vessel.

The landlords of the technical area had no objections to removing this vessel, and it was recommended that this work be done as a voluntary corrective action (LANL 1995, EES-5:95-290; LANL 1993, 1092).

2.0 CORRECTIVE ACTION

The cleanup was completed as a voluntary corrective action as referenced in the RFI Work Plan for OU 1157. Activities began on 20 September, 1994 and ended on 7 August, 1995.

Preliminary field investigations determined that the storage vessel could be removed safely, and possibly salvaged once the hazardous constituents were removed. Four steps were involved in the remediation of this site. First, on 20 September, 1994, approximately one cubic foot of solid naphthalene was removed from the vessel, placed in an appropriate container, and disposed of by the Laboratory's Waste Services Group (LANL 1995, EES-5:95-290). The next step was to remove and dispose of an asbestos strap and gasket from the vessel. A cord that had been under the vessel was also removed, and disposed of because it contained asbestos. Then, on 30 September, 1994, the

Laboratory contractor's rigging crew transported the vessel to the salvage yard, where it was inspected, and found to contain no cracks or holes. In October 1994, the site was inspected and a site reconnaissance was done with radiation and organic field instruments at the location of the vessel. No elevated readings were detected. Finally, on July 26, 1995 a surface soil sample was taken at the former location of the vessel.

The sampling data were reviewed, and no contaminants were found. Analytical results are presented in Tables 1 through 3. These data are available and will be provided upon request.

The sample was analyzed for semivolatile organics by method SW846-8270, percent solids by SW2540-G, and RCRA metals by SW846-6010, -6010A, -7060A, -7471, -7740, and -7841. Screening Action Levels (SALs) are conservative, risk-based levels (primarily based on RCRA Subpart S) that are used for preliminary screening of data. Appendix K of the installation work plan (LANL 1993, 1017) provides an in-depth explanation of how SALs are derived. All the analytes for the sample taken at Potential Release Site 8-005 were below SALs.

No site restoration was needed because the surrounding vegetation did not show any evidence of stress.

This report serves as the formal request for regulator concurrence to remove PRS 8-005 from the HSWA Module.

3.0 REFERENCES

LANL (Los Alamos National Laboratory), July 1993 "RFI Work Plan for Operable Unit 1157", Final Report, Los Alamos National Laboratory Report LA-UR-93-1230, Los Alamos, New Mexico (LANL 1993, 1092)

LANL (Los Alamos National Laboratory), November 1993 "Installation Work Plan for Environmental Restoration", Revision 3, Los Alamos National Laboratory Report LA-UR-93-3987, Los Alamos, New Mexico (LANL 1993, 1017)

LANL (Los Alamos National Laboratory), June 1995 "Removal of Storage Vessel from TA-8", Los Alamos National Laboratory Memorandum EES-5 95-290, Los Alamos, New Mexico (LANL 1995, EES-5:95-290)

