Westinghouse Hanford Company START 9513356.2345 0041579 Internal Memo

From: Office of Sample Management 28600-91-077
Phone: 3-3419 MO-346/200W T6-08
Date: JULY 8, 1991
Subject: TRANSMITTAL OF VALIDATED DATA FOR THE B-POND PHASE III PROJECT (TRANS #2)

To: R. C. Roos H4-55

cc: M. R. Adams H4-55*
R. P. Henckel H4-55*
J. H. Kessner T6-08*
E. J. Kosiancic S0-61*
C. D. Kramer H4-55*
JAL File/LB
*w/o enclosures

Validated sample data from the B-Pond Project is being transmitted by the Office of Sample Management (OSM) for the following Martin Marietta Energy Systems, K-25 Laboratory (K-25) delivery group (assigned by OSM):

B00FK6

The delivery group contains results for 70 soil samples analyzed at the K-25 facility.

The OSM data validation procedure is a review of laboratory performance and implementation of applicable protocols. Subsequent technical data evaluation by project lead personnel should include a determination of the appropriateness of results from a standpoint of past history and present knowledge of the sample site.

If you have any questions, please contact me at the number listed above.

J. A. Lerch
Scientist

tjn

Enclosure

Approved for Public Release 6/26/95

JUN 1995 RECEIVED EDMC

9513356.2346

ANALYTICAL RESULTS PACKAGE

PROJECT 90-031

B-POND PHASE III SAMPLES

MAY 1991
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DATA RECEIPT

9513356.2347

ANALYTICAL RESULTS DATA PACKAGE - PROJECT 90-031

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MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX 2003
OAK RIDGE, TENNESSEE 37831-7440

May 22, 1991

Ms. Joan Kessner
Westinghouse Hanford Company
Office of Sample Management
2355 Stevens Drive
Richland, Washington, 99352

Dear Ms. Kessner:

Analytical Results Package on Project 90-031: B-Pond Phase III Samples

Attached are the analytical results on the B-Pond Phase III samples, Project 90-031, received into the K-25 Site Analytical Chemistry Department (ACD) laboratories during February and March, 1991. Also attached are copies of the Chain of Custody records for the samples, a sample identification table and a summary of the protocol utilized to perform these analyses in accordance with agreements between the OSM and K-25 ACD. As previously requested in the letter dated December 20, 1990, the results are reported in ACD's AnaLis report format. All data quality objectives were satisfied on this project.

Total dioxin/furan and o-phosphorus pesticide analyses were requested on some of the samples for this project. Since these analyses are not available at the K-25 ACD laboratories, as previously agreed upon by the OSM and ACD, the samples requiring these pesticides analyses were sent to the International Technology Corporation laboratories. Copies of the reports for these analyses as submitted to the ACD by IT have been included in their entirety.

Some analyses are still pending at this time. However, in order that the data deliverables package on the project not be delayed any longer, the remainder of the package is being released. Complete data reports will be submitted as soon as they are available. The Strontium-90 analysis is pending at this time on the following samples: BOOFK6, BOOFK7, BOOGS4, BOOGS9, BOOGT7, BOOGV6, BOOGV7, BOOGV8, BOOGV9, BOOGW1, BOOGW0, BOOGW4, BOOGW8, and BOOH10. The gamma activity analysis is pending at this time on the following samples: BOOGW3, BOOGX6, BOOGZ2, BOOGZ6, BOOH00, BOOH01, BOOH01D, BOOH02, BOOGZ8, BOOH03, BOOH04, BOOH05, BOOH06, BOOH14, BOOH10, BOOH19, and BOOH23. The mercury analysis is pending at this time on two sample sets received on March 28, and 31, 1991. The semi-volatile analysis on sample BOOGT7, and the volatile analysis on sample BOOH14 are also pending at this time. The samples requiring total dioxin/furan and o-phosphorous pesticide analysis at IT were sent on to the IT laboratories in two groups. The completed data reports for one group have not been received by

the ACD at this time. The samples which lack data for total dioxin/furan and o-phosphorus pesticides are: BOOGX6, BOOGZ2, BOOGZ6, BOOH00, BOOH01, BOOH02, BOOGZ8, BOOH03, BOOH04, BOOH05, BOOH06, BOOH14, BOOH10, BOOH19, BOOH23.

ICP Metals

The samples were analyzed for ICP metals in accordance with EPA-6010 protocol following sample preparation by EPA-3050. All quality control criteria was applied to samples in each SDG. All internal matrix spike percent recoveries were within acceptable limits except those on samples BOOFK7, BOOFK8, and BOOGT5. Note the comment from the ICP laboratory supervisor on the AnaLis report for those samples. Replicate analyses were conducted on samples in the SDG, and all relative percent deviations were within allowable limits. At present the ACD cannot report the ICP metals blank results through the AnaLis database; however, the calibration and reagent blanks for this run as generated by the ICP's data system are available upon request.

AA Metals

The AA metals (arsenic, lead, selenium, and thallium) analyses were conducted in accordance with EPA-7000 series procedures. The arsenic, lead, selenium, and thallium analyses are complete but not yet reviewed and approved by the AA laboratory supervisor on samples BOOH14, BOOH19, BOOH20, BOOH21, and BOOH23. The AnaLis report for these samples will not contain the data for unapproved analyses. As soon as the data is reviewed and approved for these samples, a completed AnaLis report will be submitted. All the required quality control criteria were applied to the samples in each SDG. The internal matrix spike percent recoveries for the metals analyses were within acceptance limits. Replicate analyses were conducted on samples in the SDG and all relative percent deviations (RPD) were within acceptable limits. At present the ACD cannot report the AA metals blank results through the AnaLis database, however it is required according to ACD QA/QC policy that no analysis result be reported for any element which is found in the prep blank above the data reporting limits. The raw data within the QA batch (SDG) for any particular analysis contains the prep blank data and is available upon request.

Mercury

All the required quality control criteria was applied to the samples in each SDG. The internal matrix spike percent recoveries were within acceptance limits. Replicate analyses were conducted on samples in each SDG and all relative percent deviations were within acceptable limits. All internal controls and check standards run during these analyses were within the acceptance limits. At present the ACD cannot report the Mercury blank results through the AnaLis database, however it is required according to ACD QA/QC policy that no analysis result be reported for any element which is found in the prep blank above the data reporting limits. The raw data within the QA batch (SDG) for any particular analysis contains the prep blank data and is available upon request.

Semi-Volatiles: BNA

All the samples requiring semi-volatile analysis were extracted within the prescribed holding times except samples BOOFK6, BOOFK7, BOOFK8, BOOFK9, BOOFL0, BOOGZ8, BOOH03, BOOH04, BOOH05, and BOOH06 which missed the extraction holding time by eight (8) days; sample BOOH10

which missed the extraction holding time by six (6) days; samples BOOFL1, and BOOH14 which missed the extraction holding time by five (5) days; samples BOOFL3, BOOFL4, and BOOGR9 which missed the extraction holding time by four (4) days; and sample BOOGS4 which missed the extraction holding time by one (1) day. Although samples BOOGT7 and BOOGZ2 were extracted within the prescribed holding time, the analyst has not yet entered the extraction data in the AnaLis database; therefore the BNA extraction appears on the AnaLis report as incomplete. This ommission will be corrected and a completed AnaLis report submitted as soon as possible. The BNA extraction date on sample BOOGV9 was entered incorrectly by the analyst; the correct date is 3/12/91. Once extracted, all the samples were analyzed for semi-volatiles within the prescribed holding times. All required quality control criteria were applied to the samples in each SDG. All surrogate spike recoveries were within acceptance limits. All matrix spikes and matrix spike duplicates were within the acceptable limits.

Volatiles: VOA

All the samples requiring volatile analysis were analyzed within the prescribed holding times except sample BOOFL4 which missed the holding time for analysis by one (1) day. All the required quality control criteria were applied to the samples in each SDG. All surrogate spike percent recoveries were within acceptance limits. All matrix spike and matrix spike duplicates run were within acceptable limits.

Herbicides

In performing the analysis for herbicides under EPA-8150 protocol, the ACD laboratories have previously encountered several problems with recoveries in a soil matrix. Therefore all samples for this project were extracted using ether/acetone as the extraction solvent instead of diasomethane. All required quality control criteria were applied to the samples in each SDG and were within acceptable limits.

Pesticides and PCBs

The pesticide and PCB analyses were performed according to EPA-8080 protocol. All required quality control criteria were applied to the samples in each SDG and were within acceptable limits except the surrogate spike on sample BOOH01D.

Radiochemical Analyses: Alpha, Beta, Gamma, Strontium-90, and other Radionuclides

The radiochemical analyses were conducted using EPA-900 series procedures. Most of the radiochemical analyses have not yet been reviewed and approved by the supervisor in the laboratory, therefore the results will not be shown on the AnaLis report. As soon as the data has been approved, completed AnaLis reports will be submitted.

Wet Chemistry: Anions, Fluoride, Sulfide, Ammonia, Cyanide

The proximate analyses were conducted in accordance with EPA approved methodology. All the required quality control criteria were applied to the samples in each SDG and were within acceptable limits. Matrix spike percent recoveries were within acceptance limits of 75 - 125%.

I certify that this data package is in compliance with the terms and conditions of the OSM's revised Statement of Work and letter dated December 20, 1990, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Sincerely,

Deborah L. Amburgey

Deborah L. Amburgey
Program Manager
Hanford Support Program

Clarence R. Kirkpatrick

Clarence R. Kirkpatrick
Program Manager
Waste Management Analysis

Roy W. Morrow

Roy W. Morrow
Department Manager
K-25 Site Analytical Chemistry Department

Attachments

cc/attach: D.L.Amburgey
S.R.Smith - RC

cc: N.P.Buddin
H.H.Sullivan

PROTOCOL UTILIZED FOR ANALYSIS OF

B-POND PHASE III SAMPLES

Analysis	Protocol
A. ICP Metals	EPA-6010
B. Mercury	EPA-7471
C. Arsenic	EPA-7060
D. Lead	EPA-7421
E. Selenium	EPA-7740
F. Thallium	EPA-7841
G. Semi-Volatiles	ACD 2470 (BNA (CLP) protocol)
H. Volatiles	ACD 2440 (VOA (CLP) protocol)
J. Alpha Activity	EPA-900.0
K. Beta Activity	EPA-900.0
L. Gamma Activity	EPA-900.0
M. Strontium	EPA-906
N. Herbicides	EPA-8150
O. Pesticides	EPA-8080
P. PCBs	EPA-8080
Q. Anions (Cl, NO_3, SO_4)	EPA-300.0
R. Fluoride (SIE)	EPA-340.2
S. Sulfide	EPA-376.1
T. Ammonia	EPA-350.3
U. Cyanide	EPA-9010

SAMPLE IDENTIFICATION TABLE FOR PROJECT 90-031

B-POND PHASE III

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
2/09/91	BOOFK6	910215-004	soil	
	BOOFK7	910215-005	soil	
	BOOFK8	910215-006	soil	
	BOOFK9	910215-007	soil	
	BOOFL0	910215-008	soil	

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
2/09/91 Con't	BOOFK6MS	910220-065	soil	VOA matrix spike for 910215-004
	BOOFK6MSD	910220-066	soil	VOA matrix spike duplicate for 910215-004
2/12/91	BOOFL1	910215-009	soil	
2/13/91	BOOFL3	910215-010	soil	
	BOOFL4	910215-011	soil	
	BOOGR9	910215-012	soil	
	BOOGS0	910215-013	soil	
Blanks		910220-064	blank	VOA blank for 910215-004 through -006 and 910215-009
		910222-013	blank	VOA blank for 910215-007, -008, -010, and -012
		910225-170	blank	BNA blank for 910215-004 through -012
		910226-076	blank	Herbicide blank for 910215-004 through -009
		910228-107	blank	VOA blank for 910215-011
		910301-273	blank	PCB/Pesticide blank for 910215-004, and 910215-006 through -012
		910303-011	blank	Herbicide blank for 910215-010 through -012
2/15/91	BOOGS1	910215-092	soil	
2/16/91	BOOGS2	910219-089	soil	
	BOOGS3	910219-090	soil	
	BOOGS4	910219-091	soil	
	BOOGS8	910219-092	soil	
2/21/91	BOOGS9	910222-063	soil	
	BOOGT1	910222-064	soil	

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
2/21/91 Con't	BOOGT3	910222-065	soil	
Blanks		910220-064	blank	VOA blank for 910219-091
		910225-170	blank	BNA blank for 910219-091 and 910222-063
		910228-107	blank	VOA blank for 910222-063
		910301-273	blank	PCB/Pesticide blank for 910219-091 and 910222-063
		910303-011	blank	Herbicide blank for 910219-091 and 910222-063
2/24/91	BOOGT4	910224-065	soil	
	BOOGT5	910224-066	soil	
	BOOGT7	910224-067	soil	
Blanks		910228-107	blank	VOA blank for 910224-067
		910228-173	blank	BNA blank for 910224-067
		910301-273	blank	PCB blank for 910224-067
		910303-011	blank	Herbicide blank for 910224-067
2/26/91	BOOGT8	910227-087	soil	
2/28/91	BOOGV0	910301-012	soil	
3/02/91	BOOGV5	910304-008	soil	
3/04/91	BOOGV1	910306-006	soil	
	BOOGV2	910306-007	soil	
	BOOGV3	910306-008	soil	
3/06/91	BOOGV6	910307-043	soil	
	BOOGV7	910307-044	soil	

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
3/06/91 Con't	BOOGV8	910307-045	soil	
	BOOGV6MS	910311-018	soil	VOA matrix spike for 910307-043
	BOOGV6MSD	910311-019	soil	VOA matrix spike for 910307-044
Blanks		910301-170	blank	VOA blank for 910304-008
		910307-229	blank	BNA blank for 910304-008, and 910307-043 through -045
		910307-232	blank	PCB/Pesticide blank for 910304-008 and 910307-043 through -045
		910309-033	blank	Herbicide blank for 910304-008 and 910307-043 through -045
		910311-017	blank	VOA blank for 910307-043 through -045
3/07/91	BOOGV9	910308-108	soil	
	BOOGW1	910308-109	soil	
	BOOGW0	910308-110	soil	
	BOOGW4	910308-111	soil	
	BOOGW6	910308-112	soil	
	BOOGW8	910308-113	soil	
	BOOGW3	910311-027	soil	
3/08/91	BOOGW9	910308-114	soil	
	BOOGX2	910308-115	soil	
Blanks		910309-033	blank	Herbicide blank for 910308-108 through -111
		910311-017	blank	VOA blank 910308-108 through -111 and 910311-027

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
Blanks		910312-123	blank	BNA blank for 910308-108 through -111 and 910311-027
		910312-126	blank	PCB blank for 910308-108 through -111 and 910311-027
		910316-009	blank	Herbicide blank 910311-027
3/12/91	BOOGX3	910313-099	soil	
	BOOGX4	910313-100	soil	
	BOOGX5	910313-101	soil	
	BOOGX8	910313-102	soil	
	BOOGX6	910313-103	soil	
3/13/91	BOOGY0	910315-057	soil	
	BOOGY1	910315-058	soil	
	BOOGY2	910315-059	soil	
	BOOGZ2	910315-060	soil	
Blanks		910316-009	blank	Herbicide blank for 910313-103 and 910315-060
		910318-074	blank	BNA blank for 910313-103 and 910315-060
		910318-077	blank	PCB/Pesticide blank for 910313-103 and 910315-060
		910321-027	blank	VOA blank for 910313-103 and 910315-060
3/16/91	BOOG23	910318-101	soil	
3/19/91	BOOG26	910319-085	soil	
	BOOH00	910319-086	soil	
	BOOH01	910319-087	soil	
	BOOH01D	910319-088	soil	Duplicate of 910319-087

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
3/19/91	BOOH02	910319-089	soil	
Con't	BOOG26MSD	910321-078	soil	BNA matrix spike duplicate for 910319-085
3/20/91	BOOGZ8	910321-067	soil	
	BOOH03	910321-068	soil	
	BOOH04	910321-069	soil	
	BOOH05	910321-070	soil	
	BOOH06	910321-071	soil	
	BOOGZ8MS	910322-076	soil	VOA matrix spike of 910321-067
	BOOGZ8MSD	910322-077	soil	VOA matrix spike duplicate of 910321-067
3/22/91	BOOH09	910322-210	soil	
	BOOH11	910328-077	soil	
	BOOH10	910328-078	soil	
Blanks		910321-027	blank	VOA blank for 910319-085 through -089
		910321-075	blank	PCB/Pesticide blank for 910319-085 through -089
		910321-080	blank	BNA blank for 910319-085 through -089
		910322-075	blank	VOA blank for 910321-067 and 910321-069 through -071
		910327-027	blank	Herbicide blank for 910319-085 through -089
		910328-103	blank	VOA blank for 910321-068
		910401-210	blank	PCB/Pesticide blank for 910321-067 through -071
		910404-032	blank	BNA blank for 910321-067 through -071

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
Blanks		910410-064	blank	BNA blank for 910321-067 through 071
3/23/91	BOOH14	910325-035	soil	
3/28/91	BOOH15	910328-073	soil	
	BOOH16	910328-074	soil	
	BOOH17	910328-075	soil	
	BOOH18	910328-076	soil	
	BOOH19	910401-011	soil	
	BOOH19MS	910402-019	soil	Matrix spike for 910401-011
	BOOH19MSD	910402-020	soil	Matrix spike duplicate for 910401-011
3/31/91	BOOH20	910401-012	soil	
	BOOH21	910401-013	soil	
	BOOH23	910401-014	soil	
	BOOH23MS	910404-036	soil	Matrix spike for 910401-014
	BOOH23MSD	910404-037	soil	Matrix spike duplicate for 910401-014
Blanks		910328-103	blank	VOA blank for 910328-078
		910401-210	blank	PCB/Pesticide blank for 910328-078
		910402-018	blank	VOA blank for 910401-011 and -014
		910404-032	blank	BNA blank for 910325-035, 910328-078, 910401-011 and 910401-014
		910404-035	blank	PCB/Pesticide blank for 910325-035, 910401-011, and 910401-014

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
Blanks		910410-064	blank	Herbicide blank for 910325-035, 910328-078, 910401-011, and 910401-014

CASE
NARRATIVE -
SUPPLEMENT

9513356.2360

9513356.2361

ANALYTICAL RESULTS SUPPLEMENT

PROJECT 90-031

B-POND PHASE III SAMPLES

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9513356.2362

ANALYTICAL RESULTS SUPPLEMENT PACKAGE - PROJECT 90-031

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MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX 2003
OAK RIDGE, TENNESSEE 37831-7440

June 14, 1991

Ms. Joan Kessner
Westinghouse Hanford Company
Office of Sample Management
2355 Stevens Drive
Richland, Washington, 99352

Dear Ms. Kessner:

Analytical Results Supplement on Project 90-031: B-Pond Phase III Samples

Attached are the completed analytical results on forty-four of the B-Pond Phase III samples, Project 90-031, received into the K-25 Site Analytical Chemistry Department (ACD) laboratories during February and March, 1991. Also attached is a sample identification table of all the samples included in the original data package, with the samples included in this supplement indicated by a "*" following the Lab Sample ID number. These results are a supplement to the data package sent May 22, 1991. Copies of the Chain of Custody records and a summary of the protocol utilized to perform these analyses were included in the original data package and have not been included in this supplement.

Total dioxin/furan and o-phosphorus pesticide analyses were requested on some of the samples for this project. Since these analyses are not available at the K-25 ACD laboratories, as previously agreed upon by the OSM and ACD, the samples requiring these pesticides analyses were sent to the International Technology Corporation laboratories. Copies of the reports for the first sets of samples requiring these analyses as submitted to the ACD by IT were included in the original data package. Reports for the second set of samples sent to IT are included with this supplement in their entirety.

Some analyses are still pending at this time. The Strontium-90 analysis is still pending on sample BOOH10. The gamma activity analysis is still pending on the following samples: BOOGW3, BOOGX6, BOOGZ2, BOOGZ6, BOOGZ8, BOOH03, BOOH04, BOOH05, BOOH06, BOOH14,

BOOH10, BOOH19, and BOOH23. The mercury analysis is completed on two samples sets received on March 28, and 31, 1991, however the mercury data has not been reviewed or approved by the supervisor as is not available at this time. The volatile analysis on sample BOOH14 is still pending. Completed data reports on these samples will be submitted as soon as they are available.

Sincerely,

Deborah L. Amburgey

Deborah L. Amburgey
Program Manager
Hanford Support Program

Attachments

cc/attach: D.L.Amburgey
S.R.Smith - RC

cc: N.P.Buddin
C.R.Kirkpatrick
R.W.Morrow
H.H.Sullivan

SAMPLE IDENTIFICATION TABLE FOR PROJECT 90-031

B-POND PHASE III

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
2/09/91	BOOFK6	910215-004*	soil	
	BOOFK7	910215-005*	soil	
	BOOFK8	910215-006*	soil	
	BOOFK9	910215-007*	soil	
	BOOFL0	910215-008*	soil	
	BOOFK6MS	910220-065	soil	VOA matrix spike for 910215-004
	BOOFK6MSD	910220-066	soil	VOA matrix spike duplicate for 910215-004
2/12/91	BOOFL1	910215-009*	soil	
2/13/91	BOOFL3	910215-010*	soil	
	BOOFL4	910215-011*	soil	
	BOOGR9	910215-012*	soil	
	BOOGS0	910215-013*	soil	
Blanks		910220-064	blank	VOA blank for 910215-004 through -006 and 910215-009
		910222-013	blank	VOA blank for 910215-007, -008, -010, and -012
		910225-170	blank	BNA blank for 910215-004 through -012
		910226-076	blank	Herbicide blank for 910215-004 through -009
		910228-107	blank	VOA blank for 910215-011
		910301-273	blank	PCB/Pesticide blank for 910215-004, and 910215-006 through -012

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
Blanks Con't		910303-011	blank	Herbicide blank for 910215-010 through -012
2/15/91	BOOGS1	910215-092*	soil	
2/16/91	BOOGS2	910219-089*	soil	
	BOOGS3	910219-090*	soil	
	BOOGS4	910219-091*	soil	
	BOOGS8	910219-092*	soil	
2/21/91	BOOGS9	910222-063*	soil	
	BOOGT1	910222-064*	soil	
	BOOGT3	910222-065*	soil	
Blanks		910220-064	blank	VOA blank for 910219-091
		910225-170	blank	BNA blank for 910219-091 and 910222-063
		910228-107	blank	VOA blank for 910222-063
		910301-273	blank	PCB/Pesticide blank for 910219-091 and 910222-063
		910303-011	blank	Herbicide blank for 910219-091 and 910222-063
2/24/91	BOOGT4	910224-065	soil	
	BOOGT5	910224-066	soil	
	BOOGT7	910224-067*	soil	
Blanks		910228-107	blank	VOA blank for 910224-067
		910228-173	blank	BNA blank for 910224-067
		910301-273	blank	PCB blank for 910224-067
		910303-011	blank	Herbicide blank for 910224-067

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
2/26/91	BOOGT8	910227-087*	soil	
2/28/91	BOOGV0	910301-012*	soil	
3/02/91	BOOGV5	910304-008*	soil	
3/04/91	BOOGV1	910306-006*	soil	
	BOOGV2	910306-007	soil	
	BOOGV3	910306-008*	soil	
3/06/91	BOOGV6	910307-043*	soil	
	BOOGV7	910307-044*	soil	
	BOOGV8	910307-045*	soil	
	BOOGV6MS	910311-018	soil	VOA matrix spike for 910307-043
	BOOGV6MSD	910311-019	soil	VOA matrix spike for 910307-044
Blanks		910301-170	blank	VOA blank for 910304-008
		910307-229	blank	BNA blank for 910304-008, and 910307-043 through -045
		910307-232	blank	PCB/Pesticide blank for 910304-008 and 910307-043 through -045
		910309-033	blank	Herbicide blank for 910304-008 and 910307-043 through -045
		910311-017	blank	VOA blank for 910307-043 through -045
3/07/91	BOOGV9	910308-108*	soil	
	BOOGW1	910308-109*	soil	
	BOOGW0	910308-110*	soil	
	BOOGW4	910308-111*	soil	
	BOOGW6	910308-112*	soil	
	BOOGW8	910308-113*	soil	

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
3/07/91 Con't	BOOGW3	910311-027	soil	
3/08/91	BOOGW9	910308-114*	soil	
	BOOGX2	910308-115*	soil	
Blanks		910309-033	blank	Herbicide blank for 910308-108 through -111
		910311-017	blank	VOA blank 910308-108 through -111 and 910311-027
Blanks		910312-123	blank	BNA blank for 910308-108 through -111 and 910311-027
		910312-126	blank	PCB blank for 910308-108 through -111 and 910311-027
		910316-009	blank	Herbicide blank 910311-027
3/12/91	BOOGX3	910313-099	soil	
	BOOGX4	910313-100	soil	
	BOOGX5	910313-101	soil	
	BOOGX8	910313-102	soil	
	BOOGX6	910313-103	soil	
3/13/91	BOOGY0	910315-057*	soil	
	BOOGY1	910315-058*	soil	
	BOOGY2	910315-059*	soil	
	BOOGZ2	910315-060	soil	
Blanks		910316-009	blank	Herbicide blank for 910313-103 and 910315-060
		910318-074	blank	BNA blank for 910313-103 and 910315-060

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
Blanks Con't		910318-077	blank	PCB/Pesticide blank for 910313-103 and 910315-060
		910321-027	blank	VOA blank for 910313-103 and 910315-060
3/16/91	BOOG23	910318-101*	soil	
3/19/91	BOOG26	910319-085*	soil	
	BOOH00	910319-086*	soil	
	BOOH01	910319-087*	soil	
	BOOH01D	910319-088*	soil	Duplicate of 910319-087
	BOOH02	910319-089*	soil	
	BOOG26MSD	910321-078	soil	BNA matrix spike duplicate for 910319-085
3/20/91	BOOGZ8	910321-067	soil	
	BOOH03	910321-068	soil	
	BOOH04	910321-069	soil	
	BOOH05	910321-070	soil	
	BOOH06	910321-071	soil	
	BOOGZ8MS	910322-076	soil	VOA matrix spike of 910321-067
	BOOGZ8MSD	910322-077	soil	VOA matrix spike duplicate of 910321-067
3/22/91	BOOH09	910322-210	soil	
	BOOH11	910328-077	soil	
	BOOH10	910328-078	soil	
Blanks		910321-027	blank	VOA blank for 910319-085 through -089
		910321-075	blank	PCB/Pesticide blank for 910319-085 through -089
		910321-080	blank	BNA blank for 910319-085 through -089

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
Blanks Con't		910322-075	blank	VOA blank for 910321-067 and 910321-069 through -071
		910327-027	blank	Herbicide blank for 910319-085 through -089
		910328-103	blank	VOA blank for 910321-068
		910401-210	blank	PCB/Pesticide blank for 910321-067 through -071
		910404-032	blank	BNA blank for 910321-067 through -071
		910410-064	blank	BNA bland for 910321-067 through 071
3/23/91	BOOH14	910325-035	soil	
3/28/91	BOOH15	910328-073	soil	
	BOOH16	910328-074	soil	
	BOOH17	910328-075	soil	
	BOOH18	910328-076	soil	
	BOOH19	910401-011	soil	
	BOOH19MS	910402-019	soil	Matrix spike for 910401-011
	BOOH19MSD	910402-020	soil	Matrix spike duplicate for 910401-011
3/31/91	BOOH20	910401-012	soil	
	BOOH21	910401-013	soil	
	BOOH23	910401-014	soil	
	BOOH23MS	910404-036	soil	Matrix spike for 910401-014
	BOOH23MSD	910404-037	soil	Matrix spike duplicate for 910401-014
Blanks		910328-103	blank	VOA blank for 910328-078

Date Group Received	OSM Sample ID	Lab Sample ID	Matrix	Comments
Blanks Con't		910401-210	blank	PCB/Pesticide blank for 910328-078
		910402-018	blank	VOA blank for 910401-011 and -014
		910404-032	blank	BNA blank for 910325-035, 910328-078, 910401-011 and 910401-014
		910404-035	blank	PCB/Pesticide blank for 910325-035, 910401-011, and 910401-014
		910410-064	blank	Herbicide blank for 910325-035, 910328-078, 910401-011, and 910401-014

* Indicates sample reports included in this supplement.

9513356.2372

AnaLis Reports

DON'T SAY IT - - WRITE IT!

Date:

To: C. R. Kirkpatrick
D. Amberguy

From: J. A. Lerch

Subject: Review of the K-25 Data Package Submitted for Project 90-049 Titled 284E/200E S&WU-001 Samples

The following defficiencies wre noted during review of the subject data package.

	VOA	SemiVOA	PCB
SP-S34	R	E,S	R
SP-S35		E,S	E,S
SP-S36	TIC	S	S
SP-S37	TIC	E,S	E,S
SP-S38	S,TIC	E,S	E,S
SP-S39		E,S	E,S
SP-S40		E,S	E,S
SP-S41		E,S	E,S
SP-S42		E,S	E,S
SP-S43		E,S	E,S
SP-S44		R	S
SP-S45		R	E,S
SP-S46		R	E,S
SP-S47		R	E,S
SP-S48	S,TIC		S
SP-S49	TIC		
SP-S50		R	

S surrogate recovery data missing
E extraction dates missing
TIC TIC analis form missing
R all results missing

- -

- Blank results were not provided for any of the analyses.
- MS/MSD results were not included for the SemiVOA and PCB analyses (although they were mentioned as being completed in the Case Narrative).
- The reporting units were inconsistent throughout the package. Examples are
  - VOA and SemiVOA results were in ug/L
  - PCB results for samples SP-S35 thru SP-S47 and SP-S50 were in ug/g while results for SP-S48 and SP-S49 were in ug/Kg.
  - Metals results for samples SP-S35 thru SP-S47 and SP-S50 were in ug/g while results for SP-S48 and SP-S49 were in mg/L.

- Metals results for samples SP-S35 thru SP-S47 and SP-S50 were reported as analyzed according to 6010 while results for SP-S48 and SP-S49 were listed as TCLP.

COC & SAMPLE RECEIPT

9513356.2375

9513356.2376

Chain of Custody Records

and

Sample Receipt Documentation

13

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000281

PROJECT NUMBER: 31

PROJECT NAME: 216-B-3 Pond Lobes A Lobe

SAMPLERS (SIGNATURE): J. D. Fowler

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	6010 Metals	9010 Gross Beta	9310 Gross Alpha	7460 Arsenic	7470 Mercury	350.3 Ammonium	7421 Pb	300 Anions	EPA 905 Sr-90	8270 Semi-Volatile	8240 Volatile Organics	8150 Chlorinated Herbicides	9010 Cyanide	9030 Sulfide	8080 PCB's/Pesticides	7841 Thallium	7740 Selenium	8140 Phos Pesticides	8280 PCDD/PCDF	Tritium
B00FK6	910215-004	2-7-91	0842	Soil	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B00FK7	910215-005	2-7-91	1001	Soil	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B00FK8	910215-006	2-7-91	1112	Soil	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B00FK9	910215-007	2-7-91	1350	Soil	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B00FL0	910215-008	2-7-91	1420	Soil	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Fowler	2-8-91	1203	G. Barker	2/9/91	1200				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

COOLER RECEIPT FORM
for SOP 2032

File with receiving and C-O-C records.

14

Date: 2-9-91 Shipper ID and Document No: 2464538929

Cooler ID if noted on outside of cooler: MOE

Project No: G13Z (CHC 8-12-91) Subproject No: 031 (CHC 2-12-91) Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 4 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	(Yes) No
Date of login:		Additional information needed from Prog. Mgr.?	(Yes) No
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

~~OVERNIGHT~~ DELIVERY SATURDAY 9513356.239 Signature Security Service 0159 #

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING) 15
Westinghouse Hanford Co.		W91-0-0159 #1 car

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Envir. Engin. Gnd & Permitting	Envir. Field Services	Envir. Charact. & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING [X] PREPAID [ ] COLLECT

SHIPPED TO
U.S. Department of Energy
c/o Martin Marietta Energy Systems
Oak Ridge Gaseous Diffusion Plant
Bear Ridge Hwy 58
Oak Ridge, TN 37831
K-1004A drop Point A20

OFFSITE CUSTODIAN: C.R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 76 Lbs.	Coleman polylite 68 cooler [MOE] Soil Samples double bagged and packed in wet Ice and Vermiculite. Samples are non-hazardous Sample# B00FK6, B00FK7, B00FK8, B00FK9, B00FL0	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To Support drilling and Sampling at B-Pond

FB 0 8 '00

Bill of Lading# 2464538879

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89169	2/8/91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	J.D. Fanther / R.C. Roos	376-2081

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
2-8-91	EV2A7	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J.D. Fanther	2-8-91	[signature]	2-8-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
[signature]		[signature]	2-8-91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
2-8-91 [signature]				
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK } PROPERTY MANAGEMENT
GOLDENROD - RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO
WHITE - PROPERTY MANAGEMENT
GREEN - PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW - RETAIN
PINK - ORIGINATOR

EMERY WORLDWIDE

SIGNATURE AND TALLY RECORD

(46)

DATE: 02-08-91 SHIPMENT NO.: 246453887 9
SHIPPER: WESTINGHOUSE SHIPPING DEPT (509) 376-6566
REFERENCE NO.: OSPC# W91-0-0159 #1

SHIPPER NAME AND ADDRESS
WESTINGHOUSE HANFORD SHIPPING (509) 376-6665
02-06 US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD COMPANY
2355 STEVENS DR
PO BOX 1970
RICHLAND WA 99352

CONSIGNEE NAME AND ADDRESS
C R KIRKPATRICK, U S DEPARTMENT OF ENERGY C/O
MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
K-1004 A DROP POINT A20
OAK RIDGE TN 37831

Pieces	Weight	Description/Marks	Emery Authorization No.
1	76	SOIL SAMPLES W91-0-0159 #1 COLEMAN POLYLITE COOLER MOE	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BELOW

Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody	Time/Date
JOYCE DEPAREST WESTINGHOUSE SHIPPING 1167/100	RICHLAND WA		/02-08-91
S Rebol	HD		0300 2/9
[illegible] Hecker	TYS	[illegible]	07:00 2/12/91
GUSTAVE EASTER SR	MMES	[illegible]	11:55 2/9/91
[illegible] K-25		[illegible]	12:00 2/9/91

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

9513356.2380

16

17

9513356.2381

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD [X] COL ☐ OTH ☐ COMAT ☐

EMERY WORLDWIDE — A CF Company

☐ Same Day [X] SAT. DEL ☐ Express ☐ Business Documents
☐ AM ☐ PM S,S,S, ☐ Priority ☐ Customs Clearance
☐ Second Day [X] ☐ Standard ☐ Delivery

E Shipper's Account Number: 850281585

Date: 2-8-91 Origin: PSC 246453887 9

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA ☐ Canada

To:
C R KIRKPATRICK
US DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
K-1004 A DROP POINT A20
OAK RIDGE TN ☐ Canada

Hold for Pick-Up ☐

Tariff Dest. $ Gateway

EMERY WORLDWIDE will call ... pick up ... by ... the ... of the ... shipment

Customer's Reference Numbers: W81241 EV2A7 W91-0-0159 #1 99352

E Consignee's Account Number: 37831

Description	Dimensions L	W	H	Total Pieces	Total Weight
1 COLEMAN POLYLITE 68 QUART COOLER MOE 76 LBS. W91-0-0159-#1	1	29	15	1	76 L

FOR INFORMATION OR RATES CALL 1-800-HI EMERY (1-800-443-6379)

Declared Value $

246453887 9

TODSR ☐ Haz Mat ☐ Edit ☐ A B C D E F G

1 2 3 4 5 6
7 8 9 0 1 2

SATURDAY DELIVERY
SIGNATURE SECURITY SERVICE

Envelope 9X12 ☐ Pack 12X15 ☐

Shipper's Signature X 2/1/91

International Shipments: Free Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing E Third Party Account Number

International Customs Value International Insurance

Base Charge

Total Transportation Charges

Other Charges/Advance at Origin ☐ OC/AO- $

206 SAT

Terms and Conditions on Back

118

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000283

PROJECT NUMBER

PROJECT NAME: 216-B-3 Pond Lobes - A Lobe

SAMPLERS (SIGNATURE): G. E. Ennis

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	6010 Metals	9010 Gross Beta	9310 Gross Alpha	7460 Arsenic	7470 Mercury	3503 Americium	4021 Pb	300 Anions	Pu+Tot SR-90	REMARKS: 8270 Semi VOA	8240 VOA	8150 Chlorinated Herbicides	9010 Cyanide	9030 S.F.A.	8080 PCB/Pesticide	7541 Thallium	7740 Selenium	7470 Phos. Pesticides	8280 PCDD/PCDF	Tritium
CCCFL1	910215-009	2-8-91	1100	Soil	8	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
G. E. Ennis	2-11-91	0920	J. D. Fowler / J. D. Fowler	2-11-91	0920	J. D. Fowler	2/11/91	1327	[illegible]
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
									2/12/91

15:45

UCN-16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513036.2782

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 2/12/91 Shipper ID and Document No: EMERY 246453890

Cooler ID if noted on outside of cooler: —

Project No: 6132 Subproject No: ? 231 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 5.5 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles? NA	Yes No
Date of login:		Additional information needed from Prog. Mgr.?	(Yes) No
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

Overnight Delivery 9513356 2384 Signature Security Service

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0-0159 #2 car

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: AIR [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick
FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 3 Gal box	Rubbermaid Rmtt 6 poly coolr. Soil Samples double bagged and packed in wet ICE and Vermiculite. Samples are Non-Hazardous Sample # B00FL1	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

FB 11 '91

Bill of Lading # 2416453890 1

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
Cryd. Radford	89184	2-8-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
2/11/91	EV2A7 8241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J.D. Fancher J.D. Fancher	2/11/91	R. C. Roos	2/11/91

SIGNATURE AND NAME OF PROPERTY CONTROL CUSTODIAN	DATE	PROPERTY MANAGEMENT APPROVAL	DATE
			2/11/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR: WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT; GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

21

9513356.2385

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD ☒ COL ☐ OTH ☐ COMAT ☐

E 850281585

WORLDWIDE

A CF Company

☐ Same Day ☒ S.S.S. Express ☐ Business Documents ☐

☒ AM ☐ PM ☐ Customs Inbound ☐

☐ Second Day ☐ Standard ☐ Delivery ☐

Date 02-11-91 Origin PSC 246453890 1

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA Canada ☐

To: C. R. KIRKPATRICK K-00-1A DROP POINT A20
US DEPT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN Canada ☐ Hold for Pick Up ☐

Tariff Dest $ Gateway

Customer's Reference Numbers: W81241 EV2A7 W91-0-0159#2 99352

E Consignee's Account Number: 37831

Description	Pcs	L	W	H	Total Pieces	Total Weight
1 RUBBERMAID RM# 8 POLYCOOLER SAMPLES W91-0-0159#2	1	23	15	16	1	35 LBS

Declared Value $

TOOSR ☐ Haz Mat ☐ Edit ☐

OVERNIGHT DELIVERY
SIGNATURE SECURITY SERVICE

Envelope 9X12 ☐ Pack 12X15 ☐

Shipper's Signature X

International Shipments: Free Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing E Third Party Account Number

International Customs Value $ International

Base Charge

Total Transportation Charges Other C ☐

11/11
2/12/91 1245

22

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SFSCO NO. 000287

PROJECT NUMBER: 216-031

PROJECT NAME: 216-B-3 Pond Liners - A Lobe

SAMPLERS (SIGNATURE): J. P. Fanchel, J D Fanchel

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	6010 Metals	9310 Gross Beta	9310 Gross Alpha	7470 Arsenic	7470 Mercury	3510.3 Aromatics	7421 Pb	300 Anions	[illegible]	REMARKS 8270 Semi-Volatile	8240 Volatile Organics	8150 Chlorinated Herbicides	7010 Cyanide	7060 Sulfide	[illegible]	7841 Thallium	7740 Selenium	8140 Phosphorus	8080 PCBs/PCDF	Tritium		
~~B00FL3 B00FL2~~	B00FL3 910215-010	2/11/91	1024	Soil	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
B00FL4	910215-011	2/11/91	1107	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X		
B00GR9	910215-012	2/11/91	1124	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X		
B00GS0	910215-~~012~~ 013	2/11/91	1401	Soil	3		X	X	X	X	X	X	X														

Lab: Distribution Red bottle protocols

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. P. Fanchel	2/12/91	1000	MZ Mc Duff	2/13/91	1330				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN 16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

Coleman Steel bottle Cooler

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Date: 2/13/91 Shipper ID and Document No: EMERY 2464538923

Cooler ID if noted on outside of cooler: none

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 1.0 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles? NA	Yes No
Date of login:		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments: Signed: [illegible]

[illegible] in Shipping [illegible] [illegible]

2464538923

Overnight Delivery 9513356.2388 Signature Security Service

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0-0159 #3 -car 24

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING [X] PREPAID [ ] COLLECT

SHIPPED TO U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN C. R. Kirkpatrick

FULL TITLE Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W NO'S.)	ORIGINAL COST
1 56Lbs.	Coleman Steel Belted Cooler, #81. Contains Samples That are Double bagged and packed in Wet, ICE. Cushioned with Vermiculite. Samples are non-hazardous Sample # B00FL3, B00FL4, B00GR9, B00GS0	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

FB 12 '91

Bill of Lading #2464538923

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
Jim Bunn	82049	2-12-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURN
2/12/91	EV2A7 81241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
S.D. Sanchez	2/12/91	[illegible]	2/12/91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[illegible]	2/12/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD - RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO
WHITE - PROPERTY MANAGEMENT
GREEN - PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW - RETAIN
PINK - ORIGINATOR

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MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000287

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 pond Lobe A

SAMPLERS (SIGNATURE): G B Gould

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP Metals 6010	As 7060	Hg 7470	Pb 7421	NH4 350.3	Anions 300	REMARKS
B00G51	910215-092	2/12/91	1122	Soil	3	Y	X	X	X	Y	Y	Y	X	

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
D. Fahy	2/12/91	1505	G B Gould	2/12/91	1508	G B Gould	2-13-91	0720	E. Sais
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
E. Sais	2/13/91	0945	M L McAdoo	2/15/91	1132				

UCN 16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2389

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 2/15/91 Shipper ID and Document No: EMERY 2464538967

Cooler ID if noted on outside of cooler: 114

Project No: 6132 Subproject No: 031 Site Location: HANFORD

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 1.5 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login: 2.15.91		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No: _____			
Thru _____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

Overnight Delivery 9513356 2391 Signature Security Service

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0-0167 klc 27

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: AIR [X] PREPAID [ ] COLLECT

SHIPPED TO U.S.Dept. of Energy Blair Ridge HWY 56
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W NO'S.)	ORIGINAL COST
1 56lbs.	Coleman Box #4 poly Cooler containing Soil Samples. Samples are double bagged & packed in wet ice + vermiculite. Samples are non-hazardous Sample # B00GS1	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading #246453 896 7

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[illegible]	82053	2-13-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
2-13-91	EV2A7 8124J	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
B.E. Ames	2-13-91	[illegible]	2-13-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[illegible]	2/13/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
J. Lenzarast DATE 2-13-91				

DISTRIBUTION

BY ORIGINATOR: WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT; GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

EMERY WORLDWIDE — A CF Company

SIGNATURE AND TALLY RECORD

60029-46 (8/89) Litho USA

DATE: 2-13-91 SHIPMENT NO.
SHIPPER: WESTINGHOUSE SHIPPING DEPT (50
REFERENCE NO.: DSPC9 W91-0-0167

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SHIPPER NAME AND ADDRESS
WESTINGHOUSE HANFORD SHIPPING (509) 375-6665
G2-06 US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD COMPANY
2355 STEVENS DR
PO BOX 1970
RICHLAND WA 99352

CONSIGNEE NAME AND ADDRESS
C. R. KIRKPATRICK K-00-1A DROP POIN
U. S. DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN 37831

Pieces	Weight	Description/Marks	Emery Authorization No.
1	56 LBS	W91-0-0167 #BOOGS1 COLEMAN POLYCOOLER # 4 SOIL SAMPLES	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BEL

	Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody
1.	JOYCE DENAREST WESTINGHOUSE SHIPPING 1167/1100	RICHLAND WA	
2.			
3.			
4.			
5.	[illegible] CEF	PDX	
6.			
7.	JOHNNY SATTERFIELD-ENW	T/S	
8.	MARY ANDERSON	OAK RIDGE	
	CYNTHIA MONROE - MMES-ACD	OAK RIDGE-ACD	Cynthia Monroe

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

FORM OF PAYMENT

CASH ☐ GBL CBL ☐

PPD ☒ COL ☐ OTH ☐ COMAT ☐

Shipper's Account Number: E 850281585

2 4 6 4 5 3 8 9 6 7

SERVICES

UNITED STATES / CANADA: ☐ Same Day ☒ O'NITE ☐ AM ☐ PM ☐ S.S. ☐ Second Day ☐ Saturday Delivery ☐ Standard

INTER

Date: 02-13-91 Origin: PSC Shipment: 24645

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA

To:
C R KIRKPATRICK K-00-1A DROP POINT A20
U.S. DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN 37831

Canada ☐ Hold for Pick Up ☐ Cannot ☐

Customer's Reference Numbers: W81241 EV2A7 W91-0-0167

99352

E Consignee's Account Number

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Description	Pcs.	L	W	H	Total Pieces	Total Weight (Lbs.)
1 COLEMAN BOX #4 POLYCOOLER SOIL SAMPLES # BOOGS1 W91-0-0167	1	30	16	16	1	35

OVERNIGHT DELIVERY
SIGNATURE SECURITY SERVICE

A B C D E F G H I J K ☒ 2 3 4 5 6 7 8 9 0 1 2

Shipper's Signature: 2/13/91

Freight: 9X12 Pack: 12X15

Free Domicile ☐ Commodity Code: Third party Account Number for shipment or Third party billing: E

International Customs Value: International Insurance:

20

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MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000206

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 Pond Lobe A

SAMPLERS (SIGNATURE): Brian C. Lewis

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP Metals 6010	As 7060	Hg 7470	PB 7421	NH4 350.3	Anions 300	REMARKS
B00652	910219-089	2/13/91	0832	Soil	3	X	X	X	X	X	X	X	X	
B00653	-090	2/13/91	1010	Soil	3	X	X	X	X	X	X	X	X	

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
B. C. Lewis	2-13-91	1510	G B Gould	2-13-91	1510				J. Dodson 2-16- 12
G B Gould	2-15-91	0917	H. S. Thompson						

UCN 16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT. COPY TO COORDINATOR OF FIELD FILES

9513356.2393

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MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD COC NO 1751

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 Pond A LOBE

SAMPLERS (SIGNATURE): Randy S. Thompson, U.S Thompson

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	ALPHA-BETA 9310	GAMMA SCAN 901.1	Sr-90 905 (EC.13)	Metals 6010	As 7060	Hg 7470	Pb 7421	Thallium 7841	NH4 350.3	Nitrate 300	CN 9010	SULFIDE 1630	HCRB 8270	PEST/MS 8080	HCS PEST. 8140	REMARKS
B00GS4	910219-091	2/14/91	0825	SOIL	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
B00GS8	-092	2/14/91	1110	SOIL	3		X			X	X	X	X		X	X						

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
R. S. Thompson	2/14/91	1345	[illegible]	2-14-91	1345				[illegible] 2-16-91 1227
[illegible]	2-15-91	0918	R. S. Thompson						

UCN-16691 (1 4-89)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT. COPY TO COORDINATOR OF FIELD FILES

9513356.2394

COOLER RECEIPT FORM
for SOP 2332

[illegible] receiving
[illegible] records.

Date: 2-16-91 Shipper ID and Document No: 2464539044

Cooler ID if noted on outside of cooler: Coleman 80

Project No: K134 Subproject No: 03 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	Yes (No)	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	Yes (No) *
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 4 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles? Soil	(Yes) No
Date of login:		Additional information needed from Prog. Mgr.?	(Yes) No
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

Custody seal on outside of cooler was broken.

Noone relinquished the samples (illegible)

9513356.2396

Overnight Delivery SATURDAY DELIVERY Signature Security Service

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0-0159 #5 car 32

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING Air [X] PREPAID [ ] COLLECT

SHIPPED TO U.S.Dept. of Energy, Blair Ridge MKY 56
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN C. R. Kirkpatrick

FULL TITLE Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1	Box #3, Coleman poly cooler. Contains Soil Samples double bagged and packed in wet ice and vermiculite. Samples are non-hazardous	N/A
61 lbs	BOX #3	
	Sample #B00GS2, B00GS3, B00GS4, B00GS8	

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

FB 15 '91

Bill of Lading # 2464539044

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
HB Brunt	89205	2-15-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
2/15/91	EV2A7 81241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
K. S. Thompson	2/15/91	G B Gould	2/15-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		Carole A. Rodriguez	2/15/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
J. Clemmens				
DATE 2-15-91				

DISTRIBUTION

BY ORIGINATOR

WHITE, GREEN, YELLOW, PINK } PROPERTY MANAGEMENT

GOLDENROD - RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:

WHITE - PROPERTY MANAGEMENT
GREEN - PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW - RETAIN
PINK - ORIGINATOR

33

9513356.2397

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD XXX COL ☐ OTH ☐ COMAT ☐

ENTERPRISE WORLDWIDE

A CF Company

☐ Same Day XX SAT. DEL ☐ Business Document ☐
☐ AM ☐ PM S.S.51 ☐ Customs Clearance ☐
☐ Second Day XXX ☐ Standard ☐ Delivery ☐

E Shipper's Account Number 850281585

Date 02-15-91 Origin FSC 246453904 4

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA Canada ☐

To:
C R KIRKPATRICK K-00-1A DROP POINT A20
U S DEPT. OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
OAK RIDGE TN Canada ☐ Hold for Pick Up ☐

Tariff Dist. Gateway $

Customer's Reference Numbers
W81241 EV2A7 W91-0-0159 #5 99352

E Consignee's Account Number 37831

Description	Pcs.	L	W	H	Total Pieces	Total Weight
1 BOX #3 COLEMAN COOLER, SOIL SAMPLES OSPC# W91-0-0159#5	1	18	16	15	1	61

FOR INFORMATION OR RATES CALL 1-800 HI EMT

Declared Value $

246453904 4

DOSR ☐ Haz Mat ☐ Exp ☐ A B C D E F G H I J K

X 1 2 3 4 5 6 7 8 9 0 1 2

Envelope 9X12 ☐ Pack 12X15 ☐

THURSDAY DELIVERY
URE SECURITY SERVICE

X 2/15/91

International Shipments: Free Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing. E Third Party Account Number

International Customs Value

International Insurance

Base Charge

Total Transportation Charges

Other Charges/Advance at Origin ☐ OC/AO- $

206 SAT

Terms and Conditions Back

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EMERY WORLDWIDE — A CF Company

SIGNATURE AND TALLY RECORD

60029-4E (8/89) Litho USA

DATE: 02-15-91 SHIPMENT NO.: PSC 2[illegible]453904
SHIPPER: WESTINGHOUSE SHIPPING DEPT (509) 376-6665
REFERENCE NO.: OSPC# W91-[illegible]-0159 #5

SHIPPER NAME AND ADDRESS	CONSIGNEE NAME AND ADDRESS
WESTINGHOUSE HANFORD SHIPPING (509) 376-6665 G2-06 US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD COMPANY 2355 STEVENS DR PO BOX 1970 RICHLAND WA 99352	C R KIRKPATRICK K-00-1A DROP POINT A20. US DEPT. OF ENERGY C/O MARTIN MARIETTA ENERGY SYSTEMS OAK RIDGE GASEOUS DIFFUSION PLANT BLAIR RIDGE HWY 58 OAK RIDGE TN 37831

Pieces	Weight	Description/Ma[illegible]	Emery Authorization No.
1	61 LBS	OSPC# W91-0-0159 #5 BOX #3 COLEMAN COOLER SOIL SAMPLES	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BELOW

Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody	Time/Date
1. JOYCE DENAREST WESTINGHOUSE SHIPPING 11677/1100	RICHLAND WA		02-15-91
2.			
3.			
4.			
5.			
6.			
7. [illegible]			
8. W.E. McLennan	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

SPECIAL HANDLING INSTRUCTIONS

9513376.2596

3

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000150

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 Pond, A LOBE

SAMPLERS (SIGNATURE): F. S. Thompson

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	ALPHA & BETA 9310	GAMMA SCAN 901.1	Sr-90 905(EC-13)	Metals 6010	As 7060	Hg 7470	Pb 7421	Se 7740	Thallium 7841	NH_4 350.3	Anions 300	CN 9010	SULFIDE 9030	semi-VOA 8270	Herb 8150	Pest/PCB 8080	Phos. Pest. 8140
B00G59	910222-063	2/15/91	0930	SOIL	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
[signature]	2-19-91	0905	[signature]	2-19-91	0905	[signature]	2/19/91	0912	[signature]
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
									2/22/91 06

UCN-16E91A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2399

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 2/22/91 Shipper ID and Document No: EMERY 2464 539209

Cooler ID if noted on outside of cooler: PNL 715

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler? MMES only	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 4 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login: _____		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No: _____			
Thru _____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

Account Number 30281585

WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
3 STEVENS DRIVE
LAND

Customer's Reference Numbers
PO EV41M W91-0-0175

WA 99352

Description
ICE CHEST SOIL
ICE CHEST #4,57LB
#13 61LB:

Pcs 4 | Dimensions L W H | Total Pieces 4 | Total Weight (in Lbs) 237

DELIVERY
SECURITY SERVICE

Commodity Code | Third party Account Number mandatory for Third party billing | E | Third Party Account Number

International Customs Value | International Insurance

Total Transportation Charges | Other Charges/Advance at Origin | COD/AOD | $

246453920 9

SERVICES
O'NITE
S.S.S.
Express | Preferred | Standard | Saturday Delivery | Sunday Delivery
INTERNATIONAL
Business Documents | Customs Clearance | Delivery

To: C. R. KIRKPATRICK 02-19-91
K-1004A
DROPOINT A20
US DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
A BLAIR ROAD HIGHWAY 58
OAK RIDGE TN 37831-740

Origin PSC | Shipment Number 246453920 9 | Tariff Dest. | Gateway

Consignee's Account Number | Hold for Pick Up | Canada

FOR INFORMATION OR RATES
CALL 1-800 HI EMERY
(1-800-443-6379)

Check in Shipper $

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above.

Declared Value $

206 A

Terms and Conditions on Back

246453918

S.S.S.

Shipment Number 246453919

To: CR KIRKPATRICK K-00-1A POINT A20

[redacted]

CODE 206 | SERVICE A

206 A

9513356.2402

Overnight Delivery

Signature Security Service

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0176 38

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: AIR [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 43 lbs.	~~HPNL~~ 715 Thermos polycooler - Soil Samples packed in wet Ice and Vermiculite. Samples are non-hazardous Sample # B00G59	N/A

[ ] CLASSIFIED [x] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # 2464539198

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
Tim Bow	89219	2-19-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	R. C. Roos	375-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
2-18-91 JM 2-19-91	EV2A7 81241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
D. Franklin	2-18-91	Richard Roos	2/19/91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
			2/19/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

39

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000290

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 Pond, Ashe

SAMPLERS (SIGNATURE): J. D. Fahy

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 7310	Rep metals 6010	As 7060	Hg 7470	Pb 7421	NH4 350.3	Anions 300	REMARKS
B00GT1	90222-064	2-21-91	1102	Soil		X	X	X	X	X	X	X	X	3 CONTAINERS. MM 2/22/91

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Fahy	2/21/91	0917	M L McAlduff	2/22/91	0600				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2403

04

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES COC NO. 000294

PROJECT NUMBER: G0-031

PROJECT NAME: 216-B-3 Pond, A Lobe

SAMPLERS (SIGNATURE): J. D. Fenty

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ECP metals 6010	As 7060	Hg 7470	Pb 7421	Wly 350.3	Anions 300	REMARKS
BOREOT 3	910224-065	2/20/91	0950	Soil	3	1	1	1	1	1	1	1	1	

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Fenty	2/20/91	0917	[illegible]	2/20/91	1600				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN 16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2404

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 2/20/91 Shipper ID and Document No: EMSRY 246453908 6

Cooler ID if noted on outside of cooler: BETA 6

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	* (Yes) (No)	Custody form(s) properly completed and signed?	* Yes (No)
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 5 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login:		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

* MMES form (not signed)
no Hanford C-O-C form

* # of samples not listed

9513356.2406

Overnight Delivery — Signature Security Service

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		/ W91-0178 42cg

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: AIR [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-OJ-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W NO'S.)	ORIGINAL COST
1 41 Lbs.	Beryl6 Igloo poly cooler containing Soil Samples. Samples are double bagged and packed in Wet ICE & Vermiculite. Samples are Non-Hazardous Sample # B00GT1, B00GT3	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER OOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # 246453 9086

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
Ian Brown	89065	2-20-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
2/20/91	EV2A7 81241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J.D. Fancher J.D. Fancher	2/20/91	G.B. Gould G.B. Gould	2-20-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
			2-20-91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR: WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT; GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

9513356.2407

43

FORM OF PAYMENT

☐ GBL ☐ CBL ☐ FCCOD

☒ COL ☐ OTH ☐ COMAT ☐

Shipper's Account Number: 350281585

2 4 6 4 5 3 9 0 8 8

SERVICES

CANADA: Day ☒ O'NITE; PM ☐; Saturday Delivery ☐

INTERNATIONAL: Express ☐; Preferred ☐; Standard ☐; Business Documents ☐; Customs Clearance ☐; Delivery ☐

5.53

02-20-91

Origin: PSC

Shipment Number: 246453908 8

TINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
TINGHOUSE HANFORD
BLDG 1163
5 STEVENS DRIVE
HLAND WA

Canada ☐

To: C R KIRKPATRICK K-00-1A DROP POINT A20
US DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN

Canada ☐

Hold for Pick Up ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will collect consignee check made payable only to the shipper for the value of the goods in the amount shown above.

Customer's Reference Numbers: .241 EV2A7 W91-0178

Zip: 99352

E

Consignee's Account Number

Zip: 37831

Description	Pcs.	L	W	H	Total Pieces	Total Weight (in Lbs.)
BETA 6 IGLOO .YCOOLER IL SAMPLES BOOGT1	1	24	14	15	1	41

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

Haz Mat ☐ Edit ☐ A B C D E F G H I J K

X 2 3 4 5 6 7 8 9 0 1 2

Envelope 9X12 ☐ Pack 12X15 ☒

NIGHT DELIVERY
NATURE SECURITY SERVICE.

Q. Conrad 2/21

International Shipments: Commodity Code

Third party Account Number mandatory for Third party billing. E

Third Party Account Number

International Customs Value

International Insurance

Charge

Total Transportation Charges

Other Charges/Advance at Origin: OCA/O- $

206 A

Terms and Conditions on Back

44

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000295

PROJECT NUMBER: 90-31

PROJECT NAME: 216-B-3 Pond, A Lobe

SAMPLERS (SIGNATURE): J. D. Fanty

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	Icp metals 6010	As 7060	Hg 7470	Pb 7421	Cyanide	Anions 300	VOA 8240	Gamma Scan 901.1	Sr-90 905	Se 7740	Tl 7841	[illegible]	[illegible]	Sulfide 9030	Semi VOA 8270	Herbicide 8150	Pest/PCB 8080	Phos Pest 8140	PCDD/PCDF 8290
BOOGT4	910224-065	2/21/91	0900	Soil	3	X	X	X	X	X	X	X	X													
BOOGT5	910224-066	2/21/91	0945	Soil	3	X	X	X	X	X	X	X	X													
BOOGT7	910224-067	2/21/91	1300	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Fanty	2/22/91	0855	[illegible]	2/24/91	0600				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2408

9513356.2409

45

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 2/24/91 Shipper ID and Document No: EMERY 2464539121

Cooler ID if noted on outside of cooler: Delta 4

Project No: G132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.6 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login: 2-24-91		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No: _____			
Thru _____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

46

9513356.2410

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD ☒ COL ☐ OTH ☐ COMAT ☐

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: ☐ Same Day ☐ AM ☐ Second Day ☒ ☒ SAT. DEL PM S.S.S. Saturday Delivery

INTERNATIONAL: ☐ Express ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery

E Shipper's Account Number 850281585

Date 02-22-91 Origin PEC 246453912 1

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA Canada ☐

To:
C R KIRKPATRICK K-00-1A DROP POINT A20
U S DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN Canada ☐ Hold for Pick Up ☐

Tariff Dest. Gateway

Charge to Shipper $

EMERY WORLDWIDE will collect consignee check payable only to shipper for the value of the goods shown above

Customer's Reference Numbers: W81241 EV287 W91-0185 99352

E Consignee's Account Number 37831

Declared Value $

Description	Pcs.	L	W	H	Total Pieces	Total Weight
1 POLYCOOLER DELTA 4 SOIL SAMPLES OSPC# W91-0185	1	26	13	15	1	49

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

246453912 1

TOOSR ☐ Haz Mat ☐ Edit ☐ A B C D E F G H I J K

SATURDAY DELIVERY
SIGNATURE SECURITY SERVICE

Shipper's Signature X J. Dermont 2/22/91

Envelope 9X12 ☐ Pack 12X15 ☐

International Shipments: Free Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing. E Third Party Account Number

International Customs Value International Insurance

Base Charge

Total Transportation Charges

Other Charges/Advance at Origin: ☐ OCA/O $

206

SAX

Terms and Conditions on Back

47

9513062.2411

EMERY WORLDWIDE — A CF Company

SIGNATURE AND TALLY RECORD

60025-4E (8/89) Litho USA

DATE: 02-22-91 SHIPMENT NO.: PSC 246453912
SHIPPER: WESTINGHOUSE SHIPPING DEPT (509) 76-6665
REFERENCE NO.: OSPC# W91-0185

SHIPPER NAME AND ADDRESS
WESTINGHOUSE HANFORD SHIPPING (509) 376-6665
G2-06 US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD COMPANY
2355 STEVENS DR
PO BOX 1970
RICHLAND WA 99352

CONSIGNEE NAME AND ADDRESS
C R KIRKPATRICK K-00-1A KW DROP POINT
US DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
OAK RIDGE TN 37831

Pieces	Weight	Description/Marks	Emery Authorization No.
1	49 LBS	OSPC# W91-0185 POLYCOOLER DELTA 4 SOIL SAMPLES	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BELOW

Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody	Time/Date
1. JOYCE DEMAREST Westinghouse shipping 1167/1100	RICHLAND WA		02-22-91
2.			
3.			
4.			
5.			
6.			
7.			
8.			

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

9513356.2412

~~Overnight~~ Delivery Saturday

Signature Security Service

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0185 - 48

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING A/R [X] PREPAID [ ] COLLECT

SHIPPED TO U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN C. R. Kirkpatrick

FULL TITLE Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 49 Lbs	Delta 4 - poly cont. containing Soil Samples. Samples are Double Bagged and packed in Wet ICE and Vermiculite. Samples are Non-Hazardous Sample # B00GT4, B00GT5, B00GT7	N/A

[ ] CLASSIFIED [x] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # 246 453 912 1

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[illegible]	89063	2-22-93

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
2/22/91	EV 287 81341	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J.D. Fancher	2/22/91	[signature]	2/22/91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	2/22/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK } PROPERTY MANAGEMENT
GOLDENROD - RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE - PROPERTY MANAGEMENT
GREEN - PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW - RETAIN
PINK - ORIGINATOR

49

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES COC NO. 000296

PROJECT NUMBER: 90-31

PROJECT NAME: 216-B-3 Pond, A Lobe

SAMPLERS (SIGNATURE): J. D. Fowler

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 7310	Beta 7310	As 7060	Hg 7470	Pb 7421	NH4 350.3	Anions 300	ICP Metals 6010	REMARKS
BOOGT8	910227-087	2/26/91	1050	Soil	3	X	X	X	X	X	X	X	X	

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Fowler	2-25-91	0900	[illegible]	2-26-91	1350				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-1669-A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2413

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Date: FEB 26, 1991 Shipper ID and Document No: EMERY 850281585

Cooler ID if noted on outside of cooler: # 005

Project No: G132 Subproject No: 31 Site Location: HANFORD

Custody seal on cooler? (Yes) No

Condition of cooler acceptable? (Yes) No

Radioactive labels? Yes (No)

Hazardous labels? Yes (No)

Custody form(s) inside of cooler? (Yes) No

Was cooler required to be maintained at 4 deg C? (Yes) No

Sample containers intact? (Yes) No

Are containers those specified for requested parameters? (Yes) No

Date of login: _____

Lab assigned ID No: _____

Thru _____

Custody seals dated and signed? (Yes) No

Prog. Mgr. notified of receipt of cooler? (Yes) No

Radioactivity recheck OK? (Yes) No

Samples properly labeled? (Yes) No

Custody form(s) properly completed and signed? (Yes) No

Thermometer inside of cooler? Yes (No)

Temperature of cooler: 4 deg C (X.X)

VOA containers free of bubbles? NA Yes No

Additional information needed from Prog. Mgr.? (Yes) No

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: Cynthia Monroe

51

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000297

PROJECT NUMBER: 90-31

PROJECT NAME: 216-B-3 Pond A Lobe

SAMPLERS (SIGNATURE): J. D. Fahey

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP metals 6010	As 7060	Hg 7470	Pb 7421	NH4 350.3	Anions 300	REMARKS
B0GV0	910301-012	2/26/91	1106	Soil	3	X	X	X	X	X	X	X	X	3x Volume Sent for internal Lab QA/QC

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Fahey	2/27/91	0945	[illegible]	3/1/91	0400				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2415

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 2/28/91 Shipper ID and Document No: EMERY 2426158944

Cooler ID if noted on outside of cooler: BETA 4

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes)	No	Custody seals dated and signed?	(Yes)	No
Condition of cooler acceptable?	(Yes)	No	Prog. Mgr. notified of receipt of cooler?	(Yes)	No
Radioactive labels?	Yes	(No)	Radioactivity recheck OK?	(Yes)	No
Hazardous labels?	Yes	(No)	Samples properly labeled?	(Yes)	No
Custody form(s) inside of cooler?	(Yes)	No	Custody form(s) properly completed and signed?	(Yes)	No
Was cooler required to be maintained at 4 deg C?	(Yes) ?	No	Thermometer inside of cooler?	Yes	(No)
Sample containers intact?	(Yes)	No	Temperature of cooler: 1.4 deg C (X.X)		
Are containers those specified for requested parameters?	(Yes)	No	VOA containers free of bubbles?	NA ~~Yes~~	~~No~~
Date of login: 3-1-91			Additional information needed from Prog. Mgr.?	Yes	(No)
Lab assigned ID No: _____					
Thru _____					

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

9513356 2417

SHIPPER NAME AND ADDRESS
WESTINGHOUSE HANFORD SHIPPING (509) 376-6665
G2-06
WESTINGHOUSE HANFORD COMPANY
2355 STEVENS DR
PO BOX 1970
RICHLAND WA 99352

CONSIGNEE NAME AND ADDRESS
C. R. KIRKPATRICK K-00-1A DROP POINT A20
U S DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN 37831

53

Pieces	Weight	Description/Marks	Entry Authorization No.
1	41 LBS	W91-0192 IGLOO #005 POLYCOOLER SOIL SAMPLES	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BELOW

Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody	Time/Date
1. JOYCE DEKAREST 116771100 WESTINGHOUSE SHIPPING	RICHLAND WA		/02-25-91
2.			
3. [illegible]	[illegible] WA	[illegible]	[illegible]
4.			
5. [illegible]	[illegible]	[illegible]	[illegible]
6. [illegible]	[illegible]	[illegible]	[illegible]
7. JOHNNY [illegible]	TYS	[illegible]	0850 2/26
8. G. WILLIS K25	OAK RIDGE	[illegible]	2/26
[illegible] 2-26-91 1344			

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

FORM OF PAYMENT

CASH ☐ GBL/CBL ☐

PPD [XX] COL ☐ OTH ☐ COMAT ☐

E Shipper's Account Number 850281585

2 4 6 4 5 3 9 1 6 5

WORLDWIDE Company

SERVICES

UNITED STATES / CANADA: ☐ Same Day [XX] O'NITE ☐ AM ☐ PM S.S.S. ☐ Second Day ☐ Saturday Delivery

INTERNATIONAL: ☐ Express ☐ Priority ☐ Standard

Date 02-25-91 | Origin PSC | Shipment Number 246453916

From: US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE SHIPPING DEPT (509) 376-6665

WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA ☐ Canada ☐

Customer's Reference Numbers: W81241 EY2A7 W91-0192
99352

To: CR KIRKPATRICK K-00-1A DROP POINT A20
U. S. DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN ☐ Canada ☐

E Consignee's Account Number 37831

Tariff Dest. | Check in Shipper $

Hold for Pick Up ☐

EMERY WORLDW will collect consig check made pay only to the shipp for the value of t goods in the am shown above.

Description	Pcs.	L	W	H	Total Pieces	Total Weight (in Lbs)
1 IGLOO #005, POLYCOOLER SOIL SAMPLES#B00GT8 OSPC# W91-0192	1	27	16	11	1	41 LBS

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

TOD/SR ☐ Hav Mail ☐ Edit ☐ A B C D E F G H I J K

1 2 3 4 5 6 7 8 9 0 1 2

VERNIGHT DELIVERY
IGNATURE SECURITY SERVICE

Envelope 9X12 | Pack 12X15

Driver's Name

Hazardous Shipments: Fire Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing. E

Third Party Account Number

International Customs Value | International Insurance

Total Transportation Charges | Other Charges/Advanced Origin OC/AO- $

206 A

Terms and Conditions on Back

Overnight Delivery 9513356.2418 Signature Security Service

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0192 54

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: AIR - Emory [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W NO'S.)	ORIGINAL COST
1 41 Lbs.	Igloo #005, poly cooler, Soil Samples Double bagged and packed in wet ice and Vermiculite. Samples are non-hazardous Sample # B00GT8	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # 246 453 9165

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
Lisa Brown	90256	2-25-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
2-25-91	EV2A7 8/241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J.D. Farley	2-25-91	G.B. Gould	2-25-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
			2-25-91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR: WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT; GOLDENROD - RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO
WHITE - PROPERTY MANAGEMENT
GREEN - PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW - RETAIN
PINK - ORIGINATOR

☆ GPO 1988-393-381/1003-M

55

9513356.2419

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCOD ☐

PPD ☒ COL ☐ OTH ☐ COMAT ☐

E Shipper's Account Number 85D281585

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ PM ☒ O'NITE S.S.S. ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

Date 02-27-91 Day PSC Shipment Number 242 615894 4

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA

C.R. Kirkpatrick

Canada ☐

To:
cr kirkpatrick K-00-1A DROP POINT A20
US DEPARTMENT OF ENERGY
C/O BF MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN

Hold for Pick Up ☐ Canada ☐

Tariff Dest | Gateway

Charges to Shipper $

EMERY WORLDWIDE will collect consignee's check only to the extent payable for the value of the goods in the amount shown above.

Customer's Reference Numbers: W81241 EV2A7 W91-0-0200 | Zip 99352

E Consignee's Account Number | Zip 37831

Description	Pcs	L	W	H	Total Pieces	Total Weight (in Lbs)
1 BETA 4 IGLOO COOLER SOIL SAMPLES W91-0-0200	1	30	15	17	1	53

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

TODSR ☐ Haz Mat ☐ Edit ☐ A B C D E F G H I J K

OVERNIGHT DELIVERY
SIGNATURE SECURITY SERVICE

Shipper's Signature X 2/21/91

☒ 2 3 4 5 6 7 8 9 0 1 2

Envelope 9X12 ☐ Pack 12X15 ☐

2426158944

International Shipments: Free Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing E

Third Party Account Number

International Customs Value | International Insurance

Base Charge

Total Transportation Charges

Other Charges/Advance at Origin ☐ OC/AO $

206

Terms and Conditions on Back

In the event of loss or damage to Shipments of Glass, liability will be limited to the value of the bulbs and tubes.

CONSIGNEE — PACKAGE

3)

56

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000299

PROJECT NUMBER: 90-031

PROJECT NAME: 216 B-3 pond Lobe A

SAMPLERS (SIGNATURE): J. B. Fahey

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	Alpha 931D	Beta 931D	Gamma EMS01	Sr-90 905	ICP Metals 6010	As 7060	Hg 7470	Pb 7421	Se 1140	Tl 7841	NH3 350.3	Anions 300	Cn 9010	Sulfide 9030	Sem-VOA 8270	[illegible]	Pest/PCB 8080	Phos Pest. 8140	PCDD/PCDF 8280
B005V5	910304-008	2/28/91	1145	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. B. Fahey	3/1/91	0916	[illegible]	3-2-91	1400				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2420

9513356.2421

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

57

Date: 3-2-91 Shipper ID and Document No: 242615 900 T

Cooler ID if noted on outside of cooler: Delta 2

Project No: 90 Subproject No: 031 Site Location: Hanford

Custody seal on cooler? (Yes) No

Condition of cooler acceptable? (Yes) No

Radioactive labels? Yes (No)

Hazardous labels? Yes (No)

Custody form(s) inside of cooler? (Yes) No

Was cooler required to be maintained at 4 deg C? (Yes) No

Sample containers intact? (Yes) No

Are containers those specified for requested parameters? (Yes) No

Date of login: _____

Lab assigned ID No: _____

Thru _____

Custody seals dated and signed? (Yes) No

Prog. Mgr. notified of receipt of cooler? (Yes) No

Radioactivity recheck OK? (Yes) No

Samples properly labeled? (Yes) No

Custody form(s) properly completed and signed? (Yes) No

Thermometer inside of cooler? Yes (No)

Temperature of cooler: 4 deg C (X.X)

VOA containers free of bubbles? soil ~~Yes No~~ NA

Additional information needed from Prog. Mgr.? (Yes) No

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: J. Dimas

9513356.2422

Overnight Delivery

N/A ~~Signature Security Service~~

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0-0207 58 cg

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [x] CONTRACTOR [ ] VENDOR

ROUTING: AIR [x] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 49Lbs	Coleman poly-cooler Delta 2. Contains Soil Samples. Samples are double bagged and packed in wet ICE and Vermiculite. Samples are non-hazardous. Sample # B00GV5	N/A

[ ] CLASSIFIED [x] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # 242 615 900

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
Jerry L. Fuller	89312	3/1/91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe A	R. C. Roos	376-9213

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-1-91	EV2A7 81241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J. D. Tanner	3/1/91	G B Gould	3-1-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		Carole A. Rodriguez	3/1/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

59

9513356.2423

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD ☐ COL ☐ OTH ☐ COMAT ☐

E Shipper's Account Number 850283585

EMERY WORLDWIDE

A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ PM ☐ Second Day ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

Date 03-01-91 Origin PSC Shipment Tracking Number 2426159 00 T

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
U S DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA

Canada ☐

To:
CR KIRKPATRICK K-00-1A DROP POINT A20
U S DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN

Hold for Pick Up ☐ Canada ☐

Tariff Dest. Country

Check to Shipper $

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above.

Customer's Reference Numbers: W81241 EV2A7 W91-0-0207 99352

E Consignee's Account Number

Zip 37831

Description	Pcs.	L	W	H	Total Pieces	Total Weight (in Lbs.)
1 COLEMAN POLYCOOLER DELTA 2 49 LBS SOIL SAMPLER BooGY5 W91-0-0207	1	25	13	15	1	49

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

TOOSR ☐ Haz Mat ☐ Edit ☐ A B C D E F G H I J K

1 2 3 4 5 6 / 7 8 9 0 1 2

SATURDAY DELIVERY

Envelope 9X12 ☐ Pack 12X15 ☐

Shipper's Signature X J. Demaut 3/1/91

Free Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing E Third Party Account Number

Base Charge

International Customs Value

International Insurance

Total Transportation Charges

Other Charges/Advance at Origin ☐ OCAO $

2426159 00 T

206 SAT

Terms and Conditions on Back

60

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000298

PROJECT NUMBER: 90-31

PROJECT NAME: 216-B-3 Pond A Lobe

SAMPLERS (SIGNATURE): J. D. Tinsley

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP metals 6010	As 7060	Hg 7470	Pb 7421	Wet 3500	Anions 300	REMARKS
B00GV1		2/27/91	0835	Soil	3	X	X	X	X	X	X	X	X	910306-006
B00GV2		2/27/91	0855	Soil	3	X	X	X	X	X	X	X	X	-007
B00GV3		2/27/91	0915	Soil	3	X	X	X	X	X	X	X	X	-008

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Tinsley	2/28/91	1040	C. Moore	3/4/91	1245				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN 16691A (1 6-90)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2424

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 3-4-91 Shipper ID and Document No: EMERY

Cooler ID if noted on outside of cooler: ALPHA 2

Project No: G132 Subproject No: 031 Site Location: HANFORD

Custody seal on cooler? (Yes) No

Condition of cooler acceptable? (Yes) No

Radioactive labels? Yes No

Hazardous labels? Yes (No)

Custody form(s) inside of cooler? (Yes) No

Was cooler required to be maintained at 4 deg C? (Yes) No

Sample containers intact? (Yes) No

Are containers those specified for requested parameters? (Yes) No

Date of login: _____

Lab assigned ID No: _____

Thru _____

Custody seals dated and signed? (Yes) No

Prog. Mgr. notified of receipt of cooler? (Yes) No

Radioactivity recheck OK? (Yes) No

Samples properly labeled? (Yes) No

Custody form(s) properly completed and signed? (Yes) No

Thermometer inside of cooler? Yes (No)

Temperature of cooler: 4 deg C (X.X)

VOA containers free of bubbles? NA Yes No

Additional information needed from Prog. Mgr.? (Yes) No

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: Cynthia Morrae

EMERY WORLDWIDE

EF Company

SIGNATURE AND TALLY RECORD

60929-46 (8/89) Litho USA

DATE 02-28-91 SHIPMENT NO.: PSC 2420158958

SHIPPER WESTINGHOUSE SHIPPING DEPT (509) 37

REFERENCE NO.: GSPC# W91-0-0203

62

SHIPPER NAME AND ADDRESS	CONSIGNEE NAME AND ADDRESS
WESTINGHOUSE HANFORD SHIPPING (509) 376-6665 G2-C6 US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD COMPANY 2355 STEVENS DR PO BOX 1970 RICHLAND WA 99352	PEG BEATY WESTON 208 WELSH POOL ROAD LIONVILLE PA 19341

Pieces	Weight	Description/Marks	Emery Authorization No.
1	44 LBS	W91-0-0203 SOIL POLYCOOLER RUBBERMAID #004 SAMPLES	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BELOW

	Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody	Time/Da
1.	JOYCE DEMAREST WESTINGHOUSE SHIPPING 1167/1100	RICHLAND WA		10
2.				
3.				
4.				
5.				
6.				
7.	JOHNNY SATTERFIELD FWD	TYS		2830
8.	GENE McNABB -K25	OAK RIDGE		
	C.L. MONROE 1322	OAK RIDGE	C.L. Monroe	3-4-91

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

MENT

CH ☐ Gu CBL ☐ FC

PPD ☒ COL ☐ OTH ☐ COMAT ☐

2 4 2 6 1 5 8 9 7 7

SER

/ CANADA

Day ☐

Second Day ☐ Saturn Deliver

E Shipper's Account Number 850281585

From:

WESTINGHOUSE SHIPPING DEPT (509) 376-6665
US DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA 99352

WORLDWIDE EF Company

Date 02-28-91 Origin PSC 2

To:

CR KIRKPATRICK K-00-1A DROP POINTA2
US DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN 37831

Hold for Pick Up ☐ Canada ☐

E Consignee's Account Number

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Customer's Reference Numbers

W81241 EY2A7 W91-0-0202

Canada ☐

Description	Pcs.	L	W	H	Total Pieces	Total Weight (in LBS)
1 POLYCOOLER COLEMAN ALPHA 2 SOIL SAMPLES W91-0-0202	1	29	16	15	1	59

TOOSR ☐ Haz Mat ☐ Edit ☐

OVERNIGHT DELIVERY

A B C D E F G H I J K

1 2 3 4 5 6 7 8 9 0 1 2

Shipper's Signature X

Emerge 9X12 Pack 12X15

Commodity Code

Third party Account Number mandatory for Third party billing

E

Third Party Account Number

Override ☐

Base Charge

International Customs Value

63

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

SAMPLING AND ENVIRONMENTAL SUPPORT DEPARTMENT

SES/COC NO. 000300

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 Pond B Lobe

SAMPLERS (SIGNATURE): J. D. Fawley

CUSTOMER NUMBER	LAB NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	Alpha 9310	Beta 9310	Gamma Scan 901.1	Sr-90 905	ICP Metals 6010	Hg 7470	Pb 7421	Se 7740	Tl 7841	NH3 350.3	Anions 300	CN 9010	Sulfide 9030	Semi-VOA 8270	Herbicide 8150	Pest/PCB 8080	Phos. Pest. 8140	REMARKS
BOOGV6	910307-043	3-4-91	1109	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BOOGV7	-044	3-4-91	1316	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BOOGV8	-045	3-4-91	1350	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Fawley	3-4-91	1448	M L [illegible]	3/6/91	1400				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691A (1 6-90)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2427

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 3/6/91 Shipper ID and Document No: EMERY 2426159032

Cooler ID if noted on outside of cooler: EPSILON 3

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	Yes	No	Custody seals dated and signed?	Yes	No
Condition of cooler acceptable?	Yes	No	Prog. Mgr. notified of receipt of cooler?	Yes	No
Radioactive labels?	Yes	No	Radioactivity recheck OK?	Yes	No
Hazardous labels?	Yes	No	Samples properly labeled?	Yes	No
Custody form(s) inside of cooler?	Yes	No	Custody form(s) properly completed and signed?	Yes	No
Was cooler required to be maintained at 4 deg C?	Yes	No	Thermometer inside of cooler?	Yes	No
Sample containers intact?	Yes	No	Temperature of cooler: 0.9 deg C (X.X)		
Are containers those specified for requested parameters?	Yes	No	VOA containers free of bubbles?	DNA ~~Yes~~	~~No~~
Date of login: _____			Additional information needed from Prog. Mgr.?	Yes	No
Lab assigned ID No: _____					
Thru _____					

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: M L McAdoo

9513356.2429

Overnight Delivery N/A ~~Signature Security Service~~

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0-0207 #1 65

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: AIR [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 70 lbs.	Igloo Epsilon 3 poly cooler Contains Soil Samples. Samples are Double bagged and packed in Wet Ice and Vermiculite. Samples are non-hazardous. Sample # B00GV6, B00GV7, B00GV8	N/A

[ ] CLASSIFIED [x] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at 3-Pond

Bill of Lading # 242615903 2

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89308	3-5-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
3-Pond - Lobe A	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-4-91	EV2A7 8124	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J.W. Roberts	3/5/91	[signature]	3-5-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3-5-91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED

DISTRIBUTION

BY ORIGINATOR: WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT; GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

EMERY
WORLDWIDE

Company

Same Day
AM
Second Day
PM
Saturday Delivery

Number 2426 15903
Check 2
Date 3-3-91

DROP POINT A20

US DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT

BLAIR RIDGE HWY 58

OAK RIDGE TN

37831

Hold for Pick Up
Cash

Consignee Zip Code

FOR INFORMATION OR RATES

-800) HI EMERY
)-443-6379)

67

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO: 1767

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 Pond B Lobe

SAMPLERS (SIGNATURE): J. D. Farley

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	Alpha 9310	Beta 9310	Gama 901.1	SR-90 905	ICP Metals 6010	As 7060	Hg 7470	Pb 7421	Se 7740	Tl 7841	NH4 350.3	Anions 300	CN 9010	Silica 9070	Sem.-Volat 8270	Herbicides 8150	Pest/PCB 8080	Phos. Pest 8141	PCDD/PCDF 8280	REMARKS
B00GV9	910308-108	3-5-91	0830	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
B00GW0	-110	3-5-91	1006	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
B00GW1	-109	3-5-91	1048	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B0GW3	910311-027	3-5-91	1133	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B00GW4	-111	3-5-91	1133	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B00GW6	-112	3-5-91	1405	Soil	3		X	X			X	X	X	X			X	X								

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Farley	3-6-91	0010	M. Zaasa	3/8/91	0600				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2431

9513356.2432

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 3/8/91 Shipper ID and Document No. Shipper and Number 242615907 Check 6 To: Emery

Cooler ID if noted on outside of cooler: Beta 2

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.7 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes~~ No
Date of login: 3-8-91		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No: _____			
Thru _____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [signature]

9513356.2433

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Shipment Number 242615906 Check 5

Date: 3/8/91 Shipper ID and Document No: Emery

Cooler ID if noted on outside of cooler: BG-1

Project No: 6132 Subproject No: 025 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes?) No
Custody form(s) inside of cooler?	Yes (No)	Custody form(s) properly completed and signed?	Yes (No)
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.7 deg C (X.X)	
Are containers those specified for requested parameters?	Yes? No	VOA containers free of bubbles?	Yes (No)
Date of login: _____		Additional information needed from Prog. Mgr.?	(Yes) No
Lab assigned ID No: _____			
Thru _____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

* no MMES C-O-C -
Bubbles-in VOA

Signed: MZ McHaffy

EMERY WORLDWIDE — CF Company

(107)

SIGNATURE AND TALLY RECORD

60029- Printed in USA

DATE: 03-06-91 SHIPMENT NO.: PSC 242615907 6

SHIPPER: WESTINGHOUSE SHIPPING DEPT (509) 376-66

REFERENCE NO.: OSPC# W91-0207 #4

SHIPPER NAME AND ADDRESS	CONSIGNEE NAME AND ADDRESS
WESTINGHOUSE HANFORD SHIPPING (509) 376-6665 G2-06 US DEPARTMENT OF ENERGY C/O WESTINGHOUSE HANFORD COMPANY 2355 STEVENS DR PO BOX 1970 RICHLAND WA 99352	US DEPARTMENT OF ENERGY C/O MARTIN MARIETA ENERGY SYSTEMS OAK RIDGE GASEOUS DIFFUSION PLANT DROP POINT A20 BLAIR RIDGE HWY 58 OAK RIDGE TN 37831-7440

Pieces	Weight	Description/Marks	Emery Authorization No.
1	60 LB.	POLYCOOLER SAMPLES CHEST#BG-1	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BELOW

	Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody	Time/Date
10	BENAREST WESTINGHOUSE SHIPPING 1167/1100	RICHLAND WA		13-6-9
3.				
4.	Hor Salair	PSC		1600 3-6
5.	Kelly CFE	PDX	McCaly	1730 3/6
6.	ZILINKAS	HOU		01:59 3-
7.	JOHNNY SATTERFIELD/EWW	TYS		0900 3/
8.	McNabb K25	OAK RIDGE	McNabb	1:34 3/7
	MONROE K25	" "		3-7-91 135

PPD [X] COL [ ] OTH [ ] COMAT [ ]

WORLDWIDE

71

O'NITE PM Preferred [ ] Saturday Delivery Standard [ ]

Shipper's Account Number: E 850281585

Company | Date: 03-06-91 | Origin: PSC | Shipment Number: 24261590

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA
Canada [ ]

To:
US DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
K-00-1A DROP POINT A20
BLAIR RIDGE HWY 58
OAK RIDGE TN
Canada [ ]

Tariff Dest.

Check to Shipper $

Hold for Pick Up [ ]

EMERY WO[illegible] will collect [illegible] check made [illegible] only to the [illegible] for the valu[illegible] goods in th[illegible] shown abov[illegible]

Customer's Reference Numbers: EV2A7 31241 RO#W91-0207#3 | Zip: 99352

Consignee's Account Number: E | Zip: 37831

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared $

Description	Pcs	L	W	H	Total Pieces	Total Weight (in Lbs)
POLYCOOLER SOIL SAMPLE (BETA 2 IGLOO)	1	23	13	16	1	65

TOOSR [ ] Haz Mat [ ] Edit [ ] A B C D E F G H I J K

X 2 3 4 5 6 / 7 8 9 0 1 2

OVERNIGHT DELIVERY

Shipper's Signature: [illegible] 3/6/91

Pack: 9X12 [ ] 12X15 [ ]

International Shipments: Commodity Code | Free Domicile [ ]

Third party Account Number mandatory for Third party billing. | Third Party Account Number: E

International Customs Value | International Insurance

Base Charge

Total Transportation Charges | Other Charges/Advance at Origin | OC/AO- | $

Term

FORM OF PAYMENT

2426154076

[illegible] SERVICES

[illegible]ATES / CANADA: Same Day [X] | AM [ ] | Second Day [ ]

INTERNATIONAL: Express [ ] | Preferred [ ] | Saturday Delivery [ ]

O'NITE S S S

Business Documents [ ] | Customs Clearance [ ] | Delivery [ ]

[illegible]BL [ ]
[illegible]BL

COL [ ] OTH [ ] COMAT [ ]

Date: 03-06-91 | Origin: PSC | Shipment Number: 24261580 6

Tariff Dest. | Gateway

[illegible]pper's Account Number: [illegible]0281585

To:
US DEPARTMENT OF ENERGY
C/O MARTIN MARIETA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58 (DROP POINT A20)
OAK RIDGE TN 3-7-91

Check to Shipper $

Hold for Pick Up [ ]

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above.

[illegible]TINGHOUSE SHIPPING DEPT (509) 376-6665
[illegible]NGHOUSE HANFORD
[illegible] BLDG 1163
[illegible] STEVENS DRIVE
[illegible]LAND WA
Canada [ ]

Consignee's Account Number: E | Zip: 37831

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

Customer's Reference Numbers: [illegible]616 OSPC#W91-0207#4 | Zip: 99352

Description	Pcs	L	W	H	Total Pieces	Total Weight (in Lbs)
[illegible]YCOOLER SAMPLES [illegible]-1	1	24	14	16	1	60 LB

[illegible] Haz Mat [ ] Edit [ ] A B C D E F G H I J K

X 2 3 4 5 6 / 7 8 9 0 1 2

[illegible]NIGHT DELIVERY
[illegible]IATURE SERVICE SECURITY

[illegible] 3/6/91

[illegible]ternational Shipments: Commodity Code | [illegible] Domicile [ ]

Third party Account Number mandatory for Third party billing. | Third Party: E

International Customs Value | Internat[illegible]

[illegible] liability shall be limited [illegible] and if such are accepted [illegible] to windshields, plate[illegible]

9513356.2436 Project # 10-023
STA # 9-10
SAF -43-

Westinhouse Hanford Company	CHAIN OF CUSTODY #E-1

Company Contact Joan Kessner Telephone 3-3507

Sample Collected by CS McClellan 3-2550 Date 3/4-3/5 Time 0700

Sample Locations 200E Tank Farm Waste Containers, Kamokob

Ice Chest No. Field Logbook and Page No. WHC-N-205-7 p 65 7

Remarks

Bill of Lading No. Offsite Property No.

Method of Shipment

Shipped to 200-25 Martin Marietta

Sample Identification

SAF43-0304-1 40ml/ag TCLP metals method 1311
pH=6 40ml/ag Total Halogens 9020
OIL 250ml/g Ignitability 1010/1020

SAF43-0304-2 2-40ml/AG VOA method 8240
125ml/P Anions EPA 300
pH=7 250ml/AG Ignitability 1010/1020
WATER 1LAG Semivolit 8270
pH 9040
1LAG TCLP-metals 1311

SAF43-0304-2B 3-40ml/AG VOA method 8240

SAF43-0304-3 2-40ml/AG VOA 8240
125ml/P Anions EPA 300
pH=6 250ml/AG Ignitability 1010/1020
OIL/water mix 1LAG TCLP Metals 1311
1LAG Semi vol 8270, pH 9040

SAF43-0304-4 40ml/AG TCLP-metal 1311
OIL 40ml/AG Total Halogens 9020
pH=5 250ml/AG Ignitability 1010/1020

SAF43-0304-5 2-40ml/AG VOA 8240
125ml/AG Anion EPA 300
pH 6 250ml/AG Ignitability 1010/1020
WATER 1LAG Semi Vol 8270, pH 9040
1LAG TCLP metals 1311

SAF43-0304-6 40ml/AG TCLP Metal 1311
OIL 40ml/AG Total Halogens 9020
pH 6 250ml/AG Ignitability 1010/1020

Chain of Possession

Relinquished by:	Received by:	Date/Time:
CS McClellan 3-6-91 CS McClellan	M Stanley	3-6-91 / 1700
Relinquished by:	Received by:	Date/Time:
[illegible]	[illegible]	3/8/91 [illegible]
Relinquished by:	Received by:	Date/Time:
Relinquised by:	Received by:	Date/Time:

CONTRACTOR	OFF – SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
WESTINGHOUSE HANFORD COMPANY		[illegible]

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
OPERATIONS LAB & TECH	ANALYTICAL CHEMISTRY	

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: FEDERAL EXPRESS [X] PREPAID [ ] COLLECT

SHIPPED TO: MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RD. HIGHWAY 58, OAK RIDGE, TN.37831-7440

OFFSITE CUSTODIAN: C.R.KIRKPATRICK

FULL TITLE:

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W NO'S.)	ORIGINAL COST
1	polycooler. liquid samples in glass and plastic bottles packed in plastic bags and stored on wet ice. ICE CHEST # [illegible] WEIGHT [illegible]	

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

SAMPLES REQUIRE ANALYSIS THAT ARE NOT PRESENTLY AVAILABLE AT THIS SITE.

BILL OF LADING# [illegible]

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
[illegible] West, 232-3	C.S.MCCLELLAN	373-1[illegible]

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
	[illegible]	[illegible]

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
C.S.MCCLELLAN	3/6/91	R.A.MEZHARICH	[illegible]

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK – PROPERTY MANAGEMENT
GOLDENROD – RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO
WHITE – PROPERTY MANAGEMENT
GREEN – PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW – RETAIN
PINK – ORIGINATOR

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

ANALYTICAL CHEMISTRY DEPARTMENT

CHAIN OF CUSTODY RECORD

ACD/COC NO 1768

PROJECT NUMBER: 90-031

PROJECT NAME: 216B-3 pond B Lobe

SAMPLERS (SIGNATURE): J. D. Family

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	Alpha 9310	Beta 9310	Gamma 901.1	Sr-90	As 7060	Hg 7470	ICP metals 6010	Pb 7421	Se 7740	Tl 7841	NH4 350.3	Anions 300	CN 9010	Silica Gel	Semi-VOA 8270	Herb 8150	Pest/PCB 8080	Phos Pest 8140		
B00GW8	910308-113	3-6-91	0907	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	/	X	X	X	X		
B00GW9	114	3-6-91	1323	Soil	3		X	X			X	X	X	X			X	X								
B00GX2	115	3-6-91	1401	Soil	3		X	X			X	X	X	X			X	X								

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Family	3-6-91	1454	[illegible]	3/6/91	1240				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2438

9513356.2439

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 3/8/91 Shipper ID and Document No: EMERY Shipment Number 242615909 8

Cooler ID if noted on outside of cooler: #95

Project No: G132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.7 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login: 3-8-91		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No: 910308-113 Thru 115			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

9513356.2440 N/A 76

Overnight Delivery ~~Signature Security Service~~

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #5

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING AIR [X] PREPAID [ ] COLLECT

SHIPPED TO U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND M.E.W. NO'S.)	ORIGINAL COST
1 44 lbs	Coleman # 95 poly Cooler, Contains Soil Samples that are Double bagged and packed in Wet ICE and Vermiculite Sample # B00GW8, B00GW9, B00GX2	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # PSC 242615 909 8

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89325	3-6-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - ~~Lobe A~~ B Lobe	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-6-91	EV2A7 8241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J. N. Fouty	3/7/91	[signature]	3-7-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3-7-91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
[signature] 3-7-91				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK } PROPERTY MANAGEMENT
GOLDENROD - RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE - PROPERTY MANAGEMENT
GREEN - PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW - RETAIN
PINK - ORIGINATOR

RG13356 2441

WESTINGHOUSE HANFORD SHIPPING (509) 376-6665
WESTINGHOUSE HANFORD COMPANY
2355 STEVENS DRIVE
PO BOX 1970 (W/S G2-06)
RICHLAND WA 99352

CONSIGNEE NAME AND ADDRESS

US DEPT OF ENERGY C/O MARTIN MARIETA
OAK RIDGE GASEOUS DIFFUSION PLANT
K-00-1A DROP POINT A20
BLAIR RIDGE HWY 58
OAK RIDGE TN 37831

Pieces	Weight	Description/Marks	Emery Authorization No.
1	44 LB	POLYCOOLER SOIL SAMPLES COLEMAN #95	

EACH PERSON HANDLING OR TAKING CUSTODY OF THIS SHIPMENT MUST SIGN AND COMPLETE THE INFORMATION BELOW

Name of Person/Company	Transship Point/Destination	Signature of Person Accepting Custody	Time/Date
WESTINGHOUSE SHIPPING ~~JOYCE DEMAREST 1167 WHSE/1100 AREA~~	RICHLAND WA		13-7-91
[illegible]	[illegible]	[illegible]	1540 3/7/91
[illegible]	PDX	[illegible]	15:30 3/7
[illegible]	[illegible]	[illegible]	[illegible] 3-29-91
[illegible] EMERY	TYS	[illegible]	9:00 3-8-91
[illegible]			
[illegible]			1245 3/8/91

SPECIAL HANDLING INSTRUCTIONS

CONSIGNEE COPY

FORM OF PAYMENT

GBL CBL

COL OTH COMAT

Shipper's Account Number
10281585

2426159098

SERVICES

STATES / CANADA: Same Day; AM; Second Day; O'NITE; PM; Saturday Delivery

INTERNATIONAL: Express; Priority; Standard; Business Documents; Customs Clearance; Delivery

Date | Origin: PSC | Shipment Number: 242615909 8

~~NGHOUSE HANFORD SHIPPING (509) 376-6665~~
GHOUSE HANFORD
DLDG 1163
TEVENS DRIVE
ND WA 99352

To: ~~US DEPT OF ENERGY C/O MARTIN MARIETA~~
~~OAK RIDGE GASEOUS DIFFUSION PLANT~~
~~BLAI R ROAD HWY 58~~
~~OAK RIDGE~~ TN 37831

Tariff Dest. | Gateway

Check to Sender $

Hold for Pick Up

Canada

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above.