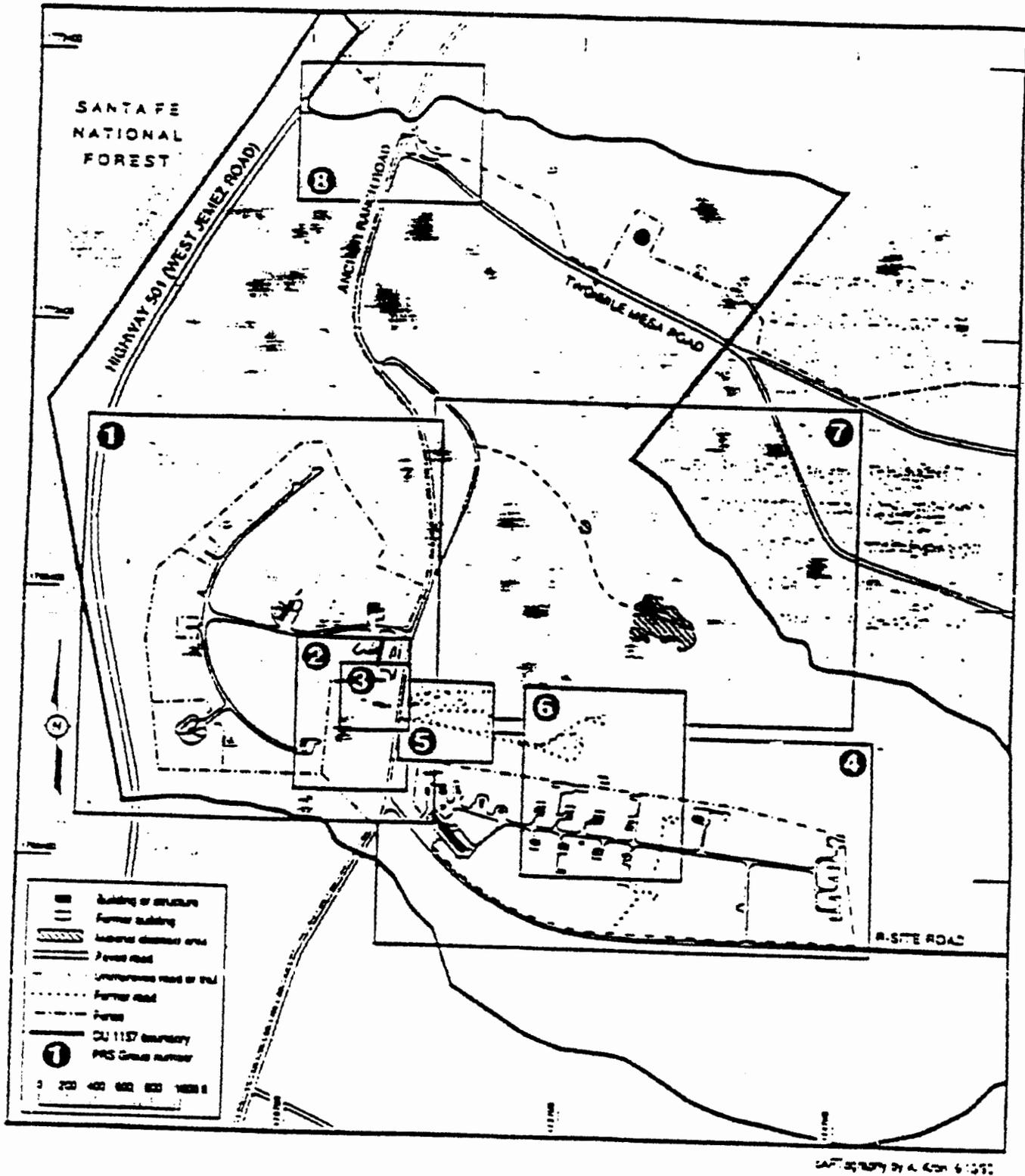


Figure 1 Location of PRS Groups

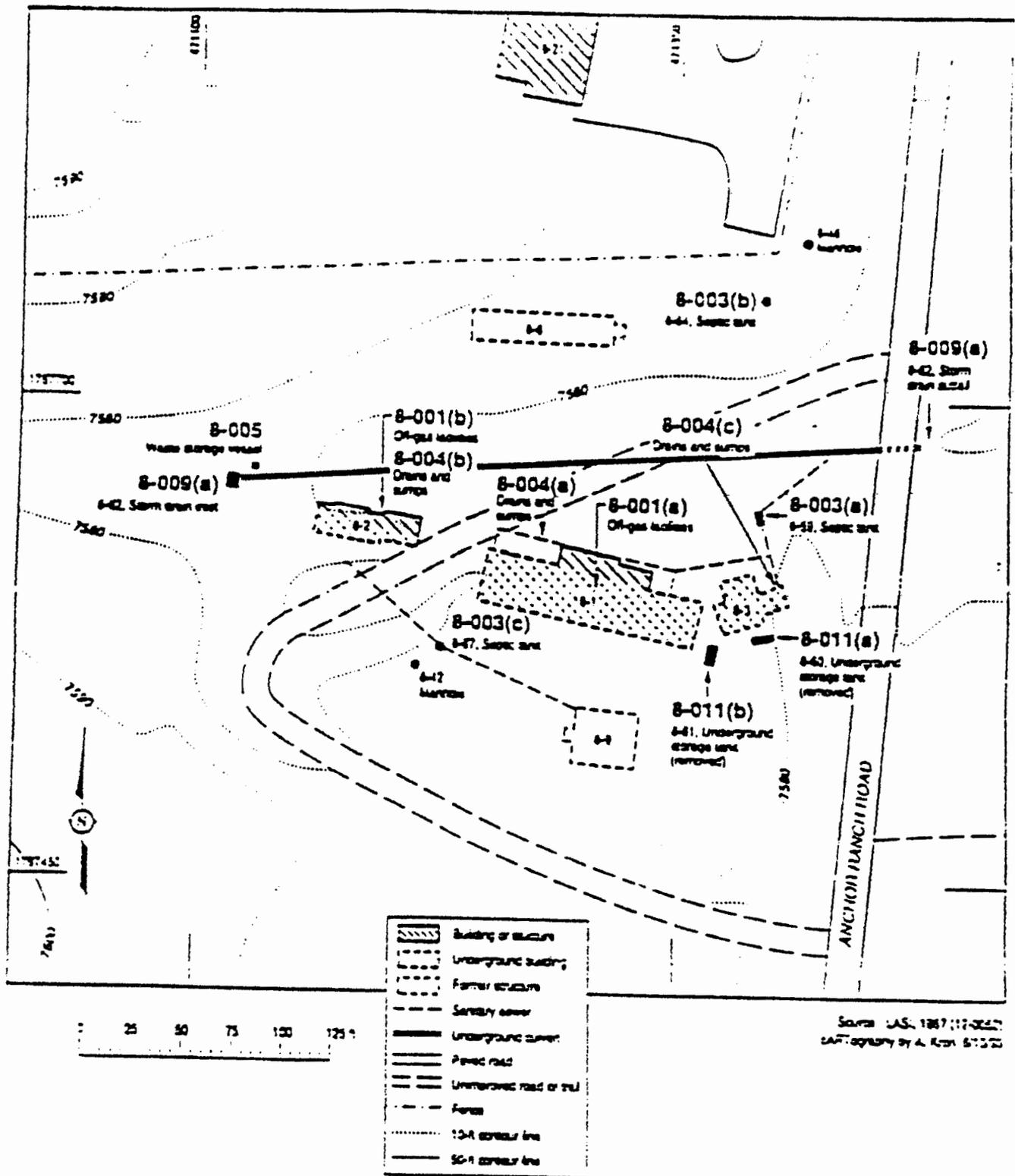


Figure 2 Location of PRSs in Group 3, abandoned bunker site.

Order # NS-07-445
August 8, 1995 16:41

KEMRON ENVIRONMENTAL SERVICES
RESULTS BY SAMPLE

This is to certify that the following samples were analyzed using good laboratory practices to show the following results