Shipper's Reference Numbers: 31241 W91-0-0207#5

Consignee's Account Number

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Description	Pcs.	Dimensions L	W	H	Total Pieces	Total Weight (in Lbs.)
OLER SOIL . COLEMAN #95	1	20	15	15	1	44

Declared Value $

DELIVERY
SECURITY SERVICE

Envelope 9X12 | Pack 12X15

Commodity Code | Third party Account Number mandatory for Third party billing: E | Third Party Account Number

International Customs Value | International Insurance

Total Transportation Charges | Other Charges Advanced at Origin $

206

Terms and Conditions on Back

A

3/5/91 1240

78

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO 1769

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 pond B Lab

SAMPLERS (SIGNATURE)

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP Metals 6010	As 7060	Hg 7470	Pb 7421	NH4 350.3	Anions 300	REMARKS
B00G X 3	910313-0~~00~~ 95	3-7-91	0943	Soil	3	X	X	X	X	X	X	X	Y	
B00G X 4	—100	3-7-91	01124	Soil	3	X	X	X	X	X	X	X	X	

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
[illegible]	3-8-91	0900	[illegible]	3/12/91	0900				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO COORDINATOR OF FIELD FILES

79

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO 1770

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 pond B Lobe

SAMPLERS (SIGNATURE): J.D. Fancher

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP metals 6010	As 7060	Hg 7470	Pb 7421	Poly Assay	Aroclors 3500	Total 8240	Gamma 901.1	Sr-90 905	Se 7740	Tl 7841	CN 9010	Sulfide 9030	Semi-VOA 8270	Herb 8150	Pest/PCB 8080	Phos. Pest 8140
B00GX5	9103B-101	3-8-91	0830	Soil	3	X	X	X	X	X	X	X	X											
B00GX6	-102	3-8-91	1103	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B00GX8	-102	3-8-91	1405	Soil	3	X	X	X	X	X	X	X	X											

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J.D. Fancher	3-11-91	0847	[illegible]	3/12/91	1300				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513556.2441

80

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

* RCVD 0855
Date: 3/12/91 Shipper ID and Document No: EMERY Shipment Number 242615929 Check 6

Cooler ID if noted on outside of cooler: _____

Project No: _____ Subproject No: _____ Site Location: _____

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.1 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	Yes ~~No~~ NA
Date of login: _____		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No: _____			
Thru _____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments: Signed: M. McAlduff

* Received cooler at this time (it was indicated due for Saturday delivery - I will check with shipping & receiving)

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 3/12/91 Shipper ID and Document No: EMERY 242615925 2

Cooler ID if noted on outside of cooler: #97

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.7 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login:		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

~~Overnight~~ Delivery Saturday 9513356.2446 82

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #6

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air

[X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-OC-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 59 lbs	Igloo Rockwell #8 Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample # B00GX3, B00GX4	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # PSC 242615929 6

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89334	3-8-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond	R. C. Roos / J.D. Fancher	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-8-91	EV217 8241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J.D. Fancher	3-8-91	[signature]	3/8/91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3/8/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
[signature] DATE 3-8-91				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

A GPO 1988-523-581/1001 V

Overnight Delivery ~~Signature Security Service~~

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #8

951356.2447 83

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [x] CONTRACTOR [ ] VENDOR

ROUTING: AIR

[x] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 64lbs.	Igloo poly cooler #97. Contains soil samples that are Double Bagged and packed in wet ICE and vermiculite. Samples are non-hazardous. Sample # B00GXS, B00GX6, B00GX8.	N/A

[ ] CLASSIFIED [x] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading #242615 9252

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
Lisa Bear	89343	3-11-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - Lobe B	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-11-91	EV2A7 81241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J. P. Franklin	3-11-91	G B Gould	3-11-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		Kathleen Mathy	3/11/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED

DATE

DISTRIBUTION

BY ORIGINATOR

WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT

GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:

WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

GPO 1988-593-581/1003-H

95133562448

84

FORM OF PAYMENT

ASH ☐ GBL CBL ☐

PPD ☐ COL ☐ OTH ☐ COMAT ☐

242615922

SERVICES

ES / CANADA: Same Day ☐ O'NITE ☐ AM ☐ PM ☐ Second Day ☐ Saturday Delivery

INTERNATIONAL: Express ☐ Business Documents ☐ Preferred ☐ Customs Clearance ☐ Standard ☐ Delivery

WORLDWIDE

Shipper's Account Number	Company	Date	Origin	Shipment Number
850281585		3-11-91	PSC	242615925

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
U S DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA
Canada ☐

To:
CR KIRKPATRICK K-00-1A DROP POINT A20
U S DEPT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN
Hold for Pick Up ☐
Canada ☐

Tariff Dest. | Gal

Check to Shipper $

EMERY WORLDW will collect consi check made pay only to the shipp for the value of goods in the am shown above.

Customer's Reference Numbers: W8124I EV2A7 W91-0207 #8 99352

Consignee's Account Number: E 5-12-91 37831

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-4

Declared Value $

Description	Pcs	Dimensions L	W	H	Total Pieces	Total Weight (in Lbs)
POLYCOOLER #97 SOIL SAMPLES BOOGX5 BOOGX6, BOOGX8	1				1	64

W91-0207 #8 ☐ Edit ☐ A B C D E F G H I J K

1 2 3 4 5 6
7 8 9 0 1 2

OVERNIGHT DELIVERY

Envelope 9X12 ☐ Pack 12X15 ☐

Shipper's Signature X 3/11/91

Free Domicile ☐ | Commodity Code | Third party Account Number mandatory for Third party billing. E | Third Party Account Number

Base Charge

International Customs Value | International Insurance

Total Transportation Charges | Other Charges/Advance at Origin ☐ OC/AO $

206 P

Terms and Conditions on Back

85

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO 1771

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 pond, B Lobe

SAMPLERS (SIGNATURE): J. D. Family

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP metals 6010	As 7060	Hg 7470	Pb 7421	NH4 350.3	Anions 300	VOA 8240	Sr-90 905	GAMA 901.1	SE 7740 Sediment	Tl 7841	CN 9010	Sulfide 9030	Semi-VOA 8270	Herbicide 8150	Pesticides/PCB 8080	Phos Pest 8140
BOUG40	90DA910315-057	3/12/91	0800	Soil	3	X	X	X	X	X	X	X	X											
BOUG41	-058	3/12/91	1131	Soil	3	X	X	X	X	X	X	X	X											
BOUG42	-059	3/12/91	1148	Soil	3	X	X	X	X	X	X	X	X											
BOUG22	-060	3/12/91	1453	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Family	3/13/91	0816	[illegible]	3/13/91	1345				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-15691 (1 4-89)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO COORDINATOR OF FIELD FILES

9513356.2450

86

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Date: 3/14/91 Shipper ID and Document No: EMERY 2 Shipment Number 42615919 Check 7

Cooler ID if noted on outside of cooler: ALPHA 3

Project No: 6132 Subproject No: ____ Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.7 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes~~ ~~No~~
Date of login: ____		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No: ____			
Thru ____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [signature]

2426159197

Overnight Delivery

9513356.2451

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #9 - - 87

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air

[X] PREPAID [ ] COLLECT

SHIPPED TO U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 62 lbs.	Alpha 3 Coleman Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample # BOOGY0, BOOGY1, BOOGY2, BOOGZ2	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # 2412615919 7

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89355	3-13-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-13-91	EV2B7 8131	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
[signature]	3-13-91	[signature]	3-13-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3/13/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK } PROPERTY MANAGEMENT
GOLDENROD - RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE - PROPERTY MANAGEMENT
GREEN - PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW - RETAIN
PINK - ORIGINATOR

95133564452 88

FORM OF PAYMENT

SH ☐ GBL CBL ☐ FCCOD ☐

PP ☐ COL ☐ OTH ☐ COMAT ☐

Shipper's Account Number: 850281585

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ Second Day ☐ XX O"NITE PM ☐ Saturday Delivery ☐

INTERNATIONAL: Express Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

Date	Origin	Shipment Number
3-13-91	PSC	242615919 7

From:
~~WESTINGHOUSE SHIPPING DEPT (509) 376-6665~~
~~U.S. DEPARTMENT OF ENERGY C/O~~
~~WESTINGHOUSE HANFORD~~
~~BLDG 1163~~
~~155 STEVENS DRIVE~~
~~RICHLAND WA~~ Canada ☐

To: C R KIRKPATRICK K-00-1A DROP POINT A20
U.S. DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN 37831
Hold for Pick Up ☐ Canada ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above.

Customer's Reference Numbers: 31241 EY2A7 W91-020749
Zip: 99352
E Consignee's Account Number
Zip: 37831

Description	Pcs.	L	W	H	Total Pieces	Total Weight (in Lbs.)
ALPHA 3 COLEMAN COOLER OIL SAMPLES BOOGYO,BOOGY1,BOOGY2	1	30	15	16	1	62

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

Haz Mat ☐ Edit ☐ A B C D E F G H I J K

1 2 3 4 5 6 7 8 9 0 1 2

Envelope 9X12 ☐ Pack 12X15 ☐

NIGHT DELIVERY

Shipper's Signature 3/13/91

International Shipments: Commodity Code

Free Domicile ☐

Third party Account Number mandatory for Third party billing: E

Third Party Account Number

International Customs Value | International Insurance

Charge

Total Transportation Charges 3/14/91 1245

Other Charges/Advance at Origin: OC/AO- $

206 A

Terms and Conditions on Back

89

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO: 1772

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 pond B Lobe

SAMPLERS (SIGNATURE): V. D. Franks

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP Metals 6010	As 7060	Hg 7470	Pb 7421	NH_4NO_3	Anions 300	REMARKS
B03-23	910318-101	3-4-91	1126	Soil	3	X	X	X	X	X	X	X	X	3X Normal Volume for Lab internal QA/QC

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
V. D. Franks	3-15-91	0716	C Morlae	3/16/91	1333				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO COORDINATOR OF FIELD FILES

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Date: 3-16-91 Shipper ID and Document No: EMERY

Cooler ID if noted on outside of cooler: NONE

Project No: G132 Subproject No: 031 Site Location: HANFORD

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 5 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles? NOT APPLICABLE	Yes No
Date of login:		Additional information needed from Prog. Mgr.?	(Yes) No
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: Cynthia Monroe

Overnight Delivery 9513356.2455 91

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Harford Company		W91-0207 #10

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick
FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 49 lbs	Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample # B00G23	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # PSC 2426159109

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89367	3-15-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-15-91	EV2A7 81241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J.D. Fank	3-15-91	G B Gould	3-15-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3/15/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
J. Demarest DATE 3-15-91				

DISTRIBUTION

BY ORIGINATOR
- WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
- GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
- WHITE — PROPERTY MANAGEMENT
- GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
- YELLOW — RETAIN
- PINK — ORIGINATOR

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD ☒ COL ☐ OTH ☐ COMAT ☐

EMERY WORLDWIDE

A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ Second Day ☐ ☒ SAT. DEL. ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

E Shipper's Account Number: 85D281585

Date: 3-15-91 Origin: PBC Shipment Number: 2426159109

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
U. S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA 99352
Canada ☐

To:
CR KIRKPATRICK K-00-1A DROP POINT A20
U.S. DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN 37831
Hold for Pick Up ☐ Canada ☐

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above.

Customer's Reference Numbers: W61241 EV2A7 W91-0207 #10

E Consignee's Account Number: 3164/1353 Monroe

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Description	Pcs	L	W	H	Total Pieces	Total Weight (lbs.)
1 POLYCOOLER SOIL SAMPLES SAMPLE # B00G23 W91-0207 #10	1	23	16	15	1	48

Declared Value $

TODSR ☐ Haz Mat ☐ Edit ☐ A B C D E F G H I J K

X 2 3 4 5 6 7 8 9 0 1 2

SATURDAY DELIVERY

Envelope 9X12 ☐ Pack 12X15 ☐

Shipper's Signature X 3/15/91

Professional Shipments: Free Service ☐ Commodity Code

Third party Account Number mandatory for Third party billing. E Third Party Account Number

International Customs Value | International Insurance

Basic Charge

Total Transportation Charges

Other Charges/Advance at Origin ☐ OC/AO- $

206 SAT

Terms and Conditions on Back

9513356.2456

92

93

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO: 1774

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 Pond B Lobe

SAMPLERS (SIGNATURE): J. D. Franklin

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	Alpha 9310	Beta 9310	GAMMA 901.1	Sr-90 905	ICP Metals 6010	As 7060	Hg 7470	Pb 7421	Se 7740	Tl 7841	NH4 350.3	Anions 300	Cn 9010	Sulfide 9030	Semi-VOA 8270	Herb 8150	Pest/PCB 8080	Phos Pest 8140
B00626	910319-085	3/15/91	1251	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Franklin	4-18-91	0700	M. L. Adams	3/19/91	1340				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

94

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO. 1773

PROJECT NUMBER: 90-031

PROJECT NAME: 216B3 Pond C Lab

SAMPLERS (SIGNATURE): D. Fowler

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	Alpha 9310	Beta 9310	Gama 901.1	Sr-90 905	ICP-metals 6010	As 7060	Hg 7470	Pb 7421	Se 7740	Tl 7841	NH4 350.3	Anions 300	CN 9010	Sulfide 9030	Semi-VOA 8270	Herb. 8150	Pest/PCB 8080	Phos Pest 8140	PCDD/PCDF 8280
B00H00	910319-056	3-15-91	1058	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B00H01	910319-058	3-15-91	1031	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
B00H02	910319-059	3-15-91	1348	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
D. Fowler	4-19-91	0730	[illegible]	4/19/91	1340				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

2426159120

Date: 3/19/91 Shipper ID and Document No: ENERY

Cooler ID if noted on outside of cooler: 206 A

Project No: G132 Subproject No: C13 Site Location: Hanford

Custody seal on cooler?	Yes No	Custody seals dated and signed?	Yes No
Condition of cooler acceptable?	Yes No	Prog. Mgr. notified of receipt of cooler?	Yes No
Radioactive labels?	Yes No	Radioactivity recheck OK?	Yes No
Hazardous labels?	Yes No	Samples properly labeled?	Yes No
Custody form(s) inside of cooler?	Yes No	Custody form(s) properly completed and signed? no time	Yes * No
Was cooler required to be maintained at 4 deg C?	Yes No	Thermometer inside of cooler?	Yes No
Sample containers intact?	Yes No	Temperature of cooler: 4.2 deg C (X.X)	
Are containers those specified for requested parameters?	Yes No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login:		Additional information needed from Prog. Mgr.?	Yes No
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

no * time on C-O-C

Signed: M L A F A Duff

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

242615917 5

Date: 3/19/91 Shipper ID and Document No: _____

Cooler ID if noted on outside of cooler: LARRY

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	Yes No	Custody seals dated and signed?	Yes No
Condition of cooler acceptable?	Yes No	Prog. Mgr. notified of receipt of cooler?	Yes No
Radioactive labels?	Yes No	Radioactivity recheck OK?	Yes No
Hazardous labels?	Yes No	Samples properly labeled?	Yes No
Custody form(s) inside of cooler?	Yes No	Custody form(s) properly completed and signed?	Yes No
Was cooler required to be maintained at 4 deg C?	Yes No	Thermometer inside of cooler?	Yes No
Sample containers intact?	Yes No	Temperature of cooler: 0.7 deg C (X.X)	
Are containers those specified for requested parameters?	Yes No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login: _____		Additional information needed from Prog. Mgr.?	Yes No
Lab assigned ID No: _____			
Thru _____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

26

95133456 2461

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD ☒ COL ☐ OTH ☐ COMAT ☐

EMERY WORLDWIDE

A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ Second Day ☐ O"NITE ☒ PM ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

E Shipper's Account Number: 850281585

Date: 03-18-91 | Origin: PSC | Shipment Number: 242615917 5

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
U.S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA
Canada ☐

To:
C.R. KIRKPATRICK K-00-1A DROP POINT A20
U.S. DEPARTMENT OF ENERGY
% MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN
Hold for Pick Up ☐
Canada ☐

Tariff Dest | Gateway

Check to Shipper $

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above.

Customer's Reference Numbers: W81241 EV2A7 W91-0207 #11

Zip: 99352

E Consignee's Account Number

Zip: 37831

Description	Pcs	L	W	H	Total Pieces	Total Weight (in Lbs)
1 COLEMAN "LARRY" POLYCOOLER SOIL SAMPLES	1	25	16	16	1	67
W91-0207 #11 OVERNIGHT DELIVERY						

Edit ☐ A B C D E F G H I J K

1 2 3 4 5 6 / 7 8 9 0 1 2

Envelope 9X12 ☐ Pack 12X15 ☐

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

Shipper's Signature: X 3/12/91 3/19/91

International Shipments: Free Domicile ☐ | Commodity Code | Third party Account Number mandatory for Third party billing. | E Third Party Account Number

International Customs Value | International Insurance

206 A

Terms and Conditions on Back

Overnight Delivery

9513356.2462

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #11 98

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W NO'S.)	ORIGINAL COST
1 67 lbs	Coleman "Larry" Poly Cooler. Contains soil samples that are double bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample #	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # PSC 2426159175

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89375	3-18-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
4-18-91	EY 2A7 81241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
[signature]	4-18-91	[signature]	3-18-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3-18-91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
[signature] DATE 3-18-91				

DISTRIBUTION

BY ORIGINATOR
- WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
- GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
- WHITE — PROPERTY MANAGEMENT
- GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
- YELLOW — RETAIN
- PINK — ORIGINATOR

99

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO. 1806

PROJECT NUMBER:

PROJECT NAME: 216-B-3 pond B + C Lobe

SAMPLERS (SIGNATURE): V. D. Fancher

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	Alpha 9310	Beta 9310	Gamma 901.1	Sr-90 905	ICP Metals 6010	As 7060	Hg 7470	Pb 7421	Se 7740	Tl 7841	NH4 350.3	Anions 300	CN 9010	Sulfide	Semi-VOA 8270	Herb 8150	Pest/PCB 8081	Phos Pest 8140	PCDD/PCDF 4430	REMARKS
B00GZ8	910321-067	3-18-91	0816	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X		
B00H03	910321-068	3-18-91	0915	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
B00H04	-069	3-18-91	01022	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B00H05	-070	3-18-91	1043	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X		
B00H06	-071	3-18-91	1348	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B00GZ8MS	-910322-076																									
B00GZ8MSD	-077																									

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
V. D. Fancher	3/19/91	0735	M. L. McAdoy	3/20/91	1000				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION ORIGINAL ACCOMPANIES SHIPMENT. COPY TO COORDINATOR OF FIELD FILES

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Date: 3-20-91 Shipper ID and Document No: EMERY Shipment Number 247425551 Check 0

Cooler ID if noted on outside of cooler: NONE

Project No: 6132 Subproject No: ____ Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	Yes (No) *
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.8 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login: ____		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No: ____			
Thru ____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

* no proj-subproj # (-031)

101

9513356.2465

FORM OF PAYMENT

CASH ☐ GBL/CBL ☐ FCCOD ☐

PPD [X] COL ☐ OTH ☐ COMAT ☐

E Shipper's Account Number: 850281585

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ [X] O'NITE; [X] AM ☐ PM; Second Day ☐ Saturday Delivery

INTERNATIONAL: Express ☐ Business Documents ☐; Preferred ☐ Customs Clearance ☐; Standard ☐ Delivery ☐

Date: 03-19-91 | Origin: PSC | Shipment Number: 247425651 0

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
U. S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA ☐ Canada

To:
CR KIRKPATRICK K-00-1A DROP POINT A20
U.S. DEPT. OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN 37831 ☐ Canada
Hold for Pick Up ☐

3/20/91 1422

Tariff Dest. | Gateway

Check to Pay $

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above

Customer's Reference Numbers: W81241 EV2A7 W91-0207 #13

Zip: 99352

E Consignee's Account Number: C Mokrae

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

Description	Pcs	L	W	H	Total Pieces	Total Weight (in lbs)
1 COLEMAN "IDON WASTE" COOLER SOIL SAMPLES # B00G28, B00H03,H04, H05, H06 W91-0207#13	1	22	15	15	1	86

Tools ☐ Haz Mat ☐ Exp ☐

A B C D E F G H I J K

[X] 2 3 4 5 6 7 8 9 0 1 2

OVERNIGHT DELIVERY

Envelope 9X12 ☐ Pak 12X15 ☐

Shipper's Signature: X [signature] 3/19/91

International Shipments: Free Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing. E Third Party Account Number

International Customs Value | International Insurance

Base Charge

Total Transportation Charges | Other Charges/Advance at Origin ☐ OC/AO- $

206 A

Terms and Conditions on Back

Overnight Delivery

9513356.2466

102

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #13

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air

[X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge, TN 37831
Oak Ridge Gaseous Diffusion Plant
K-OO-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W NO'S.)	ORIGINAL COST
1	Coleman "IDOW Wash" Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous.	N/A
86 lbs	Sample #B00G28, B00H03, B00H04, B00H05, B00H06	

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # 2474256510

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89380	3-19-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-19-91	EV2A7 8124	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
[signature]	3/19/91	[signature]	3-19-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3/19/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR:
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

103

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD. COC NO. 1807

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 pond C Lobe

SAMPLERS (SIGNATURE): J. D. Franklin

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP metals 6010	As 7060	Hg 7470	Pb 7421	Nitrate 300.3	Anions 300	REMARKS
B00H09	910322-210	3-19-91	1100	Soil	3	X	X	X	X	X	X	X	X	

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Franklin	3-19-91	1515	M L Hatfield	3/22/91	0630				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO COORDINATOR OF FIELD FILES

9513310.2467

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Shipment Number 247425654 Check 3

Date: 3-22-91 Shipper ID and Document No: EMERY

Cooler ID if noted on outside of cooler: EA010

Project No: G132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.7 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login: 3-22-91		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

Overnight Delivery

9513356.2469

105

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #14

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air [X] PREPAID [ ] COLLECT

SHIPPED TO U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 54165	Coleman EA010 Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample # B00H09	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # 2474256543

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
Jim Berg	89388	3-20-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond - C Lobe	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-19-91	EV2A7 8341	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J. D. Franklin	3-19-91	Manager, Roos	3-19-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
			3-20-91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
TE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

GPO 1988-593-581/1003-H

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ ☐ FCCOD ☐

PPD ☒ COI ☐ OTH ☐ COMAT ☐

EMERY WORLDWIDE

A CF Company

SERVICES

UNITED STATES / CANADA: ☐ Same Day ☒ O'NITE ☒ AM ☐ PM ☐ Second Day ☐ Saturday Delivery

INTERNATIONAL: ☐ Express ☐ Business Documents ☐ Preferred ☐ Customs Clearance ☐ Standard ☐ Delivery

E Shipper's Account Number 850281585

Date 03-20-91 | Origin PSC | Shipment Number 247425654 3

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-8665
U. S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA
Canada ☐
Customer's Reference Numbers: W81241 EV2A7 W91-0207#14
Zip: 99352

To:
C R KIRKPATRICK K-00-1A DROP POINT A20
~~U.S. DEPARTMENT OF ENERGY~~
% MARTIN MARIETTA ENERGY SYSTEMS
~~OAK RIDGE GASEOUS DIFFUSION PLANT~~
BLAIR RIDGE HWY 58
OAK RIDGE TN 3-21-91 1509
Hold for Pick Up ☐
Canada ☐
E Consignee's Account Number 37831

Tariff Dest. | Gateway

Check to Shipper $

EMERY WORLDWI will collect consign check made paya. only to the shippe for the value of the goods in the amoun shown above.

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared $

Description	Pcs	L	W	H	Total Pieces	Total Weight (In Lbs.)
1 COLEMAN EAOIO COOLER SOIL SAMPLE #500H09 W91-0207#14	1	24	14	15	1	54

TDCSR ☐ Hor. Mer. ☐ Edi. ☐ A B C D E F G H I J K

X 2 3 4 5 6 7 8 9 0 1 2

OVERNIGHT DELIVERY

Envelope 9X12 ☒ Pack 12X15 ☒

Shipper's Signature X

Perishable Shipments: Type Domicile ☐

Commodity Code

Third party Account Number mandatory for Third party billing. E Third Party Account Number

International Customs Value

International Insurance

Base Charge

Total Transportation Charges

Other Charges/Advance at Origin ☐ OCAO $

206 A

Terms and Conditions on Back

9513356.2470

106

107 Please Return All Coolers - We ARE Almost OUT!! VDW

also Return Rad bottle protective Sleeves

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO. 1804

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 pond C Lobe

SAMPLERS (SIGNATURE): J.D. Fambrey

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA 8240	Alpha 9310	Gr. 9310	Gamma 9021	Sr-90 905	ICP Metals 6010	As 7060	Hg 7470	Pb 7421	Se 7740	Tl 7841	NH4 350.3	Anions 300	CN 9010	Sulfide 9030	Semi-VOA 8270	Herb 8150	Pest/PCB 8080	Phos Pest 8140
B0H14	910325-035	3-21-91	1042	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J.D. Fambrey	3/21/91	1501	J. Dawson	3-23-91	1319				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Date: 3-23-91 Shipper ID and Document No: 2474256576

Cooler ID if noted on outside of cooler: # Astro

Project No: G132 Subproject No: 032 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	Yes (No)	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	Yes No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 4 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login:		Additional information needed from Prog. Mgr.?	(Yes) No
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: Jonnette D. Gardner

Shipping label on cooler was not one specified for this cooler.

~~Overnight~~ Delivery SATURDAY 9513356 2473 105

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #16

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick
FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 102 lbs.	Igloo #24 Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample # B00H14	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading #247 4256576

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89405	3-22-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond C Lobe	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-21-91	EV2A7 8241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J. D. Franklin	3-21-91	[signature]	3-22-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	5/22/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

110

9513356.2474

FORM OF PAYMENT

CASH ☐ GBL ☐ COL ☐ PO/OB ☐

PRD ☑ COL ☐ OTH ☐ COMAT ☐

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ Second Day ☒ SAT. DEL. PM ☒ Saturday Delivery

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

Shipper's Account Number: E 850281585

Date: 05-22-91 Origin: PSC 247425657 6

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
U. S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA

Canada ☐

To: C. R. KIRKPATRICK K-00-1A DROP POINT A20
U.S. DEPT. OF ENERGY
% MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
CLAIR BRIDGE HWY 58
OAK RIDGE TN

Hold for Pick Up ☐ Canada ☐

Tariff Dest. | Gateway

$

EMERY WORLDWIDE will collect consignee's check made payable to the shipper for the value of the goods in the amount shown above.

Customer's Reference Number: W81241 EV2[illegible]7 W9[illegible]0207#16 99352

Consignee's Account Number: E 37831

Description	Pcs.	L	W	H	Total Pieces	Total Weight (Lbs)
1 IGLOO #[illegible] POLYCOOLER SOIL SAMPLES BOOH1[illegible] W91-0207 #16	1				1	62

TOBILL ☐ Hold ☐ Edit ☐ A B C D E F G H I J K

SATURDAY DELIVERY

X 2 3 4 5 6 7 8 9 0 1 2

Envelope 9X12 ☐ Pack 12X15 ☐

Shipper's Signature X

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

2474256[illegible]6

International Shipments: Free Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing: E

Third Party Account Number

Base Charge

International Customs Value

International Insurance

Total Transportation Charges

Other Charges/Advance at Origin: OC/AO ☐ $

Terms and Conditions on Back

206 SAT

111

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD. COC NO 1810

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 pond C Lobe

SAMPLERS (SIGNATURE): J. D. Fankey

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	ICP Metals 6010	As 7060	Hg 7470	Pb 7421	NH4 350.3	Anions 300	REMARKS
B00H15	910328-073	3-25-91	0900	Soil	3	X	X	X	X	X	X	X	X	
B00H16	-074	3-25-91	1002	Soil	3	X	X	X	X	X	X	X	X	
B00H17	-075	3-25-91	1035	Soil	3	X	X	X	X	X	X	X	X	
B00H18	-076	3-25-91	1435	Soil	3	X	X	X	X	X	X	X	X	

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Fankey	3-26-91	0755	[illegible]	3/28/91	0615				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1 4-89)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

9513356.2476

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Date: 3/27/91 Shipper ID and Document No: EMERY - Shipment Number 247425659

Cooler ID if noted on outside of cooler: IGLOO #12

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes)	No	Custody seals dated and signed?	(Yes)	No
Condition of cooler acceptable?	(Yes)	No	Prog. Mgr. notified of receipt of cooler?	(Yes)	No
Radioactive labels?	Yes	(No)	Radioactivity recheck OK?	(Yes)	No
Hazardous labels?	Yes	(No)	Samples properly labeled?	(Yes)	No
Custody form(s) inside of cooler?	(Yes)	No	Custody form(s) properly completed and signed?	(Yes)	No
Was cooler required to be maintained at 4 deg C?	(Yes)	No	Thermometer inside of cooler?	Yes	(No)
Sample containers intact?	(Yes)	No	Temperature of cooler: 0.8 deg C (X.X)		
Are containers those specified for requested parameters?	(Yes)	No	VOA containers free of bubbles?	NA ~~Yes~~	~~No~~
Date of login: _____			Additional information needed from Prog. Mgr.?	Yes	(No)
Lab assigned ID No: _____					
Thru _____					

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: M L McAdoff

Overnight Delivery

9513356.2477

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #17 113

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental C & S

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air [X] PREPAID [ ] COLLECT

SHIPPED TO U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W NO'S.)	ORIGINAL COST
1 63 lbs.	Ig\00#12 Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample #B00H15, B00H16, B00H17, B00H18	N/A

[ ] CLASSIFIED [XX] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading #PSL2474256598

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
L.B. Bro	85931	3-26-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond C Lobe	R. C. Roos	376-9213

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-26-91	EV2A7 8241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J. D. Fancher	3-26-91	[illegible]	3-26-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[illegible]	3/26/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
[illegible]				
DATE 3-26-91				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

A ORO 1028-591 (81/1001 V

9513356.2478

114

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD [XX] COL ☐ OTH ☐ COMAT ☐

Shipper's Account Number: 850281585

EMERY WORLDWIDE — A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM ☐ Second Day ☐ O'NITE [X] PM ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Preferred ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

Date: 03-26-91 | Origin: PSC | Shipper's Number: 247425659 8

From:
WESTINGHOUSE SHIPPING DEPT [illegible] 376-6665
U. S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 163
2355 STEVENS DRIVE
RICHLAND WA

To:
C R KIRKPATRICK K-00-1A DROP POINT A20
U.S. DEPARTMENT OF ENERGY
MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN

Tariff Dest. | Gateway

Check to Shipper $

Hold for Pick Up ☐ Canada ☐

EMERY WORLDWIDE will collect consignee check made payable only to the shipper for the value of the goods in the amount shown above.

Customer's Reference Numbers: W81241 EV2A7 W91-0207 #17 [illegible]352

Consignee's Account Number: E

Acct: 37630

Description	Pcs.	Pounds	Total Pieces	Total Weight (P. LBS.)
1 IGLOO #12 POLYCOOLER SAMPLE # BOOH15,BOOH16 BOOH17, BOOH18 SOIL SAMPLES W91-0207 #17 OVERNIGHT DELIVERY	1	26 16 16	1	63

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

Shipper's Signature: [illegible] 3/26/91

Envelope 9X12 ☐ Pack 12X15 ☐

International Shipments: Foreign ☐ Domestic ☐ Commodity Code

Third party Account Number mandatory for Third party billing: Third Party Account Number

International Customs Value | International Insurance

Total Transportation Charges | Other Charges/Advance at Origin: OCAO ☐ $

206 A

Terms and Conditions on Back

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

2 4 7 4 2 5 6 5 5 4

Date: 3-23-91 Shipper ID and Document No: EMER

Cooler ID if noted on outside of cooler: IGLOO #6

Project No: 6132 Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.7 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	(Yes) No
Date of login: 3-23 91		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No: _____			
Thru _____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

Overnight Delivery

9513356.2480

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #14 117

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air [X] PREPAID [ ] COLLECT

SHIPPED TO U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 66 lbs	Igloo #6 Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample # B00H10, B00H11	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading #247425655 4

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	89834	3-21-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond C Lobe	R. C. Roos	376-9216

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-21-91	EV2A7 8641	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
J. D. Fambro	3-21-91	[signature]	3-21-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3/21/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

☆ GPO 1988-593-581/10003-4

FORM OF PAYMENT

CASH ☐ GBL/CBL ☐ PPCOD ☐

PPD [X] COL ☐ OTH ☐ COMAT ☐

E Shipper's Account Number B 0[illegible]

EMERY WORLDWIDE

A CF Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ [XX] O'NITE; [XX] AM; PM ☐; Second Day ☐; Saturday Delivery ☐

INTERNATIONAL: Express ☐; Preferred ☐; Standard ☐; Bus. Documents ☐; Customs Clearance ☐; Duty/Tax ☐

Date: 03-21-91 | Origin: PSC | Shipment Number: 24242565[illegible]4

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6465
U. S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLD 11
2355 STEVENS DRIVE
RICHLAND WA

To:
C R KIRKPATRICK K-00-1A DROPTPOINT A20
U.S. DEPT. OF ENERGY
% MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN

Tariff Dest. | Gateway

Check to Shipper $

Hold for Pick Up ☐ Canada ☐

EMERY WORLDWIDE will collect consignee's check made payable only to the shipper for the value of the goods in the amount shown above.

Customer's Reference Numbers: W81241 EV2A[illegible]HS[illegible]-0207 #14

Zip: 99352

E Consignee's Account Number

Zip: 37831

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

Description	Pcs.	L	W	H	Total Actual	Total Weight (lbs)
1 IGLOO #6 POL COOLER SOIL SAMPLES BOOH10, BOOH11 ~~W91-0207 #14~~	1	28	16	16	1	66

TOOSR ☐ Haz. Mat. ☐ Sat. ☐ A B C D E F G H I J K 1 2 3 4 5 6 7 8 9 0 1 2

OVERNIGHT DELIVERY

Envelope 9x12 ☐ Pack 12X15 ☐

Shipper's Signature X [illegible]

International Shipments: Free Domicile ☐ | Commodity Code | Third party Account Number mandatory for Third party billing. E | International Customs

Base Charge M L McHaffey 3/22/91 | Total Transportation Charges 19.00

Insurance | Total Charges

206 4

Terms and Conditions on Back

9513356.2481

118

119

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO 1812

PROJECT NUMBER: 90-031

PROJECT NAME: 216-B-3 POND (C-LOBE)

SAMPLERS (SIGNATURE): Steven E. Kua

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	VOA - 8240	ALPHA + BETA - 9310	GAMMA SCA - 901.1	SR-90 - 905 (EC-134)	METALS - 6010	AS - 7060	HG - 7470	PB - 7421	Se - 7740	THALLIUM - 7841	NH4 - 350.3	ANIONS - 300	CN - 9010	SULFIDE - 9030	SEMI-VOA - 8270	HERB - 8150	PEST/PCB - 8080	PHOS/PEST - 8140
B00H19	910401-011	3/26/91	1256	SOIL	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MS	910402-019																						

REMARKS: NA

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
Steven E. Kua	3/27/91	0700	N.D. Fahey	3/27/91	0700	N.D. Fahey	3/27/91	1105	
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
			M.L. McAdams	3/28/91	1500				

UCN-16691 (1 4-89)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

COOLER RECEIPT FORM
for SOP 2332

File with receiving and C-O-C records.

Date: 3/28/91 Shipper ID and Document No: EMERY 247425661

Cooler ID if noted on outside of cooler: #7

Project No: 6133 ~~037~~ Subproject No: 031 Site Location: Hanford

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	(Yes) No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 0.8 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	NA ~~Yes No~~
Date of login:		Additional information needed from Prog. Mgr.?	Yes (No)
Lab assigned ID No:			
Thru			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: ML Albright

Received late Thursday - couldn't FAX until today - 4-1-91

Overnight Delivery

9513356 2484

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #18

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 59 Lbs	Igloo #7 Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample # B00H19	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading #247 425 661 T

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	85935	3-27-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
B-Pond	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-27-91	EV2A7 8241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
[signature]	3/27/91	[signature]	3-27-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3/27/91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
DATE				

DISTRIBUTION

BY ORIGINATOR
WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO
WHITE — PROPERTY MANAGEMENT
GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
YELLOW — RETAIN
PINK — ORIGINATOR

9513356.2485 122

GBL CBL FCCOD

COL OTH COMAT

EMERY WORLDWIDE Company

Same Day AM Second Day — O'NITE PM Saturday Delivery — Express Preferred Standard — Business Documents Customs Clearance Delivery

Shipper's Account Number: 50281585

Date: 03-27-91 Origin: PSC Shipment Number: 247425661 T

TINGHOUSE SHIPPING DEPT (509) 376-6665
S. DEPARTMENT OF ENERGY C/O
TINGHOUSE HANFORD
BLDG 1163
STEVENS DRIVE
LAND WA Canada

To: C R KIRKPATRICK K-00-1A DROP POINT A20
U.S. DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLAIR RIDGE HWY 58
OAK RIDGE TN 37831 Canada

Tariff Dest. Gateway

Check to Shipper $

Hold for Pick Up

EMERY WORLDWIDE will collect consignee's check drawn payable only to the shipper for the value of the goods in the amount shown above.

Customer's Reference Numbers: 61 Ev2A7 W91-0207 #18 Zip: 99352

E Consignee's Account Number Zip

Description	Pcs.	L	W	H	Total Pieces	Total Weight
00 #7 POLYCOOLER SAMPLE # B)H19 0207#18	1	28	16	15	1	59

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

Declared Value $

Haz Mat Edit A B C D E F G H I J K

TIGHT DELIVERY

1 2 3 4 5 6 7 8 9 0 1 2

Envelope 9X12 Pack 12X15

Delivery 3/27/91

Commodity Code

Third party Account Number mandatory for Third party billing. E Third Party Account Number

International Customs Value International Insurance

Total Transportation Charges Other Charges/Advance at Origin OC/AO $

206 A

Terms and Conditions on Back

I signed for this cooler.

Tricia
3/28
12:52 pm

Bill of Lading 247 425 6620

offsite property # W91-0207 #19

MARTIN MARIETTA

MARTIN MARIETTA ENERGY SYSTEMS, INC.

CHAIN OF CUSTODY RECORD

ANALYTICAL CHEMISTRY DEPARTMENT

ACD/COC NO. 1813

PROJECT NUMBER: 90-031

PROJECT NAME: 216 B-3 Pond Lobe C

SAMPLERS (SIGNATURE): J. D. Farley

CUSTOMER NUMBER	ACD NUMBER	SAMPLING DATE	SAMPLING TIME	SAMPLE TYPE	NO. OF CONTAINERS	Alpha 9310	Beta 9310	Icp Metals 6010	As 7060	Hg 7470	Pb 7421	NH4 350.3	Anions 300	VOA 8240	Gamma 901.1	Sr-90 905	Se 7740	Tl 7841	Cn 9010	Sulfide 9030	Semi-VOA 8270	Herb 8150	Pest/PCB 8080	Phos-Pest 8141
B00H20	910401-012	3/27/91	0956	Soil	3	X	X	X	X	X	X	X	X											
B00H21	-013	3/27/91	1335	Soil	3	X	X	X	X	X	X	X	X											
B00H23	-014	3/27/91	1410	Soil	7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	23MS 910404-036																							
	23MSD-037																							

REMARKS

RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)
J. D. Farley	3/28/91	0935	[illegible]	3-31-91	1045				
RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)	Date	Time	RELINQUISHED BY (Signature)	Date	Time	RECEIVED BY (Signature)

UCN-16691 (1, 4-89)

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT, COPY TO COORDINATOR OF FIELD FILES

COOLER RECEIPT FORM
for SOP 2332

File with receiving
and C-O-C records.

Date: 3-31-91 Shipper ID and Document No: 2474256620

Cooler ID if noted on outside of cooler: _____

Project No: G132 Subproject No: 031 Site Location: Hanford.

Custody seal on cooler?	(Yes) No	Custody seals dated and signed?	(Yes) No
Condition of cooler acceptable?	(Yes) No	Prog. Mgr. notified of receipt of cooler?	(Yes) No
Radioactive labels?	Yes (No)	Radioactivity recheck OK?	Yes No
Hazardous labels?	Yes (No)	Samples properly labeled?	(Yes) No
Custody form(s) inside of cooler?	(Yes) No	Custody form(s) properly completed and signed?	(Yes) No
Was cooler required to be maintained at 4 deg C?	(Yes) No	Thermometer inside of cooler?	Yes (No)
Sample containers intact?	(Yes) No	Temperature of cooler: 4 deg C (X.X)	
Are containers those specified for requested parameters?	(Yes) No	VOA containers free of bubbles?	~~Yes No~~ Soil
Date of login: _____		Additional information needed from Prog. Mgr.?	(Yes) No
Lab assigned ID No: _____			
Thru _____			

NOTE: Nitrite-N, Nitrate-N, o-Phosphate-o-Phosphate-P have 48-hour holding time. LOG IN THESE FIRST - ASAP

The lab numbers plus the project number are used for tracking purposes.

Comments:

Signed: [illegible]

Overnight Delivery

9513356.2488

CONTRACTOR	OFF - SITE PROPERTY CONTROL	SERIAL NUMBER (TO BE OBTAINED FROM PROPERTY ACCOUNTING)
Westinghouse Hanford Company		W91-0207 #19 125

PART I - TO BE COMPLETED BY ORIGINATOR

DEPARTMENT	SECTION	UNIT
Environmental Engineering, Geotechnology & Permitting Function	Environmental Field Services	Environmental Characterization & Sampling

THE FOLLOWING ITEMS ARE TO BE SHIPPED FROM: [X] CONTRACTOR [ ] VENDOR

ROUTING: Air [X] PREPAID [ ] COLLECT

SHIPPED TO: U.S.Dept. of Energy, Blair Ridge HWY 58
%Martin Marietta Energy Systems, Oak Ridge,TN 37831
Oak Ridge Gaseous Diffusion Plant
K-00-1A Drop Point A20

OFFSITE CUSTODIAN: C. R. Kirkpatrick

FULL TITLE: Manager

QUANTITY	DESCRIPTION (INCLUDE SERIAL AND H.E.W. NO'S.)	ORIGINAL COST
1 55 Lbs	Igloo "Beta 3" Poly Cooler. Contains soil samples that are double-bagged and packed in wet ICE and vermiculite. Samples are nonhazardous. Sample # B00H20, B00H21	N/A

[ ] CLASSIFIED [X] UNCLASSIFIED [ ] SHIPPED UNDER DOE CONTRACT [ ] SHIPPED UNDER CONTRACTOR'S USE PERMIT CONTRACT

NECESSITY FOR THE OFF-SITE USE OF THIS PROPERTY:

To support drilling and sampling at B-Pond

Bill of Lading # 247425662 0

CERTIFICATION OF THE RADIATION MONITORING RELEASE MUST BE SECURED THE SAME DAY THAT MATERIAL IS DELIVERED TO WESTINGHOUSE HANFORD OPERATIONS

RM CLEARANCE FOR PUBLIC RELEASE	RM SURVEY NO.	DATE
[signature]	59420	3-28-91

LOCATION OF PROPERTY (AREA & BLDG.)	CONTACT	PHONE
3-Pond C Lobe	R. C. Roos	376-9218

DATE READY FOR SHIPMENT	COST CODE TO BE CHARGED	APPROXIMATE DATE THIS PROPERTY WILL BE RETURNED
3-28-91	EV2A7 81241	N/A

ORIGINATED BY	DATE	AUTHORIZED BY	DATE
[signature]	3-28-91	[signature]	3-28-91

SIGNATURE AND NAME OF PROPERTY CONTROL	CUSTODIAN DATE	PROPERTY MANAGEMENT APPROVAL	DATE
		[signature]	3-28-91

PART II - TO BE COMPLETED BY WHC SHIPPING OPERATION

SIGNATURE OF WHC RECIPIENT	RETURN ORDER NO.	DATE ISSUED	PURCHASE ORDER NO.	DATE ISSUED
[signature] DATE 3-28-91				

DISTRIBUTION

BY ORIGINATOR
- WHITE, GREEN, YELLOW, PINK — PROPERTY MANAGEMENT
- GOLDENROD — RETAIN

WHC SHIPPING OPERATIONS - SIGN ALL COPIES AND FORWARD TO:
- WHITE — PROPERTY MANAGEMENT
- GREEN — PROPERTY CONTROL CUSTODIAN (ISSUING OFFICE)
- YELLOW — RETAIN
- PINK — ORIGINATOR

☆ GPO 1988-593-581/1003-M

FORM OF PAYMENT

CASH ☐ GBL CBL ☐ FCCOD ☐

PPD XX COL ☐ OTH ☐ COMAT ☐

Shipper's Account No. E 850281585

EMERY WORLDWIDE

A Consolidated Company

SERVICES

UNITED STATES / CANADA: Same Day ☐ AM XX Second Day ☐ O'NITE XX PM ☐ Saturday Delivery ☐

INTERNATIONAL: Express ☐ Priority ☐ Standard ☐ Business Documents ☐ Customs Clearance ☐ Delivery ☐

Date 03-28-91 Origin PSC Shipment Number 2 17425662 0

From:
WESTINGHOUSE SHIPPING DEPT (509) 376-6665
U. S. DEPARTMENT OF ENERGY C/O
WESTINGHOUSE HANFORD
BLDG 1163
2355 STEVENS DRIVE
RICHLAND WA 99352

To:
C R KIRKPATRICK K-00-1A DROP POINT A20
U.S. DEPARTMENT OF ENERGY
C/O MARTIN MARIETTA ENERGY SYSTEMS
OAK RIDGE GASEOUS DIFFUSION PLANT
BLDG 2 RIDGE HWY 58
OAK RIDGE TN 37831

Tariff Dest. Getway

Customer's Reference: 81241 EV2A7 W9-0207 #19

Consignee's Account Number E

Hold for Pick Up ☐ Canada ☐

EMERY WORLDWIDE will not accept cash or check made payable only to the shipper for the value of the goods in the amount shown above.

Declared Value $

FOR INFORMATION OR RATES CALL 1-800 HI EMERY (1-800-443-6379)

4 7 4 2 5 6 6 2 0

Pcs	L	W	H	Total Pieces	Total Weight (in lbs)
1	26	15	18	1	1

1 ICE "BETA3" POLYCOOLER
SOIL SAMPLES # B00H20
500121

TOOSR ☐ Haz Mat ☐ Edit ☐

OVERNIGHT DELIVERY
W91-0207 #19

Shipper's Signature X

Envelope 9X12 ☐ Pack 12X15 ☐

International Shipments: Free Domicile ☐ Commodity Code

Third party Account Number mandatory for Third party billing

Third Party Account Number

International Customs Value

International Insurance

Base Charge

Total Transportation Charges

Other Charges/AC/AD/QC/AO

206A

Terms and Conditions on Back

9513356.2989

126

Westinghouse
Hanford Company

9513356.2490

OSM RCRA LEVEL C DATA ASSESSMENT

DATE 7/5/91

SAMPLES/MATRIX see attached page - all samples soil

REVIEWED BY JA Lerch

LABORATORY K-25

CASE # B-Pond

SDG # B00FK6 (assigned by OSM)
Project 90-031

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	Dioxins	Phos. Pest.	VOA
1. Holding Time		X	X	X
2. Blank Analysis		O	O	X
3. MS/MSD		O	O	O
4. Matrix Spike		N/A	N/A	N/A
5. Duplicates		N/A	N/A	O
6. Surrogates		O	O	O
7. Other		see attachment		
8.				
9.				
10.				

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSSMENT: no major problems - all results acceptable with attached qualification
- many results qualified according to holding time criteria established for water samples; SEE OTHER QC for more info

~~NOTES:~~

o Refer to the corresponding attachments for explanation of any problems.

54 PRO 046

Westinghouse
Hanford Company

9513356.2491

OSM RCRA LEVEL C DATA ASSESSMENT (cont pg 2)

DATE 7/5/91 SAMPLES/MATRIX See attached

REVIEWED BY JA Lerch

LABORATORY K-25

CASE # B-Pond

SDG # B00FK6

Project 90-031

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	Pest/PCB	Herb	SemiVOA
1. Holding Time		X	X	X
2. Blank Analysis		X	X	X
3. MS/MSD		NE	NE	NE
4. Matrix Spike		N/A	N/A	N/A
5. Duplicates		O	O	O
6. Surrogate %R		X	NE	O
7. Other		See attachment		
8.				
9.				
10.				

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable
NE - not evaluated

OVERALL ASSESSSMENT: See Cover

NOTES: —

o Refer to the corresponding attachments for explanation of any problems.

54 7900 046

9513356.2492

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Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT (cont pg 3)

DATE 7/5/91 SAMPLES/MATRIX see attachment

REVIEWED BY JA Lerch

LABORATORY K-25

CASE # B-Pond

SDG # B00FK6

Project 90-031

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	ICP metals	GFAA	Hg
1. Holding Time		O	O	X
2. Blank Analysis		NE	NE	NE
3. Matrix Spike		X	O	O
4. Duplicates		NE	O	NE
5. Other QC		see attachment		
6.				
7.				
8.				
9.				
10.				

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable
NE - not evaluated

OVERALL ASSESSSMENT: See COVER

NOTES: —

o Refer to the corresponding attachments for explanation of any problems.

54 7900 046

Westinghouse
Hanford Company

OSM RCRA LEVEL C DATA ASSESSMENT (cont pg 4)

DATE JA Lerch 7/5/91 SAMPLES/MATRIX see attachment

REVIEWED BY

LABORATORY K-25

CASE # B-Pond

SDG # B00FK6
project 90-031

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	Anions (IC)	Sulfide	Fluoride SIE
1. Holding Time		X	X	O
2. Blanks		NE	NE	NE
3. Matrix Spike		O	NE	O
4. Duplicates		O	O	O
5. Other QC		see	attached	
6.				
7.				
8.				
9.				
10.				

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable
NE- Not evaluated

OVERALL ASSESSSMENT: See COVER

NOTES: —

o Refer to the corresponding attachments for explanation of any problems.

Westinghouse
Hanford Company

9513356.2494

OSM RCRA LEVEL C DATA ASSESSMENT (cont pg 5)

DATE 7/5/91 SAMPLES/MATRIX See attached

REVIEWED BY JA Lerch

LABORATORY K-25

CASE # B-Pond

SDG # B00FK6

Project 90-031

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	CN	Ammonia	
1. Holding Time		X	O	
2. Blanks		NE	NE	
3. Matrix Spike		O	O	
4. Duplicates		O	O	
5. Other QC		see attachment		
6.				
7.				
8.				
9.				
10.				

O = data had no problems
X = data qualified due to minor problems
M = data qualified due to major problems/some data may be unusable
NE- not evaluated

OVERALL ASSESSSMENT: See COVER

NOTES: —

o Refer to the corresponding attachments for explanation of any problems.

54 7900 046

9513356.2495

Date: 7/5/91
Reviewed by: JA Lerch
Lab: K-25
Case: Bpond
SDG: B00FK6 (assigned by OSM)
Project 90-031

This Data Report Contains the following samples:

B00FK6	B00GV6	B00H03
B00FK7	B00GV7	B00H04
B00FK8	B00GV8	B00H05
B00FK9	B00GV9	B00H06
B00FL0	B00GW1	B00H09
B00FL1	B00GW0	B00H11
B00FL3	B00GW4	B00H10
B00FL4	B00GW6	B00H14
B00GR9	B00GW8	B00H15
B00GS0	B00GW3	B00H16
B00GS1	B00GW9	B00H17
B00GS2	B00GX2	B00H18
B00GS3	B00GX3	B00H19
B00GS4	B00GX4	B00H20
B00GS8	B00GX5	B00H21
B00GS9	B00GX8	B00H23
B00GT1	B00GX6	
B00GT3	B00GY0	
B00GT4	B00GY1	
B00GT5	B00GY2	
B00GT7	B00GZ2	
B00GT8	B00GZ3	
B00GV0	B00GZ6	
B00GV5	B00H00	
B00GV1	B00H01	
B00GV2	B00H02	
B00GV3	B00GZ8	

— all samples are soil

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Holding Times

COMMENTS: Dioxins - all samples extracted outside 7 day criteria established for water; all samples analyzed within 40 days of ext. Phosphorous Pest. - all samples extrated outside 7 day criteria established for water; all samples analyzed within 40 days of ext.

ACTION: qualify associated results as per OSM guidelines

	sample #	constituent	value/qual	sample #	constituent	value/qual
Dioxins	all	all	UJ			
Phosphorous Pest	all	all	UJ			

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Holding times (cont)

COMMENTS: VOA - 14 day holding time criteria established for water missed on sample BOOFL4 by 7 days

Pest/PCB's - all samples extracted outside 7day criteria established for water, all samples analyzed within 40 days of ext.

ACTION: qualify associated results as per OSM guidelines

	sample #	constituent	value/qual	sample #	constituent	value/qual
VOA	BOOFL4	all	UJ			
Pest/PCB	all	all	UJ			

RCRA LEVEL C QC

Name JA Larch Date 6/29/91

QC Check: Holding times (cont)

COMMENTS: Herbicides- 7 day extraction criteria established for water exceeded for all samples; all samples analyzed within 40 days of ext.
SemiVOA- 7 day extraction criteria exceeded for several samples, all samples analyzed within 40 days of extraction

ACTION: qualify associated results as per OSM guidelines

sample #	constituent	value/qual
Herbicides all	all	UJ
SemiVOA B00FK6	all	J, UJ
B00FK7		
B00FK8		
B00FK9		
B00FL0		
B00FL1		
B00FL3		
B00FL4		
B00GR9		
B00GS4		
B00GS9		
B00GT7		
B00GV5		
B00GW1		

sample #	constituent	value/qual
B00GW8	all	J, UJ
B00GW3		
B00GX6		
B00GZ2		
B00GZ6		
B00H00		
B00H01		
B00H02		
B00GZ8		
B00H03		
B00H04		
B00H05		
B00H06		
B00H14		
B00H10		
B00H19		

RCRA LEVEL C QC

Name JAlerch Date 7/4/91

QC Check: Holding Time (cont)

COMMENTS: ICP metals - all holding time criteria met
GFAA metals - all holding time criteria met
Hg - 28 day criteria established for water exceed for several samples

ACTION: qualify associated results as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
B00FK6	Hg	UJ			
B00FK7					
B00FK8					
B00FK9					
B00FL0					
B00GV9					
B00GW1					
B00GW0					
B00GW4					
B00GW6					
B00GW8					
B00GW9					
B00GX2					
B00GW3					

RCRA LEVEL C QC

Name JA Lerch Date 7/5/91

QC Check: Holding Time (cont)

COMMENTS: Anions IC - Nitrate Holding time (48 hrs) exceeded for all samples; chloride and sulfate ok for all samples
Sulfide - 28 day holding time exceeded for several samples
Fluoride SIE - holding time criteria met for all samples

ACTION: qualify associated sample results as per OSM guidelines

sample #	constituent	value/qual
all	Nitrate	UJ
all	Sulfide	UJ
-with the following exceptions		
B00GT7	Sulfide	acceptable
B00GV7		
B00GV8		
B00H14		

sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 7/5/91

QC Check: Holding time (cont)

COMMENTS: CN - holding time criteria established for water (14 days) exceeded for all samples
Ammonia - 28 day holding time criteria met for all samples

ACTION: qualify associated results as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
all	CN	J, UJ			

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Blank Analysis

COMMENTS: Dioxins – no contaminants detected in Dioxin method blanks (BLK1998, BLK1985, BLK1986)
Phos. Pest – no contaminants detected in Phosphorous Pest method blanks (T1-03-275MB1, T1-03-275-MB2, T1-04-201-MB)

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Blank Analysis (cont)

COMMENTS: VOA- no contaminants detected in VOA blanks 910402-018, 910328-103, 910311-017, 910301-170, 910222-013, 910220-064 : acetone detected in blank # 910321-027; 4-methyl-2-pentanone detected in 910228-107; unknown TIC detected in 910322-075, no TCL's detected

ACTION: qualify associated results as per OSM guidelines

	sample #	constituent	value/qual	sample #	constituent	value/qual
VOA	B00H02	acetone	15 U			

RCRA LEVEL C QC

Name JA Lerch Date 7/4/91

QC Check: Blank Analysis (cont)

COMMENTS: Pest/PCB- no contaminants detected in 910404-035; Aroclor-1254 detected in 910401-210, 910321-075, 910318-077, 910312-126; Aroclor-1254, lindane detected in 910307-232; beta-BHC, lindane, and Aroclor-1254 detected in 910301-273

ACTION: qualify associated results as per OSM guidelines

Pest/PCB

sample #	constituent	value/qual
B00FK6	beta-BHC	14 U
B00FK7	Aroclor-1254	280 U
B00FK8	lindane Aroclor-1254	13 U 260 U
B00FK9	lindane Aroclor-1254	13 U 260 U
B00FL0	Aroclor-1254	260 U
B00FL1	Aroclor-1254	280 U
B00FL3	lindane Aroclor-1254	12 U 240 U
B00FL4	lindane Aroclor-1254	13 U 260 U
B00GR9	beta-BHC lindane Aroclor-1254	13 U 13 U 260 U
B00GS4	lindane Aroclor-1254	16 U 320 U
B00GS9	lindane Aroclor 1254	13 U 260 U
B00GT7	lindane Aroclor 1254	13 U 260 U
B00GV5	lindane Aroclor 1254	13 U 260 U
B00GV6	lindane Aroclor 1254	13 U 260 U
B00GV7	lindane Aroclor 1254	13 U 260 U
B00GV8	lindane Aroclor 1254	13 U 260 U
B00GV9	Aroclor 1254	U
B00GW1		
B00GW0		
B00GW4		
B00GW8		
B00GW3		
B00GX6		
B00GZ2		
B00GZ6		
B00H01		
B00H02		
B00GZ8		
B00H03		
B00H04		
B00H05		
B00H06		
B00H14		
B00H10	lindane Aroclor-1254	60 U 240 U
B00H19	Aroclor-1254	260 U
B00H23	Aroclor-1254	300 U

RCRA LEVEL C QC

Name JA Lerch Date 7/4/91

QC Check: Blank Analysis (cont)

COMMENTS: Herbicides - no contaminants detected in blanks 910226-076, 910303-01, 910316-009, 910327-027, 910410-064 : Silvex detected in blank # 910309-033

ACTION: qualify associated results as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
• no herbicide compounds detected - no qualification req.					

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Blank Analysis (cont)

COMMENTS: SemiVOA — several TCL compounds and TIC's detected in blanks (910225-170, 910228-173, 910307-229, 910312-123, 910318-074 910321-080, 910404-032) including di-n-butylphthalate, bis(2-ethylhexyl)phthalate diethylphthalate & benzoic acid,

ACTION: quality associated results as per OSM guidelines

sample #	constituent	value/qual
B00FK6	bis(2-ethyl	1100 U
B00FK7	di-n-butyl	1100 U
	bis(2-ethyl	1100 U
B00FK8	bis(2-ethyl	1100 U
B00FK9	bis(2-ethyl	1100 U
B00FL0	di-n-butyl	1100 U
	bis(2-ethyl)	1100 U
B00FL1	di-n-butyl	1100 U
	bis(2-ethyl)	1100 U
B00FL3	bis(2-ethyl)	990 U
B00FL4	di-n-butyl	1000 U
	bis(2-ethyl	1000 U
B00GR9	di-n-butyl	1000 U
	bis(2-ethyl	1000 U
B00GS4	di-n-butyl	1300 U
	bis(2-ethyl	1400 U
B00GS9	di-n-butyl	1100 U
	bis(2-ethyl	1100 U
B00GT7	benzoic acid	5000 U
	bis(2-ethyl	1000 U
B00GV5	bis(2-ethyl	990 U
B00GV6	di-n-butyl	2500 U
	bis(2-ethyl	990 U
B00GV7	bis(2-ethyl	990 U
B00GV8	bis(2-ethyl	1000 U
B00GV9	di-n-butyl	1900 U

sample #	constituent	value/qual
B00GW1	diethylphthalate	1000 U
	di-n-butyl	1800 U
B00GW0	diethyl	990 U
	di-n-butyl	990 U
B00GW4	diethyl	1000 U
	di-n-butyl	1000 U
B00GW8	di-n-butyl	1500 U
B00GW3	diethyl	1000 U
	di-n-butyl	1000 U
B00GX6	di-n-butyl	1000 U
	bis(2-ethyl	1000 U
B00GZ2	di-n-butyl	1400 U
	bis(2-ethyl	1000 U
B00GZ6	di-n-butyl	1200 U
	bis(2-ethyl	1200 U
B00H00	di-n-butyl	1000 U
	bis(2-ethyl	1200 U
B00H01	di-n-butyl	1000 U
	bis(2-ethyl	1600 U
B00H02	di-n-butyl	2000 U
	bis(2-ethyl	1400 U

(continued on next page)

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Blank analysis (cont)

COMMENTS: SemiVOA - see previous page

ACTION: qualify associated results as per OSM guidelines

sample #	constituent	value/qual
B00G28	benzoic acid	7300 U
	diethyl	1500 U
	di-n-butyl	4500 U
B00H03	benzoic acid	5000 U
	di-n-butyl	1500 U
	bis(2-ethyl	1000 U
B00H04	benzoic acid	5100 U
	di-n-butyl	2500 U
	bis(2-ethyl	1000 U
B00H05	benzoic acid	5000 U
	di-n-butyl	2100 U
	bis(2-ethyl	1000 U
B00H06	benzoic acid	5100 U
	diethyl	1000 U
	di-n-butyl	3100 U
B00H14	benzoic acid	5300 U
	diethyl	1100 U
	di-n-butyl	2500 U
B00H10	benzoic acid	4800 U
	di-n-butyl	1100 U

sample #	constituent	value/qual
B00H19	benzoic acid	5100 U
	di-n-butyl	2200 U
	bis(2-ethyl	1100 U
B00H23	benzoic acid	6200 U
	diethyl	1300 U
	di-n-butyl	3700 U
	bis(2-ethyl	1300 U

• blank qualification criteria also applied to SemiVOA TIC's and unknowns

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Matrix Spike/Matrix Spike Dup (MS/MSD)

COMMENTS: Dioxins - all MS + MSD recoveries and all RPD's within limits for dioxin QC samples (B00FK7MS/MSD, B00GV6MS/MSD, ~~B00G26MS/MSD~~ B00H00MS/MSD)

Phos. Pest - all spike %R and RPD's acceptable for Phos Pest QC samples (B00GV9MS/MSD, B00GW3MS/MSD, B00G26MS/MSD)

~~ACTION:~~

ACTION - none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: MS/MSD (cont)

COMMENTS: VOA - all MS, MSD recoveries and all RPD's within limits for QC samples (B00FK6MS/MSD) (B00GV6MS/MSD, B00G28MS/MSD, B00H19MS/MSD)

Pest/PCB's - MS/MSD performed on B00H23 but no results provided; other ~~ACTION:~~ MS/MSD results from this project have not shown any matrix effects; MS/MSD not evaluated - estimated impact on quality minimal

Action: None

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JAlerch Date 7/4/91

QC Check: MS/MSD (cont)

COMMENTS: Herbicides- no MS/MSD performed - other samples from this project have shown no matrix effects

SemiVOA- MS/MSD analysis performed on B00G26, no results provided; other samples from this project have shown no matrix effects + all

~~ACTION:~~ surrogate recoveries were ok

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 7/4/91

QC Check: Matrix Spike

COMMENTS: ICP metals - all spike recoveries acceptable for B00GT1, B00GZ6, B00GZ8, B00H19; Mn recovery high for B00FK7; Mn and Fe recovery high for B00GT5; Fe recovery high for B00GW0; all other recoveries ok for B00FK7, B00GT5, and B00GW0

ACTION: qualify associated results as per QSM guidelines

sample #	constituent	value/qual
B00FK6	Mn	J
B00FK7		
B00FK8		
B00FK9		
B00FL0		
B00FL1		
B00FL3		
B00FL4		
B00GR9		
B00GT4	Mn, Fe	J
B00GT5		
B00GT7		
B00GT8		
B00GV0		
B00GV5		
B00GV1		
B00GV3		
B00GV2		
B00GV6		
B00GV7		
B00GV8		
B00GV9		
B00GW1		
B00GW0		
B00GW4		
B00GW6		
B00GW8		
B00GW9		
B00GX2		

sample #	constituent	value/qual
B00GY0	Fe, Mn	J
B00GY1		
B00GY2		
B00GZ2		

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RCRA LEVEL C QC

Name JA Lerch Date 7/4/91

QC Check: Matrix Spike (cont)

COMMENTS: GFAA - all spike recoveries ok for B00FK7, B00GV1, B00GX8, B00H10, B00H21

Hg - all spike recoveries ok for B00FK6, B00GT4, B00GV1, B00GV9 B00GW4,

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 7/5/91

QC Check: Matrix Spike (cont)

COMMENTS: Anions IC - all spike recoveries acceptable for B00FK6, B00FK8 B00FL1, B00G51, B00G59, B00GX2, B00H15, B00H23

Sulfide - no spike results provide; no problems w/other Wet Chem Spikes

Fluoride - spike %R ok for B00GV1, B00GW4, B00GX8

ACTION: None

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 7/5/91

QC Check: Matrix Spike (cont)

COMMENTS: CN - spike recovery acceptable for B00H10

Ammonia - spike recovery acceptable for B00GT1, B00GT3, B00GW3
B00GY0, B00H18

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Duplicates

COMMENTS: VOA – (B00H01D) - sample and duplicate results not-detected (U)
Pest/PCB's – (B00H01D) - sample and dup. results not-detected (U)
Herb - (B00H01D) - sample + dup results not detected (U)
SemiVOA (B00H01D) - sample + dup results not detected (U)

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 7/4/91

QC Check: Duplicates (cont)

COMMENTS: GFAA- all replicate RPD's acceptable for B00GX8, B00H10, B00FK6, B00GT4, and B00GW1

Hg- no duplicate results reported; other Dup results for metals from samples of the same project

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 7/5/91

QC Check: Duplicates (cont)

COMMENTS: Anions IC - all sample + dup results nondetects (u) for B00H01D
Sulfide (B00H01D) - sample and dup result nondetects (u)
Fluoride SIE - (B00H01D) - sample + dup RPD 0%

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 7/5/91

QC Check: Duplicates (cont)

COMMENTS: CN- (B00H01D) - sample + dup result non-detect (U)
Ammonia (B00H01D) - sample + dup result non-detects (U)

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Surrogate Recovery

COMMENTS: Dioxins - all surrogate/internal std recoveries acceptable
Phosphorous Pest - all surrogate recoveries acceptable
for samples and blanks
VOA - all surrogate recoveries within control limits

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Surrogate %R (cont)

COMMENTS: Pest/PCB's - recovery high for sample B00H01; all other recoveries within limits

Herb - no surrogates spiked into samples - Pest and Phes. Pest surrogates showed no problems; minimal impact on quality

ACTION: qualify associated results as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
B00H01	all	UJ			

Pest/PCB

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Surrogate %R (cont)

COMMENTS: SemiVOA - all surrogate recoveries within limits for samples + blanks

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Other QC

COMMENTS: Dioxins/Phosphorous Pest - analysis performed at IT - WHC sample #'s handwritten on IT report forms ICP/GFAA metals - As, Se, Pb results reported for both methodologies on several samples

ACTION: none

sample #	constituent	value/qual	sample #	constituent	value/qual

RCRA LEVEL C QC

Name JA Lerch Date 6/29/91

QC Check: Other QC

COMMENTS: many sample results were qualified according to holding time criteria established for water samples - this represents a conservative approach to qualification; it is questionable if the analysis period (especially in the case of extraction for organics) for soil matrices is quality affecting

~~ACTION:~~

sample #	constituent	value/qual	sample #	constituent	value/qual

9513356.2524

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 08:49

AnaLIS ID: 910215-004
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08324
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: B00FK6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 20-FEB-1991
Preparation Procedure Number:
Percent Moisture: 11.6
Percent Moisture (decanted):
Associated Blank: 910220-064
[] : Result has been Corrected for Spike

Date Analyzed: 20-FEB-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910220LMP-0014

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	6U
74-83-9	Bromomethane	11U	71-43-2	Benzene	6U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	6U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	6U
75-09-2	Methylene Chloride	6U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	6U	127-18-4	Tetrachloroethene	6U
75-35-4	1,1-Dichloroethene	6U	79-34-5	1,1,2,2-Tetrachloroethane	6U
75-34-3	1,1-Dichloroethane	6U	108-88-3	Toluene	6U
540-59-0	1,2-Dichloroethene (total)	6U	108-90-7	Chlorobenzene	6U
67-66-3	Chloroform	6U	100-41-4	Ethylbenzene	6U
107-06-2	1,2-Dichloroethane	6U	100-42-5	Styrene	6U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	6U
71-55-6	1,1,1-Trichloroethane	6U			
56-23-5	Carbon Tetrachloride	6U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	6U			
78-87-5	1,2-Dichloropropane	6U			
10061-01-5	cis-1,3-Dichloropropene	6U			
79-01-6	Trichloroethene	6U			
124-48-1	Dibromochloromethane	6U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 07:34

AnaLIS ID: 910215-005
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08327
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: B00FK7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 20-FEB-1991
Preparation Procedure Number:
Percent Moisture: 10.9
Percent Moisture (decanted):
Associated Blank: 910220-064
[] : Result has been Corrected for Spike

Date Analyzed: 20-FEB-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910220LMP-0014

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	6U
74-83-9	Bromomethane	11U	71-43-2	Benzene	6U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	6U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	6U
75-09-2	Methylene Chloride	4 J	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	64	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	6U	127-18-4	Tetrachloroethene	6U
75-35-4	1,1-Dichloroethene	6U	79-34-5	1,1,2,2-Tetrachloroethane	6U
75-34-3	1,1-Dichloroethane	6U	108-88-3	Toluene	6U
540-59-0	1,2-Dichloroethene (total)	6U	108-90-7	Chlorobenzene	6U
67-66-3	Chloroform	6U	100-41-4	Ethylbenzene	6U
107-06-2	1,2-Dichloroethane	6U	100-42-5	Styrene	6U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	6U
71-55-6	1,1,1-Trichloroethane	6U			
56-23-5	Carbon Tetrachloride	6U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	6U			
78-87-5	1,2-Dichloropropane	6U			
10061-01-5	cis-1,3-Dichloropropene	6U			
79-01-6	Trichloroethene	6U			
124-48-1	Dibromochloromethane	6U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 07:38

AnaLIS ID: 910215-006
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08238
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: B00FK8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 20-FEB-1991
Preparation Procedure Number:
Percent Moisture: 5.3
Percent Moisture (decanted):
Associated Blank: 910220-064
[] : Result has been Corrected for Spike

Date Analyzed: 20-FEB-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910220LMP-0014

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	3 J	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	55	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 09:23

AnaLIS ID: 910215-007
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08356
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: B00FK9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 22-FEB-1991
Preparation Procedure Number:
Percent Moisture: 6.7
Percent Moisture (decanted):
Associated Blank: 910222-013
[] : Result has been Corrected for Spike

Date Analyzed: 22-FEB-1991
Analysis Procedure Number: VOA (CLP) NDP
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910222LMP-0003

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 08:59

AnaLIS ID: 910215-008
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08357
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOFLO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 22-FEB-1991
Preparation Procedure Number:
Percent Moisture: 6.8
Percent Moisture (decanted):
Associated Blank: 910222-013
[] : Result has been Corrected for Spike

Date Analyzed: 22-FEB-1991
Analysis Procedure Number: VOA (CLP) NDP
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910222LMP-0003

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	13	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 09:02

AnaLIS ID: 910215-009
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08331
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOFL1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 12-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 20-FEB-1991
Preparation Procedure Number:
Percent Moisture: 11.2
Percent Moisture (decanted):
Associated Blank: 910220-064
[] : Result has been Corrected for Spike

Date Analyzed: 20-FEB-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910220LMP-0014

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	6U
74-83-9	Bromomethane	11U	71-43-2	Benzene	6U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	6U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	6U
75-09-2	Methylene Chloride	6U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	6U	127-18-4	Tetrachloroethene	6U
75-35-4	1,1-Dichloroethene	6U	79-34-5	1,1,2,2-Tetrachloroethane	6U
75-34-3	1,1-Dichloroethane	6U	108-88-3	Toluene	6U
540-59-0	1,2-Dichloroethene (total)	6U	108-90-7	Chlorobenzene	6U
67-66-3	Chloroform	6U	100-41-4	Ethylbenzene	6U
107-06-2	1,2-Dichloroethane	6U	100-42-5	Styrene	6U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	6U
71-55-6	1,1,1-Trichloroethane	6U			
56-23-5	Carbon Tetrachloride	6U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	6U			
78-87-5	1,2-Dichloropropane	6U			
10061-01-5	cis-1,3-Dichloropropene	6U			
79-01-6	Trichloroethene	6U			
124-48-1	Dibromochloromethane	6U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 09:07

AnaLIS ID: 910215-010
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08353
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: B00FL3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 22-FEB-1991
Preparation Procedure Number:
Percent Moisture: .0
Percent Moisture (decanted):
Associated Blank: 910222-013
[] : Result has been Corrected for Spike

Date Analyzed: 22-FEB-1991
Analysis Procedure Number: VOA (CLP) NDP
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910222LMP-0003

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	17	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 09:11

AnaLIS ID: 910215-011
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08414
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: B00FL4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 28-FEB-1991
Preparation Procedure Number:
Percent Moisture: 4.9
Percent Moisture (decanted):
Associated Blank: 910228-107
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: VOA (CLP) NDP
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910228LMP-VOA2

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U J	79-00-5	1,1,2-Trichloroethane	5U J
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U J
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 09:14

AnaLIS ID: 910215-012
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08355
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: B00GR9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 22-FEB-1991
Preparation Procedure Number:
Percent Moisture: 5.3
Percent Moisture (decanted):
Associated Blank: 910222-013
[] : Result has been Corrected for Spike

Date Analyzed: 22-FEB-1991
Analysis Procedure Number: VOA (CLP) NDP
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 91022LMP-0003

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	27	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 09:31

AnaLIS ID: 910219-091
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08336
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: B00GS4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 16-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 20-FEB-1991
Preparation Procedure Number:
Percent Moisture: 23.2
Percent Moisture (decanted):
Associated Blank: 910220-064
[] : Result has been Corrected for Spike

Date Analyzed: 20-FEB-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910220LMP-0014

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	13U	79-00-5	1,1,2-Trichloroethane	7U
74-83-9	Bromomethane	13U	71-43-2	Benzene	7U
75-01-4	Vinyl Chloride	13U	10061-02-6	trans-1,3-Dichloropropene	7U
75-00-3	Chloroethane	13U	75-25-2	Bromoform	7U
75-09-2	Methylene Chloride	7U	108-10-1	4-Methyl-2-pentanone	13U
67-64-1	Acetone	13U	591-78-6	2-Hexanone	13U
75-15-0	Carbon Disulfide	7U	127-18-4	Tetrachloroethene	7U
75-35-4	1,1-Dichloroethene	7U	79-34-5	1,1,2,2-Tetrachloroethane	7U
75-34-3	1,1-Dichloroethane	7U	108-88-3	Toluene	7U
540-59-0	1,2-Dichloroethene (total)	7U	108-90-7	Chlorobenzene	7U
67-66-3	Chloroform	7U	100-41-4	Ethylbenzene	7U
107-06-2	1,2-Dichloroethane	7U	100-42-5	Styrene	7U
78-93-3	2-Butanone	13U	1330-20-7	Xylene (total)	7U
71-55-6	1,1,1-Trichloroethane	7U			
56-23-5	Carbon Tetrachloride	7U			
108-05-4	Vinyl Acetate	13U			
75-27-4	Bromodichloromethane	7U			
78-87-5	1,2-Dichloropropane	7U			
10061-01-5	cis-1,3-Dichloropropene	7U			
79-01-6	Trichloroethene	7U			
124-48-1	Dibromochloromethane	7U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 09:42

AnaLIS ID: 910222-063
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08415
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: B00GS9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 28-FEB-1991
Preparation Procedure Number:
Percent Moisture: 7.3
Percent Moisture (decanted):
Associated Blank: 910228-107
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: VOA (CLP) NDP
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910228LMP-VOA2

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 09:59

AnaLIS ID: 910224-067
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08416
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGT7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 24-FEB-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 28-FEB-1991
Preparation Procedure Number:
Percent Moisture: 4.0
Percent Moisture (decanted):
Associated Blank: 910228-107
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: VOA (CLP) NDP
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910228LMP-VOA2

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:07

AnaLIS ID: 910304-008
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08429
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGV5
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 2-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared:
Preparation Procedure Number:
Percent Moisture:
Percent Moisture (decanted):
Associated Blank: 910301-170
[] : Result has been Corrected for Spike

Date Analyzed: 4-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910304LMP-0127

CAS		ug/Kg	CAS			ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane		5U
74-83-9	Bromomethane	10U	71-43-2	Benzene		5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene		5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform		5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone		3 J
67-64-1	Acetone	10U	591-78-6	2-Hexanone		10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene		5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane		5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene		5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene		5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene		5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	R	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)		5U
71-55-6	1,1,1-Trichloroethane	5U				
56-23-5	Carbon Tetrachloride	5U				
108-05-4	Vinyl Acetate	10U				
75-27-4	Bromodichloromethane	5U				
78-87-5	1,2-Dichloropropane	5U				
10061-01-5	cis-1,3-Dichloropropene	5U				
79-01-6	Trichloroethene	5U				
124-48-1	Dibromochloromethane	5U				

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 10:07

VOA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910304-008
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec.

Number TICs found: 3

Customer Sample ID: BOOGV5
Customer: KESSNER/FANCHER
File ID: >08429
Date Received: 2-MAR-1991
Date Analyzed: 4-MAR-1991

Concentration Units
(ug/L or ug/Kg): ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	18.03	19	J
2.	UNKNOWN	19.05	22	J
3.	UNKNOWN	21.14	11	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.
P - Probable Identification.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:15

AnaLIS ID: 910307-043
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08460
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGV6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 6-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 11-MAR-1991
Preparation Procedure Number:
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank: 910311-017
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910311LMP-0013

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:20

AnaLIS ID: 910307-044
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08463
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGV7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 6-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 11-MAR-1991
Preparation Procedure Number:
Percent Moisture: 4.0
Percent Moisture (decanted):
Associated Blank: 910311-017
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910331LMP-0013

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:23

AnaLIS ID: 910307-045
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08464
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGV8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 6-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 11-MAR-1991
Preparation Procedure Number:
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank: 910311-017
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910311LMP-0013

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:38

AnaLIS ID: 910308-108
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08465
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGV9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 11-MAR-1991
Preparation Procedure Number:
Percent Moisture: 0.0
Percent Moisture (decanted):
Associated Blank: 910311-017
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910311LMP-0013

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:28

AnaLIS ID: 910308-109
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08466
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGW1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 11-MAR-1991
Preparation Procedure Number:
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank: 910311-017
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910311LMP-0013

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:31

AnaLIS ID: 910308-110
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08467
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGWO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 11-MAR-1991
Preparation Procedure Number:
Percent Moisture: 0.0
Percent Moisture (decanted):
Associated Blank: 910311-017
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910311LMP-0013

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:42

AnaLIS ID: 910308-111
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08468
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGW4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 11-MAR-1991
Preparation Procedure Number:
Percent Moisture: 3.0
Percent Moisture (decanted):
Associated Blank: 910311-017
[] ; Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910311LMP-0013

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
21-MAY-1991 08:36

AnaLIS ID: 910308-113
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08469
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGW8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 11-MAR-1991
Preparation Procedure Number:
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank: 910311-017

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910311LMP-0013

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:52

AnaLIS ID: 910311-027
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08470
Instrument ID: 70 2
Authorized By: D. C. Canada

Customer Sample ID: BOOGW3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 11-MAR-1991
Preparation Procedure Number:
Percent Moisture: 3.0
Percent Moisture (decanted):
Associated Blank: 910311-017
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910311LMP-0013

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:12

AnaLIS ID: 910313-103
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08518
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGX6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 12-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number:
Percent Moisture: 5.4
Percent Moisture (decanted):
Associated Blank: 910321-027
[] : Result has been Corrected for Spike

Date Analyzed: 21-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910321LMP-0056

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	3 J
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:25

AnaLIS ID: 910315-060
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08517
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number:
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank: 910321-027
[] : Result has been Corrected for Spike

Date Analyzed: 21-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910321LMP-0056

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	75-25-2	Bromoform	5U
75-00-3	Chloroethane	11U	108-10-1	4-Methyl-2-pentanone	3 J
75-09-2	Methylene Chloride	5U	591-78-6	2-Hexanone	11U
67-64-1	Acetone	11U	127-18-4	Tetrachloroethene	5U
75-15-0	Carbon Disulfide	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-35-4	1,1-Dichloroethene	5U	108-88-3	Toluene	5U
75-34-3	1,1-Dichloroethane	5U	108-90-7	Chlorobenzene	5U
540-59-0	1,2-Dichloroethene (total)	5U	100-41-4	Ethylbenzene	5U
67-66-3	Chloroform	5U	100-42-5	Styrene	5U
107-06-2	1,2-Dichloroethane	5U	1330-20-7	Xylene (total)	5U
78-93-3	2-Butanone	11U			
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 12:33

AnaLIS ID: 910319-085
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08513
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number:
Percent Moisture: 16.7
Percent Moisture (decanted):
Associated Blank: 910321-027
[] : Result has been Corrected for Spike

Date Analyzed: 21-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: RW ANDERSON
QA File Number: 910321LMP-0056

CAS			ug/Kg	CAS			ug/Kg
74-87-3	Chloromethane	R	13U	79-00-5	1,1,2-Trichloroethane	R	6U
74-83-9	Bromomethane	R	13U	71-43-2	Benzene	R	6U
75-01-4	Vinyl Chloride	R	13U	10061-02-6	trans-1,3-Dichloropropene	R	6U
75-00-3	Chloroethane	R	13U	75-25-2	Bromoform	R	6U
75-09-2	Methylene Chloride	R	6U	108-10-1	4-Methyl-2-pentanone	R	13U
67-64-1	Acetone	R	13U	591-78-6	2-Hexanone	R	13U
75-15-0	Carbon Disulfide	R	6U	127-18-4	Tetrachloroethene	R	6U
75-35-4	1,1-Dichloroethene	R	6U	79-34-5	1,1,2,2-Tetrachloroethane	R	6U
75-34-3	1,1-Dichloroethane	R	6U	108-88-3	Toluene	R	6U
540-59-0	1,2-Dichloroethene (total)	R	6U	108-90-7	Chlorobenzene	R	6U
67-66-3	Chloroform	R	6U	100-41-4	Ethylbenzene	R	6U
107-06-2	1,2-Dichloroethane	R	6U	100-42-5	Styrene	R	6U
78-93-3	2-Butanone	R	13U	1330-20-7	Xylene (total)	R	6U
71-55-6	1,1,1-Trichloroethane	R	6U				
56-23-5	Carbon Tetrachloride	R	6U				
108-05-4	Vinyl Acetate	R	13U				
75-27-4	Bromodichloromethane	R	6U				
78-87-5	1,2-Dichloropropane	R	6U				
10061-01-5	cis-1,3-Dichloropropene	R	6U				
79-01-6	Trichloroethene	R	6U				
124-48-1	Dibromochloromethane	R	6U				

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:28

AnaLIS ID: 910319-086
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08512
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH00
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number:
Percent Moisture: 3.9
Percent Moisture (decanted):
Associated Blank: 910321-027
[] : Result has been Corrected for Spike

Date Analyzed: 21-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: RW ANDERSON
QA File Number: 910321LMP-0056

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:40

AnaLIS ID: 910319-087
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08514
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH01
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number:
Percent Moisture: 4.8
Percent Moisture (decanted):
Associated Blank: 910321-027
[] : Result has been Corrected for Spike

Date Analyzed: 21-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: RW ANDERSON
QA File Number: 910321LMP-0056

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:35

AnaLIS ID: 910319-089
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08516
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH02
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number:
Percent Moisture: 4.8
Percent Moisture (decanted):
Associated Blank: 910321-027

Date Analyzed: 21-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: RW ANDERSON
QA File Number: 910321LMP-0056

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	15 ~~B~~ U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:47

AnaLIS ID: 910321-067
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08522
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared:
Preparation Procedure Number:
Percent Moisture: 34.5
Percent Moisture (decanted):
Associated Blank: 910322-075

Date Analyzed: 22-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910322LMP-0109

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	15U	79-00-5	1,1,2-Trichloroethane	8U
74-83-9	Bromomethane	15U	71-43-2	Benzene	8U
75-01-4	Vinyl Chloride	15U	10061-02-6	trans-1,3-Dichloropropene	8U
75-00-3	Chloroethane	15U	75-25-2	Bromoform	8U
75-09-2	Methylene Chloride	8U	108-10-1	4-Methyl-2-pentanone	15U
67-64-1	Acetone	15U	591-78-6	2-Hexanone	15U
75-15-0	Carbon Disulfide	8U	127-18-4	Tetrachloroethene	8U
75-35-4	1,1-Dichloroethene	8U	79-34-5	1,1,2,2-Tetrachloroethane	8U
75-34-3	1,1-Dichloroethane	8U	108-88-3	Toluene	8U
540-59-0	1,2-Dichloroethene (total)	8U	108-90-7	Chlorobenzene	8U
67-66-3	Chloroform	8U	100-41-4	Ethylbenzene	8U
107-06-2	1,2-Dichloroethane	8U	100-42-5	Styrene	8U
78-93-3	2-Butanone	15U	1330-20-7	Xylene (total)	8U
71-55-6	1,1,1-Trichloroethane	8U			
56-23-5	Carbon Tetrachloride	8U			
108-05-4	Vinyl Acetate	15U			
75-27-4	Bromodichloromethane	8U			
78-87-5	1,2-Dichloropropane	8U			
10061-01-5	cis-1,3-Dichloropropene	8U			
79-01-6	Trichloroethene	8U			
124-48-1	Dibromochloromethane	8U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:01

AnaLIS ID: 910321-068
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08591
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH03
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared:
Preparation Procedure Number:
Percent Moisture:
Percent Moisture (decanted):
Associated Blank: 910328-103
[] : Result has been Corrected for Spike

Date Analyzed: 28-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910328LMP-0097

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:53

AnaLIS ID: 910321-069
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08526
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH04
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared:
Preparation Procedure Number:
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank: 910322-075

Date Analyzed: 22-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910322LMP-0109

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:56

AnaLIS ID: 910321-070
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08527
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH05
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared:
Preparation Procedure Number:
Percent Moisture: 4.3
Percent Moisture (decanted):
Associated Blank: 910322-075
[] : Result has been Corrected for Spike

Date Analyzed: 22-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910322LMP-0109

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secordary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:07

AnaLIS ID: 910321-071
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08528
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH06
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared:
Preparation Procedure Number:
Percent Moisture: 5.6
Percent Moisture (decanted):
Associated Blank: 910322-075
[] : Result has been Corrected for Spike

Date Analyzed: 22-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910322LMP-0109

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	11U	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:13

AnaLIS ID: 910328-078
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08592
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH10
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 22-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared:
Preparation Procedure Number:
Percent Moisture:
Percent Moisture (decanted):
Associated Blank: 910328-103
[] : Result has been Corrected for Spike

Date Analyzed: 28-MAR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910328LMP-0097

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	10U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	10U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	10U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	10U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	10U
67-64-1	Acetone	10U	591-78-6	2-Hexanone	10U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane *	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	10U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	10U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 09:35

AnaLIS ID: 910401-011
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08617
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH19
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 28-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared:
Preparation Procedure Number:
Percent Moisture: 6.1
Percent Moisture (decanted):
Associated Blank: 910402-018
[] : Result has been Corrected for Spike

Date Analyzed: 2-APR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910402LMP-0098

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	11U	79-00-5	1,1,2-Trichloroethane	5U
74-83-9	Bromomethane	11U	71-43-2	Benzene	5U
75-01-4	Vinyl Chloride	11U	10061-02-6	trans-1,3-Dichloropropene	5U
75-00-3	Chloroethane	11U	75-25-2	Bromoform	5U
75-09-2	Methylene Chloride	5U	108-10-1	4-Methyl-2-pentanone	11U
67-64-1	Acetone	49	591-78-6	2-Hexanone	11U
75-15-0	Carbon Disulfide	5U	127-18-4	Tetrachloroethene	5U
75-35-4	1,1-Dichloroethene	5U	79-34-5	1,1,2,2-Tetrachloroethane	5U
75-34-3	1,1-Dichloroethane	5U	108-88-3	Toluene	5U
540-59-0	1,2-Dichloroethene (total)	5U	108-90-7	Chlorobenzene	5U
67-66-3	Chloroform	5U	100-41-4	Ethylbenzene	5U
107-06-2	1,2-Dichloroethane	5U	100-42-5	Styrene	5U
78-93-3	2-Butanone	11U	1330-20-7	Xylene (total)	5U
71-55-6	1,1,1-Trichloroethane	5U			
56-23-5	Carbon Tetrachloride	5U			
108-05-4	Vinyl Acetate	11U			
75-27-4	Bromodichloromethane	5U			
78-87-5	1,2-Dichloropropane	5U			
10061-01-5	cis-1,3-Dichloropropene	5U			
79-01-6	Trichloroethene	5U			
124-48-1	Dibromochloromethane	5U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:29

AnaLIS ID: 910401-014
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >08616
Instrument ID: 5970-2
Authorized By: D. C. Canada

Customer Sample ID: BOOH23
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 31-MAR-1991

VOA - Volatile Organic Compounds (TCL)

Date Extracted/Prepared:
Preparation Procedure Number:
Percent Moisture: 22.3
Percent Moisture (decanted):
Associated Blank: 910402-018
[] : Result has been Corrected for Spike

Date Analyzed: 2-APR-1991
Analysis Procedure Number: ACD 2440
Dilution Factor: 1.0
Analyst: LM POTTER
QA File Number: 910402LMP-0098

CAS		ug/Kg	CAS		ug/Kg
74-87-3	Chloromethane	13U	79-00-5	1,1,2-Trichloroethane	6U
74-83-9	Bromomethane	13U	71-43-2	Benzene	6U
75-01-4	Vinyl Chloride	13U	10061-02-6	trans-1,3-Dichloropropene	6U
75-00-3	Chloroethane	13U	75-25-2	Bromoform	6U
75-09-2	Methylene Chloride	6U	108-10-1	4-Methyl-2-pentanone	13U
67-64-1	Acetone	13U	591-78-6	2-Hexanone	13U
75-15-0	Carbon Disulfide	6U	127-18-4	Tetrachloroethene	6U
75-35-4	1,1-Dichloroethene	6U	79-34-5	1,1,2,2-Tetrachloroethane	6U
75-34-3	1,1-Dichloroethane	6U	108-88-3	Toluene	6U
540-59-0	1,2-Dichloroethene (total)	6U	108-90-7	Chlorobenzene	6U
67-66-3	Chloroform	6U	100-41-4	Ethylbenzene	6U
107-06-2	1,2-Dichloroethane	6U	100-42-5	Styrene	6U
78-93-3	2-Butanone	13U	1330-20-7	Xylene (total)	6U
71-55-6	1,1,1-Trichloroethane	6U			
56-23-5	Carbon Tetrachloride	6U			
108-05-4	Vinyl Acetate	13U			
75-27-4	Bromodichloromethane	6U			
78-87-5	1,2-Dichloropropane	6U			
10061-01-5	cis-1,3-Dichloropropene	6U			
79-01-6	Trichloroethene	6U			
124-48-1	Dibromochloromethane	6U			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

SEMI-
VOA

9513356.2562

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:12

AnaLIS ID: 910215-004
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11109
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FK6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 11.6
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1100U J	106-47-8	4-Chloroaniline	1100U J
111-44-4	bis(2-Chloroethyl)ether	1100U	87-68-3	Hexachlorobutadiene	1100U
95-57-8	2-Chlorophenol	1100U	59-50-7	4-Chloro-3-methylphenol	1100U
541-73-1	1,3-Dichlorobenzene	1100U	91-57-6	2-Methylnaphthalene	1100U
106-46-7	1,4-Dichlorobenzene	1100U	77-47-4	Hexachlorocyclopentadiene	1100U
100-51-6	Benzyl Alcohol	1100U	88-06-2	2,4,6-Trichlorophenol	1100U
95-50-1	1,2-Dichlorobenzene	1100U	95-95-4	2,4,5-Trichlorophenol	5400U
95-48-7	2-Methylphenol	1100U	91-58-7	2-Chloronaphthalene	1100U
108-60-1	bis(2-Chloroisopropyl)ether	1100U	88-74-4	2-Nitroaniline	5400U
106-44-5	4-Methylphenol	1100U	131-11-3	Dimethylphthalate	1100U
621-64-7	N-Nitroso-di-n-propylamine	1100U	208-96-8	Acenaphthylene	1100U
67-72-1	Hexachloroethane	1100U	99-09-2	3-Nitroaniline	5400U
98-95-3	Nitrobenzene	1100U	83-32-9	Acenaphthene	1100U
78-59-1	Isophorone	1100U	51-28-5	2,4-Dinitrophenol	5400U
88-75-5	2-Nitrophenol	1100U	100-02-7	4-Nitrophenol	5400U
105-67-9	2,4-Dimethylphenol	1100U	132-64-9	Dibenzofuran	1100U
65-85-0	Benzoic Acid	5400U	121-14-2	2,4-Dinitrotoluene	1100U
111-91-1	bis(2-Chloroethoxy)methane	1100U	606-20-2	2,6-Dinitrotoluene	1100U
120-83-2	2,4-Dichlorophenol	1100U	84-66-2	Diethylphthalate	1100U
120-82-1	1,2,4-Trichlorobenzene	1100U	7005-72-3	4-Chlorophenyl-phenylether	1100U
91-20-3	Naphthalene	1100U J	86-73-7	Fluorene	1100U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:12

AnaLIS ID: 910215-004
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11109
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FK6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 11.6
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg
100-01-6	4-Nitroaniline	5400U J
534-52-1	4,6-Dinitro-2-methylphenol	5400U
86-30-6	N-Nitrosodiphenylamine	1100U
101-55-3	4-Bromophenyl-phenylether	1100U
118-74-1	Hexachlorobenzene	1100U
87-86-5	Pentachlorophenol	5400U
85-01-8	Phenanthrene	1100U
120-12-7	Anthracene	1100U
84-74-2	Di-n-butylphthalate	1100U
206-44-0	Fluoranthene	1100U
129-00-0	Pyrene	1100U
85-68-7	Butylbenzylphthalate	1100U
91-94-1	3,3'-Dichlorobenzidine	2200U
56-55-3	Benzo(a)anthracene	1100U J
117-81-7	bis(2-Ethylhexyl)phthalate	1100 ~~840 JB~~ U J
218-01-9	Chrysene	1100U J
117-84-0	Di-n-octylphthalate	1100U
205-99-2	Benzo(b)fluoranthene	1100U
207-08-9	Benzo(k)fluoranthene	1100U
50-32-8	Benzo(a)pyrene	1100U
193-39-5	Indeno(1,2,3-cd)pyrene	1100U J
53-70-3	Dibenz(a,h)anthracene	1100U J
191-24-2	Benzo(g,h,i)perylene	1100U J

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:12

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910215-004
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 11.6 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 7

Customer Sample ID: B00FK6
Customer: KESSNER/FANCHER
File ID: >11109
Date Received: 9-FEB-1991
Date Analyzed: 28-FEB-1991
Date Extracted: 24-FEB-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.80~~	~~13000~~	~~JAB~~
2.		UNKNOWN	8.77	960	J
3.		HYDROCARBON	~~15.12~~	~~2600~~	~~JB~~
4.		UNKNOWN (ACID?)	~~22.01~~	~~970~~	~~JB~~
5.	123-79-5	Dioctyl Adipate	26.01	630	J
6.		UNKNOWN	27.07	1400	J
7.		UNKNOWN (HYDROCARBON)	~~32.45~~	~~1200~~	~~JB~~
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:16

AnaLIS ID: 910215-005
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11110
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FK7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 10.9
Percent Moisture (decanted):
Associated Blank: 910225-170

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1100U J	106-47-8	4-Chloroaniline	1100U J
111-44-4	bis(2-Chloroethyl)ether	1100U	87-68-3	Hexachlorobutadiene	1100U
95-57-8	2-Chlorophenol	1100U	59-50-7	4-Chloro-3-methylphenol	1100U
541-73-1	1,3-Dichlorobenzene	1100U	91-57-6	2-Methylnaphthalene	1100U
106-46-7	1,4-Dichlorobenzene	1100U	77-47-4	Hexachlorocyclopentadiene	1100U
100-51-6	Benzyl Alcohol	1100U	88-06-2	2,4,6-Trichlorophenol	1100U
95-50-1	1,2-Dichlorobenzene	1100U	95-95-4	2,4,5-Trichlorophenol	5400U
95-48-7	2-Methylphenol	1100U	91-58-7	2-Chloronaphthalene	1100U
108-60-1	bis(2-Chloroisopropyl)ether	1100U	88-74-4	2-Nitroaniline	5400U
106-44-5	4-Methylphenol	1100U	131-11-3	Dimethylphthalate	1100U
621-64-7	N-Nitroso-di-n-propylamine	1100U	208-96-8	Acenaphthylene	1100U
67-72-1	Hexachloroethane	1100U	99-09-2	3-Nitroaniline	5400U
98-95-3	Nitrobenzene	1100U	83-32-9	Acenaphthene	1100U
78-59-1	Isophorone	1100U	51-28-5	2,4-Dinitrophenol	5400U
88-75-5	2-Nitrophenol	1100U	100-02-7	4-Nitrophenol	5400U
105-67-9	2,4-Dimethylphenol	1100U J	132-64-9	Dibenzofuran	1100U
65-85-0	Benzoic Acid	590 J	121-14-2	2,4-Dinitrotoluene	1100U
111-91-1	bis(2-Chloroethoxy)methane	1100U J	606-20-2	2,6-Dinitrotoluene	1100U J
120-83-2	2,4-Dichlorophenol	1100U J	84-66-2	Diethylphthalate	170 J
120-82-1	1,2,4-Trichlorobenzene	1100U J	7005-72-3	4-Chlorophenyl-phenylether	1100U J
91-20-3	Naphthalene	1100U J	86-73-7	Fluorene	1100U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:16

AnaLIS ID: 910215-005
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11110
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FK7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 10.9
Percent Moisture (decanted):
Associated Blank: 910225-170

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5400U J	53-70-3	Dibenz(a,h)anthracene	1100U J
534-52-1	4,6-Dinitro-2-methylphenol	5400U	191-24-2	Benzo(g,h,i)perylene	1100U J
86-30-6	N-Nitrosodiphenylamine	1100U			
101-55-3	4-Bromophenyl-phenylether	1100U			
118-74-1	Hexachlorobenzene	1100U			
87-86-5	Pentachlorophenol	5400U			
85-01-8	Phenanthrene	1100U			
120-12-7	Anthracene	1100U J			
84-74-2	Di-n-butylphthalate 1100	~~330 JB~~ U J			
206-44-0	Fluoranthene	1100U J			
129-00-0	Pyrene	1100U J			
85-68-7	Butylbenzylphthalate	1100U J			
91-94-1	3,3'-Dichlorobenzidine	2200U J			
56-55-3	Benzo(a)anthracene	1100U J			
117-81-7	bis(2-Ethylhexyl)phthalate 1100	~~410 JB~~ U J			
218-01-9	Chrysene	1100U J			
117-84-0	Di-n-octylphthalate	1100U J			
205-99-2	Benzo(b)fluoranthene	1100U J			
207-08-9	Benzo(k)fluoranthene	1100U J			
50-32-8	Benzo(a)pyrene	1100U J			
193-39-5	Indeno(1,2,3-cd)pyrene	1100U J			

JL 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:16

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910215-005
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 10.9 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 7

Customer Sample ID: B00FK7
Customer: KESSNER/FANCHER
File ID: >11110
Date Received: 9-FEB-1991
Date Analyzed: 28-FEB-1991
Date Extracted: 24-FEB-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.59~~	~~15000~~	~~JAB~~
2.	872-50-4	2-Pyrrolidinone, 1-methyl-	9.45	610	J
3.		HYDROCARBON	~~15.12~~	~~2000~~	~~JB~~
4.	121-33-5	Benzaldehyde,5-hydroxy-3-metho	15.28	550	J
5.		UNKNOWN (HEXADECANOIC ACID?)	~~22.02~~	~~1200~~	~~JB~~
6.		UNKNOWN	27.08	900	J
7.		HYDROCARBON	~~32.47~~	~~1500~~	~~JB~~
8.					
9.					
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30.					