SAMPLE ID: 01 0508-95-0008/02 Collected: 07/26/95 Category: SOIL

TEST DESCRIPTION	RESULT	DETECTION LIMIT	UNITS	DATE ANALYZED BY	ME	C
Percent Solids	94	1	% wt.	07/28/95	JCR	SW2

SAMPLE ID: 02 0508-95-0008/01 Collected: 07/26/95 Category: SOIL

TEST DESCRIPTION	RESULT	DETECTION LIMIT	UNITS	DATE ANALYZED BY	ME	D
Percent Solids	94	1	% wt.	07/28/95	JCR	SW2
Aluminum, Total	7300	43	mg/kg Al	07/31/95	JCR	601
Antimony, Total	<13	13	mg/kg Sb	07/31/95	JCR	601
Arsenic, Total	<2.1	2.1	mg/kg As	08/01/95	JCR	705
Barium, Total	180	43	mg/kg Ba	07/31/95	JCR	601
Beryllium, Total	<1.1	1.1	mg/kg Be	07/31/95	JCR	601
Cadmium, Total	<1.1	1.1	mg/kg Cd	07/31/95	JCR	601
Calcium, Total	1800	1300	mg/kg Ca	07/31/95	JCR	601
Chromium, Total	7.4	2.1	mg/kg Cr	07/31/95	JCR	601
Cobalt, Total	<13	11	mg/kg Co	07/31/95	JCR	601
Copper, Total	3.5	5.3	mg/kg Cu	07/31/95	JCR	601
Iron, Total	40000	21	mg/kg Fe	07/31/95	JCR	601
Lead, Total	23	5.3	mg/kg Pb	07/31/95	JCR	601
Magnesium, Total	1800	1100	mg/kg Mg	07/31/95	JCR	601
Manganese, Total	110	3.2	mg/kg Mn	07/31/95	JCR	601
Mercury, Total	<0.11	0.11	mg/kg Hg	08/02/95	JCR	747
Nickel, Total	<4.5	3.5	mg/kg Ni	07/31/95	JCR	601
Potassium, Total	1400	1100	mg/kg K	07/31/95	JCR	601
Selenium, Total	<1.1	1.1	mg/kg Se	07/31/95	JCR	601
Silver, Total	<2.1	2.1	mg/kg Ag	07/31/95	JCR	601
Sodium, Total	<1100	1100	mg/kg Na	07/31/95	JCR	601
Thallium, Total	<2.1	2.1	mg/kg Tl	07/31/95	JCR	601
Vanadium, Total	15	11	mg/kg V	07/31/95	JCR	601
Zinc, Total	170	4.3	mg/kg Zn	07/31/95	JCR	601

45

Table 1. Priority Release Site 8-005 Surface Soil Sampling Data

1995-15-20

KEYRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: LA8270
Sample Description: 0508-95-0008-02
Test Description: Semivolatile Compounds

Lab No: 01A

Collection: 07-26-95
Category: SOIL
Method: S750

Analyst: MDC Extracted: 07/27/95 File #: LAC3055
Instrument: HPMS_3 Injected: 08/01/95 Factor: 33 Units: ug/kg Verified