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:20

AnaLIS ID: 910215-006
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11111
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FK8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.3
Percent Moisture (decanted):
Associated Blank: 910225-170

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5100U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5100U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5100U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5100U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5100U
105-67-9	2,4-Dimethylphenol	1000U J	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	520 J	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U J	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U J	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U J	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JL 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:20

AnaLIS ID: 910215-006
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11111
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FK8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.3
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5100U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5100U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5100U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U			
84-74-2	Di-n-butylphthalate	1000U			
206-44-0	Fluoranthene	1000U			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate 1100 ~~790 JB~~	U J			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:20

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910215-006
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 5.3 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 8

Customer Sample ID: B00FK8
Customer: KESSNER/FANCHER
File ID: >11111
Date Received: 9-FEB-1991
Date Analyzed: 28-FEB-1991
Date Extracted: 24-FEB-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.06	500	J
2.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.67~~	~~23000~~	~~JAB~~
3.		HYDROCARBON	~~15.13~~	~~2500~~	~~JB~~
4.		HYDROCARBON	21.43	1100	J
5.		UNKNOWN (ACID?)	~~22.04~~	~~1800~~	~~JB~~
6.		UNKNOWN	27.14	1500	J
7.		HYDROCARBON	28.85	5400	J
8.		HYDROCARBON	~~32.57~~	~~2000~~	~~JB~~
9.					
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30.					

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:24

AnaLIS ID: 910215-007
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11112
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FK9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 6.7
Percent Moisture (decanted):
Associated Blank: 910225-170

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1100U J	106-47-8	4-Chloroaniline	1100U J
111-44-4	bis(2-Chloroethyl)ether	1100U	87-68-3	Hexachlorobutadiene	1100U
95-57-8	2-Chlorophenol	1100U	59-50-7	4-Chloro-3-methylphenol	1100U
541-73-1	1,3-Dichlorobenzene	1100U	91-57-6	2-Methylnaphthalene	1100U
106-46-7	1,4-Dichlorobenzene	1100U	77-47-4	Hexachlorocyclopentadiene	1100U
100-51-6	Benzyl Alcohol	1100U	88-06-2	2,4,6-Trichlorophenol	1100U
95-50-1	1,2-Dichlorobenzene	1100U	95-95-4	2,4,5-Trichlorophenol	5100U
95-48-7	2-Methylphenol	1100U	91-58-7	2-Chloronaphthalene	1100U
108-60-1	bis(2-Chloroisopropyl)ether	1100U	88-74-4	2-Nitroaniline	5100U
106-44-5	4-Methylphenol	1100U	131-11-3	Dimethylphthalate	1100U
621-64-7	N-Nitroso-di-n-propylamine	1100U	208-96-8	Acenaphthylene	1100U
67-72-1	Hexachloroethane	1100U	99-09-2	3-Nitroaniline	5100U
98-95-3	Nitrobenzene	1100U	83-32-9	Acenaphthene	1100U
78-59-1	Isophorone	1100U	51-28-5	2,4-Dinitrophenol	5100U
88-75-5	2-Nitrophenol	1100U	100-02-7	4-Nitrophenol	5100U
105-67-9	2,4-Dimethylphenol	1100U	132-64-9	Dibenzofuran	1100U
65-85-0	Benzoic Acid	5100U	121-14-2	2,4-Dinitrotoluene	1100U
111-91-1	bis(2-Chloroethoxy)methane	1100U	606-20-2	2,6-Dinitrotoluene	1100U
120-83-2	2,4-Dichlorophenol	1100U	84-66-2	Diethylphthalate	1100U
120-82-1	1,2,4-Trichlorobenzene	1100U	7005-72-3	4-Chlorophenyl-phenylether	1100U
91-20-3	Naphthalene	1100U J	86-73-7	Fluorene	1100U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:24

AnaLIS ID: 910215-007
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11112
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FK9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 6.7
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5100U J	53-70-3	Dibenz(a,h)anthracene	1100U J
534-52-1	4,6-Dinitro-2-methylphenol	5100U	191-24-2	Benzo(g,h,i)perylene	1100U J
86-30-6	N-Nitrosodiphenylamine	1100U			
101-55-3	4-Bromophenyl-phenylether	1100U			
118-74-1	Hexachlorobenzene	1100U			
87-86-5	Pentachlorophenol	5100U			
85-01-8	Phenanthrene	1100U			
120-12-7	Anthracene	1100U			
84-74-2	Di-n-butylphthalate	1100U			
206-44-0	Fluoranthene	1100U			
129-00-0	Pyrene	1100U			
85-68-7	Butylbenzylphthalate	1100U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1100U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1100 ~~4700 JB~~ UJ			
218-01-9	Chrysene	1100U J			
117-84-0	Di-n-octylphthalate	1100U			
205-99-2	Benzo(b)fluoranthene	1100U			
207-08-9	Benzo(k)fluoranthene	1100U			
50-32-8	Benzo(a)pyrene	1100U			
193-39-5	Indeno(1,2,3-cd)pyrene	1100U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:24

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910215-007
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 6.7 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 6

Customer Sample ID: B00FK9
Customer: KESSNER/FANCHER
File ID: >11112
Date Received: 9-FEB-1991
Date Analyzed: 28-FEB-1991
Date Extracted: 24-FEB-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.62~~	~~19000~~	~~JAB~~
2.		HYDRAZINE, DIMETHYL-	~~8.81~~	~~1400~~	~~JBY~~
3.	124-07-2	Octanoic Acid	11.96	460	J
4.		3-HEXADECENE, (Z)-	~~15.13~~	~~1900~~	~~JB~~
5.		UNKNOWN (ACID?)	~~22.82~~	~~840~~	~~JB~~
6.		UNKNOWN	27.07	1400	J
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JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:45

AnaLIS ID: 910215-008
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11113
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: 800FLO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 6.8
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1100U J	106-47-8	4-Chloroaniline	1100U J
111-44-4	bis(2-Chloroethyl)ether	1100U	87-68-3	Hexachlorobutadiene	1100U
95-57-8	2-Chlorophenol	1100U	59-50-7	4-Chloro-3-methylphenol	1100U
541-73-1	1,3-Dichlorobenzene	1100U	91-57-6	2-Methylnaphthalene	1100U
106-46-7	1,4-Dichlorobenzene	1100U	77-47-4	Hexachlorocyclopentadiene	1100U
100-51-6	Benzyl Alcohol	1100U	88-06-2	2,4,6-Trichlorophenol	1100U
95-50-1	1,2-Dichlorobenzene	1100U	95-95-4	2,4,5-Trichlorophenol	5200U
95-48-7	2-Methylphenol	1100U	91-58-7	2-Chloronaphthalene	1100U
108-60-1	bis(2-Chloroisopropyl)ether	1100U	88-74-4	2-Nitroaniline	5200U
106-44-5	4-Methylphenol	1100U	131-11-3	Dimethylphthalate	1100U
621-64-7	N-Nitroso-di-n-propylamine	1100U	208-96-8	Acenaphthylene	1100U
67-72-1	Hexachloroethane	1100U	99-09-2	3-Nitroaniline	5200U
98-95-3	Nitrobenzene	1100U	83-32-9	Acenaphthene	1100U
78-59-1	Isophorone	1100U	51-28-5	2,4-Dinitrophenol	5200U
88-75-5	2-Nitrophenol	1100U	100-02-7	4-Nitrophenol	5200U
105-67-9	2,4-Dimethylphenol	1100U J	132-64-9	Dibenzofuran	1100U
65-85-0	Benzoic Acid	360 J	121-14-2	2,4-Dinitrotoluene	1100U
111-91-1	bis(2-Chloroethoxy)methane	1100U J	606-20-2	2,6-Dinitrotoluene	1100U
120-83-2	2,4-Dichlorophenol	1100U J	84-66-2	Diethylphthalate	1100U
120-82-1	1,2,4-Trichlorobenzene	1100U J	7005-72-3	4-Chlorophenyl-phenylether	1100U
91-20-3	Naphthalene	1100U J	86-73-7	Fluorene	1100U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:45

AnaLIS ID: 910215-008
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11113
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOFLO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 9-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 6.8
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5200U J	53-70-3	Dibenz(a,h)anthracene	1100U J
534-52-1	4,6-Dinitro-2-methylphenol	5200U	191-24-2	Benzo(g,h,i)perylene	1100U J
86-30-6	N-Nitrosodiphenylamine	1100U			
101-55-3	4-Bromophenyl-phenylether	1100U			
118-74-1	Hexachlorobenzene	1100U			
87-86-5	Pentachlorophenol	5200U			
85-01-8	Phenanthrene	1100U			
120-12-7	Anthracene	1100U J			
84-74-2	Di-n-butylphthalate 1100	~~220 JB~~ UJ			
206-44-0	Fluoranthene	1100U J			
129-00-0	Pyrene	1100U J			
85-68-7	Butylbenzylphthalate	1100U J			
91-94-1	3,3'-Dichlorobenzidine	2100U J			
56-55-3	Benzo(a)anthracene	1100U J			
117-81-7	bis(2-Ethylhexyl)phthalate 1100	~~900 JB~~ UJ			
218-01-9	Chrysene	1100U J			
117-84-0	Di-n-octylphthalate	1100U J			
205-99-2	Benzo(b)fluoranthene	1100U J			
207-08-9	Benzo(k)fluoranthene	1100U J			
50-32-8	Benzo(a)pyrene	1100U J			
193-39-5	Indeno(1,2,3-cd)pyrene	1100U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:45

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910215-008
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 6.8 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 8

Customer Sample ID: B00FL0
Customer: KESSNER/FANCHER
File ID: >11113
Date Received: 9-FEB-1991
Date Analyzed: 28-FEB-1991
Date Extracted: 24-FEB-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.62~~	~~26000~~	~~JAB~~
2.		UNKNOWN	9.50	490	J
3.		3-HEXADECENE, (Z)-	~~15.12~~	~~1400~~	~~JB~~
4.		HYDROCARBON	21.34	810	J
5.		UNKNOWN	~~22.03~~	~~1100~~	~~JB~~
6.		UNKNOWN	27.09	1500	J
7.		UNKNOWN	28.85	520	J
8.		HYDROCARBON	32.49	2800	J
9.					
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29.					
30.					

JL 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:48

AnaLIS ID: 910215-009
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11114
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOFL1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 12-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 11.2
Percent Moisture (decanted):
Associated Blank: 910225-170

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1100U J	106-47-8	4-Chloroaniline	1100U J
111-44-4	bis(2-Chloroethyl)ether	1100U	87-68-3	Hexachlorobutadiene	1100U
95-57-8	2-Chlorophenol	1100U	59-50-7	4-Chloro-3-methylphenol	1100U
541-73-1	1,3-Dichlorobenzene	1100U	91-57-6	2-Methylnaphthalene	1100U
106-46-7	1,4-Dichlorobenzene	1100U	77-47-4	Hexachlorocyclopentadiene	1100U
100-51-6	Benzyl Alcohol	1100U	88-06-2	2,4,6-Trichlorophenol	1100U
95-50-1	1,2-Dichlorobenzene	1100U	95-95-4	2,4,5-Trichlorophenol	5400U
95-48-7	2-Methylphenol	1100U	91-58-7	2-Chloronaphthalene	1100U
108-60-1	bis(2-Chloroisopropyl)ether	1100U	88-74-4	2-Nitroaniline	5400U
106-44-5	4-Methylphenol	1100U	131-11-3	Dimethylphthalate	1100U
621-64-7	N-Nitroso-di-n-propylamine	1100U	208-96-8	Acenaphthylene	1100U
67-72-1	Hexachloroethane	1100U	99-09-2	3-Nitroaniline	5400U
98-95-3	Nitrobenzene	1100U	83-32-9	Acenaphthene	1100U
78-59-1	Isophorone	1100U	51-28-5	2,4-Dinitrophenol	5400U
88-75-5	2-Nitrophenol	1100U	100-02-7	4-Nitrophenol	5400U
105-67-9	2,4-Dimethylphenol	1100U J	132-64-9	Dibenzofuran	1100U
65-85-0	Benzoic Acid	470 J	121-14-2	2,4-Dinitrotoluene	1100U
111-91-1	bis(2-Chloroethoxy)methane	1100U J	606-20-2	2,6-Dinitrotoluene	1100U
120-83-2	2,4-Dichlorophenol	1100U J	84-66-2	Diethylphthalate	1100U
120-82-1	1,2,4-Trichlorobenzene	1100U J	7005-72-3	4-Chlorophenyl-phenylether	1100U
91-20-3	Naphthalene	1100U J	86-73-7	Fluorene	1100U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:48

AnaLIS ID: 910215-009
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11114
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOFL1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 12-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 11.2
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS			ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline		5400U J	53-70-3	Dibenz(a,h)anthracene	1100U J
534-52-1	4,6-Dinitro-2-methylphenol		5400U	191-24-2	Benzo(g,h,i)perylene	1100U J
86-30-6	N-Nitrosodiphenylamine		1100U			
101-55-3	4-Bromophenyl-phenylether		1100U			
118-74-1	Hexachlorobenzene		1100U			
87-86-5	Pentachlorophenol		5400U			
85-01-8	Phenanthrene		1100U			
120-12-7	Anthracene		1100U J			
84-74-2	Di-n-butylphthalate	1100	~~370 JB~~ UJ			
206-44-0	Fluoranthene		1100U J			
129-00-0	Pyrene		1100U J			
85-68-7	Butylbenzylphthalate		1100U J			
91-94-1	3,3'-Dichlorobenzidine		2200U J			
56-55-3	Benzo(a)anthracene		1100U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1100	~~710 JB~~ UJ			
218-01-9	Chrysene		1100U J			
117-84-0	Di-n-octylphthalate		1100U J			
205-99-2	Benzo(b)fluoranthene		1100U J			
207-08-9	Benzo(k)fluoranthene		1100U J			
50-32-8	Benzo(a)pyrene		1100U J			
193-39-5	Indeno(1,2,3-cd)pyrene		1100U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:48

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910215-009
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 11.2 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Customer Sample ID: BOOFL1
Customer: KESSNER/FANCHER
File ID: >11114
Date Received: 12-FEB-1991
Date Analyzed: 28-FEB-1991
Date Extracted: 24-FEB-1991
pH:

Number TICs found: 8

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.81~~	~~12000~~	~~JAB~~
2.		DIMETHYL HYDRAZINE	8.77	600	JY
3.		HYDROCARBON	~~15.13~~	~~1800~~	~~JB~~
4.		UNKNOWN (ALCOHOL?)	21.39	620	J
5.		UNKNOWN (ACID?)	~~22.04~~	~~1600~~	~~JB~~
6.		UNKNOWN	27.14	1700	J
7.		HYDROCARBON	28.87	530	J
8.		UNKNOWN	32.61	1500	J
9.					
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6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:30

AnaLIS ID: 910215-010
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11115
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FL3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 0.0
Percent Moisture (decanted):
Associated Blank: 910225-170

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	990U J	106-47-8	4-Chloroaniline	990U J
111-44-4	bis(2-Chloroethyl)ether	990U	87-68-3	Hexachlorobutadiene	990U
95-57-8	2-Chlorophenol	990U	59-50-7	4-Chloro-3-methylphenol	990U
541-73-1	1,3-Dichlorobenzene	990U	91-57-6	2-Methylnaphthalene	990U
106-46-7	1,4-Dichlorobenzene	990U	77-47-4	Hexachlorocyclopentadiene	990U
100-51-6	Benzyl Alcohol	990U	88-06-2	2,4,6-Trichlorophenol	990U
95-50-1	1,2-Dichlorobenzene	990U	95-95-4	2,4,5-Trichlorophenol	4800U
95-48-7	2-Methylphenol	990U	91-58-7	2-Chloronaphthalene	990U
108-60-1	bis(2-Chloroisopropyl)ether	990U	88-74-4	2-Nitroaniline	4800U
106-44-5	4-Methylphenol	990U	131-11-3	Dimethylphthalate	990U
621-64-7	N-Nitroso-di-n-propylamine	990U	208-96-8	Acenaphthylene	990U
67-72-1	Hexachloroethane	990U	99-09-2	3-Nitroaniline	4800U
98-95-3	Nitrobenzene	990U	83-32-9	Acenaphthene	990U
78-59-1	Isophorone	990U	51-28-5	2,4-Dinitrophenol	4800U
88-75-5	2-Nitrophenol	990U	100-02-7	4-Nitrophenol	4800U
105-67-9	2,4-Dimethylphenol	990U	132-64-9	Dibenzofuran	990U
65-85-0	Benzoic Acid	4800U	121-14-2	2,4-Dinitrotoluene	990U
111-91-1	bis(2-Chloroethoxy)methane	990U	606-20-2	2,6-Dinitrotoluene	990U
120-83-2	2,4-Dichlorophenol	990U	84-66-2	Diethylphthalate	990U
120-82-1	1,2,4-Trichlorobenzene	990U	7005-72-3	4-Chlorophenyl-phenylether	990U
91-20-3	Naphthalene	990U J	86-73-7	Fluorene	990U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:30

AnaLIS ID: 910215-010
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11115
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FL3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 0.0
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	4800U J	53-70-3	Dibenz(a,h)anthracene	990U J
534-52-1	4,6-Dinitro-2-methylphenol	4800U	191-24-2	Benzo(g,h,i)perylene	990U J
86-30-6	N-Nitrosodiphenylamine	990U			
101-55-3	4-Bromophenyl-phenylether	990U			
118-74-1	Hexachlorobenzene	990U			
87-86-5	Pentachlorophenol	4800U			
85-01-8	Phenanthrene	990U			
120-12-7	Anthracene	990U			
84-74-2	Di-n-butylphthalate	990U			
206-44-0	Fluoranthene	990U			
129-00-0	Pyrene	990U			
85-68-7	Butylbenzylphthalate	990U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	990U J			
117-81-7	bis(2-Ethylhexyl)phthalate	990 ~~530 JB~~ UJ			
218-01-9	Chrysene	990U J			
117-84-0	Di-n-octylphthalate	990U			
205-99-2	Benzo(b)fluoranthene	990U			
207-08-9	Benzo(k)fluoranthene	990U			
50-32-8	Benzo(a)pyrene	990U			
193-39-5	Indeno(1,2,3-cd)pyrene	990U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:30

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910215-010
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 0.0 dec. _____
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 2

Customer Sample ID: B00FL3
Customer: KESSNER/FANCHER
File ID: >11115
Date Received: 13-FEB-1991
Date Analyzed: 28-FEB-1991
Date Extracted: 24-FEB-1991
pH: _____

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.69~~	~~30000~~	~~JAB~~
2.		HYDROCARBON	~~15.12~~	~~1000~~	~~JB~~
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30.					

JB 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:33

AnaLIS ID: 910215-011
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11116
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FL4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.9
Percent Moisture (decanted):
Associated Blank: 910225-170

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5000U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5000U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5000U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5000U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5000U
105-67-9	2,4-Dimethylphenol	1000U J	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	370 J	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U J	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U J	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U J	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:33

AnaLIS ID: 910215-011
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11116
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00FL4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.9
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5000U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5000U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5000U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate 1000	~~260 JB~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate 1000	~~640 JB~~ UJ			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:33

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910215-011
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 4.9 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 7

Customer Sample ID: B00FL4
Customer: KESSNER/FANCHER
File ID: >11116
Date Received: 13-FEB-1991
Date Analyzed: 28-FEB-1991
Date Extracted: 24-FEB-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.65~~	~~23000~~	~~JAB~~
2.		HYDROCARBON	~~15.13~~	~~1600~~	~~JB~~
3.	121-33-5	Benzaldehyde,5-hydroxy-3-metho	15.27	480	J
4.		PHOSPHORIC ACID, DIOCTADECYL E	21.37	470	J
5.	57-10-3	Hexadecanoic acid	~~22.04~~	~~1500~~	~~JB~~
6.		UNKNOWN	27.14	1600	J
7.		UNKNOWN	32.67	1200	J
8.					
9.					
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30.					

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:55

AnaLIS ID: 910215-012
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11117
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00GR9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.3
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5100U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5100U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5100U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5100U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5100U
105-67-9	2,4-Dimethylphenol	1000U J	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	390 J	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U J	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U J	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U J	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:55

AnaLIS ID: 910215-012
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11117
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00GR9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.3
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 28-FEB-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910228CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5100U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5100U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5100U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	1000 ~~340 JB~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1000 ~~600 JB~~ UJ			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:55

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910215-012
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 5.3 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 9

Customer Sample ID: B00GR9
Customer: KESSNER/FANCHER
File ID: >11117
Date Received: 13-FEB-1991
Date Analyzed: 28-FEB-1991
Date Extracted: 24-FEB-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.64~~	~~24000~~	~~JAB~~
2.		DIMETHYL HADRAZINE	8.77	460	J
3.		UNKNOWN	9.48	640	J
4.		HYDROCARBON	~~15.13~~	~~1800~~	~~JB~~
5.	121-33-5	Benzaldehyde,5-hydroxy-3-metho	15.29	450	J
6.		UNKNOWN (ACID?)	~~22.03~~	~~1400~~	~~JB~~
7.		UNKNOWN	27.13	790	J
8.		UNKNOWN	29.00	440	J
9.		UNKNOWN	32.84	630	J
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JJ 6/27/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:39

AnaLIS ID: 910219-091
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11121
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00GS4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 16-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 23.2
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 1-MAR-1991
Analysis Procedure Number: BNA (CLP) NDP
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910301CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1300U J	106-47-8	4-Chloroaniline	1300U J
111-44-4	bis(2-Chloroethyl)ether	1300U	87-68-3	Hexachlorobutadiene	1300U
95-57-8	2-Chlorophenol	1300U	59-50-7	4-Chloro-3-methylphenol	1300U
541-73-1	1,3-Dichlorobenzene	1300U	91-57-6	2-Methylnaphthalene	1300U
106-46-7	1,4-Dichlorobenzene	1300U	77-47-4	Hexachlorocyclopentadiene	1300U
100-51-6	Benzyl Alcohol	1300U	88-06-2	2,4,6-Trichlorophenol	1300U
95-50-1	1,2-Dichlorobenzene	1300U	95-95-4	2,4,5-Trichlorophenol	6300U
95-48-7	2-Methylphenol	1300U	91-58-7	2-Chloronaphthalene	1300U
108-60-1	bis(2-Chloroisopropyl)ether	1300U	88-74-4	2-Nitroaniline	6300U
106-44-5	4-Methylphenol	1300U	131-11-3	Dimethylphthalate	1300U
621-64-7	N-Nitroso-di-n-propylamine	1300U	208-96-8	Acenaphthylene	1300U
67-72-1	Hexachloroethane	1300U	99-09-2	3-Nitroaniline	6300U
98-95-3	Nitrobenzene	1300U	83-32-9	Acenaphthene	1300U
78-59-1	Isophorone	1300U	51-28-5	2,4-Dinitrophenol	6300U
88-75-5	2-Nitrophenol	1300U	100-02-7	4-Nitrophenol	6300U
105-67-9	2,4-Dimethylphenol	1300U	132-64-9	Dibenzofuran	1300U
65-85-0	Benzoic Acid	6300U	121-14-2	2,4-Dinitrotoluene	1300U
111-91-1	bis(2-Chloroethoxy)methane	1300U	606-20-2	2,6-Dinitrotoluene	1300U J
120-83-2	2,4-Dichlorophenol	1300U	84-66-2	Diethylphthalate	210 J
120-82-1	1,2,4-Trichlorobenzene	1300U	7005-72-3	4-Chlorophenyl-phenylether	1300U J
91-20-3	Naphthalene	1300U J	86-73-7	Fluorene	1300U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:39

AnaLIS ID: 910219-091
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11121
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00GS4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 16-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 23.2
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 1-MAR-1991
Analysis Procedure Number: BNA (CLP) NDP
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910301CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	6300U J	53-70-3	Dibenz(a,h)anthracene	1300U J
534-52-1	4,6-Dinitro-2-methylphenol	6300U	191-24-2	Benzo(g,h,i)perylene	1300U J
86-30-6	N-Nitrosodiphenylamine	1300U			
101-55-3	4-Bromophenyl-phenylether	1300U			
118-74-1	Hexachlorobenzene	1300U			
87-86-5	Pentachlorophenol	6300U			
85-01-8	Phenanthrene	1300U			
120-12-7	Anthracene	1300U J			
84-74-2	Di-n-butylphthalate	1300 ~~240 J~~ UJ			
206-44-0	Fluoranthene	1300U J			
129-00-0	Pyrene	1300U			
85-68-7	Butylbenzylphthalate	1300U			
91-94-1	3,3'-Dichlorobenzidine	2600U			
56-55-3	Benzo(a)anthracene	1300U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1400 ~~B~~ UJ			
218-01-9	Chrysene	1300U J			
117-84-0	Di-n-octylphthalate	1300U			
205-99-2	Benzo(b)fluoranthene	1300U			
207-08-9	Benzo(k)fluoranthene	1300U			
50-32-8	Benzo(a)pyrene	1300U			
193-39-5	Indeno(1,2,3-cd)pyrene	1300U J			

JL 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 08:39

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910219-091
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 23.2 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 8

Customer Sample ID: B00GS4
Customer: KESSNER/FANCHER
File ID: >11121
Date Received: 16-FEB-1991
Date Analyzed: 1-MAR-1991
Date Extracted: 24-FEB-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.60~~	~~15000~~	~~JAB~~
2.		UNKNOWN	8.60	650	J
3.		UNKNOWN	~~8.83~~	~~530~~	~~JB~~
4.		HYDROCARBON	~~15.12~~	~~1900~~	~~JB~~
5.		PHOSPHORIC ACID,DIOCTADECYL ES	21.34	1200	J
6.		DECANOIC ACID	~~22.03~~	~~1100~~	~~JB~~
7.		UNKNOWN	27.13	1300	J
8.		HYDROCARBON	32.66	1700	J
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6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
12-JUN-1991 08:06

AnaLIS ID: 910222-063
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11122
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00GS9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 7.3
Percent Moisture (decanted):
Associated Blank: 910225-170
[] : Result has been Corrected for Spike

Date Analyzed: 1-MAR-1991
Analysis Procedure Number: BNA (CLP) NDP
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910301CM-BNA1

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1100U J	106-47-8	4-Chloroaniline	1100U J
111-44-4	bis(2-Chloroethyl)ether	1100U	87-68-3	Hexachlorobutadiene	1100U
95-57-8	2-Chlorophenol	1100U	59-50-7	4-Chloro-3-methylphenol	1100U
541-73-1	1,3-Dichlorobenzene	1100U	91-57-6	2-Methylnaphthalene	1100U
106-46-7	1,4-Dichlorobenzene	1100U	77-47-4	Hexachlorocyclopentadiene	1100U
100-51-6	Benzyl Alcohol	1100U	88-06-2	2,4,6-Trichlorophenol	1100U
95-50-1	1,2-Dichlorobenzene	1100U	95-95-4	2,4,5-Trichlorophenol	5200U
95-48-7	2-Methylphenol	1100U	91-58-7	2-Chloronaphthalene	1100U
108-60-1	bis(2-Chloroisopropyl)ether	1100U	88-74-4	2-Nitroaniline	5200U
106-44-5	4-Methylphenol	1100U	131-11-3	Dimethylphthalate	1100U
621-64-7	N-Nitroso-di-n-propylamine	1100U	208-96-8	Acenaphthylene	1100U
67-72-1	Hexachloroethane	1100U	99-09-2	3-Nitroaniline	5200U
98-95-3	Nitrobenzene	1100U	83-32-9	Acenaphthene	1100U
78-59-1	Isophorone	1100U	51-28-5	2,4-Dinitrophenol	5200U
88-75-5	2-Nitrophenol	1100U	100-02-7	4-Nitrophenol	5200U
105-67-9	2,4-Dimethylphenol	1100U J	132-64-9	Dibenzofuran	1100U
65-85-0	Benzoic Acid	830 J	121-14-2	2,4-Dinitrotoluene	1100U
111-91-1	bis(2-Chloroethoxy)methane	1100U J	606-20-2	2,6-Dinitrotoluene	1100U
120-83-2	2,4-Dichlorophenol	1100U J	84-66-2	Diethylphthalate	1100U
120-82-1	1,2,4-Trichlorobenzene	1100U J	7005-72-3	4-Chlorophenyl-phenylether	1100U
91-20-3	Naphthalene	1100U J	86-73-7	Fluorene	1100U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
12-JUN-1991 08:06

AnaLIS ID: 910222-063
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11122
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: B00GS9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 24-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 7.3
Percent Moisture (decanted):
Associated Blank: 910225-170

Date Analyzed: 1-MAR-1991
Analysis Procedure Number: BNA (CLP) NDP
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910301CM-BNA1

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5200U J	53-70-3	Dibenz(a,h)anthracene	1100U J
534-52-1	4,6-Dinitro-2-methylphenol	5200U	191-24-2	Benzo(g,h,i)perylene	1100U J
86-30-6	N-Nitrosodiphenylamine	1100U			
101-55-3	4-Bromophenyl-phenylether	1100U			
118-74-1	Hexachlorobenzene	1100U			
87-86-5	Pentachlorophenol	5200U			
85-01-8	Phenanthrene	1100U			
120-12-7	Anthracene	1100U J			
84-74-2	Di-n-butylphthalate	1100 ~~230 JB~~ UJ			
206-44-0	Fluoranthene	1100U J			
129-00-0	Pyrene	1100U J			
85-68-7	Butylbenzylphthalate	1100U J			
91-94-1	3,3'-Dichlorobenzidine	2200U J			
56-55-3	Benzo(a)anthracene	1100U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1100 ~~370 JB~~ UJ			
218-01-9	Chrysene	1100U J			
117-84-0	Di-n-octylphthalate	1100U J			
205-99-2	Benzo(b)fluoranthene	1100U J			
207-08-9	Benzo(k)fluoranthene	1100U J			
50-32-8	Benzo(a)pyrene	1100U J			
193-39-5	Indeno(1,2,3-cd)pyrene	1100U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
12-JUN-1991 08:06

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910222-063
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 7.3 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Customer Sample ID: B00GS9
Customer: KESSNER/FANCHER
File ID: >11122
Date Received: 21-FEB-1991
Date Analyzed: 1-MAR-1991
Date Extracted: 24-FEB-1991
pH:

Number TICs found: 8

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.67~~	~~25000~~	~~JAB~~
2.	111-76-2	Butyl Cellosolve	6.89	690	J
3.		UNKNOWN	~~8.78~~	~~740~~	~~JB~~
4.		UNKNOWN	9.49	490	J
5.		HYDROCARBON	~~15.13~~	~~2000~~	~~JB~~
6.	57-10-3	Hexadecanoic acid	~~22.04~~	~~1300~~	~~JB~~
7.		UNKNOWN	27.18	1400	J
8.		UNKNOWN	29.03	470	J
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JB 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 10:50

AnaLIS ID: 910224-067
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11140
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGT7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 24-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 27-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.0
Percent Moisture (decanted):
Associated Blank: 910228-173
[] : Result has been Corrected for Spike

Date Analyzed: 5-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: JW SAUNDERS
QA File Number: 910305JWS-0167

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5000U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5000U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5000U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5000U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5000U
105-67-9	2,4-Dimethylphenol	1000U J	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid 5000	~~270 JB~~ UJ	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U J	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U J	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U J	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 10:50

AnaLIS ID: 910224-067
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11140
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGT7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 24-FEB-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 27-FEB-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.0
Percent Moisture (decanted):
Associated Blank: 910228-173
[] : Result has been Corrected for Spike

Date Analyzed: 5-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: JW SAUNDERS
QA File Number: 910305JWS-0167

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5000U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5000U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5000U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U			
84-74-2	Di-n-butylphthalate	1000U			
206-44-0	Fluoranthene	1000U			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate	~~1000560 JB~~ U J			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U J			
205-99-2	Benzo(b)fluoranthene	1000U J			
207-08-9	Benzo(k)fluoranthene	1000U J			
50-32-8	Benzo(a)pyrene	1000U J			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 10:50

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910224-067
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 4.0 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 13

Customer Sample ID: BOOGT7
Customer: KESSNER/FANCHER
File ID: >11140
Date Received: 24-FEB-1991
Date Analyzed: 5-MAR-1991
Date Extracted: 27-FEB-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.58~~	~~22000~~	~~JAB~~
2.	UNKNOWN HYDROCARBON	~~15.09~~	~~910~~	~~JB~~
3.	UNKNOWN HYDROCARBON	21.36	3000	J
4.	UNKNOWN PHTHALATE ESTER	21.91	470	J
5.	UNKNOWN	21.99	2000	J
6.	UNKNOWN	22.54	1400	J
7.	UNKNOWN	23.55	1400	J
8.	UNKNOWN	23.74	550	J
9.	UNKNOWN	23.96	820	J
10.	UNKNOWN	27.27	1600	J
11.	UNKNOWN	29.02	780	J
12.	UNKNOWN	30.67	2000	J
13.	UNKNOWN	32.76	2300	J
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:41

AnaLIS ID: 910304-008
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11156
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGV5
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 2-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 7-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture:
Percent Moisture (decanted):
Associated Blank: 910307-229
[] : Result has been Corrected for Spike

Date Analyzed: 12-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910312CM-0016

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	990U J	106-47-8	4-Chloroaniline	990U J
111-44-4	bis(2-Chloroethyl)ether	990U	87-68-3	Hexachlorobutadiene	990U
95-57-8	2-Chlorophenol	990U	59-50-7	4-Chloro-3-methylphenol	990U
541-73-1	1,3-Dichlorobenzene	990U	91-57-6	2-Methylnaphthalene	990U
106-46-7	1,4-Dichlorobenzene	990U	77-47-4	Hexachlorocyclopentadiene	990U
100-51-6	Benzyl Alcohol	990U	88-06-2	2,4,6-Trichlorophenol	990U
95-50-1	1,2-Dichlorobenzene	990U	95-95-4	2,4,5-Trichlorophenol	4800U
95-48-7	2-Methylphenol	990U	91-58-7	2-Chloronaphthalene	990U
108-60-1	bis(2-Chloroisopropyl)ether	990U	88-74-4	2-Nitroaniline	4800U
106-44-5	4-Methylphenol	990U	131-11-3	Dimethylphthalate	990U
621-64-7	N-Nitroso-di-n-propylamine	990U	208-96-8	Acenaphthylene	990U
67-72-1	Hexachloroethane	990U	99-09-2	3-Nitroaniline	4800U
98-95-3	Nitrobenzene	990U	83-32-9	Acenaphthene	990U
78-59-1	Isophorone	990U	51-28-5	2,4-Dinitrophenol	4800U
88-75-5	2-Nitrophenol	990U	100-02-7	4-Nitrophenol	4800U
105-67-9	2,4-Dimethylphenol	990U	132-64-9	Dibenzofuran	990U
65-85-0	Benzoic Acid	4800U	121-14-2	2,4-Dinitrotoluene	990U
111-91-1	bis(2-Chloroethoxy)methane	990U	606-20-2	2,6-Dinitrotoluene	990U
120-83-2	2,4-Dichlorophenol	990U	84-66-2	Diethylphthalate	990U
120-82-1	1,2,4-Trichlorobenzene	990U	7005-72-3	4-Chlorophenyl-phenylether	990U
91-20-3	Naphthalene	990U J	86-73-7	Fluorene	990U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:41

AnaLIS ID: 910304-008
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11156
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGV5
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 2-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 7-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture:
Percent Moisture (decanted):
Associated Blank: 910307-229
[] : Result has been Corrected for Spike

Date Analyzed: 12-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910312CM-0016

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	4800U J	53-70-3	Dibenz(a,h)anthracene	990U J
534-52-1	4,6-Dinitro-2-methylphenol	4800U	191-24-2	Benzo(g,h,i)perylene	990U J
86-30-6	N-Nitrosodiphenylamine	990U			
101-55-3	4-Bromophenyl-phenylether	990U			
118-74-1	Hexachlorobenzene	990U			
87-86-5	Pentachlorophenol	4800U			
85-01-8	Phenanthrene	990U			
120-12-7	Anthracene	990U			
84-74-2	Di-n-butylphthalate	990U			
206-44-0	Fluoranthene	990U			
129-00-0	Pyrene	990U			
85-68-7	Butylbenzylphthalate	990U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	990U J			
117-81-7	bis(2-Ethylhexyl)phthalate	~~990 400 JB~~ UJ			
218-01-9	Chrysene	990U J			
117-84-0	Di-n-octylphthalate	990U			
205-99-2	Benzo(b)fluoranthene	990U			
207-08-9	Benzo(k)fluoranthene	990U			
50-32-8	Benzo(a)pyrene	990U			
193-39-5	Indeno(1,2,3-cd)pyrene	990U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
23-MAY-1991 09:41

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910304-008
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. _____ dec. _____
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 7

Customer Sample ID: B00GV5
Customer: KESSNER/FANCHER
File ID: >11156
Date Received: 2-MAR-1991
Date Analyzed: 12-MAR-1991
Date Extracted: 7-MAR-1991
pH: _____

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.54~~	~~36000~~	~~JAB~~
2.		HEXADECENE, (E)-	~~14.98~~	~~1300~~	~~JB~~
3.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	~~17.60~~	~~630~~	~~JB~~
4.		UNKNOWN	20.55	790	J
5.		UNKNOWN	21.85	640	J
6.		UNKNOWN	26.58	1400	J
7.		UNKNOWN	27.01	780	J
8.					
9.					
10.					
11.					
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6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:39

AnaLIS ID: 910307-043
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11157
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGV6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 6-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 7-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture:
Percent Moisture (decanted):
Associated Blank: 910307-229
[] : Result has been Corrected for Spike

Date Analyzed: 12-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910312CM-0016

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	990U	106-47-8	4-Chloroaniline	990U
111-44-4	bis(2-Chloroethyl)ether	990U	87-68-3	Hexachlorobutadiene	990U
95-57-8	2-Chlorophenol	990U	59-50-7	4-Chloro-3-methylphenol	990U
541-73-1	1,3-Dichlorobenzene	990U	91-57-6	2-Methylnaphthalene	990U
106-46-7	1,4-Dichlorobenzene	990U	77-47-4	Hexachlorocyclopentadiene	990U
100-51-6	Benzyl Alcohol	990U	88-06-2	2,4,6-Trichlorophenol	990U
95-50-1	1,2-Dichlorobenzene	990U	95-95-4	2,4,5-Trichlorophenol	4800U
95-48-7	2-Methylphenol	990U	91-58-7	2-Chloronaphthalene	990U
108-60-1	bis(2-Chloroisopropyl)ether	990U	88-74-4	2-Nitroaniline	4800U
106-44-5	4-Methylphenol	990U	131-11-3	Dimethylphthalate	990U
621-64-7	N-Nitroso-di-n-propylamine	990U	208-96-8	Acenaphthylene	990U
67-72-1	Hexachloroethane	990U	99-09-2	3-Nitroaniline	4800U
98-95-3	Nitrobenzene	990U	83-32-9	Acenaphthene	990U
78-59-1	Isophorone	990U	51-28-5	2,4-Dinitrophenol	4800U
88-75-5	2-Nitrophenol	990U	100-02-7	4-Nitrophenol	4800U
105-67-9	2,4-Dimethylphenol	990U	132-64-9	Dibenzofuran	990U
65-85-0	Benzoic Acid	290 J	121-14-2	2,4-Dinitrotoluene	990U
111-91-1	bis(2-Chloroethoxy)methane	990U	606-20-2	2,6-Dinitrotoluene	990U
120-83-2	2,4-Dichlorophenol	990U	84-66-2	Diethylphthalate	990U
120-82-1	1,2,4-Trichlorobenzene	990U	7005-72-3	4-Chlorophenyl-phenylether	990U
91-20-3	Naphthalene	990U	86-73-7	Fluorene	990U

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:39

AnaLIS ID: 910307-043
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11157
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGV6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 6-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 7-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture:
Percent Moisture (decanted):
Associated Blank: 910307-229
[] : Result has been Corrected for Spike

Date Analyzed: 12-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910312CM-0016

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	4800U	53-70-3	Dibenz(a,h)anthracene	990U
534-52-1	4,6-Dinitro-2-methylphenol	4800U	191-24-2	Benzo(g,h,i)perylene	990U
86-30-6	N-Nitrosodiphenylamine	990U			
101-55-3	4-Bromophenyl-phenylether	990U			
118-74-1	Hexachlorobenzene	990U			
87-86-5	Pentachlorophenol	4800U			
85-01-8	Phenanthrene	990U			
120-12-7	Anthracene	990U			
84-74-2	Di-n-butylphthalate	2500 ~~B~~ U			
206-44-0	Fluoranthene	990U			
129-00-0	Pyrene	990U			
85-68-7	Butylbenzylphthalate	990U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	990U			
117-81-7	bis(2-Ethylhexyl)phthalate	990 ~~390 JB~~ U			
218-01-9	Chrysene	990U			
117-84-0	Di-n-octylphthalate	990U			
205-99-2	Benzo(b)fluoranthene	990U			
207-08-9	Benzo(k)fluoranthene	990U			
50-32-8	Benzo(a)pyrene	990U			
193-39-5	Indeno(1,2,3-cd)pyrene	990U			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
30-MAY-1991 07:39

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910307-043
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. _____ dec. _____
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 17

Customer Sample ID: BOOGV6
Customer: KESSNER/FANCHER
File ID: >11157
Date Received: 6-MAR-1991
Date Analyzed: 12-MAR-1991
Date Extracted: 7-MAR-1991
pH: _____

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.54~~	~~37000~~	~~JAB~~
2.		UNKNOWN	~~8.67~~	~~360~~	~~JB~~
3.	872-50-4	2-Pyrrolidinone, 1-methyl-	9.30	620	J
4.		OCTADECANE, (E)-	~~14.96~~	~~830~~	~~JBY~~
5.		SAT'D HYDROCARBON	18.93	1100	J
6.		PHTHALATE ESTER	~~20.78~~	~~720~~	~~JB~~
7.		ALKYL HYDROCARBON	~~21.18~~	~~630~~	~~JB~~
8.		PHTHALATE ESTER	~~21.29~~	~~670~~	~~JB~~
9.		UNKNOWN	21.88	920	J
10.		SAT'D HYDROCARBON	23.22	670	J
11.		SAT'D HYDROCARBON	25.08	1300	J
12.		UNKNOWN	25.34	1200	J
13.	123-79-5	Dioctyl Adipate	~~25.87~~	~~2900~~	~~JB~~
14.		SAT'D HYDROCARBON	25.95	1200	J
15.		UNKNOWN	~~26.93~~	~~520~~	~~JB~~
16.		SAT'D HYDROCARBON	27.60	570	J
17.		ISOHEPTDECANOL	32.40	1800	J
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:04

AnaLIS ID: 910307-044
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11158
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGV7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 6-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 7-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture:
Percent Moisture (decanted):
Associated Blank: 910307-229
[] : Result has been Corrected for Spike

Date Analyzed: 12-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910312CM-0016

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	990U	106-47-8	4-Chloroaniline	990U
111-44-4	bis(2-Chloroethyl)ether	990U	87-68-3	Hexachlorobutadiene	990U
95-57-8	2-Chlorophenol	990U	59-50-7	4-Chloro-3-methylphenol	990U
541-73-1	1,3-Dichlorobenzene	990U	91-57-6	2-Methylnaphthalene	990U
106-46-7	1,4-Dichlorobenzene	990U	77-47-4	Hexachlorocyclopentadiene	990U
100-51-6	Benzyl Alcohol	990U	88-06-2	2,4,6-Trichlorophenol	990U
95-50-1	1,2-Dichlorobenzene	990U	95-95-4	2,4,5-Trichlorophenol	4800U
95-48-7	2-Methylphenol	990U	91-58-7	2-Chloronaphthalene	990U
108-60-1	bis(2-Chloroisopropyl)ether	990U	88-74-4	2-Nitroaniline	4800U
106-44-5	4-Methylphenol	990U	131-11-3	Dimethylphthalate	990U
621-64-7	N-Nitroso-di-n-propylamine	990U	208-96-8	Acenaphthylene	990U
67-72-1	Hexachloroethane	990U	99-09-2	3-Nitroaniline	4800U
98-95-3	Nitrobenzene	990U	83-32-9	Acenaphthene	990U
78-59-1	Isophorone	990U	51-28-5	2,4-Dinitrophenol	4800U
88-75-5	2-Nitrophenol	990U	100-02-7	4-Nitrophenol	4800U
105-67-9	2,4-Dimethylphenol	990U	132-64-9	Dibenzofuran	990U
65-85-0	Benzoic Acid	240 J	121-14-2	2,4-Dinitrotoluene	990U
111-91-1	bis(2-Chloroethoxy)methane	990U	606-20-2	2,6-Dinitrotoluene	990U
120-83-2	2,4-Dichlorophenol	990U	84-66-2	Diethylphthalate	990U
120-82-1	1,2,4-Trichlorobenzene	990U	7005-72-3	4-Chlorophenyl-phenylether	990U
91-20-3	Naphthalene	990U	86-73-7	Fluorene	990U

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:04

AnaLIS ID: 910307-044
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11158
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGV7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 6-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 7-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture:
Percent Moisture (decanted):
Associated Blank: 910307-229
[] : Result has been Corrected for Spike

Date Analyzed: 12-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910312CM-0016

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	4800U	53-70-3	Dibenz(a,h)anthracene	990U
534-52-1	4,6-Dinitro-2-methylphenol	4800U	191-24-2	Benzo(g,h,i)perylene	990U
86-30-6	N-Nitrosodiphenylamine	990U			
101-55-3	4-Bromophenyl-phenylether	990U			
118-74-1	Hexachlorobenzene	990U			
87-86-5	Pentachlorophenol	4800U			
85-01-8	Phenanthrene	990U			
120-12-7	Anthracene	990U			
84-74-2	Di-n-butylphthalate	990U			
206-44-0	Fluoranthene	990U			
129-00-0	Pyrene	990U			
85-68-7	Butylbenzylphthalate	990U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	990U			
117-81-7	bis(2-Ethylhexyl)phthalate	990 ~~810 JB~~ U			
218-01-9	Chrysene	990U			
117-84-0	Di-n-octylphthalate	990U			
205-99-2	Benzo(b)fluoranthene	990U			
207-08-9	Benzo(k)fluoranthene	990U			
50-32-8	Benzo(a)pyrene	990U			
193-39-5	Indeno(1,2,3-cd)pyrene	990U			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
30-MAY-1991 08:04

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910307-044
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. _____ dec. _____
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 9

Customer Sample ID: B00GV7
Customer: KESSNER/FANCHER
File ID: >11158
Date Received: 6-MAR-1991
Date Analyzed: 12-MAR-1991
Date Extracted: 7-MAR-1991
pH: _____

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.55~~	~~45000~~	~~JAB~~
2.		UNKNOWN	~~8.66~~	~~500~~	~~JB~~
3.		OCTADECENE, (E)-	~~14.98~~	~~1500~~	~~JB~~
4.		UNKNOWN	~~21.27~~	~~930~~	~~JB~~
5.	57-10-3	Hexadecanoic acid	21.86	1500	J
6.	123-79-5	Dioctyl Adipate	~~25.87~~	~~3300~~	~~JB~~
7.		UNKNOWN	~~26.98~~	~~830~~	~~JB~~
8.	3234-85-3	Tetradecanoic acid, tetradecyl	30.50	520	J
9.		HYDROCARBON	~~32.41~~	~~1600~~	~~JB~~
10.					
11.					
12.					
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29.					
30.					

JB 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:17

AnaLIS ID: 910307-045
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11159
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGV8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 6-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 7-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank: 910307-229

Date Analyzed: 12-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910312CM-0016

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U	106-47-8	4-Chloroaniline	1000U
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5100U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5100U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5100U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5100U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5100U
105-67-9	2,4-Dimethylphenol	1000U	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	5100U	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U	86-73-7	Fluorene	1000U

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:17

AnaLIS ID: 910307-045
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11159
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGV8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 6-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 7-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank: 910307-229
[] : Result has been Corrected for Spike

Date Analyzed: 12-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910312CM-0016

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5100U	53-70-3	Dibenz(a,h)anthracene	1000U
534-52-1	4,6-Dinitro-2-methylphenol	5100U	191-24-2	Benzo(g,h,i)perylene	1000U
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5100U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U			
84-74-2	Di-n-butylphthalate	1000U			
206-44-0	Fluoranthene	1000U			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U			
117-81-7	bis(2-Ethylhexyl)phthalate	1000 ~~510 UB~~ U			
218-01-9	Chrysene	1000U			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
30-MAY-1991 08:17

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910307-045
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 5.0 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 7

Customer Sample ID: B00GV8
Customer: KESSNER/FANCHER
File ID: >11159
Date Received: 6-MAR-1991
Date Analyzed: 12-MAR-1991
Date Extracted: 7-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.54~~	~~37000~~	~~JAB~~
2.		FLUORO PROPENE	~~8.63~~	~~770~~	~~JB~~
3.		OCTADECENE, (E)-	~~14.99~~	~~1300~~	~~JBY~~
4.		UNKNOWN	20.55	640	J
5.	1002-84-2	Pentadecanoic acid	21.87	820	J
6.		UNKNOWN	~~26.05~~	~~2100~~	~~JB~~
7.		UNKNOWN	~~32.40~~	~~1300~~	~~JB~~
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J 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:08

AnaLIS ID: 910308-108
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14675
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGV9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 0.0
Percent Moisture (decanted):
Associated Blank: 910312-123

Date Analyzed: 14-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	990U	106-47-8	4-Chloroaniline	990U
111-44-4	bis(2-Chloroethyl)ether	990U	87-68-3	Hexachlorobutadiene	990U
95-57-8	2-Chlorophenol	990U	59-50-7	4-Chloro-3-methylphenol	990U
541-73-1	1,3-Dichlorobenzene	990U	91-57-6	2-Methylnaphthalene	990U
106-46-7	1,4-Dichlorobenzene	990U	77-47-4	Hexachlorocyclopentadiene	990U
100-51-6	Benzyl Alcohol	990U	88-06-2	2,4,6-Trichlorophenol	990U
95-50-1	1,2-Dichlorobenzene	990U	95-95-4	2,4,5-Trichlorophenol	4800U
95-48-7	2-Methylphenol	990U	91-58-7	2-Chloronaphthalene	990U
108-60-1	bis(2-Chloroisopropyl)ether	990U	88-74-4	2-Nitroaniline	4800U
106-44-5	4-Methylphenol	990U	131-11-3	Dimethylphthalate	990U
621-64-7	N-Nitroso-di-n-propylamine	990U	208-96-8	Acenaphthylene	990U
67-72-1	Hexachloroethane	990U	99-09-2	3-Nitroaniline	4800U
98-95-3	Nitrobenzene	990U	83-32-9	Acenaphthene	990U
78-59-1	Isophorone	990U	51-28-5	2,4-Dinitrophenol	4800U
88-75-5	2-Nitrophenol	990U	100-02-7	4-Nitrophenol	4800U
105-67-9	2,4-Dimethylphenol	990U	132-64-9	Dibenzofuran	990U
65-85-0	Benzoic Acid	4800U	121-14-2	2,4-Dinitrotoluene	990U
111-91-1	bis(2-Chloroethoxy)methane	990U	606-20-2	2,6-Dinitrotoluene	990U
120-83-2	2,4-Dichlorophenol	990U	84-66-2	Diethylphthalate	990U
120-82-1	1,2,4-Trichlorobenzene	990U	7005-72-3	4-Chlorophenyl-phenylether	990U
91-20-3	Naphthalene	990U	86-73-7	Fluorene	990U

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:08

AnaLIS ID: 910308-108
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14675
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGV9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 0.0
Percent Moisture (decanted):
Associated Blank: 910312-123
[] : Result has been Corrected for Spike

Date Analyzed: 14-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	4800U	53-70-3	Dibenz(a,h)anthracene	990U
534-52-1	4,6-Dinitro-2-methylphenol	4800U	191-24-2	Benzo(g,h,i)perylene	990U
86-30-6	N-Nitrosodiphenylamine	990U			
101-55-3	4-Bromophenyl-phenylether	990U			
118-74-1	Hexachlorobenzene	990U			
87-86-5	Pentachlorophenol	4800U			
85-01-8	Phenanthrene	990U			
120-12-7	Anthracene	990U			
84-74-2	Di-n-butylphthalate	1900~~B~~ LA			
206-44-0	Fluoranthene	990U			
129-00-0	Pyrene	990U			
85-68-7	Butylbenzylphthalate	990U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	990U			
117-81-7	bis(2-Ethylhexyl)phthalate	990U			
218-01-9	Chrysene	990U			
117-84-0	Di-n-octylphthalate	990U			
205-99-2	Benzo(b)fluoranthene	990U			
207-08-9	Benzo(k)fluoranthene	990U			
50-32-8	Benzo(a)pyrene	990U			
193-39-5	Indeno(1,2,3-cd)pyrene	990U			

JZ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
30-MAY-1991 08:08

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910308-108
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 0.0 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 16

Customer Sample ID: BOOGV9
Customer: KESSNER/FANCHER
File ID: >14675
Date Received: 7-MAR-1991
Date Analyzed: 14-MAR-1991
Date Extracted: 12-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.75~~	~~25000~~	~~JAB~~
2.	UNKNOWN	10.01	850	J
3.	UNKNOWN	10.23	490	J
4.	UNKNOWN ALKOXY CPD	13.91	1800	J
5.	UNKNOWN	20.93	4800	J
6.	UNKNOWN	22.07	400	J
7.	UNKNOWN PHTHALATE ESTER	24.71	890	J
8.	UNKNOWN ALKYL HYDROCARBON	~~24.85~~	~~640~~	~~JB~~
9.	UNKNOWN ALKYL HYDROCARBON	~~25.12~~	~~440~~	~~JB~~
10.	UNKNOWN ALKYL HYDROCARBON	26.37	440	J
11.	UNKNOWN ALKYL HYDROCARBON	~~27.58~~	~~1800~~	~~JB~~
12.	UNKNOWN ALKYL HYDROCARBON	28.73	1800	J
13.	UNKNOWN ALKYL/ALKOXY CPD	~~29.69~~	~~640~~	~~JB~~
14.	UNKNOWN ALKYL HYDROCARBON	~~29.82~~	~~1700~~	~~JB~~
15.	UNKNOWN ALKYL HYDROCARBON	~~30.87~~	~~2200~~	~~JB~~
16.	UNKNOWN ALKYL HYDROCARBON	~~31.89~~	~~860~~	~~JB~~
17.				
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19.				
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6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:12

AnaLIS ID: 910308-109
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14689
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGW1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank: 910312-123
[] : Result has been Corrected for Spike

Date Analyzed: 2-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5000U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5000U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5000U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5000U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5000U
105-67-9	2,4-Dimethylphenol	1000U	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	5000U	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U	606-20-2	2,6-Dinitrotoluene	1000U J
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	1000 ~~580 JB~~ UJ
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U J
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:12

AnaLIS ID: 910308-109
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14689
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGW1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank: 910312-123
[] : Result has been Corrected for Spike

Date Analyzed: 2-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5000U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5000U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5000U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	1800 ~~B~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	1000U			
117-81-7	bis(2-Ethylhexyl)phthalate	1000U			
218-01-9	Chrysene	1000U			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

JZ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
30-MAY-1991 08:12

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910308-109
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 3.1 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 9

Customer Sample ID: BOOGW1
Customer: KESSNER/FANCHER
File ID: >14689
Date Received: 7-MAR-1991
Date Analyzed: 2-APR-1991
Date Extracted: 12-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.73~~	~~20000~~	~~JAB~~
2.		UNKNOWN ALKOXY CPD	13.84	860	J
3.		UNKNOWN ALKYL HYDROCARBON	~~27.49~~	~~910~~	~~JB~~
4.		UNKNOWN ALKYL HYDROCARBON	28.64	1500	J
5.		UNKNOWN	~~29.63~~	~~430~~	~~JB~~
6.		UNKNOWN ALKYL HYDROCARBON	~~29.73~~	~~1300~~	~~JB~~
7.		UNKNOWN ALKYL HYDROCARBON	~~30.79~~	~~1100~~	~~JB~~
8.		UNKNOWN ALKLOXY CPD	~~31.72~~	~~1000~~	~~JB~~
9.		UNKNOWN ALKYL HYDROCARBON	~~31.79~~	~~840~~	~~JB~~
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
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28.					
29.					
30.					

JL 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:51

AnaLIS ID: 910308-110
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14677
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGWO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 0.0
Percent Moisture (decanted):
Associated Blank: 910312-123

Date Analyzed: 14-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	990U	106-47-8	4-Chloroaniline	990U
111-44-4	bis(2-Chloroethyl)ether	990U	87-68-3	Hexachlorobutadiene	990U
95-57-8	2-Chlorophenol	990U	59-50-7	4-Chloro-3-methylphenol	990U
541-73-1	1,3-Dichlorobenzene	990U	91-57-6	2-Methylnaphthalene	990U
106-46-7	1,4-Dichlorobenzene	990U	77-47-4	Hexachlorocyclopentadiene	990U
100-51-6	Benzyl Alcohol	990U	88-06-2	2,4,6-Trichlorophenol	990U
95-50-1	1,2-Dichlorobenzene	990U	95-95-4	2,4,5-Trichlorophenol	4800U
95-48-7	2-Methylphenol	990U	91-58-7	2-Chloronaphthalene	990U
108-60-1	bis(2-Chloroisopropyl)ether	990U	88-74-4	2-Nitroaniline	4800U
106-44-5	4-Methylphenol	990U	131-11-3	Dimethylphthalate	990U
621-64-7	N-Nitroso-di-n-propylamine	990U	208-96-8	Acenaphthylene	990U
67-72-1	Hexachloroethane	990U	99-09-2	3-Nitroaniline	4800U
98-95-3	Nitrobenzene	990U	83-32-9	Acenaphthene	990U
78-59-1	Isophorone	990U	51-28-5	2,4-Dinitrophenol	4800U
88-75-5	2-Nitrophenol	990U	100-02-7	4-Nitrophenol	4800U
105-67-9	2,4-Dimethylphenol	990U	132-64-9	Dibenzofuran	990U
65-85-0	Benzoic Acid	4800U	121-14-2	2,4-Dinitrotoluene	990U
111-91-1	bis(2-Chloroethoxy)methane	990U	606-20-2	2,6-Dinitrotoluene	990U
120-83-2	2,4-Dichlorophenol	990U	84-66-2	Diethylphthalate	990 ~~500 JB~~ U
120-82-1	1,2,4-Trichlorobenzene	990U	7005-72-3	4-Chlorophenyl-phenylether	990U
91-20-3	Naphthalene	990U	86-73-7	Fluorene	990U

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:51

AnaLIS ID: 910308-110
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14677
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGWO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 0.0
Percent Moisture (decanted):
Associated Blank: 910312-123
[] : Result has been Corrected for Spike

Date Analyzed: 14-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	4800U	53-70-3	Dibenz(a,h)anthracene	990U
534-52-1	4,6-Dinitro-2-methylphenol	4800U	191-24-2	Benzo(g,h,i)perylene	990U
86-30-6	N-Nitrosodiphenylamine	990U			
101-55-3	4-Bromophenyl-phenylether	990U			
118-74-1	Hexachlorobenzene	990U			
87-86-5	Pentachlorophenol	4800U			
85-01-8	Phenanthrene	990U			
120-12-7	Anthracene	990U			
84-74-2	Di-n-butylphthalate	990 ~~500 JB~~ U			
206-44-0	Fluoranthene	990U			
129-00-0	Pyrene	990U			
85-68-7	Butylbenzylphthalate	990U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	990U			
117-81-7	bis(2-Ethylhexyl)phthalate	990U			
218-01-9	Chrysene	990U			
117-84-0	Di-n-octylphthalate	990U			
205-99-2	Benzo(b)fluoranthene	990U			
207-08-9	Benzo(k)fluoranthene	990U			
50-32-8	Benzo(a)pyrene	990U			
193-39-5	Indeno(1,2,3-cd)pyrene	990U			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
30-MAY-1991 07:51

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910308-110
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 0.0 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 11

Customer Sample ID: BOOGW0
Customer: KESSNER/FANCHER
File ID: >14677
Date Received: 7-MAR-1991
Date Analyzed: 14-MAR-1991
Date Extracted: 12-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.73~~	~~28000~~	~~JAB~~
2.		UNKNOWN ALKYL HYDROCARBON	~~24.83~~	~~500~~	~~JB~~
3.		UNKNOWN ALKYL HYDROCARBON	~~27.54~~	~~650~~	~~JB~~
4.		UNKNOWN ALKYL HYDROCARBON	28.69	1200	J
5.		UNKNOWN ALKYL HYDROCARBON	~~29.66~~	~~380~~	~~JB~~
6.		UNKNOWN ALKYL HYDROCARBON	~~29.78~~	~~1200~~	~~JB~~
7.		UNKNOWN ALKYL HYDROCARBON	~~30.84~~	~~1200~~	~~JB~~
8.		UNKNOWN ALKYL/ALKOXY CPD	31.77	2300	J
9.		UNKNOWN ALKYL HYDROCARBON	~~31.84~~	~~820~~	~~JB~~
10.		UNKNOWN ALKYL HYDROCARBON	32.81	470	J
11.		UNKNOWN ALKYL/ALKOXY CPD	37.20	990	J
12.					
13.					
14.					
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26.					
27.					
28.					
29.					
30.					

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:54

AnaLIS ID: 910308-111
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14678
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGW4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.0
Percent Moisture (decanted):
Associated Blank: 910312-123
[] : Result has been Corrected for Spike

Date Analyzed: 14-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U	106-47-8	4-Chloroaniline	1000U
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	4900U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	4900U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	4900U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	4900U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	4900U
105-67-9	2,4-Dimethylphenol	1000U	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	4900U	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	1400 ~~570 JB~~ LA
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U	86-73-7	Fluorene	1000U

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:54

AnaLIS ID: 910308-111
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14678
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGW4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.0
Percent Moisture (decanted):
Associated Blank: 910312-123
[] : Result has been Corrected for Spike

Date Analyzed: 14-MAR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	4900U	53-70-3	Dibenz(a,h)anthracene	1000U
534-52-1	4,6-Dinitro-2-methylphenol	4900U	191-24-2	Benzo(g,h,i)perylene	1000U
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	4900U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U			
84-74-2	Di-n-butylphthalate	(000 ~~830 JB~~ U			
206-44-0	Fluoranthene	1000U			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	1000U			
117-81-7	bis(2-Ethylhexyl)phthalate	1000U			
218-01-9	Chrysene	1000U			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
30-MAY-1991 07:54

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910308-111
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 3.0 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 11

Customer Sample ID: B00GW4
Customer: KESSNER/FANCHER
File ID: >14678
Date Received: 7-MAR-1991
Date Analyzed: 14-MAR-1991
Date Extracted: 12-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.71~~	~~29000~~	~~JAB~~
2.		UNKNOWN	24.16	440	J
3.		UNKNOWN ALKYL HYDROCARBON	~~24.82~~	~~560~~	~~JB~~
4.		UNKNOWN ALKYL HYDROCARBON	~~27.54~~	~~460~~	~~JB~~
5.		UNKNOWN ALKYL/ALKOXY CPD	~~29.66~~	~~530~~	~~JB~~
6.		UNKNOWN ALKYL HYDROCARBON	~~29.78~~	~~970~~	~~JB~~
7.		UNKNOWN ALKYL HYDROCARBON	~~30.84~~	~~990~~	~~JB~~
8.		UNKNOWN ALKYL/ALKOXY CPD	31.78	2300	J
9.		UNKNOWN ALKYL HYDROCARBON	~~31.84~~	~~780~~	~~JB~~
10.		UNKNOWN PHTHALATE ESTER	32.34	460	J
11.		UNKNOWN ALKYL/ALKOXY CPD	37.19	1000	J
12.					
13.					
14.					
15.					
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20.					
21.					
22.					
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24.					
25.					
26.					
27.					
28.					
29.					
30.					

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:58

AnaLIS ID: 910308-113
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14690
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGW8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank: 910312-123

Date Analyzed: 2-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000UJ	106-47-8	4-Chloroaniline	1000UJ
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5000U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5000U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5000U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5000U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5000U
105-67-9	2,4-Dimethylphenol	1000U	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	5000U	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000UJ	86-73-7	Fluorene	1000UJ

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 1/4/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:58

AnaLIS ID: 910308-113
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14690
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGW8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank: 910312-123
[] : Result has been Corrected for Spike

Date Analyzed: 2-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5000U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5000U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5000U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	1500 ~~B~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	1000U			
117-81-7	bis(2-Ethylhexyl)phthalate	1000U			
218-01-9	Chrysene	1000U			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
30-MAY-1991 07:58

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910308-113
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 3.1 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 13

Customer Sample ID: BOOGW8
Customer: KESSNER/FANCHER
File ID: >14690
Date Received: 7-MAR-1991
Date Analyzed: 2-APR-1991
Date Extracted: 12-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.75~~	~~27000~~	~~JAB~~
2.		UNKNOWN	9.94	470	J
3.		UNKNOWN	10.16	450	J
4.		UNKNOWN ALKOXY CPD	13.86	670	J
5.		UNKNOWN ALKYL HYDROCARBON	17.54	450	J
6.		UNKNOWN	20.85	3600	J
7.		UNKNOWN PHTHALTE ESTER	24.63	610	J
8.		UNKNOWN ALKYL HYDROCARBON	~~27.49~~	~~880~~	~~JB~~
9.		UNKNOWN ALKYL HYDROCARBON	28.64	1000	J
10.		UNKNOWN ALKYL HYDROCARBON	~~29.74~~	~~1300~~	~~JB~~
11.		UNKNOWN	~~30.79~~	~~2400~~	~~JB~~
12.		UNKNOWN	~~31.75~~	~~460~~	~~JB~~
13.		UNKNOWN ALKYL HYDROCARBON	~~31.79~~	~~960~~	~~JB~~
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:52

AnaLIS ID: 910311-027
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14691
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGW3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.0
Percent Moisture (decanted):
Associated Blank: 910312-123
[] : Result has been Corrected for Spike

Date Analyzed: 2-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	4900U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	4900U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	4900U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	4900U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	4900U
105-67-9	2,4-Dimethylphenol	1000U	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	4900U	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U	606-20-2	2,6-Dinitrotoluene	1000U J
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	1000 ~~668-8~~ UJ
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U J
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution..
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:52

AnaLIS ID: 910311-027
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >14691
Instrument ID: HP-5985
Authorized By: D. C. Canada

Customer Sample ID: BOOGW3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 12-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.0
Percent Moisture (decanted):
Associated Blank: 910312-123
[] : Result has been Corrected for Spike

Date Analyzed: 2-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: AK HEADRICK
QA File Number: 910402AKH-0065

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	4900U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	4900U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	4900U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate 1000	~~910 JB~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	1000U			
117-81-7	bis(2-Ethylhexyl)phthalate	1000U			
218-01-9	Chrysene	1000U			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

JJ 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 10:52

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910311-027
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 3.0 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 6

Customer Sample ID: BOOGW3
Customer: KESSNER/FANCHER
File ID: >14691
Date Received: 7-MAR-1991
Date Analyzed: 2-APR-1991
Date Extracted: 12-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~5.72~~	~~26000~~	~~JAB~~
2.		UNKNOWN ALKYL HYDROCARBON	27.51	600	JB
3.		UNKNOWN ALKYL HYDROCARBON	29.75	1100	JB
4.		UNKNOWN ALKYL HYDROCARBON	30.81	1100	JB
5.		UNKNOWN ALKYL/ALKOXY CPD	31.76	580	JB
6.		UNKNOWN ALKYL HYDROCARBON	~~31.81~~	~~950~~	~~JB~~
7.					
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JJ 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:12

AnaLIS ID: 910313-103
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11238
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGX6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 12-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 17-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.4
Percent Moisture (decanted):
Associated Blank: 910318-074

Date Analyzed: 4-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: RW ANDERSON
QA File Number: 910404CM-0067

[] : Result has been Corrected for Spike

CAS		ug/Kg		CAS		ug/Kg	
108-95-2	Phenol	1000U	J	106-47-8	4-Chloroaniline	1000U	J
111-44-4	bis(2-Chloroethyl)ether	1000U		87-68-3	Hexachlorobutadiene	1000U	
95-57-8	2-Chlorophenol	1000U		59-50-7	4-Chloro-3-methylphenol	1000U	
541-73-1	1,3-Dichlorobenzene	1000U		91-57-6	2-Methylnaphthalene	1000U	
106-46-7	1,4-Dichlorobenzene	1000U		77-47-4	Hexachlorocyclopentadiene	1000U	
100-51-6	Benzyl Alcohol	1000U		88-06-2	2,4,6-Trichlorophenol	1000U	
95-50-1	1,2-Dichlorobenzene	1000U		95-95-4	2,4,5-Trichlorophenol	5100U	
95-48-7	2-Methylphenol	1000U		91-58-7	2-Chloronaphthalene	1000U	
108-60-1	bis(2-Chloroisopropyl)ether	1000U		88-74-4	2-Nitroaniline	5100U	
106-44-5	4-Methylphenol	1000U		131-11-3	Dimethylphthalate	1000U	
621-64-7	N-Nitroso-di-n-propylamine	1000U		208-96-8	Acenaphthylene	1000U	
67-72-1	Hexachloroethane	1000U		99-09-2	3-Nitroaniline	5100U	
98-95-3	Nitrobenzene	1000U		83-32-9	Acenaphthene	1000U	
78-59-1	Isophorone	1000U		51-28-5	2,4-Dinitrophenol	5100U	
88-75-5	2-Nitrophenol	1000U		100-02-7	4-Nitrophenol	5100U	
105-67-9	2,4-Dimethylphenol	1000U		132-64-9	Dibenzofuran	1000U	
65-85-0	Benzoic Acid	5100U		121-14-2	2,4-Dinitrotoluene	1000U	
111-91-1	bis(2-Chloroethoxy)methane	1000U		606-20-2	2,6-Dinitrotoluene	1000U	
120-83-2	2,4-Dichlorophenol	1000U		84-66-2	Diethylphthalate	1000U	
120-82-1	1,2,4-Trichlorobenzene	1000U		7005-72-3	4-Chlorophenyl-phenylether	1000U	
91-20-3	Naphthalene	1000U	J	86-73-7	Fluorene	1000U	J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:12

AnaLIS ID: 910313-103
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11238
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGX6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 12-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 17-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.4
Percent Moisture (decanted):
Associated Blank: 910318-074
[] : Result has been Corrected for Spike

Date Analyzed: 4-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: RW ANDERSON
QA File Number: 910404CM-0067

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5100U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5100U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5100U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	1000 ~~730 JB~~ U J			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1000 ~~620 JB~~ U J			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 11:12

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910313-103
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 5.4 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 14

Customer Sample ID: BOOGX6
Customer: KESSNER/FANCHER
File ID: >11238
Date Received: 12-MAR-1991
Date Analyzed: 4-APR-1991
Date Extracted: 17-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.30~~	~~92000~~	~~JAB~~
2.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	18.59	2400	JB
3.		HYDROCARBON	21.78	1200	JB
4.	295-65-8	Cyclohexadecane	23.88	640	JB
5.		HYDROCARBON	24.59	890	JB
6.		ALKYL HYDROCARBON	~~24.93~~	~~1200~~	~~JB~~
7.		UNKNOWN	25.00	830	J
8.		ALKYL HYDROCARBON	25.79	1300	J
9.		ALKYL HYDROCARBON	~~25.83~~	~~1600~~	~~JB~~
10.		ALKYL HYDROCARBON	26.71	3600	J
11.		HYDROCARBON	~~27.52~~	~~6800~~	~~JB~~
12.		ALKYL HYDROCARBON	~~28.33~~	~~1200~~	~~JB~~
13.		SAT'D HYDROCARBON	29.11	740	J
14.		1-DOTRIACONTANOL	32.97	3100	J
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
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28.					
29.					
30.					

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:25

AnaLIS ID: 910315-060
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11239
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 17-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.2
Percent Moisture (decanted):
Associated Blank: 910318-074

Date Analyzed: 4-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: RW ANDERSON
QA File Number: 910404CM-0067

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5000U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5000U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5000U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5000U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5000U
105-67-9	2,4-Dimethylphenol	1000U	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	5000U	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U	606-20-2	2,6-Dinitrotoluene	1000U J
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	370 J
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U J
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

1/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:25

AnaLIS ID: 910315-060
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11239
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 17-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.2
Percent Moisture (decanted):
Associated Blank: 910318-074
[] : Result has been Corrected for Spike

Date Analyzed: 4-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: RW ANDERSON
QA File Number: 910404CM-0067

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5000U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5000U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5000U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	1400 ~~B~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1000 ~~610 JB~~ UJ			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 11:25

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910315-060
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 4.2 dec. _____
Extraction: (SepF/Cont/Sonc) ____
GPC Cleanup: (Y/N) N

Number TICs found: 17

Customer Sample ID: BOOGZ2
Customer: KESSNER/FANCHER
File ID: >11239
Date Received: 13-MAR-1991
Date Analyzed: 4-APR-1991
Date Extracted: 17-MAR-1991
pH: _____

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.33~~	~~13000~~	~~JAB~~
2.		1-PROPANOL,2-ETHOXY-	9.54	850	J
3.		7-HEXADECANE,(2)-	15.80	500	J
4.		HYDROCARBON	19.50	520	J
5.		PHTHALATE ESTER	~~21.72~~	~~670~~	~~JB~~
6.		HYDROCARBON	~~21.80~~	~~1000~~	~~JB~~
7.		HYDROCARBON	21.96	500	J
8.		HYDROCARBON	~~23.89~~	~~700~~	~~JB~~
9.	544-76-3	Hexadecane	~~24.00~~	~~610~~	~~JB~~
10.		UNKNOWN	24.59	980	J
11.		ALKYL HYDROCARBON	~~24.93~~	~~2400~~	~~JB~~
12.		ALKYL HYDROCARBON	25.79	1400	J
13.		ALKYL HYDROCARBON	~~25.85~~	~~2300~~	~~JB~~
14.		ALKYL HYDROCARBON	26.71	3300	J
15.		3-EICOSENE, (E)-	27.52	7900	J
16.		SAT'D HYDROCARBON	~~28.34~~	~~1100~~	~~JB~~
17.		HYDROCARBON	32.97	4600	J
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JZ 7/9/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 12:33

AnaLIS ID: 910319-085
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11219
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 16.7
Percent Moisture (decanted):
Associated Blank: 910320-080
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910401CM-0060

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1200UJ	106-47-8	4-Chloroaniline	1200UJ
111-44-4	bis(2-Chloroethyl)ether	1200U	87-68-3	Hexachlorobutadiene	1200U
95-57-8	2-Chlorophenol	1200U	59-50-7	4-Chloro-3-methylphenol	1200U
541-73-1	1,3-Dichlorobenzene	1200U	91-57-6	2-Methylnaphthalene	1200U
106-46-7	1,4-Dichlorobenzene	1200U	77-47-4	Hexachlorocyclopentadiene	1200U
100-51-6	Benzyl Alcohol	1200U	88-06-2	2,4,6-Trichlorophenol	1200U
95-50-1	1,2-Dichlorobenzene	1200U	95-95-4	2,4,5-Trichlorophenol	5800U
95-48-7	2-Methylphenol	1200U	91-58-7	2-Chloronaphthalene	1200U
108-60-1	bis(2-Chloroisopropyl)ether	1200U	88-74-4	2-Nitroaniline	5800U
106-44-5	4-Methylphenol	1200U	131-11-3	Dimethylphthalate	1200U
621-64-7	N-Nitroso-di-n-propylamine	1200U	208-96-8	Acenaphthylene	1200U
67-72-1	Hexachloroethane	1200U	99-09-2	3-Nitroaniline	5800U
98-95-3	Nitrobenzene	1200U	83-32-9	Acenaphthene	1200U
78-59-1	Isophorone	1200U	51-28-5	2,4-Dinitrophenol	5800U
88-75-5	2-Nitrophenol	1200U	100-02-7	4-Nitrophenol	5800U
105-67-9	2,4-Dimethylphenol	1200U	132-64-9	Dibenzofuran	1200U
65-85-0	Benzoic Acid	5800U	121-14-2	2,4-Dinitrotoluene	1200U
111-91-1	bis(2-Chloroethoxy)methane	1200U	606-20-2	2,6-Dinitrotoluene	1200U
120-83-2	2,4-Dichlorophenol	1200U	84-66-2	Diethylphthalate	1200U
120-82-1	1,2,4-Trichlorobenzene	1200U	7005-72-3	4-Chlorophenyl-phenylether	1200U
91-20-3	Naphthalene	1200UJ	86-73-7	Fluorene	1200UJ

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:10

AnaLIS ID: 910319-085
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11219
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 16.7
Percent Moisture (decanted):
Associated Blank: 910320-080
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910401CM-0060

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1200U J	106-47-8	4-Chloroaniline	1200U J
111-44-4	bis(2-Chloroethyl)ether	1200U	87-68-3	Hexachlorobutadiene	1200U
95-57-8	2-Chlorophenol	1200U	59-50-7	4-Chloro-3-methylphenol	1200U
541-73-1	1,3-Dichlorobenzene	1200U	91-57-6	2-Methylnaphthalene	1200U
106-46-7	1,4-Dichlorobenzene	1200U	77-47-4	Hexachlorocyclopentadiene	1200U
100-51-6	Benzyl Alcohol	1200U	88-06-2	2,4,6-Trichlorophenol	1200U
95-50-1	1,2-Dichlorobenzene	1200U	95-95-4	2,4,5-Trichlorophenol	5800U
95-48-7	2-Methylphenol	1200U	91-58-7	2-Chloronaphthalene	1200U
108-60-1	bis(2-Chloroisopropyl)ether	1200U	88-74-4	2-Nitroaniline	5800U
106-44-5	4-Methylphenol	1200U	131-11-3	Dimethylphthalate	1200U
621-64-7	N-Nitroso-di-n-propylamine	1200U	208-96-8	Acenaphthylene	1200U
67-72-1	Hexachloroethane	1200U	99-09-2	3-Nitroaniline	5800U
98-95-3	Nitrobenzene	1200U	83-32-9	Acenaphthene	1200U
78-59-1	Isophorone	1200U	51-28-5	2,4-Dinitrophenol	5800U
88-75-5	2-Nitrophenol	1200U	100-02-7	4-Nitrophenol	5800U
105-67-9	2,4-Dimethylphenol	1200U	132-64-9	Dibenzofuran	1200U
65-85-0	Benzoic Acid	5800U	121-14-2	2,4-Dinitrotoluene	1200U
111-91-1	bis(2-Chloroethoxy)methane	1200U	606-20-2	2,6-Dinitrotoluene	1200U
120-83-2	2,4-Dichlorophenol	1200U	84-66-2	Diethylphthalate	1200U
120-82-1	1,2,4-Trichlorobenzene	1200U	7005-72-3	4-Chlorophenyl-phenylether	1200U
91-20-3	Naphthalene	1200U J	86-73-7	Fluorene	1200U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/2/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:10

AnaLIS ID: 910319-085
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11219
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 16.7
Percent Moisture (decanted):
Associated Blank: 910320-080
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910401CM-0060

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5800U J	53-70-3	Dibenz(a,h)anthracene	1200U J
534-52-1	4,6-Dinitro-2-methylphenol	5800U	191-24-2	Benzo(g,h,i)perylene	1200U J
86-30-6	N-Nitrosodiphenylamine	1200U			
101-55-3	4-Bromophenyl-phenylether	1200U			
118-74-1	Hexachlorobenzene	1200U			
87-86-5	Pentachlorophenol	5800U			
85-01-8	Phenanthrene	1200U			
120-12-7	Anthracene	1200U J			
84-74-2	Di-n-butylphthalate	1200 ~~700 JB~~ UJ			
206-44-0	Fluoranthene	1200U J			
129-00-0	Pyrene	1200U			
85-68-7	Butylbenzylphthalate	1200U			
91-94-1	3,3'-Dichlorobenzidine	2400U			
56-55-3	Benzo(a)anthracene	1200U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1200 ~~670 JB~~ UJ			
218-01-9	Chrysene	1200U J			
117-84-0	Di-n-octylphthalate	1200U			
205-99-2	Benzo(b)fluoranthene	1200U			
207-08-9	Benzo(k)fluoranthene	1200U			
50-32-8	Benzo(a)pyrene	1200U			
193-39-5	Indeno(1,2,3-cd)pyrene	1200U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 09:10

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910319-085
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 16.7 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 11

Customer Sample ID: BOOGZ6
Customer: KESSNER/FANCHER
File ID: >11219
Date Received: 19-MAR-1991
Date Analyzed: 1-APR-1991
Date Extracted: 21-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.48~~	~~34000~~	~~JAB~~
2.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	18.58	970	JB
3.	295-65-8	Cyclohexadecane	21.77	2400	JB
4.		HYDROCARBON	23.86	1400	JB
5.		UNKNOWN SAT;D HYDROCARBON	24.92	490	JB
6.		SAT'D HYDROCARBON	25.82	950	JB
7.		ALKYL HYDROCARBON	26.71	1300	JB
8.		UNKNOWN	27.04	880	JB
9.		SAT'D HYDROCARBON	27.52	1800	JB
10.		HYDROCARBON	~~30.23~~	~~1200~~	~~JB~~
11.		UNKNOWN	33.13	1400	J
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JB 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:13

AnaLIS ID: 910319-086
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11220
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH00
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.9
Percent Moisture (decanted):
Associated Blank: 910320-080
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910401CM-0060

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5000U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5000U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5000U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5000U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5000U
105-67-9	2,4-Dimethylphenol	1000U	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	5000U	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:13

AnaLIS ID: 910319-086
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11220
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH00
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 3.9
Percent Moisture (decanted):
Associated Blank: 910320-080
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910401CM-0060

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5000U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5000U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5000U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	1000 ~~720 JB~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1200 B UJ			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 09:13

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910319-086
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 3.9 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 16

Customer Sample ID: BOOH00
Customer: KESSNER/FANCHER
File ID: >11220
Date Received: 19-MAR-1991
Date Analyzed: 1-APR-1991
Date Extracted: 21-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.54~~	~~29000~~	~~JAB~~
2.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	~~18.64~~	~~1500~~	~~JB~~
3.		HYDROCARBON	21.84	1600	J
4.		HYDROCARBON	23.93	1200	J
5.		UNKNOWN	24.64	590	J
6.		SAT'D HYDROCARBON	~~24.99~~	~~690~~	~~JB~~
7.		UNKNOWN	~~25.84~~	~~600~~	~~JB~~
8.		HYDROCARBON	25.91	910	J
9.		HYDROCARBON	~~26.78~~	~~1400~~	~~JB~~
10.		UNKNOWN	27.11	640	JB
11.	77899-03-7	1-Heneicosyl Formate	27.57	3500	JB
12.		SAT'D HYDROCARBON	28.39	650	JB
13.		SAT'D HYDROCARBON	29.16	760	JB
14.		UNKNOWN	~~30.30~~	~~1200~~	~~JB~~
15.		HYDROCARBON	33.02	3800	J
16.		UNKNOWN	~~35.97~~	~~800~~	~~JB~~
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:15

AnaLIS ID: 910319-087
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11221
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH01
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.8
Percent Moisture (decanted):
Associated Blank: 910320-080
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910401CM-0060

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5000U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5000U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5000U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5000U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5000U
105-67-9	2,4-Dimethylphenol	1000U	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	5000U	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:15

AnaLIS ID: 910319-087
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11221
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH01
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.8
Percent Moisture (decanted):
Associated Blank: 910320-080
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910401CM-0060

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5000U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5000U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5000U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	1000 ~~930 JB~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1600 B UJ			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

6/29/91

Data Reporting Qualifiers:

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B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 09:15

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910319-087
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 4.8 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 17

Customer Sample ID: B00H01
Customer: KESSNER/FANCHER
File ID: >11221
Date Received: 19-MAR-1991
Date Analyzed: 1-APR-1991
Date Extracted: 21-MAR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.51~~	~~2900~~	~~JAB~~
2.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	18.62	1600	JB
3.		HYDROCARBON	21.81	3400	JB
4.		HYDROCARBON	23.89	2000	JB
5.		UNKNOWN	24.42	630	JB
6.		UNKNOWN	24.62	580	JB
7.		SAT'D HYDROCARBON	24.97	700	JB
8.		UNKNOWN	25.78	700	JB
9.		SAT'D HYDROCARBON	25.86	910	JB
10.		SAT'D HYDROCARBON	26.74	1800	JB
11.		UNKNOWN	27.08	2800	JB
12.		HYDROCARBON	27.53	4100	JB
13.		SAT'D HYDROCARBON	28.37	510	JB
14.		HYDROCARBON	29.14	800	JB
15.		UNKNOWN	30.28	2700	JB
16.		UNKNOWN	32.98	4100	JB
17.		UNKNOWN	~~35.85~~	~~1600~~	~~JB~~
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:21

AnaLIS ID: 910319-089
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11223
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH02
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 23.2
Percent Moisture (decanted):
Associated Blank: 910320-080
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910401CM-0060

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1300U J	106-47-8	4-Chloroaniline	1300U J
111-44-4	bis(2-Chloroethyl)ether	1300U	87-68-3	Hexachlorobutadiene	1300U
95-57-8	2-Chlorophenol	1300U	59-50-7	4-Chloro-3-methylphenol	1300U
541-73-1	1,3-Dichlorobenzene	1300U	91-57-6	2-Methylnaphthalene	1300U
106-46-7	1,4-Dichlorobenzene	1300U	77-47-4	Hexachlorocyclopentadiene	1300U
100-51-6	Benzyl Alcohol	1300U	88-06-2	2,4,6-Trichlorophenol	1300U
95-50-1	1,2-Dichlorobenzene	1300U	95-95-4	2,4,5-Trichlorophenol	6300U
95-48-7	2-Methylphenol	1300U	91-58-7	2-Chloronaphthalene	1300U
108-60-1	bis(2-Chloroisopropyl)ether	1300U	88-74-4	2-Nitroaniline	6300U
106-44-5	4-Methylphenol	1300U	131-11-3	Dimethylphthalate	1300U
621-64-7	N-Nitroso-di-n-propylamine	1300U	208-96-8	Acenaphthylene	1300U
67-72-1	Hexachloroethane	1300U	99-09-2	3-Nitroaniline	6300U
98-95-3	Nitrobenzene	1300U	83-32-9	Acenaphthene	1300U
78-59-1	Isophorone	1300U	51-28-5	2,4-Dinitrophenol	6300U
88-75-5	2-Nitrophenol	1300U	100-02-7	4-Nitrophenol	6300U
105-67-9	2,4-Dimethylphenol	1300U	132-64-9	Dibenzofuran	1300U
65-85-0	Benzoic Acid	6300U	121-14-2	2,4-Dinitrotoluene	1300U
111-91-1	bis(2-Chloroethoxy)methane	1300U	606-20-2	2,6-Dinitrotoluene	1300U
120-83-2	2,4-Dichlorophenol	1300U	84-66-2	Diethylphthalate	1300U
120-82-1	1,2,4-Trichlorobenzene	1300U	7005-72-3	4-Chlorophenyl-phenylether	1300U
91-20-3	Naphthalene	1300U J	86-73-7	Fluorene	1300U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/9/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:21

AnaLIS ID: 910319-089
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11223
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH02
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 21-MAR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 23.2
Percent Moisture (decanted):
Associated Blank: 910320-080
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910401CM-0060

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	6300U J	53-70-3	Dibenz(a,h)anthracene	1300U J
534-52-1	4,6-Dinitro-2-methylphenol	6300U	191-24-2	Benzo(g,h,i)perylene	1300U J
86-30-6	N-Nitrosodiphenylamine	1300U			
101-55-3	4-Bromophenyl-phenylether	1300U			
118-74-1	Hexachlorobenzene	1300U			
87-86-5	Pentachlorophenol	6300U			
85-01-8	Phenanthrene	1300U			
120-12-7	Anthracene	1300U J			
84-74-2	Di-n-butylphthalate	2000 B UJ			
206-44-0	Fluoranthene	1300U J			
129-00-0	Pyrene	1300U			
85-68-7	Butylbenzylphthalate	1300U			
91-94-1	3,3'-Dichlorobenzidine	2600U			
56-55-3	Benzo(a)anthracene	1300U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1400 B UJ			
218-01-9	Chrysene	1300U J			
117-84-0	Di-n-octylphthalate	1300U			
205-99-2	Benzo(b)fluoranthene	1300U			
207-08-9	Benzo(k)fluoranthene	1300U			
50-32-8	Benzo(a)pyrene	1300U			
193-39-5	Indeno(1,2,3-cd)pyrene	1300U J			

JZ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
14-JUN-1991 09:21

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910319-089
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 23.2 dec. _____
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 18

Customer Sample ID: B00H02
Customer: KESSNER/FANCHER
File ID: >11223
Date Received: 19-MAR-1991
Date Analyzed: 1-APR-1991
Date Extracted: 21-MAR-1991
pH: _____

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.49~~	~~33000~~	~~JAB~~
2.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	18.60	3700	JB
3.		HYDROCARBON	21.79	3800	JB
4.		HYDROCARBON	23.86	2700	JB
5.		UNKNOWN	24.37	920	JB
6.		UNKNOWN	24.58	640	JB
7.		UNKNOWN	24.94	1300	JB
8.		METHYL CYCLODECANE	25.76	910	JB
9.		SAT'D HYDROCARBON	25.84	1100	JB
10.	123-79-5	Dioctyl Adipate	26.72	1800	JB
11.		UNKNOWN	27.04	1700	JB
12.	77899-03-7	1-Heneicosyl Formate	27.51	4600	JB
13.		SAT'D HYDROCARBON	28.32	910	JB
14.		HYDROCARBON	29.10	1000	JB
15.		UNKNOWN	30.24	2600	JB
16.		UNKNOWN	~~32.94~~	~~4500~~	~~JB~~
17.		UNKNOWN (PYRIDO PYRIMIDINE?)	34.26	790	J
18.	77899-03-7	1-Heneicosyl Formate	~~35.81~~	~~1700~~	~~JB~~
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:47