CAS#	COMPOUND	RESULT	DETECTION LIMIT
103-95-2	Phenol	ND	10
100-44-4	bis(2-Chloroethyl)ether	ND	10
95-57-8	2-Chlorophenol	ND	10
941-73-1	1,3-Dichlorobenzene	ND	10
106-46-7	1,4-Dichlorobenzene	ND	10
100-51-6	Benzyl alcohol	ND	10
95-50-1	1,2-Dichlorobenzene	ND	10
95-48-7	2-Methylphenol	ND	10
106-44-5	4-Methylphenol	ND	10
621-64-7	N-Nitroso-di-n-propylamine	ND	10
67-72-1	Hexachlorocyclopentadiene	ND	10
98-95-3	Nitrobenzene	ND	10
78-59-1	1,2,3-Trichlorobenzene	ND	10
88-75-9	2-Nitrophenol	ND	10
105-67-9	2,4-Dichlorophenol	ND	10
65-85-0	Succinic acid	ND	10
101-91-1	bis(2-Chloroethoxy)ethane	ND	10
120-82-2	2,4-Dichlorophenol	ND	10
120-82-1	1,2,4-Trichlorobenzene	ND	10
81-20-3	Naphthalene	ND	10
106-47-8	4-Chloroaniline	ND	10
27-59-3	Hexachlorocyclohexane	ND	10
59-50-7	4-Chloro-2-methylphenol	ND	10
81-57-6	2-Methylnaphthalene	ND	10
77-47-4	Hexachlorocyclopentadiene	ND	10
88-06-2	1,4,5-Trichlorophenol	ND	10
95-83-4	2,4,6-Trichlorophenol	ND	10
91-58-7	2-Chloronaphthalene	ND	10
88-74-4	1-Nitroaniline	ND	10
91-21-3	Dimethylphthalate	ND	10
208-96-8	Acenaphthylene	ND	10
65-25-2	1,4-Dinitrobenzene	ND	10
99-08-2	3-Nitroaniline	ND	10
83-32-9	Acenaphthene	ND	10
81-23-5	1,4-Dinitrophenol	ND	10
100-02-7	4-Nitrophenol	ND	10
112-64-9	Dibenzofuran	ND	10
121-14-2	1,4-Dinitrobenzene	ND	10
84-66-2	Diethylphthalate	ND	10
7226-72-1	4-Chlorophenyl-phenyl ether	ND	10
56-73-7	Fluorene	ND	10
100-51-6	4-Nitroaniline	ND	10
534-52-1	4,6-Dinitro-2-methylphenol	ND	10
85-30-8	N-Nitrosodiphenylamine	ND	10
101-88-3	4-Bromophenyl-phenyl ether	ND	10
118-74-1	Hexachlorobenzene	ND	10
97-86-8	Pentachlorophenol	ND	10
85-01-8	Phenanthrene	ND	10
123-32-7	Anthracene	ND	10
84-74-3	2,3-Diethylphthalate	ND	10
106-44-2	Fluoranthene	ND	10
129-03-1	Pyrene	ND	10
85-68-4	Burylbenzylphthalate	ND	10
51-94-1	1,1'-Dichloroethane	ND	10
56-55-1	Benzo[a]anthracene	ND	10
218-02-9	Chrysene	ND	10
101-81-7	bis(2-Ethylhexyl)phthalate	ND	10
111-84-0	2,3-Diethylphthalate	ND	10
101-81-3	Acenaphthene	ND	10
129-03-1	Benzo[b]fluoranthene	ND	10
123-32-7	Benzo[k]fluoranthene	ND	10

Order # N307-225
August 3, 1995 16:00

KEMRON ENVIRONMENTAL SERVICES
TEST RESULTS BY SAMPLE

Test Code: LAS270
Sample Description: 0508-95-0008:02
Test Description: Semivolatile Compounds

Lab No: 01A

Collected: 07/26/95
Category: SOIL
Method: 8270

Analyst: MDC
Instrument: HPMS_3

Extracted: 07/27/95
Injected: 08/01/95

File #: LA03055
Factor: 33

Units: ug/kg

Verifica

CAS#	COMPOUND	RESULT	DETECTION LIMIT
50-32-3	Benzo(a)pyrene	ND	100
153-39-3	Indeno(1,2,3-cd)pyrene	ND	100
53-70-3	Dibenzo(a,h)anthracene	ND	100
191-24-2	Benzo(g,h,i)perylene	ND	100
62-53-3	aniline	ND	100
62-75-9	N-Nitrosodimethylamine	ND	100

LIBRARY SEARCH COMPOUNDS:

CAS#	COMPOUND	RESULT
108-60-1	2,2'-Oxybis(1-Chloropropane)	NF

SURROGATES:

1-Fluorophenol	46 % Recovery (254 - 224)
2-Fluorobiphenyl	44 % Recovery (334 - 2154)
Phenol-d6	54 % Recovery (244 - 2134)
2,4,6-Tribromophenol	71 % Recovery (194 - 224)
Microbenzene-d5	40 % Recovery (234 - 224)
p-Terphenyl-d14	48 % Recovery (184 - 214)

NOTES AND DEFINITIONS FOR THIS SAMPLE
 ND = NOT DETECTED AT OR ABOVE THE METHOD
 DETECTION LIMIT (MDL)
 NA = NOT ANALYZED
 RL = REJECTED OUT
 NF = NOT FOUND