AnaLIS ID: 910321-067
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11254
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 34.5
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1500U J	106-47-8	4-Chloroaniline	1500U J
111-44-4	bis(2-Chloroethyl)ether	1500U	87-68-3	Hexachlorobutadiene	1500U
95-57-8	2-Chlorophenol	1500U	59-50-7	4-Chloro-3-methylphenol	1500U
541-73-1	1,3-Dichlorobenzene	1500U	91-57-6	2-Methylnaphthalene	1500U
106-46-7	1,4-Dichlorobenzene	1500U	77-47-4	Hexachlorocyclopentadiene	1500U
100-51-6	Benzyl Alcohol	1500U	88-06-2	2,4,6-Trichlorophenol	1500U
95-50-1	1,2-Dichlorobenzene	1500U	95-95-4	2,4,5-Trichlorophenol	7300U
95-48-7	2-Methylphenol	1500U	91-58-7	2-Chloronaphthalene	1500U
108-60-1	bis(2-Chloroisopropyl)ether	1500U	88-74-4	2-Nitroaniline	7300U
106-44-5	4-Methylphenol	1500U	131-11-3	Dimethylphthalate	1500U
621-64-7	N-Nitroso-di-n-propylamine	1500U	208-96-8	Acenaphthylene	1500U
67-72-1	Hexachloroethane	1500U	99-09-2	3-Nitroaniline	7300U
98-95-3	Nitrobenzene	1500U	83-32-9	Acenaphthene	1500U
78-59-1	Isophorone	1500U	51-28-5	2,4-Dinitrophenol	7300U
88-75-5	2-Nitrophenol	1500U	100-02-7	4-Nitrophenol	7300U
105-67-9	2,4-Dimethylphenol	1500U J	132-64-9	Dibenzofuran	1500U
65-85-0	Benzoic Acid	7300 ~~7800 JB~~ UJ	121-14-2	2,4-Dinitrotoluene	1500U
111-91-1	bis(2-Chloroethoxy)methane	1500U J	606-20-2	2,6-Dinitrotoluene	1500U J
120-83-2	2,4-Dichlorophenol	1500U J	84-66-2	Diethylphthalate	1500 ~~570 JB~~ UJ
120-82-1	1,2,4-Trichlorobenzene	1500U J	7005-72-3	4-Chlorophenyl-phenylether	1500U J
91-20-3	Naphthalene	1500U J	86-73-7	Fluorene	1500U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:47

AnaLIS ID: 910321-067
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11254
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOGZ8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 34.5
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	7300U J	191-24-2	Benzo(g,h,i)perylene	1500U J
534-52-1	4,6-Dinitro-2-methylphenol	7300U			
86-30-6	N-Nitrosodiphenylamine	1500U			
101-55-3	4-Bromophenyl-phenylether	1500U			
118-74-1	Hexachlorobenzene	1500U			
87-86-5	Pentachlorophenol	7300U			
85-01-8	Phenanthrene	1500U			
120-12-7	Anthracene	1500U J			
84-74-2	Di-n-butylphthalate	4500~~B~~ UJ			
206-44-0	Fluoranthene	1500U J			
129-00-0	Pyrene	1500U			
85-68-7	Butylbenzylphthalate	1500U			
91-94-1	3,3'-Dichlorobenzidine	3000U			
56-55-3	Benzo(a)anthracene	1500U			
218-01-9	Chrysene	1500U			
117-84-0	Di-n-octylphthalate	1500U			
205-99-2	Benzo(b)fluoranthene	1500U			
207-08-9	Benzo(k)fluoranthene	1500U			
50-32-8	Benzo(a)pyrene	1500U			
193-39-5	Indeno(1,2,3-cd)pyrene	1500U			
53-70-3	Dibenz(a,h)anthracene	1500U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 12:47

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910321-067
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 34.5 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 20

Customer Sample ID: B00GZ8
Customer: KESSNER/FANCHER
File ID: >11254
Date Received: 20-MAR-1991
Date Analyzed: 5-APR-1991
Date Extracted: 2-APR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.45~~	~~120000~~	~~JAB~~
2.	74367-33-2	Propanoic acid,2-methyl-,2,2-m	13.35	2900	JB
3.		PROPANOIC ACID,2-METHYL-,3-HYD	15.63	1800	JB
4.		UNKNOWN	17.50	28000	JB
5.		HYDROCARBON	19.48	4300	JB
6.	117-82-8	bis(2-Methoxyethyl)ester	21.69	2600	JB
7.		HYDROCARBON	21.77	12000	JB
8.		UNKNOWN	~~22.59~~	~~2000~~	~~JB~~
9.		ALKYL HYDROCARBON	23.02	2600	J
10.	84-65-1	Anthracedione	~~23.24~~	~~30000~~	~~JB~~
11.		SAT'D HYDROCARBON	23.85	3400	JB
12.		UNKNOWN	24.59	4700	JB
13.		HYDROCARBON	24.95	6600	JB
14.		HYDROCARBON	25.75	5200	JB
15.		ALKYL HYDROCARBON	25.81	2700	JB
16.		ALKYL HYDROCARBON	26.69	3300	JB
17.		HYDROCARBON	27.52	25000	JB
18.		PHOSPHONIC ACID,DIOCTADECYL ES	29.11	3600	JB
19.		UNKNOWN	32.94	10000	JB
20.		UNKNOWN	~~35.85~~	~~4100~~	~~JB~~
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:01

AnaLIS ID: 910321-068
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11255
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH03
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.7
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5000U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5000U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5000U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5000U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5000U
105-67-9	2,4-Dimethylphenol	1000U J	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	5000 ~~3000 JB~~ UJ	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U J	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U J	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U J	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:01

AnaLIS ID: 910321-068
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11255
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH03
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.7
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5000U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5000U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5000U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	1500 ~~B~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1000 ~~680 JB~~ UJ			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 13:01

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910321-068
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 4.7 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 21

Customer Sample ID: B00H03
Customer: KESSNER/FANCHER
File ID: >11255
Date Received: 20-MAR-1991
Date Analyzed: 5-APR-1991
Date Extracted: 2-APR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.43~~	~~76000~~	~~JAB~~
2.	74367-33-2	Propanoic acid,2-methyl-,2,2-m	~~15.35~~	~~2400~~	~~JB~~
3.		PROPANOIC ACID,2-METHYL-,3-HYD	~~15.63~~	~~1300~~	~~JB~~
4.		UNKNOWN	~~17.48~~	~~7600~~	~~JB~~
5.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	18.56	2600	J
6.		HYDROCARBON	~~19.46~~	~~1700~~	~~JB~~
7.	117-82-8	bis(2-Methoxyethyl)ester	21.69	860	J
8.		HYDROCARBON	~~21.75~~	~~7100~~	~~JB~~
9.		ALKYL HYDROCARBON	23.02	900	J
10.	84-65-1	Anthracedione	~~23.24~~	~~22000~~	~~JB~~
11.		HYDROCARBON	23.85	1700	JB
12.		HYDROCARBON	24.57	2200	JB
13.		HYDROCARBON	25.75	2300	JB
14.		SAT'D HYDROCARBON	25.81	1000	JB
15.		SAT'D HYDROCARBON	26.69	1600	JB
16.		HYDROCARBON	27.52	16000	JB
17.		SAT'D HYDROCARBON	28.31	1100	JB
18.		PHOSPHONIC ACID, DIOCTADECYL E	~~29.11~~	~~2000~~	~~JB~~
19.		HYDROCARBON	30.21	1200	J
20.		HYDROCARBON	~~32.94~~	~~6900~~	~~JB~~
21.		UNKNOWN	~~35.84~~	~~2000~~	~~JB~~
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JB 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:53

AnaLIS ID: 910321-069
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11256
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH04
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank: 910404-032
[].: Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5100U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5100U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5100U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5100U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5100U
105-67-9	2,4-Dimethylphenol	1000U J	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	500 ~~1700 JB~~ UJ	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U J	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U J	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U J	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:53

AnaLIS ID: 910321-069
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11256
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH04
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank: 910404-032

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5100U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5100U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5100U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	2500 ~~B~~ U J			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1000 ~~620 JB~~ UJ			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 12:53

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910321-069
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 5.0 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Customer Sample ID: B00H04
Customer: KESSNER/FANCHER
File ID: >11256
Date Received: 20-MAR-1991
Date Analyzed: 5-APR-1991
Date Extracted: 2-APR-1991
pH:

Number TICs found: 21

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.41~~	~~61000~~	~~JAB~~
2.	74367-33-2	Propanoic acid,2-methyl-,2,2-m	~~15.37~~	~~1500~~	~~JB~~
3.		PROPANOIC ACID,2-METHYL,3-HYDR	~~15.64~~	~~1200~~	~~JB~~
4.		HYDROCARBON	~~17.49~~	~~7800~~	~~JB~~
5.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	18.58	4100	J
6.		HYDROCARBON	~~19.48~~	~~2000~~	~~JJB~~
7.	117-82-8	bis(2-Methoxyethyl)ester	21.69	960	J
8.		HYDROCARBON	~~21.70~~	~~7200~~	~~JB~~
9.	84-65-1	Anthracedione	23.24	20000	JB
10.		HYDROCARBON	23.84	1700	JB
11.		HYDROCARBON	24.59	2200	JB
12.		HYDROCARBON	24.93	1500	JB
13.		HYDROCARBON	25.77	1800	JB
14.		HYDROCARBON	25.83	1100	JB
15.		HYDROCARBON	26.69	1200	JB
16.		HYDROCARBON	27.52	14000	JB
17.		HYDROCARBON	28.34	950	JB
18.		PHOSPHORIC ACID,DIOCTADECYL ES	~~29.11~~	~~1900~~	~~JB~~
19.		UNKNOWN	30.23	1100	J
20.		UNKNOWN	~~32.96~~	~~6500~~	~~JB~~
21.		UNKNOWN	~~35.85~~	~~2600~~	~~JB~~
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

7/1/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:56

AnaLIS ID: 910321-070
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11257
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH05
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.3
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 247D
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5000U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5000U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5000U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5000U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5000U
105-67-9	2,4-Dimethylphenol	1000U J	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid 5000	~~1500 JB~~ UJ	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U J	606-20-2	2,6-Dinitrotoluene	1000U
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	1000U
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
NO - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

9/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:56

AnaLIS ID: 910321-070
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11257
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH05
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 4.3
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5000U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5000U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5000U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	2100 ~~B~~ UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1000 ~~500 JB~~ UJ			
218-01-9	Chrysene	1000U J			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 12:56

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910321-070
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 4.3 dec. _____
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 20

Customer Sample ID: B00H05
Customer: KESSNER/FANCHER
File ID: >11257
Date Received: 20-MAR-1991
Date Analyzed: 5-APR-1991
Date Extracted: 2-APR-1991
pH: _____

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.42~~	~~69000~~	~~JAB~~
2.	74367-33-2	Propanoic acid,2-methyl-,2,2-m	~~15.34~~	~~1400~~	~~JB~~
3.		PROPANOIC ACID,2-METHYL-,3-HYD	~~15.63~~	~~920~~	~~JB~~
4.		UNKNOWN	~~17.47~~	~~10000~~	~~JB~~
5.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	18.57	2300	J
6.		HYDROCARBON	~~19.47~~	~~1300~~	~~JB~~
7.	117-82-8	bis(2-Methoxyethyl)ester	21.68	790	J
8.		HYDROCARBON	~~21.76~~	~~4100~~	~~JB~~
9.		UNKNOWN	22.58	760	JB
10.	84-65-1	Anthracedione	23.23	19000	JB
11.		HYDROCARBON	23.88	900	JB
12.		HYDROCARBON	24.57	1900	JB
13.		HYDROCARBON	24.90	1100	JB
14.		HYDROCARBON	25.76	1900	JB
15.		ALKYL HYDROCARBON	26.67	1000	JB
16.		HYDROCARBON	27.51	13000	JB
17.		HYDROCARBON	28.32	820	JB
18.		PHOSPHONIC ACID,DIOCTYLDECYL E	29.11	1600	JB
19.		HYDROCARBON	32.94	6200	JB
20.		UNKNOWN	~~35.85~~	~~2200~~	~~JB~~
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JZ 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:07

AnaLIS ID: 910321-071
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11258
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH06
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.6
Percent Moisture (decanted):
Associated Blank: 910404-032

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1000U J	106-47-8	4-Chloroaniline	1000U J
111-44-4	bis(2-Chloroethyl)ether	1000U	87-68-3	Hexachlorobutadiene	1000U
95-57-8	2-Chlorophenol	1000U	59-50-7	4-Chloro-3-methylphenol	1000U
541-73-1	1,3-Dichlorobenzene	1000U	91-57-6	2-Methylnaphthalene	1000U
106-46-7	1,4-Dichlorobenzene	1000U	77-47-4	Hexachlorocyclopentadiene	1000U
100-51-6	Benzyl Alcohol	1000U	88-06-2	2,4,6-Trichlorophenol	1000U
95-50-1	1,2-Dichlorobenzene	1000U	95-95-4	2,4,5-Trichlorophenol	5100U
95-48-7	2-Methylphenol	1000U	91-58-7	2-Chloronaphthalene	1000U
108-60-1	bis(2-Chloroisopropyl)ether	1000U	88-74-4	2-Nitroaniline	5100U
106-44-5	4-Methylphenol	1000U	131-11-3	Dimethylphthalate	1000U
621-64-7	N-Nitroso-di-n-propylamine	1000U	208-96-8	Acenaphthylene	1000U
67-72-1	Hexachloroethane	1000U	99-09-2	3-Nitroaniline	5100U
98-95-3	Nitrobenzene	1000U	83-32-9	Acenaphthene	1000U
78-59-1	Isophorone	1000U	51-28-5	2,4-Dinitrophenol	5100U
88-75-5	2-Nitrophenol	1000U	100-02-7	4-Nitrophenol	5100U
105-67-9	2,4-Dimethylphenol	1000U J	132-64-9	Dibenzofuran	1000U
65-85-0	Benzoic Acid	5100 ~~2000 JB~~ UJ	121-14-2	2,4-Dinitrotoluene	1000U
111-91-1	bis(2-Chloroethoxy)methane	1000U J	606-20-2	2,6-Dinitrotoluene	1000U J
120-83-2	2,4-Dichlorophenol	1000U	84-66-2	Diethylphthalate	1000 ~~630 JB~~ UJ
120-82-1	1,2,4-Trichlorobenzene	1000U	7005-72-3	4-Chlorophenyl-phenylether	1000U J
91-20-3	Naphthalene	1000U J	86-73-7	Fluorene	1000U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JZ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:07

AnaLIS ID: 910321-071
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11258
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH06
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 20-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 5.6
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5100U J	53-70-3	Dibenz(a,h)anthracene	1000U J
534-52-1	4,6-Dinitro-2-methylphenol	5100U	191-24-2	Benzo(g,h,i)perylene	1000U J
86-30-6	N-Nitrosodiphenylamine	1000U			
101-55-3	4-Bromophenyl-phenylether	1000U			
118-74-1	Hexachlorobenzene	1000U			
87-86-5	Pentachlorophenol	5100U			
85-01-8	Phenanthrene	1000U			
120-12-7	Anthracene	1000U J			
84-74-2	Di-n-butylphthalate	3100 B UJ			
206-44-0	Fluoranthene	1000U J			
129-00-0	Pyrene	1000U			
85-68-7	Butylbenzylphthalate	1000U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1000U			
117-81-7	bis(2-Ethylhexyl)phthalate	1000U			
218-01-9	Chrysene	1000U			
117-84-0	Di-n-octylphthalate	1000U			
205-99-2	Benzo(b)fluoranthene	1000U			
207-08-9	Benzo(k)fluoranthene	1000U			
50-32-8	Benzo(a)pyrene	1000U			
193-39-5	Indeno(1,2,3-cd)pyrene	1000U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 13:07

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910321-071
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 5.6 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 21

Customer Sample ID: BOOH06
Customer: KESSNER/FANCHER
File ID: >11258
Date Received: 20-MAR-1991
Date Analyzed: 5-APR-1991
Date Extracted: 2-APR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.42~~	~~71000~~	~~JAB~~
2.	112-05-0	Nonanoic Acid	~~14.02~~	~~800~~	~~JB~~
3.	74367-33-2	Propanoic acid,2-methyl-,2,2-m	~~15.36~~	~~2000~~	~~JB~~
4.		PROPANOIC ACID,2-METHYL-,3-HYD	~~15.62~~	~~1600~~	~~JB~~
5.		HYDROCARBON	16.92	940	J
6.		UNKNOWN	~~17.49~~	~~9500~~	~~JB~~
7.		HYDROCARBON	~~19.46~~	~~1300~~	~~JB~~
8.		HYDROCARBON	~~21.76~~	~~4800~~	~~JB~~
9.		UNKNOWN	~~22.60~~	~~1200~~	~~JB~~
10.		ALKYL HYDROCARBON	23.00	1000	J
11.	84-65-1	Anthracedione	~~23.23~~	~~21000~~	~~JB~~
12.		HYDROCARBON	23.86	1800	JB
13.		HYDROCARBON	24.57	2500	JB
14.		HYDROCARBON	24.92	1900	JB
15.		HYDROCARBON	25.76	2800	JB
16.		SAT'D HYDROCARBON	26.67	1700	JB
17.		HYDROCARBON	27.51	16000	JB
18.		SAT'D HYDROCARBON	28.30	1300	JB
19.		PHOSPHONIC ACID,DIOCTADECYL ES	29.12	2900	JB
20.		HYDROCARBON	32.94	6900	JB
21.		UNKNOWN	~~35.85~~	~~2400~~	~~JB~~
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:19

AnaLIS ID: 910325-035
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11262
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH14
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 23-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 8.7
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1100U J	106-47-8	4-Chloroaniline	1100U J
111-44-4	bis(2-Chloroethyl)ether	1100U	87-68-3	Hexachlorobutadiene	1100U
95-57-8	2-Chlorophenol	1100U	59-50-7	4-Chloro-3-methylphenol	1100U
541-73-1	1,3-Dichlorobenzene	1100U	91-57-6	2-Methylnaphthalene	1100U
106-46-7	1,4-Dichlorobenzene	1100U	77-47-4	Hexachlorocyclopentadiene	1100U
100-51-6	Benzyl Alcohol	1100U	88-06-2	2,4,6-Trichlorophenol	1100U
95-50-1	1,2-Dichlorobenzene	1100U	95-95-4	2,4,5-Trichlorophenol	5300U
95-48-7	2-Methylphenol	1100U	91-58-7	2-Chloronaphthalene	1100U
108-60-1	bis(2-Chloroisopropyl)ether	1100U	88-74-4	2-Nitroaniline	5300U
106-44-5	4-Methylphenol	1100U	131-11-3	Dimethylphthalate	1100U
621-64-7	N-Nitroso-di-n-propylamine	1100U	208-96-8	Acenaphthylene	1100U
67-72-1	Hexachloroethane	1100U	99-09-2	3-Nitroaniline	5300U
98-95-3	Nitrobenzene	1100U	83-32-9	Acenaphthene	1100U
78-59-1	Isophorone	1100U	51-28-5	2,4-Dinitrophenol	5300U
88-75-5	2-Nitrophenol	1100U	100-02-7	4-Nitrophenol	5300U
105-67-9	2,4-Dimethylphenol	1100U J	132-64-9	Dibenzofuran	1100U
65-85-0	Benzoic Acid 5300	~~2900 JB~~ UJ	121-14-2	2,4-Dinitrotoluene	1100U
111-91-1	bis(2-Chloroethoxy)methane	1100U J	606-20-2	2,6-Dinitrotoluene	1100U J
120-83-2	2,4-Dichlorophenol	1100U J	84-66-2	Diethylphthalate 1100	~~520 JB~~ UJ
120-82-1	1,2,4-Trichlorobenzene	1100U J	7005-72-3	4-Chlorophenyl-phenylether	1100U J
91-20-3	Naphthalene	1100U J	86-73-7	Fluorene	1100U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:19

AnaLIS ID: 910325-035
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11262
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH14
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 23-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 8.7
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5300U J	53-70-3	Dibenz(a,h)anthracene	1100U J
534-52-1	4,6-Dinitro-2-methylphenol	5300U	191-24-2	Benzo(g,h,i)perylene	1100U J
86-30-6	N-Nitrosodiphenylamine	1100U			
101-55-3	4-Bromophenyl-phenylether	1100U			
118-74-1	Hexachlorobenzene	1100U			
87-86-5	Pentachlorophenol	5300U			
85-01-8	Phenanthrene	1100U			
120-12-7	Anthracene	1100U J			
84-74-2	Di-n-butylphthalate	2500 ~~B~~ UJ			
206-44-0	Fluoranthene	1100U J			
129-00-0	Pyrene	1100U			
85-68-7	Butylbenzylphthalate	1100U			
91-94-1	3,3'-Dichlorobenzidine	2200U			
56-55-3	Benzo(a)anthracene	1100U			
117-81-7	bis(2-Ethylhexyl)phthalate	1100U			
218-01-9	Chrysene	1100U			
117-84-0	Di-n-octylphthalate	1100U			
205-99-2	Benzo(b)fluoranthene	1100U			
207-08-9	Benzo(k)fluoranthene	1100U			
50-32-8	Benzo(a)pyrene	1100U			
193-39-5	Indeno(1,2,3-cd)pyrene	1100U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 13:19

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910325-035
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 8.7 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 21

Customer Sample ID: BOOH14
Customer: KESSNER/FANCHER
File ID: >11262
Date Received: 23-MAR-1991
Date Analyzed: 5-APR-1991
Date Extracted: 2-APR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.43~~	~~79000~~	~~JAB~~
2.		HYDROCARBON(ACID?)	~~14.01~~	~~740~~	~~JB~~
3.	74367-33-2	Propanoic acid,2-methyl-,2,2-m	~~15.35~~	~~2000~~	~~JB~~
4.		PROPANOIC ACID,2-METHYL-,2,2-D	15.64	1200	J
5.		HYDROCARBON	16.92	780	J
6.		UNKNOWN	~~17.49~~	~~7900~~	~~JB~~
7.		UNKNOWN	18.59	890	J
8.		HYDROCARBON	~~19.48~~	~~1200~~	~~JB~~
9.		HYDROCARBON	~~21.78~~	~~4700~~	~~JB~~
10.		UNKNOWN	~~22.59~~	~~1200~~	~~JB~~
11.		UNKNOWN	23.02	800	J
12.	84-65-1	Anthracedione	~~23.24~~	~~21000~~	~~JB~~
13.		HYDROCARBON	23.88	1200	JB
14.		HYDROCARBON	24.59	1900	JB
15.		HYDROCARBON	24.92	1200	JB
16.		HYDROCARBON	25.77	3800	JB
17.		SAT'D HYDROCARBON	26.69	1700	JB
18.		HYDROCARBON	27.52	14000	JB
19.		HYDROCARBON	29.13	1500	JB
20.		HYDROCARBON	32.96	5400	JB
21.		UNKNOWN	~~35.93~~	~~1200~~	~~JB~~
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JB 9/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:13

AnaLIS ID: 910328-078
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11259
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH10
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 31-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: .1
Percent Moisture (decanted):
Associated Blank: 910404-023
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	990U J	106-47-8	4-Chloroaniline	990U J
111-44-4	bis(2-Chloroethyl)ether	990U	87-68-3	Hexachlorobutadiene	990U
95-57-8	2-Chlorophenol	990U	59-50-7	4-Chloro-3-methylphenol	990U
541-73-1	1,3-Dichlorobenzene	990U	91-57-6	2-Methylnaphthalene	990U
106-46-7	1,4-Dichlorobenzene	990U	77-47-4	Hexachlorocyclopentadiene	990U
100-51-6	Benzyl Alcohol	990U	88-06-2	2,4,6-Trichlorophenol	990U
95-50-1	1,2-Dichlorobenzene	990U	95-95-4	2,4,5-Trichlorophenol	4800U
95-48-7	2-Methylphenol	990U	91-58-7	2-Chloronaphthalene	990U
108-60-1	bis(2-Chloroisopropyl)ether	990U	88-74-4	2-Nitroaniline	4800U
106-44-5	4-Methylphenol	990U	131-11-3	Dimethylphthalate	990U
621-64-7	N-Nitroso-di-n-propylamine	990U	208-96-8	Acenaphthylene	990U
67-72-1	Hexachloroethane	990U	99-09-2	3-Nitroaniline	4800U
98-95-3	Nitrobenzene	990U	83-32-9	Acenaphthene	990U
78-59-1	Isophorone	990U	51-28-5	2,4-Dinitrophenol	4800U
88-75-5	2-Nitrophenol	990U	100-02-7	4-Nitrophenol	4800U
105-67-9	2,4-Dimethylphenol	990U J	132-64-9	Dibenzofuran	990U
65-85-0	Benzoic Acid 4800	~~1700 JB~~ UJ	121-14-2	2,4-Dinitrotoluene	990U
111-91-1	bis(2-Chloroethoxy)methane	990U J	606-20-2	2,6-Dinitrotoluene	990U
120-83-2	2,4-Dichlorophenol	990U J	84-66-2	Diethylphthalate	990U
120-82-1	1,2,4-Trichlorobenzene	990U J	7005-72-3	4-Chlorophenyl-phenylether	990U
91-20-3	Naphthalene	990U J	86-73-7	Fluorene	990U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 13:13

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910328-078
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. .1 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 21

Customer Sample ID: BOOH10
Customer: KESSNER/FANCHER
File ID: >11259
Date Received: 31-MAR-1991
Date Analyzed: 5-APR-1991
Date Extracted: 2-APR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.36~~	~~43000~~	~~JAB~~
2.	74367-33-2	Propanoic acid,2-methyl-,2,2-m	~~15.36~~	~~1800~~	~~JB~~
3.		PROPANOIC ACID,2-METHYL-,3-HYD	~~15.62~~	~~1600~~	~~JB~~
4.		UNKNOWN	~~17.47~~	~~4400~~	~~JB~~
5.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	18.57	1100	J
6.		HYDROCARBON	~~19.47~~	~~1000~~	~~JB~~
7.		HYDROCARBON	~~21.76~~	~~3900~~	~~JB~~
8.		UNKNOWN	22.62	2100	J
9.		ALKYL HYDROCARBON	23.00	550	J
10.	84-65-1	Anthracedione	~~23.21~~	~~16000~~	~~JB~~
11.		HYDROCARBON	~~23.88~~	~~910~~	~~JB~~
12.		HYDROCARBON	~~24.57~~	~~1200~~	~~JB~~
13.		HYDROCARBON	~~24.92~~	~~730~~	~~JB~~
14.		UNKNOWN	24.98	550	J
15.		ALKYL HYDROCARBON	~~25.77~~	~~1300~~	~~JB~~
16.		ALKYL HYDROCARBON	26.69	1100	JB
17.		PHOSPHONIC ACID,DIOCTADECYL ES	27.50	11000	JB
18.		SAT'D HYDROCARBON	28.32	700	JB
19.		PHOSPHONIC ACID,DIOCTADECYL ES	29.13	1300	JB
20.		HYDROCARBON	32.93	4400	JB
21.		HYDROCARBON	~~35.88~~	~~1400~~	~~JB~~
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:13

AnaLIS ID: 910328-078
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11259
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH10
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 31-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: .1
Percent Moisture (decanted):
Associated Blank: 910404-023
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	4800U J	53-70-3	Dibenz(a,h)anthracene	990U J
534-52-1	4,6-Dinitro-2-methylphenol	4800U	191-24-2	Benzo(g,h,i)perylene	990U J
86-30-6	N-Nitrosodiphenylamine	990U			
101-55-3	4-Bromophenyl-phenylether	990U			
118-74-1	Hexachlorobenzene	990U			
87-86-5	Pentachlorophenol	4800U			
85-01-8	Phenanthrene	990U			
120-12-7	Anthracene	990U J			
84-74-2	Di-n-butylphthalate	1100 ~~B~~ UJ			
206-44-0	Fluoranthene	990U J			
129-00-0	Pyrene	990U			
85-68-7	Butylbenzylphthalate	990U			
91-94-1	3,3'-Dichlorobenzidine	2000U			
56-55-3	Benzo(a)anthracene	990U			
117-81-7	bis(2-Ethylhexyl)phthalate	990U			
218-01-9	Chrysene	990U			
117-84-0	Di-n-octylphthalate	990U			
205-99-2	Benzo(b)fluoranthene	990U			
207-08-9	Benzo(k)fluoranthene	990U			
50-32-8	Benzo(a)pyrene	990U			
193-39-5	Indeno(1,2,3-cd)pyrene	990U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 09:35

AnaLIS ID: 910401-011
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11261
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH19
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 28-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 6.1
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1100U J	106-47-8	4-Chloroaniline	1100U J
111-44-4	bis(2-Chloroethyl)ether	1100U	87-68-3	Hexachlorobutadiene	1100U
95-57-8	2-Chlorophenol	1100U	59-50-7	4-Chloro-3-methylphenol	1100U
541-73-1	1,3-Dichlorobenzene	1100U	91-57-6	2-Methylnaphthalene	1100U
106-46-7	1,4-Dichlorobenzene	1100U	77-47-4	Hexachlorocyclopentadiene	1100U
100-51-6	Benzyl Alcohol	1100U	88-06-2	2,4,6-Trichlorophenol	1100U
95-50-1	1,2-Dichlorobenzene	1100U	95-95-4	2,4,5-Trichlorophenol	5100U
95-48-7	2-Methylphenol	1100U	91-58-7	2-Chloronaphthalene	1100U
108-60-1	bis(2-Chloroisopropyl)ether	1100U	88-74-4	2-Nitroaniline	5100U
106-44-5	4-Methylphenol	1100U	131-11-3	Dimethylphthalate	1100U
621-64-7	N-Nitroso-di-n-propylamine	1100U	208-96-8	Acenaphthylene	1100U
67-72-1	Hexachloroethane	1100U	99-09-2	3-Nitroaniline	5100U
98-95-3	Nitrobenzene	1100U	83-32-9	Acenaphthene	1100U
78-59-1	Isophorone	1100U	51-28-5	2,4-Dinitrophenol	5100U
88-75-5	2-Nitrophenol	1100U	100-02-7	4-Nitrophenol	5100U
105-67-9	2,4-Dimethylphenol	1100U J	132-64-9	Dibenzofuran	1100U
65-85-0	Benzoic Acid 5100	~~2800 JB~~ U	121-14-2	2,4-Dinitrotoluene	1100U
111-91-1	bis(2-Chloroethoxy)methane	1100U J	606-20-2	2,6-Dinitrotoluene	1100U
120-83-2	2,4-Dichlorophenol	1100U J	84-66-2	Diethylphthalate	1100U
120-82-1	1,2,4-Trichlorobenzene	1100U J	7005-72-3	4-Chlorophenyl-phenylether	1100U
91-20-3	Naphthalene	1100U J	86-73-7	Fluorene	1100U J

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 09:35

AnaLIS ID: 910401-011
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11261
Instrument ID: 5970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH19
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 28-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 6.1
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	5100U J	53-70-3	Dibenz(a,h)anthracene	1100U J
534-52-1	4,6-Dinitro-2-methylphenol	5100U	191-24-2	Benzo(g,h,i)perylene	1100U J
86-30-6	N-Nitrosodiphenylamine	1100U			
101-55-3	4-Bromophenyl-phenylether	1100U			
118-74-1	Hexachlorobenzene	1100U			
87-86-5	Pentachlorophenol	5100U			
85-01-8	Phenanthrene	1100U			
120-12-7	Anthracene	1100U J			
84-74-2	Di-n-butylphthalate	2200 ~~B~~ UJ			
206-44-0	Fluoranthene	1100U J			
129-00-0	Pyrene	1100U			
85-68-7	Butylbenzylphthalate	1100U			
91-94-1	3,3'-Dichlorobenzidine	2100U			
56-55-3	Benzo(a)anthracene	1100U J			
117-81-7	bis(2-Ethylhexyl)phthalate	1100 ~~380 JB~~ UJ			
218-01-9	Chrysene	1100U J			
117-84-0	Di-n-octylphthalate	1100U			
205-99-2	Benzo(b)fluoranthene	1100U			
207-08-9	Benzo(k)fluoranthene	1100U			
50-32-8	Benzo(a)pyrene	1100U			
193-39-5	Indeno(1,2,3-cd)pyrene	1100U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
22-MAY-1991 09:35

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910401-011
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 6.1 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Customer Sample ID: BOOH19
Customer: KESSNER/FANCHER
File ID: >11261
Date Received: 28-MAR-1991
Date Analyzed: 5-APR-1991
Date Extracted: 2-APR-1991
pH:

Number TICs found: 19

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.43~~	~~66000~~	~~JAB~~
2.	74367-33-2	Propanoic acid,2-methyl-,2,2-m	~~15.37~~	~~1500~~	~~JB~~
3.		PROPANOIC ACID,2-METHYL-,3-HYD	~~15.65~~	~~940~~	~~JB~~
4.		UNKNOWN	~~17.50~~	~~61000~~	~~JB~~
5.	74381-40-1	Propanoic acid, 2-methyl-,1-(1	18.58	3300	J
6.		HYDROCARBON	~~19.49~~	~~1400~~	~~JB~~
7.	117-82-8	bis(2-Methoxyethyl)ester	21.17	880	J
8.		HYDROCARBON	~~21.79~~	~~3600~~	~~JB~~
9.		UNKNOWN	22.63	2100	JB
10.	84-65-1	Anthracedione	23.24	20000	JB
11.		HYDROCARBON	23.89	1500	JB
12.		HYDROCARBON	24.60	2400	JB
13.		HYDROCARBON	24.93	970	JB
14.		HYDROCARBON	25.78	2800	JB
15.		HYDROCARBON	26.70	1200	JB
16.		HYDROCARBON	27.54	15000	JB
17.		PHOSPHONIC ACID,DIOCTADECYL ES	29.14	1900	JB
18.		HYDROCARBON	32.97	6400	JB
19.		UNKNOWN	~~35.96~~	~~1200~~	~~JB~~
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:29

AnaLIS ID: 910401-014
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11260
Instrument ID: 56970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH23
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 31-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 22.3
Percent Moisture (decanted):
Associated Blank: 910404-032
[] : Result has been Corrected for Spike

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

CAS		ug/Kg	CAS		ug/Kg
108-95-2	Phenol	1300U	106-47-8	4-Chloroaniline	1300U
111-44-4	bis(2-Chloroethyl)ether	1300U	87-68-3	Hexachlorobutadiene	1300U
95-57-8	2-Chlorophenol	1300U	59-50-7	4-Chloro-3-methylphenol	1300U
541-73-1	1,3-Dichlorobenzene	1300U	91-57-6	2-Methylnaphthalene	1300U
106-46-7	1,4-Dichlorobenzene	1300U	77-47-4	Hexachlorocyclopentadiene	1300U
100-51-6	Benzyl Alcohol	1300U	88-06-2	2,4,6-Trichlorophenol	1300U
95-50-1	1,2-Dichlorobenzene	1300U	95-95-4	2,4,5-Trichlorophenol	6200U
95-48-7	2-Methylphenol	1300U	91-58-7	2-Chloronaphthalene	1300U
108-60-1	bis(2-Chloroisopropyl)ether	1300U	88-74-4	2-Nitroaniline	6200U
106-44-5	4-Methylphenol	1300U	131-11-3	Dimethylphthalate	1300U
621-64-7	N-Nitroso-di-n-propylamine	1300U	208-96-8	Acenaphthylene	1300U
67-72-1	Hexachloroethane	1300U	99-09-2	3-Nitroaniline	6200U
98-95-3	Nitrobenzene	1300U	83-32-9	Acenaphthene	1300U
78-59-1	Isophorone	1300U	51-28-5	2,4-Dinitrophenol	6200U
88-75-5	2-Nitrophenol	1300U	100-02-7	4-Nitrophenol	6200U
105-67-9	2,4-Dimethylphenol	1300U	132-64-9	Dibenzofuran	1300U
65-85-0	Benzoic Acid	6200 ~~3500B~~ U	121-14-2	2,4-Dinitrotoluene	1300U
111-91-1	bis(2-Chloroethoxy)methane	1300U	606-20-2	2,6-Dinitrotoluene	1300U
120-83-2	2,4-Dichlorophenol	1300U	84-66-2	Diethylphthalate	1300 ~~580B~~ U
120-82-1	1,2,4-Trichlorobenzene	1300U	7005-72-3	4-Chlorophenyl-phenylether	1300U
91-20-3	Naphthalene	1300U	86-73-7	Fluorene	1300U

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:29

AnaLIS ID: 910401-014
Laboratory: Organic Mass Spectroscopy Laboratory
File ID: >11260
Instrument ID: 56970-3
Authorized By: D. C. Canada

Customer Sample ID: BOOH23
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 31-MAR-1991

BNA - Base/Neutral/Acid Compounds (TCL)

Date Extracted/Prepared: 2-APR-1991
Preparation Procedure Number: EPA-3550
Percent Moisture: 22.3
Percent Moisture (decanted):
Associated Blank: 910404-032

Date Analyzed: 5-APR-1991
Analysis Procedure Number: ACD 2470
Dilution Factor: 1.0
Analyst: C MEEHAN
QA File Number: 910405CM-0116

[] : Result has been Corrected for Spike

CAS		ug/Kg	CAS		ug/Kg
100-01-6	4-Nitroaniline	6200U	53-70-3	Dibenz(a,h)anthracene	1300U
534-52-1	4,6-Dinitro-2-methylphenol	6200U	191-24-2	Benzo(g,h,i)perylene	1300U
86-30-6	N-Nitrosodiphenylamine	1300U			
101-55-3	4-Bromophenyl-phenylether	1300U			
118-74-1	Hexachlorobenzene	1300U			
87-86-5	Pentachlorophenol	6200U			
85-01-8	Phenanthrene	1300U			
120-12-7	Anthracene	1300U			
84-74-2	Di-n-butylphthalate	3700 ~~B~~ U			
206-44-0	Fluoranthene	1300U			
129-00-0	Pyrene	1300U			
85-68-7	Butylbenzylphthalate	1300U			
91-94-1	3,3'-Dichlorobenzidine	2500U			
56-55-3	Benzo(a)anthracene	1300U			
117-81-7	bis(2-Ethylhexyl)phthalate	1300 ~~770 JB~~ U			
218-01-9	Chrysene	1300U			
117-84-0	Di-n-octylphthalate	1300U			
205-99-2	Benzo(b)fluoranthene	1300U			
207-08-9	Benzo(k)fluoranthene	1300U			
50-32-8	Benzo(a)pyrene	1300U			
193-39-5	Indeno(1,2,3-cd)pyrene	1300U			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

Oak Ridge K-25 Site
Analytical Chemistry Department

Date Printed:
20-MAY-1991 13:29

BNA (TCL) SOIL ORGANICS ANALYSIS DATA SHEETS
TENTATIVELY IDENTIFIED COMPOUNDS

AnaLIS ID: 910401-014
Laboratory: Organic Mass Spectroscopy Laboratory
Sample Matrix: SOIL
Level: (low/med): LOW
Dilution Factor: 1.0
% Moisture: not dec. 22.3 dec.
Extraction: (SepF/Cont/Sonc) SoxH
GPC Cleanup: (Y/N) N

Number TICs found: 20

Customer Sample ID: BOOH23
Customer: KESSNER/FANCHER
File ID: >11260
Date Received: 31-MAR-1991
Date Analyzed: 5-APR-1991
Date Extracted: 2-APR-1991
pH:

Concentration Units
(ug/L or ug/Kg): ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	2-Pentanone, 4-hydroxy-4-methy	~~6.42~~	~~85000~~	~~JAB~~
2.	74367-33-2	Propanoic acid,2-methyl-,2,2-m	~~15.36~~	~~2300~~	~~JB~~
3.		PROPANOIC ACID,2-METHYL-,3-HYD	~~15.63~~	~~1400~~	~~JB~~
4.		HYDROCARBON	16.91	1100	J
5.		UNKNOWN	~~17.50~~	~~21000~~	~~JB~~
6.		UNKNOWN	18.58	1100	J
7.		HYDROCARBON	~~19.47~~	~~1500~~	~~JB~~
8.	117-82-8	bis(2-Methoxyethyl)ester	21.69	1200	J
9.		HYDROCARBON	~~21.77~~	~~5700~~	~~JB~~
10.	84-65-1	Anthracedione	23.23	23000	JB
11.		HYDROCARBON	23.85	1600	JB
12.		HYDROCARBON	24.58	2800	JB
13.		HYDROCARBON	25.74	3400	JB
14.		HYDROCARBON	26.68	2100	JB
15.		PHOSPHONIC ACID,DIOCTADECYL ES	27.52	19000	JB
16.		SAT'D HYDROCARBON	28.31	1500	JB
17.		PHOSPHONIC ACID, DIOCTADECYL E	~~29.10~~	~~2500~~	~~JB~~
18.		HYDROCARBON	30.20	1100	J
19.		HYDROCARBON	~~32.95~~	~~7400~~	~~JB~~
20.		UNKNOWN (HYDROCARBON?)	~~35.84~~	~~2700~~	~~JB~~
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

JB 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

PESTICIDE -
PCBs

9513356.2675

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:12

AnaLIS ID: 910215-004
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FK6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 11.6
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	14U J	11104-28-2	Aroclor-1221	140U J
319-85-7	beta-BHC	14 ~~0.75L~~ U J	11141-16-5	Aroclor-1232	140U J
319-86-8	delta-BHC	14U J	53469-21-9	Aroclor-1242	140U J
58-89-9	gamma-BHC(Lindane)	14U	12672-29-6	Aroclor-1248	140U J
76-44-8	Heptachlor	14U	11097-69-1	Aroclor-1254	280U J
309-00-2	Aldrin	14U	11096-82-5	Aroclor-1260	280U J
1024-57-3	Heptachlor Epoxide	14U			
959-98-8	Endosulfan I	14U			
60-57-1	Dieldrin	27U			
72-55-9	4,4'-DDE	27U			
72-20-8	Endrin	27U			
33213-65-9	Endosulfan II	27U			
72-54-8	4,4'-DDD	27U			
1031-07-8	Endosulfan Sulfate	27U			
50-29-3	4,4'-DDT	27U			
72-43-5	Methoxychlor	140U			
53494-70-5	Endrin Ketone	27U			
5103-71-9	alpha-Chlordane	140U			
5103-74-2	gamma-Chlordane	140U			
8001-35-2	Toxaphene	270U			
12674-11-2	Aroclor-1016	140U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:16

AnaLIS ID: 910215-005
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FK7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 10.9
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	140U J
319-85-7	beta-BHC	13U	11141-16-5	Aroclor-1232	140U J
319-86-8	delta-BHC	13U	53469-21-9	Aroclor-1242	140U J
58-89-9	gamma-BHC(Lindane)	13U	12672-29-6	Aroclor-1248	140U J
76-44-8	Heptachlor	13U	11097-69-1	Aroclor-1254	280 ~~23.8 J~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	280U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	27U			
72-55-9	4,4'-DDE	27U			
72-20-8	Endrin	27U			
33213-65-9	Endosulfan II	27U			
72-54-8	4,4'-DDD	27U			
1031-07-8	Endosulfan Sulfate	27U			
50-29-3	4,4'-DDT	27U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	27U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	270U			
12674-11-2	Aroclor-1016	140U J			

JL 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:20

AnaLIS ID: 910215-006
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FK8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 5.3
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	13U J	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	13U J	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	13 ~~3.71~~ UJ	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	13U J	11097-69-1	Aroclor-1254	260 ~~32.41~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	25U			
72-55-9	4,4'-DDE	25U			
72-20-8	Endrin	25U			
33213-65-9	Endosulfan II	25U			
72-54-8	4,4'-DDD	25U			
1031-07-8	Endosulfan Sulfate	25U			
50-29-3	4,4'-DDT	25U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	25U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	250U			
12674-11-2	Aroclor-1016	130U J			

JZ 6/29/91

Data Reporting Qualifiers:

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B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:24

AnaLIS ID: 910215-007
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FK9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 6.7
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	13U J	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	13U J	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	13 ~~2.94~~ UJ	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	13U J	11097-69-1	Aroclor-1254	260 ~~32.74~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	26U			
72-55-9	4,4'-DDE	26U			
72-20-8	Endrin	26U			
33213-65-9	Endosulfan II	26U			
72-54-8	4,4'-DDD	26U			
1031-07-8	Endosulfan Sulfate	26U			
50-29-3	4,4'-DDT	26U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	26U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	260U			
12674-11-2	Aroclor-1016	130U J			

JJ 6/29/91

Data Reporting Qualifiers:

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J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
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E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:45

AnaLIS ID: 910215-008
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOFLO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 6.8
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg
319-84-6	alpha-BHC	13U J
319-85-7	beta-BHC	13U
319-86-8	delta-BHC	13U
58-89-9	gamma-BHC(Lindane)	13U
76-44-8	Heptachlor	13U
309-00-2	Aldrin	13U
1024-57-3	Heptachlor Epoxide	13U
959-98-8	Endosulfan I	13U
60-57-1	Dieldrin	26U
72-55-9	4,4'-DDE	26U
72-20-8	Endrin	26U
33213-65-9	Endosulfan II	26U
72-54-8	4,4'-DDD	26U
1031-07-8	Endosulfan Sulfate	26U
50-29-3	4,4'-DDT	26U
72-43-5	Methoxychlor	130U
53494-70-5	Endrin Ketone	26U
5103-71-9	alpha-Chlordane	130U
5103-74-2	gamma-Chlordane	130U
8001-35-2	Toxaphene	260U
12674-11-2	Aroclor-1016	130U J

CAS		ug/Kg
11104-28-2	Aroclor-1221	130U J
11141-16-5	Aroclor-1232	130U J
53469-21-9	Aroclor-1242	130U J
12672-29-6	Aroclor-1248	130U J
11097-69-1	Aroclor-1254	260 ~~16.4~~ 4J
11096-82-5	Aroclor-1260	260U J

6/29/91

Data Reporting Qualifiers:

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J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:48

AnaLIS ID: 910215-009
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOFL1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 11.2
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	14UJ	11104-28-2	Aroclor-1221	140UJ
319-85-7	beta-BHC	14U	11141-16-5	Aroclor-1232	140UJ
319-86-8	delta-BHC	14U	53469-21-9	Aroclor-1242	140UJ
58-89-9	gamma-BHC(Lindane)	14U	12672-29-6	Aroclor-1248	140UJ
76-44-8	Heptachlor	14U	11097-69-1	Aroclor-1254	280 ~~25.8J~~ UJ
309-00-2	Aldrin	14U	11096-82-5	Aroclor-1260	280UJ
1024-57-3	Heptachlor Epoxide	14U			
959-98-8	Endosulfan I	14U			
60-57-1	Dieldrin	27U			
72-55-9	4,4'-DDE	27U			
72-20-8	Endrin	27U			
33213-65-9	Endosulfan II	27U			
72-54-8	4,4'-DDD	27U			
1031-07-8	Endosulfan Sulfate	27U			
50-29-3	4,4'-DDT	27U			
72-43-5	Methoxychlor	140U			
53494-70-5	Endrin Ketone	27U			
5103-71-9	alpha-Chlordane	140U			
5103-74-2	gamma-Chlordane	140U			
8001-35-2	Toxaphene	270U			
12674-11-2	Aroclor-1016	140UJ			

JS 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:30

AnaLIS ID: 910215-010
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FL3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	12U J	11104-28-2	Aroclor-1221	120U J
319-85-7	beta-BHC	12U J	11141-16-5	Aroclor-1232	120U J
319-86-8	delta-BHC	12U J	53469-21-9	Aroclor-1242	120U J
58-89-9	gamma-BHC(Lindane)	12 ~~0.714~~ UJ	12672-29-6	Aroclor-1248	120U J
76-44-8	Heptachlor	12U J	11097-69-1	Aroclor-1254	240 ~~48.54~~ UJ
309-00-2	Aldrin	12U	11096-82-5	Aroclor-1260	240U J
1024-57-3	Heptachlor Epoxide	12U			
959-98-8	Endosulfan I	12U			
60-57-1	Dieldrin	24U			
72-55-9	4,4'-DDE	24U			
72-20-8	Endrin	24U			
33213-65-9	Endosulfan II	24U			
72-54-8	4,4'-DDD	24U			
1031-07-8	Endosulfan Sulfate	24U			
50-29-3	4,4'-DDT	24U			
72-43-5	Methoxychlor	120U			
53494-70-5	Endrin Ketone	24U			
5103-71-9	alpha-Chlordane	120U			
5103-74-2	gamma-Chlordane	120U			
8001-35-2	Toxaphene	240U			
12674-11-2	Aroclor-1016	120U J			

J 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:33

AnaLIS ID: 910215-011
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOFL4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 4.9
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	13U J	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	13U J	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	13 ~~0.54~~ UJ	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	13U J	11097-69-1	Aroclor-1254	260 ~~39.2~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	25U			
72-55-9	4,4'-DDE	25U			
72-20-8	Endrin	25U			
33213-65-9	Endosulfan II	25U			
72-54-8	4,4'-DDD	25U			
1031-07-8	Endosulfan Sulfate	25U			
50-29-3	4,4'-DDT	25U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	25U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	250U			
12674-11-2	Aroclor-1016	130U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed: 14-JUN-1991 08:55

AnaLIS ID: 910215-012
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00GR9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 5.3
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	13 ~~0.774~~ UJ	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	13U J	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	13 ~~2.65~~ UJ	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	13U J	11097-69-1	Aroclor-1254	260 ~~49.6~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	25U			
72-55-9	4,4'-DDE	25U			
72-20-8	Endrin	25U			
33213-65-9	Endosulfan II	25U			
72-54-8	4,4'-DDD	25U			
1031-07-8	Endosulfan Sulfate	25U			
50-29-3	4,4'-DDT	25U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	25U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	250U			
12674-11-2	Aroclor-1016	130U J			

JZ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:39

AnaLIS ID: 910219-091
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00GS4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 23.2
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	16U J	11104-28-2	Aroclor-1221	160U J
319-85-7	beta-BHC	16U J	11141-16-5	Aroclor-1232	160U J
319-86-8	delta-BHC	16U J	53469-21-9	Aroclor-1242	160U J
58-89-9	gamma-BHC(Lindane)	16 ~~1.3L~~ UJ	12672-29-6	Aroclor-1248	160U J
76-44-8	Heptachlor	16U J	11097-69-1	Aroclor-1254	320 ~~4.3L~~ UJ
309-00-2	Aldrin	16U	11096-82-5	Aroclor-1260	320U J
1024-57-3	Heptachlor Epoxide	16U			
959-98-8	Endosulfan I	16U			
60-57-1	Dieldrin	31U			
72-55-9	4,4'-DDE	31U			
72-20-8	Endrin	31U			
33213-65-9	Endosulfan II	31U			
72-54-8	4,4'-DDD	31U			
1031-07-8	Endosulfan Sulfate	31U			
50-29-3	4,4'-DDT	31U			
72-43-5	Methoxychlor	160U			
53494-70-5	Endrin Ketone	31U			
5103-71-9	alpha-Chlordane	160U			
5103-74-2	gamma-Chlordane	160U			
8001-35-2	Toxaphene	310U			
12674-11-2	Aroclor-1016	160U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
12-JUN-1991 08:06

AnaLIS ID: 910222-063
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00GS9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 22-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 7.3
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	13U J	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	13U J	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	13 ~~3.5J~~ UJ	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	13U J	11097-69-1	Aroclor-1254	260 ~~44.3J~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	26U			
72-55-9	4,4'-DDE	26U			
72-20-8	Endrin	26U			
33213-65-9	Endosulfan II	26U			
72-54-8	4,4'-DDD	26U			
1031-07-8	Endosulfan Sulfate	26U			
50-29-3	4,4'-DDT	26U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	26U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	260U			
12674-11-2	Aroclor-1016	130U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 10:50

AnaLIS ID: 910224-067
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGT7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 24-FEB-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 4.0
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	13U J	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	13U J	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	13 ~~1.4L~~ UJ	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	13U J	11097-69-1	Aroclor-1254	260 ~~31.3L~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	25U			
72-55-9	4,4'-DDE	25U			
72-20-8	Endrin	25U			
33213-65-9	Endosulfan II	25U			
72-54-8	4,4'-DDD	25U			
1031-07-8	Endosulfan Sulfate	25U			
50-29-3	4,4'-DDT	25U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	25U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	250U			
12674-11-2	Aroclor-1016	130U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:41

AnaLIS ID: 910304-008
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV5
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 4-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 8.0
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	13U J	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	13U J	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	13 ~~4.71~~ UJ	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	13U J	11097-69-1	Aroclor-1254	260 ~~34.4~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	26U			
72-55-9	4,4'-DDE	26U			
72-20-8	Endrin	26U			
33213-65-9	Endosulfan II	26U			
72-54-8	4,4'-DDD	26U			
1031-07-8	Endosulfan Sulfate	26U			
50-29-3	4,4'-DDT	26U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	26U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	260U			
12674-11-2	Aroclor-1016	130U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:39

AnaLIS ID: 910307-043
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	13U J	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	13U J	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	13 ~~1.44~~ UJ	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	13U J	11097-69-1	Aroclor-1254	260 ~~48.54~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	25U			
72-55-9	4,4'-DDE	25U			
72-20-8	Endrin	25U			
33213-65-9	Endosulfan II	25U			
72-54-8	4,4'-DDD	25U			
1031-07-8	Endosulfan Sulfate	25U			
50-29-3	4,4'-DDT	25U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	25U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	250U			
12674-11-2	Aroclor-1016	130U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:04

AnaLIS ID: 910307-044
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 4.0
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13UJ	11104-28-2	Aroclor-1221	130UJ
319-85-7	beta-BHC	13UJ	11141-16-5	Aroclor-1232	130UJ
319-86-8	delta-BHC	13UJ	53469-21-9	Aroclor-1242	130UJ
58-89-9	gamma-BHC(Lindane)	13 ~~1.24~~ UJ	12672-29-6	Aroclor-1248	130UJ
76-44-8	Heptachlor	13UJ	11097-69-1	Aroclor-1254	260 ~~42.3~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260UJ
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	25U			
72-55-9	4,4'-DDE	25U			
72-20-8	Endrin	25U			
33213-65-9	Endosulfan II	25U			
72-54-8	4,4'-DDD	25U			
1031-07-8	Endosulfan Sulfate	25U			
50-29-3	4,4'-DDT	25U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	25U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	250U			
12674-11-2	Aroclor-1016	130UJ			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:17

AnaLIS ID: 910307-045
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0542
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 19-MAR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 19-MAR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0542

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	13U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	13U J	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	13U J	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	13 ~~0.94J~~ UJ	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	13U J	11097-69-1	Aroclor-1254	260 ~~34.8J~~ UJ
309-00-2	Aldrin	13U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	13U			
959-98-8	Endosulfan I	13U			
60-57-1	Dieldrin	25U			
72-55-9	4,4'-DDE	25U			
72-20-8	Endrin	25U			
33213-65-9	Endosulfan II	25U			
72-54-8	4,4'-DDD	25U			
1031-07-8	Endosulfan Sulfate	25U			
50-29-3	4,4'-DDT	25U			
72-43-5	Methoxychlor	130U			
53494-70-5	Endrin Ketone	25U			
5103-71-9	alpha-Chlordane	130U			
5103-74-2	gamma-Chlordane	130U			
8001-35-2	Toxaphene	250U			
12674-11-2	Aroclor-1016	130U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:08

AnaLIS ID: 910308-108
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	60U J	11104-28-2	Aroclor-1221	120U J
319-85-7	beta-BHC	60U	11141-16-5	Aroclor-1232	120U J
319-86-8	delta-BHC	60U	53469-21-9	Aroclor-1242	120U J
58-89-9	gamma-BHC(Lindane)	60U	12672-29-6	Aroclor-1248	120U J
76-44-8	Heptachlor	60U	11097-69-1	Aroclor-1254	240 ~~470~~ UJ
309-00-2	Aldrin	60U	11096-82-5	Aroclor-1260	240U J
1024-57-3	Heptachlor Epoxide	60U			
959-98-8	Endosulfan I	60U			
60-57-1	Dieldrin	120U			
72-55-9	4,4'-DDE	120U			
72-20-8	Endrin	120U			
33213-65-9	Endosulfan II	120U			
72-54-8	4,4'-DDD	120U			
1031-07-8	Endosulfan Sulfate	120U			
50-29-3	4,4'-DDT	120U			
72-43-5	Methoxychlor	600U			
53494-70-5	Endrin Ketone	120U			
5103-71-9	alpha-Chlordane	600U			
5103-74-2	gamma-Chlordane	600U			
8001-35-2	Toxaphene	1200U			
12674-11-2	Aroclor-1016	120U J			

JJ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:12

AnaLIS ID: 910308-109
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGW1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	62U J	11104-28-2	Aroclor-1221	120U J
319-85-7	beta-BHC	62U	11141-16-5	Aroclor-1232	120U J
319-86-8	delta-BHC	62U	53469-21-9	Aroclor-1242	120U J
58-89-9	gamma-BHC(Lindane)	62U	12672-29-6	Aroclor-1248	120U J
76-44-8	Heptachlor	62U	11097-69-1	Aroclor-1254	240 ~~2294~~ UJ
309-00-2	Aldrin	62U	11096-82-5	Aroclor-1260	240U J
1024-57-3	Heptachlor Epoxide	62U			
959-98-8	Endosulfan I	62U			
60-57-1	Dieldrin	120U			
72-55-9	4,4'-DDE	120U			
72-20-8	Endrin	120U			
33213-65-9	Endosulfan II	120U			
72-54-8	4,4'-DDD	120U			
1031-07-8	Endosulfan Sulfate	120U			
50-29-3	4,4'-DDT	120U			
72-43-5	Methoxychlor	620U			
53494-70-5	Endrin Ketone	120U			
5103-71-9	alpha-Chlordane	620U			
5103-74-2	gamma-Chlordane	620U			
8001-35-2	Toxaphene	1200U			
12674-11-2	Aroclor-1016	120U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:51

AnaLIS ID: 910308-110
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGWO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	60U J	11104-28-2	Aroclor-1221	120U J
319-85-7	beta-BHC	60U	11141-16-5	Aroclor-1232	120U J
319-86-8	delta-BHC	60U	53469-21-9	Aroclor-1242	120U J
58-89-9	gamma-BHC(Lindane)	60U	12672-29-6	Aroclor-1248	120U J
76-44-8	Heptachlor	60U	11097-69-1	Aroclor-1254	260 ~~421~~ UJ
309-00-2	Aldrin	60U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	60U			
959-98-8	Endosulfan I	60U			
60-57-1	Dieldrin	120U			
72-55-9	4,4'-DDE	120U			
72-20-8	Endrin	120U			
33213-65-9	Endosulfan II	120U			
72-54-8	4,4'-DDD	120U			
1031-07-8	Endosulfan Sulfate	120U			
50-29-3	4,4'-DDT	120U			
72-43-5	Methoxychlor	600U			
53494-70-5	Endrin Ketone	120U			
5103-71-9	alpha-Chlordane	600U			
5103-74-2	gamma-Chlordane	600U			
8001-35-2	Toxaphene	1200U			
12674-11-2	Aroclor-1016	120U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:54

AnaLIS ID: 910308-111
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGW4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 3.0
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	62U J	11104-28-2	Aroclor-1221	120U J
319-85-7	beta-BHC	62U	11141-16-5	Aroclor-1232	120U J
319-86-8	delta-BHC	62U	53469-21-9	Aroclor-1242	120U J
58-89-9	gamma-BHC(Lindane)	62U	12672-29-6	Aroclor-1248	120U J
76-44-8	Heptachlor	62U	11097-69-1	Aroclor-1254	240 ~~480~~ U J
309-00-2	Aldrin	62U	11096-82-5	Aroclor-1260	240U J
1024-57-3	Heptachlor Epoxide	62U			
959-98-8	Endosulfan I	62U			
60-57-1	Dieldrin	120U			
72-55-9	4,4'-DDE	120U			
72-20-8	Endrin	120U			
33213-65-9	Endosulfan II	120U			
72-54-8	4,4'-DDD	120U			
1031-07-8	Endosulfan Sulfate	120U			
50-29-3	4,4'-DDT	120U			
72-43-5	Methoxychlor	620U			
53494-70-5	Endrin Ketone	120U			
5103-71-9	alpha-Chlordane	620U			
5103-74-2	gamma-Chlordane	620U			
8001-35-2	Toxaphene	1200U			
12674-11-2	Aroclor-1016	120U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:58

AnaLIS ID: 910308-113
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGW8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	62U J	11104-28-2	Aroclor-1221	120U J
319-85-7	beta-BHC	62U	11141-16-5	Aroclor-1232	120U J
319-86-8	delta-BHC	62U	53469-21-9	Aroclor-1242	120U J
58-89-9	gamma-BHC(Lindane)	62U	12672-29-6	Aroclor-1248	120U J
76-44-8	Heptachlor	62U	11097-69-1	Aroclor-1254	240 ~~65J~~ UJ
309-00-2	Aldrin	62U	11096-82-5	Aroclor-1260	240U J
1024-57-3	Heptachlor Epoxide	62U			
959-98-8	Endosulfan I	62U			
60-57-1	Dieldrin	120U			
72-55-9	4,4'-DDE	120U			
72-20-8	Endrin	120U			
33213-65-9	Endosulfan II	120U			
72-54-8	4,4'-DDD	120U			
1031-07-8	Endosulfan Sulfate	120U			
50-29-3	4,4'-DDT	120U			
72-43-5	Methoxychlor	620U			
53494-70-5	Endrin Ketone	120U			
5103-71-9	alpha-Chlordane	620U			
5103-74-2	gamma-Chlordane	620U			
8001-35-2	Toxaphene	1200U			
12674-11-2	Aroclor-1016	120U J			

JL 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed: 20-MAY-1991 10:52

AnaLIS ID: 910311-027
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGW3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 11-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 3.0
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	62U J	11104-28-2	Aroclor-1221	120U J
319-85-7	beta-BHC	62U	11141-16-5	Aroclor-1232	120U J
319-86-8	delta-BHC	62U	53469-21-9	Aroclor-1242	120U J
58-89-9	gamma-BHC(Lindane)	62U	12672-29-6	Aroclor-1248	120U J
76-44-8	Heptachlor	62U	11097-69-1	Aroclor-1254	240 ~~310~~ UJ
309-00-2	Aldrin	62U	11096-82-5	Aroclor-1260	240U J
1024-57-3	Heptachlor Epoxide	62U			
959-98-8	Endosulfan I	62U			
60-57-1	Dieldrin	120U			
72-55-9	4,4'-DDE	120U			
72-20-8	Endrin	120U			
33213-65-9	Endosulfan II	120U			
72-54-8	4,4'-DDD	120U			
1031-07-8	Endosulfan Sulfate	120U			
50-29-3	4,4'-DDT	120U			
72-43-5	Methoxychlor	620U			
53494-70-5	Endrin Ketone	120U			
5103-71-9	alpha-Chlordane	620U			
5103-74-2	gamma-Chlordane	620U			
8001-35-2	Toxaphene	1200U			
12674-11-2	Aroclor-1016	120U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:12

AnaLIS ID: 910313-103
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGX6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 5.4
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	63U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	63U	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	63U	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	63U	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	63U	11097-69-1	Aroclor-1254	260 ~~171~~ UJ
309-00-2	Aldrin	63U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	63U			
959-98-8	Endosulfan I	63U			
60-57-1	Dieldrin	130U			
72-55-9	4,4'-DDE	130U			
72-20-8	Endrin	130U			
33213-65-9	Endosulfan II	130U			
72-54-8	4,4'-DDD	130U			
1031-07-8	Endosulfan Sulfate	130U			
50-29-3	4,4'-DDT	130U			
72-43-5	Methoxychlor	630U			
53494-70-5	Endrin Ketone	130U			
5103-71-9	alpha-Chlordane	630U			
5103-74-2	gamma-Chlordane	630U			
8001-35-2	Toxaphene	1300U			
12674-11-2	Aroclor-1016	130U J			

JJ 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:25

AnaLIS ID: 910315-060
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGZ2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 4.2
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg
319-84-6	alpha-BHC	63U J
319-85-7	beta-BHC	63U
319-86-8	delta-BHC	63U
58-89-9	gamma-BHC(Lindane)	63U
76-44-8	Heptachlor	63U
309-00-2	Aldrin	63U
1024-57-3	Heptachlor Epoxide	63U
959-98-8	Endosulfan I	63U
60-57-1	Dieldrin	130U
72-55-9	4,4'-DDE	130U
72-20-8	Endrin	130U
33213-65-9	Endosulfan II	130U
72-54-8	4,4'-DDD	130U
1031-07-8	Endosulfan Sulfate	130U
50-29-3	4,4'-DDT	130U
72-43-5	Methoxychlor	630U
53494-70-5	Endrin Ketone	130U
5103-71-9	alpha-Chlordane	630U
5103-74-2	gamma-Chlordane	630U
8001-35-2	Toxaphene	1300U
12674-11-2	Aroclor-1016	130U J

CAS		ug/Kg
11104-28-2	Aroclor-1221	130U J
11141-16-5	Aroclor-1232	130U J
53469-21-9	Aroclor-1242	130U J
12672-29-6	Aroclor-1248	130U J
11097-69-1	Aroclor-1254	260 ~~251~~ UJ
11096-82-5	Aroclor-1260	260U J

JJ 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 12:33

AnaLIS ID: 910319-085
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGZ6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 16.7
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 10
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	140U J	11104-28-2	Aroclor-1221	140U J
319-85-7	beta-BHC	140U	11141-16-5	Aroclor-1232	140U J
319-86-8	delta-BHC	140U	53469-21-9	Aroclor-1242	140U J
58-89-9	gamma-BHC(Lindane)	140U	12672-29-6	Aroclor-1248	140U J
76-44-8	Heptachlor	140U	11097-69-1	Aroclor-1254	280 ~~1990~~ UJ
309-00-2	Aldrin	140U	11096-82-5	Aroclor-1260	280U J
1024-57-3	Heptachlor Epoxide	140U			
959-98-8	Endosulfan I	140U			
60-57-1	Dieldrin	290U			
72-55-9	4,4'-DDE	290U			
72-20-8	Endrin	290U			
33213-65-9	Endosulfan II	290U			
72-54-8	4,4'-DDD	290U			
1031-07-8	Endosulfan Sulfate	290U			
50-29-3	4,4'-DDT	290U			
72-43-5	Methoxychlor	1400U			
53494-70-5	Endrin Ketone	290U			
5103-71-9	alpha-Chlordane	1400U			
5103-74-2	gamma-Chlordane	1400U			
8001-35-2	Toxaphene	2900U			
12674-11-2	Aroclor-1016	140U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:13

AnaLIS ID: 910319-086
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH00
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 3.9
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 10
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	120U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	120U	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	120U	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	120U	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	120U	11097-69-1	Aroclor-1254	260U J
309-00-2	Aldrin	120U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	120U			
959-98-8	Endosulfan I	120U			
60-57-1	Dieldrin	250U			
72-55-9	4,4'-DDE	250U			
72-20-8	Endrin	250U			
33213-65-9	Endosulfan II	250U			
72-54-8	4,4'-DDD	250U			
1031-07-8	Endosulfan Sulfate	250U			
50-29-3	4,4'-DDT	250U			
72-43-5	Methoxychlor	1200U			
53494-70-5	Endrin Ketone	250U			
5103-71-9	alpha-Chlordane	1200U			
5103-74-2	gamma-Chlordane	1200U			
8001-35-2	Toxaphene	2500U			
12674-11-2	Aroclor-1016	130U J			

JZ 6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:15

AnaLIS ID: 910319-087
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH01
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 4.8
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 10
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	130U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	130U	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	130U	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	130U	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	130U	11097-69-1	Aroclor-1254	260 ~~223J~~ UJ
309-00-2	Aldrin	130U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	130U			
959-98-8	Endosulfan I	130U			
60-57-1	Dieldrin	250U			
72-55-9	4,4'-DDE	250U			
72-20-8	Endrin	250U			
33213-65-9	Endosulfan II	250U			
72-54-8	4,4'-DDD	250U			
1031-07-8	Endosulfan Sulfate	250U			
50-29-3	4,4'-DDT	250U			
72-43-5	Methoxychlor	1300U			
53494-70-5	Endrin Ketone	250U			
5103-71-9	alpha-Chlordane	1300U			
5103-74-2	gamma-Chlordane	1300U			
8001-35-2	Toxaphene	2500U			
12674-11-2	Aroclor-1016	130U J			

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:21

AnaLIS ID: 910319-089
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0584
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH02
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 10-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 23.2
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 10-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 10
Analyst: EK BROWN
QA File Number: GC 0584

CAS		ug/Kg
319-84-6	alpha-BHC	160U J
319-85-7	beta-BHC	160U
319-86-8	delta-BHC	160U
58-89-9	gamma-BHC(Lindane)	160U
76-44-8	Heptachlor	160U
309-00-2	Aldrin	160U
1024-57-3	Heptachlor Epoxide	160U
959-98-8	Endosulfan I	160U
60-57-1	Dieldrin	310U
72-55-9	4,4'-DDE	310U
72-20-8	Endrin	310U
33213-65-9	Endosulfan II	310U
72-54-8	4,4'-DDD	310U
1031-07-8	Endosulfan Sulfate	310U
50-29-3	4,4'-DDT	310U
72-43-5	Methoxychlor	1600U
53494-70-5	Endrin Ketone	310U
5103-71-9	alpha-Chlordane	1600U
5103-74-2	gamma-Chlordane	1600U
8001-35-2	Toxaphene	3100U
12674-11-2	Aroclor-1016	160U J

CAS		ug/Kg
11104-28-2	Aroclor-1221	160U J
11141-16-5	Aroclor-1232	160U J
53469-21-9	Aroclor-1242	160U J
12672-29-6	Aroclor-1248	160U J
11097-69-1	Aroclor-1254	320 ~~440~~ UJ
11096-82-5	Aroclor-1260	320U J

6/29/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:47

AnaLIS ID: 910321-067
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0622
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGZ8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 23-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 34.5
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 23-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0622

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	92U J	11104-28-2	Aroclor-1221	180U J
319-85-7	beta-BHC	92U	11141-16-5	Aroclor-1232	180U J
319-86-8	delta-BHC	92U	53469-21-9	Aroclor-1242	180U J
58-89-9	gamma-BHC(Lindane)	92U	12672-29-6	Aroclor-1248	180U J
76-44-8	Heptachlor	92U	11097-69-1	Aroclor-1254	360 ~~360~~ UJ
309-00-2	Aldrin	92U	11096-82-5	Aroclor-1260	360U J
1024-57-3	Heptachlor Epoxide	92U			
959-98-8	Endosulfan I	92U			
60-57-1	Dieldrin	180U			
72-55-9	4,4'-DDE	180U			
72-20-8	Endrin	180U			
33213-65-9	Endosulfan II	180U			
72-54-8	4,4'-DDD	180U			
1031-07-8	Endosulfan Sulfate	180U			
50-29-3	4,4'-DDT	180U			
72-43-5	Methoxychlor	920U			
53494-70-5	Endrin Ketone	180U			
5103-71-9	alpha-Chlordane	920U			
5103-74-2	gamma-Chlordane	920U			
8001-35-2	Toxaphene	1800U			
12674-11-2	Aroclor-1016	180U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:01

AnaLIS ID: 910321-068
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0622
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH03
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 23-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 4.7
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 23-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0622

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	63U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	63U	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	63U	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	63U	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	63U	11097-69-1	Aroclor-1254	260 ~~280~~ UJ
309-00-2	Aldrin	63U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	63U			
959-98-8	Endosulfan I	63U			
60-57-1	Dieldrin	130U			
72-55-9	4,4'-DDE	130U			
72-20-8	Endrin	130U			
33213-65-9	Endosulfan II	130U			
72-54-8	4,4'-DDD	130U			
1031-07-8	Endosulfan Sulfate	130U			
50-29-3	4,4'-DDT	130U			
72-43-5	Methoxychlor	630U			
53494-70-5	Endrin Ketone	130U			
5103-71-9	alpha-Chlordane	630U			
5103-74-2	gamma-Chlordane	630U			
8001-35-2	Toxaphene	1300U			
12674-11-2	Aroclor-1016	130U J			

JJ 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:53

AnaLIS ID: 910321-069
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0622
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH04
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 23-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 23-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 10
Analyst: EK BROWN
QA File Number: GC 0622

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	130U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	130U	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	130U	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	130U	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	130U	11097-69-1	Aroclor-1254	260 ~~310~~ UJ
309-00-2	Aldrin	130U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	130U			
959-98-8	Endosulfan I	130U			
60-57-1	Dieldrin	250U			
72-55-9	4,4'-DDE	250U			
72-20-8	Endrin	250U			
33213-65-9	Endosulfan II	250U			
72-54-8	4,4'-DDD	250U			
1031-07-8	Endosulfan Sulfate	250U			
50-29-3	4,4'-DDT	250U			
72-43-5	Methoxychlor	1300U			
53494-70-5	Endrin Ketone	250U			
5103-71-9	alpha-Chlordane	1300U			
5103-74-2	gamma-Chlordane	1300U			
8001-35-2	Toxaphene	2500U			
12674-11-2	Aroclor-1016	130U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:56

AnaLIS ID: 910321-070
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0622
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH05
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 23-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 4.3
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 23-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0622

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	63U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	63U	11141-16-5	Aroclor-1232	130U
319-86-8	delta-BHC	63U	53469-21-9	Aroclor-1242	130U
58-89-9	gamma-BHC(Lindane)	63U	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	63U	11097-69-1	Aroclor-1254	260 ~~524~~ UJ
309-00-2	Aldrin	63U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	63U			
959-98-8	Endosulfan I	63U			
60-57-1	Dieldrin	130U			
72-55-9	4,4'-DDE	130U			
72-20-8	Endrin	130U			
33213-65-9	Endosulfan II	130U			
72-54-8	4,4'-DDD	130U			
1031-07-8	Endosulfan Sulfate	130U			
50-29-3	4,4'-DDT	130U			
72-43-5	Methoxychlor	630U			
53494-70-5	Endrin Ketone	130U			
5103-71-9	alpha-Chlordane	630U			
5103-74-2	gamma-Chlordane	630U			
8001-35-2	Toxaphene	1300U			
12674-11-2	Aroclor-1016	130U J			

JZ 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:07

AnaLIS ID: 910321-071
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0622
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00H06
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 23-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 5.6
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 23-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 10
Analyst: EK BROWN
QA File Number: GC 0622

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	130U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	130U	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	130U	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	130U	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	130U	11097-69-1	Aroclor-1254	260 ~~591~~ UJ
309-00-2	Aldrin	130U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	130U			
959-98-8	Endosulfan I	130U			
60-57-1	Dieldrin	250U			
72-55-9	4,4'-DDE	250U			
72-20-8	Endrin	250U			
33213-65-9	Endosulfan II	250U			
72-54-8	4,4'-DDD	250U			
1031-07-8	Endosulfan Sulfate	250U			
50-29-3	4,4'-DDT	250U			
72-43-5	Methoxychlor	1300U			
53494-70-5	Endrin Ketone	250U			
5103-71-9	alpha-Chlordane	1300U			
5103-74-2	gamma-Chlordane	1300U			
8001-35-2	Toxaphene	2500U			
12674-11-2	Aroclor-1016	130U J			

JJ 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:19

AnaLIS ID: 910325-035
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0622
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH14
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 25-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 23-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 8.7
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 23-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 10
Analyst: EK BROWN
QA File Number: GC 0622

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	130U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	130U	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	130U	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	130U	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	130U	11097-69-1	Aroclor-1254	260 ~~1350~~ UJ
309-00-2	Aldrin	130U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	130U			
959-98-8	Endosulfan I	130U			
60-57-1	Dieldrin	260U			
72-55-9	4,4'-DDE	260U			
72-20-8	Endrin	260U			
33213-65-9	Endosulfan II	260U			
72-54-8	4,4'-DDD	260U			
1031-07-8	Endosulfan Sulfate	260U			
50-29-3	4,4'-DDT	260U			
72-43-5	Methoxychlor	1300U			
53494-70-5	Endrin Ketone	260U			
5103-71-9	alpha-Chlordane	1300U			
5103-74-2	gamma-Chlordane	1300U			
8001-35-2	Toxaphene	2600U			
12674-11-2	Aroclor-1016	130U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:13

AnaLIS ID: 910328-078
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0622
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH10
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 28-MAR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 23-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 0.1
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 23-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0622

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	60U J	11104-28-2	Aroclor-1221	120U J
319-85-7	beta-BHC	60U J	11141-16-5	Aroclor-1232	120U J
319-86-8	delta-BHC	60U J	53469-21-9	Aroclor-1242	120U J
58-89-9	gamma-BHC(Lindane)	60 ~~5.82~~ UJ	12672-29-6	Aroclor-1248	120U J
76-44-8	Heptachlor	60U J	11097-69-1	Aroclor-1254	240 ~~1040~~ UJ
309-00-2	Aldrin	60U	11096-82-5	Aroclor-1260	240U J
1024-57-3	Heptachlor Epoxide	60U			
959-98-8	Endosulfan I	60U			
60-57-1	Dieldrin	120U			
72-55-9	4,4'-DDE	120U			
72-20-8	Endrin	120U			
33213-65-9	Endosulfan II	120U			
72-54-8	4,4'-DDD	120U			
1031-07-8	Endosulfan Sulfate	120U			
50-29-3	4,4'-DDT	120U			
72-43-5	Methoxychlor	600U			
53494-70-5	Endrin Ketone	120U			
5103-71-9	alpha-Chlordane	600U			
5103-74-2	gamma-Chlordane	600U			
8001-35-2	Toxaphene	1200U			
12674-11-2	Aroclor-1016	120U J			

JZ 7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 09:35

AnaLIS ID: 910401-011
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0622
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH19
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 1-APR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 23-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 6.1
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 23-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 10
Analyst: EK BROWN
QA File Number: GC 0622

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	130U J	11104-28-2	Aroclor-1221	130U J
319-85-7	beta-BHC	130U	11141-16-5	Aroclor-1232	130U J
319-86-8	delta-BHC	130U	53469-21-9	Aroclor-1242	130U J
58-89-9	gamma-BHC(Lindane)	130U	12672-29-6	Aroclor-1248	130U J
76-44-8	Heptachlor	130U	11097-69-1	Aroclor-1254	260 ~~1091~~ UJ
309-00-2	Aldrin	130U	11096-82-5	Aroclor-1260	260U J
1024-57-3	Heptachlor Epoxide	130U			
959-98-8	Endosulfan I	130U			
60-57-1	Dieldrin	260U			
72-55-9	4,4'-DDE	260U			
72-20-8	Endrin	260U			
33213-65-9	Endosulfan II	260U			
72-54-8	4,4'-DDD	260U			
1031-07-8	Endosulfan Sulfate	260U			
50-29-3	4,4'-DDT	260U			
72-43-5	Methoxychlor	1300U			
53494-70-5	Endrin Ketone	260U			
5103-71-9	alpha-Chlordane	1300U			
5103-74-2	gamma-Chlordane	1300U			
8001-35-2	Toxaphene	2600U			
12674-11-2	Aroclor-1016	130U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:29

AnaLIS ID: 910401-014
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0622
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH23
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 1-APR-1991

PESTICIDES/PCB (TCL) SOIL

Date Extracted/Prepared: 23-APR-1991
Preparation Procedure Number: EPA-3540
Percent Moisture: 22.3
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 23-APR-1991
Analysis Procedure Number: EPA-8080
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0622

CAS		ug/Kg	CAS		ug/Kg
319-84-6	alpha-BHC	77U J	11104-28-2	Aroclor-1221	150U J
319-85-7	beta-BHC	77U	11141-16-5	Aroclor-1232	150U J
319-86-8	delta-BHC	77U	53469-21-9	Aroclor-1242	150U J
58-89-9	gamma-BHC(Lindane)	77U	12672-29-6	Aroclor-1248	150U J
76-44-8	Heptachlor	77U	11097-69-1	Aroclor-1254	300 ~~594~~ UJ
309-00-2	Aldrin	77U	11096-82-5	Aroclor-1260	300U J
1024-57-3	Heptachlor Epoxide	77U			
959-98-8	Endosulfan I	77U			
60-57-1	Dieldrin	150U			
72-55-9	4,4'-DDE	150U			
72-20-8	Endrin	150U			
33213-65-9	Endosulfan II	150U			
72-54-8	4,4'-DDD	150U			
1031-07-8	Endosulfan Sulfate	150U			
50-29-3	4,4'-DDT	150U			
72-43-5	Methoxychlor	770U			
53494-70-5	Endrin Ketone	150U			
5103-71-9	alpha-Chlordane	770U			
5103-74-2	gamma-Chlordane	770U			
8001-35-2	Toxaphene	1500U			
12674-11-2	Aroclor-1016	150U J			

7/4/91

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

HERBICIDES

95133956 2713

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:12

AnaLIS ID: 910215-004
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FK6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100U J			
93-72-1	2,4,5-TP (Silvex)	10U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:16

AnaLIS ID: 910215-005
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FK7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100UJ			
93-72-1	2,4,5-TP (Silvex)	10UJ			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:20

AnaLIS ID: 910215-006
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FK8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100U J			
93-72-1	2,4,5-TP (Silvex)	10U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:24

AnaLIS ID: 910215-007
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FK9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100UJ			
93-72-1	2,4,5-TP (Silvex)	10UJ			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:45

AnaLIS ID: 910215-008
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOFLO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100U J			
93-72-1	2,4,5-TP (Silvex)	10U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:48

AnaLIS ID: 910215-009
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOFL1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100U J			
93-72-1	2,4,5-TP (Silvex)	10U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:30

AnaLIS ID: 910215-010
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FL3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	500U J			
93-72-1	2,4,5-TP (Silvex)	50U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:33

AnaLIS ID: 910215-011
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00FL4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	500U J			
93-72-1	2,4,5-TP (Silvex)	50U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:55

AnaLIS ID: 910215-012
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00GR9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	500U J			
93-72-1	2,4,5-TP (Silvex)	50U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:39

AnaLIS ID: 910219-091
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00GS4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	500U J			
93-72-1	2,4,5-TP (Silvex)	50U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JT 6/29/91

ANALYSIS DATA REPORT

Date Printed:
12-JUN-1991 08:06

AnaLIS ID: 910222-063
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00GS9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 22-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	500U J			
93-72-1	2,4,5-TP (Silvex)	50U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 10:50

AnaLIS ID: 910224-067
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0514
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGT7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 24-FEB-1991

SOIL HERBICIDES

Date Extracted/Prepared: 6-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 6-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0514

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100U J			
93-72-1	2,4,5-TP (Silvex)	10U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:41

AnaLIS ID: 910304-008
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV5
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 4-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 8
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	150U J			
93-72-1	2,4,5-TP (Silvex)	15U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:39

AnaLIS ID: 910307-043
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 5
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: CG 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	150U J			
93-72-1	2,4,5-TP (Silvex)	15U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:04

AnaLIS ID: 910307-044
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 4
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	150U J			
93-72-1	2,4,5-TP (Silvex)	15U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JL 6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:17

AnaLIS ID: 910307-045
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 7-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 5
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	151U J			
93-72-1	2,4,5-TP (Silvex)	15.1U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:08

AnaLIS ID: 910308-108
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGV9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	150U J			
93-72-1	2,4,5-TP (Silvex)	15U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:12

AnaLIS ID: 910308-109
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGW1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	29U J			
93-72-1	2,4,5-TP (Silvex)	3U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:51

AnaLIS ID: 910308-110
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGW0
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	28U J			
93-72-1	2,4,5-TP (Silvex)	3U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:54

AnaLIS ID: 910308-111
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGW4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 3
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	148U J			
93-72-1	2,4,5-TP (Silvex)	14.8U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:58

AnaLIS ID: 910308-113
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGW8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 8-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 3.1
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	30U J			
93-72-1	2,4,5-TP (Silvex)	3U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:52

AnaLIS ID: 910311-027
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGW3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 11-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 3
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	150UJ			
93-72-1	2,4,5-TP (Silvex)	15U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

1/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:12

AnaLIS ID: 910313-103
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGX6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 13-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 5.4
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	152UJ			
93-72-1	2,4,5-TP (Silvex)	15.2UJ			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was-found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JD 7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:25

AnaLIS ID: 910315-060
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0557
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGZ2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 15-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 26-MAR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 4.2
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 26-MAR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 5
Analyst: EK BROWN
QA File Number: GC 0557

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	154U J			
93-72-1	2,4,5-TP (Silvex)	15.4U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
22-MAY-1991 12:33

AnaLIS ID: 910319-085
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGZ6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 16.69
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100UJ			
93-72-1	2,4,5-TP (Silvex)	10UJ			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:13

AnaLIS ID: 910319-086
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH00
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 3.86
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100U J			
93-72-1	2,4,5-TP (Silvex)	10U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JZ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:15

AnaLIS ID: 910319-087
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH01
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 4.78
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100U J			
93-72-1	2,4,5-TP (Silvex)	10U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:19

AnaLIS ID: 910319-088
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH01D
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 4.78
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100UJ			
93-72-1	2,4,5-TP (Silvex)	10UJ			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JZ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:21

AnaLIS ID: 910319-089
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH02
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 19-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 23.2
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	98U J			
93-72-1	2,4,5-TP (Silvex)	10U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

6/29/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:47

AnaLIS ID: 910321-067
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOGZ8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 34.7
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 50.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	4900U J			
93-72-1	2,4,5-TP (Silvex)	490U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:01

AnaLIS ID: 910321-068
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: B00H03
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 4.65
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 10.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	960UJ			
93-72-1	2,4,5-TP (Silvex)	96UJ			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:53

AnaLIS ID: 910321-069
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH04
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 5.0
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 10.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	990U J			
93-72-1	2,4,5-TP (Silvex)	99U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:56

AnaLIS ID: 910321-070
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH05
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 4.3
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 10.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	960U J			
93-72-1	2,4,5-TP (Silvex)	96U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:07

AnaLIS ID: 910321-071
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH06
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 21-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 5.6
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 10.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	980U J			
93-72-1	2,4,5-TP (Silvex)	98U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:19

AnaLIS ID: 910325-035
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH14
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 25-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 8.7
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 25.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	2400U J			
93-72-1	2,4,5-TP (Silvex)	240U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:13

AnaLIS ID: 910328-078
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: 400H10
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 28-MAR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 0.1
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 10.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	990U J			
93-72-1	2,4,5-TP (Silvex)	99U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

ANALYSIS DATA REPORT

832

Date Printed:
22-MAY-1991 09:35

AnaLIS ID: 910401-011
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH19
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 1-APR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 6.1
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 10.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	990U J			
93-72-1	2,4,5-TP (Silvex)	99U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

JJ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:29

AnaLIS ID: 910401-014
Laboratory: Gas / Liquid Chromatography Laboratory
File ID: GC 0620
Instrument ID:
Authorized By: D. S. ZINGG

Customer Sample ID: BOOH23
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received: 1-APR-1991

SOIL HERBICIDES

Date Extracted/Prepared: 25-APR-1991
Preparation Procedure Number: EPA-8150
Percent Moisture: 22.3
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 25-APR-1991
Analysis Procedure Number: EPA-8150
Dilution Factor: 1.0
Analyst: RE HOWARD
QA File Number: GC 0620

CAS		ug/Kg	CAS		ug/Kg
94-75-7	2,4-D	100U J			
93-72-1	2,4,5-TP (Silvex)	10U J			

Data Reporting Qualifiers:

U - Compound was analyzed for but not detected. The number is the attainable detection limit for the sample.
B - Analyte was found in the reagent blank as well as the sample.
J - Indicates an estimated value.
ND - Not detected.
A - Aldol condensation product.
D - Secondary dilution.
E - Exceeds initial calibration range.

7/4/91

Phosphorous
pest

95133356.2752

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Date: 04/15/91

IT Analytical Services
5815 Middlebrook Pike
Knoxville, TN 37921
Mary Tyler

Work Order: T1-03-275 P.O. Number: 486000.03 MMOK48098

This is the Certificate of Analysis for the following samples:

Client Work ID: K39A Martin Marietta
Date Received: 03/21/91
Number of Samples: 22
Sample Type: solid

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4	T1-03-275-02	910308-108 MS/MSD	18	T1-03-275-16	910215-009
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Reviewed and Approved:

Suzanne Veaudry
Project Manager

 9513356.2754

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910304-008 WHC # B00GV5
SAMPLE DATE: 02/28/91
LAB SAMPLE ID: T103275-01
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/08/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT		DETECTED
Dimethoate	0.11	UJ	None
Disulfoton	0.06		None
Parathion ethyl	0.11		None
Parathion methyl	0.11		None
Phorate	0.06		None
Sulfotepp	0.06		None
Famphur	0.17		None
Thionazin	0.06		None
0,0,0,-Triethylphos phorothioate	0.03	UJ	None

SURROGATE	% RECOVERY
Methidathion	65.

7/04/91

9513356.2755

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910308-108 WHC # B00GV9
SAMPLE DATE: 03/05/91
LAB SAMPLE ID: T103275-02
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/08/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.15	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.025 UJ	None

SURRAGATE	% RECOVERY
Methidathion	61.

JJ 7/4/91

9513356.2756

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910308-110 WHC # B00GW0
SAMPLE DATE: 03/05/91
LAB SAMPLE ID: T103275-03
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 03/08/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.11 UJ	None
Disulfoton	0.06	None
Parathion ethyl	0.11	None
Parathion methyl	0.11	None
Phorate	0.06	None
Sulfotepp	0.06	None
Famphur	0.16	None
Thionazin	0.06	None
0,0,0,-Triethylphos	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	72.

JJ 7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910215-011 WHC # B00FL4
SAMPLE DATE: 02/11/91
LAB SAMPLE ID: T103275-04
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	88.

7/4/91

9513356.2758

922

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910215-012 WHC # B00GR9
SAMPLE DATE: 02/11/91
LAB SAMPLE ID: T103275-05
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	94.

7/4/91

9513356.2759

923

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910307-043 WHC # B00GV6
SAMPLE DATE: 03/04/91
LAB SAMPLE ID: T103275-06
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	102.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910307-044 WHC # B00GV7
SAMPLE DATE: 03/04/91
LAB SAMPLE ID: T103275-07
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	97.

JB 7/4/91

 9513356.2761 925

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910307-045 WHC # B00GV8
SAMPLE DATE: 03/04/91
LAB SAMPLE ID: T103275-08
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	102.

4/4/91

9513356.2762

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910308-109 WHC # B00GW1
SAMPLE DATE: 03/05/91
LAB SAMPLE ID: T103275-09
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	93.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910308-111 WHC # B00GW4
SAMPLE DATE: 03/05/91
LAB SAMPLE ID: T103275-10
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	94.

7/4/91

9513356.2764

928

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910215-004 WHC # B00FK6
SAMPLE DATE: 02/07/91
LAB SAMPLE ID: T103275-11
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.11 UJ	None
Disulfoton	0.06	None
Parathion ethyl	0.11	None
Parathion methyl	0.11	None
Phorate	0.06	None
Sulfotepp	0.06	None
Famphur	0.17	None
Thionazin	0.06	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	112.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910215-005 WHC# B00FK7
SAMPLE DATE: 02/07/91
LAB SAMPLE ID: T103275-12
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.11 UJ	None
Disulfoton	0.06	None
Parathion ethyl	0.11	None
Parathion methyl	0.11	None
Phorate	0.06	None
Sulfotepp	0.06	None
Famphur	0.17	None
Thionazin	0.06	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	102.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910215-006 WHC # B00FK8
SAMPLE DATE: 02/07/91
LAB SAMPLE ID: T103275-13
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.11 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.11	None
Parathion methyl	0.11	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	58.

JJ 7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910215-007 WHC # B00FK9
SAMPLE DATE: 02/07/91
LAB SAMPLE ID: T103275-14
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.11 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.11	None
Parathion methyl	0.11	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	56.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910215-008 WHC # BOOFLO
SAMPLE DATE: 02/07/91
LAB SAMPLE ID: T103275-15
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.11 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.11	None
Parathion methyl	0.11	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	67.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910215-009 WHC # B00FL1
SAMPLE DATE: 02/08/91
LAB SAMPLE ID: T103275-16
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.11 UJ	None
Disulfoton	0.06	None
Parathion ethyl	0.11	None
Parathion methyl	0.11	None
Phorate	0.06	None
Sulfotepp	0.06	None
Famphur	0.17	None
Thionazin	0.06	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	73.

JS 7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910215-010 WHC # B00FL3
SAMPLE DATE: 02/11/91
LAB SAMPLE ID: T103275-17
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.15	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.025 UJ	None

SURROGATE	% RECOVERY
Methidathion	58.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910219-091 WHC # 800GS4
SAMPLE DATE: 02/14/91
LAB SAMPLE ID: T103275-18
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.13 UJ	None
Disulfoton	0.06	None
Parathion ethyl	0.13	None
Parathion methyl	0.13	None
Phorate	0.06	None
Sulfotepp	0.06	None
Famphur	0.19	None
Thionazin	0.06	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	70.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910222-063 WHC # B00GS9
SAMPLE DATE: 02/15/91
LAB SAMPLE ID: T103275-19
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.11 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.11	None
Parathion methyl	0.11	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	78.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910224-067 WHC # 800GT7
SAMPLE DATE: 02/21/91
LAB SAMPLE ID: T103275-20
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	63.

7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910308-113 WHC # B00GW8
SAMPLE DATE: 03/06/91
LAB SAMPLE ID: T103275-21
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/09/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	53.

JJ 7/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/15/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST NAME: EPA 8140

SAMPLE ID: 910311-027 WHC # B00GW3
SAMPLE DATE: 03/05/91
LAB SAMPLE ID: T103275-22
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 03/27/91
ANALYSIS DATE: 04/10/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Dimethoate	0.10 UJ	None
Disulfoton	0.05	None
Parathion ethyl	0.10	None
Parathion methyl	0.10	None
Phorate	0.05	None
Sulfotepp	0.05	None
Famphur	0.16	None
Thionazin	0.05	None
0,0,0,-Triethylphos phorothioate	0.03 UJ	None

SURROGATE	% RECOVERY
Methidathion	55.

JJ 1/4/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 04/16/91
Client Work ID: K39A Martin Marietta

Work Order: T1-03-275

TEST CODE 8140 TEST NAME EPA 8140

The method of analysis for organophosphorus pesticides is taken from E.P.A. Method 8140. The samples are extracted with solvent and concentrated. Final detection is by gas chromatography using a flameless alkali salt nitrogen-phosphorus detector.

CASE NARRATIVE

All samples were received past holding times. There is insufficient data available to plot control charts.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Date: 05/09/91

IT Analytical Services
5815 Middlebrook Pike
Knoxville, TN 37921
Mary Tyler

Work Order: T1-04-201 P.O. Number: 486000.03

This is the Certificate of Analysis for the following samples:

Client Work ID: MMOK/48228
Date Received: 04/29/91
Number of Samples: 15
Sample Type: Soil

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

PAGES	LABORATORY #	SAMPLE IDENTIFICATION	WHC ID #
2	T1-04-201-01	910313-103	B00GX6
3	T1-04-201-02	910315-060	B00GZ2
4	T1-04-201-03	910319-085	B00G26
5	T1-04-201-03	910319-085 MS/MSD	
6	T1-04-201-04	910319-086	B00H00
7	T1-04-201-05	910319-087	B00H01
8	T1-04-201-06	910319-089	B00H02
9	T1-04-201-07	910321-067	B00G28
10	T1-04-201-08	910321-068	B00H03
11	T1-04-201-09	910321-069	B00H04
12	T1-04-201-10	910321-070	B00H05
13	T1-04-201-11	910321-071	B00H06
14	T1-04-201-12	910325-035	B00H14
15	T1-04-201-13	910328-078	B00H10
16	T1-04-201-14	910401-011	B00H19
17	T1-04-201-15	910401-014	B00H23

6/29/91

Reviewed and Approved:

Suzanne Veaudry
Project Manager

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910313-103
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-01
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

WHC ID# B00GX6

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT		DETECTED
Azinphos methyl	0.21	UJ	None
Chlorpyrifos	0.05		None
Chlorpyrifos methyl	0.05		None
Coumaphos	0.21		None
Demeton	0.1		None
Diazinon	0.05		None
DDVP (Dichlorvos)	0.1		None
Dimethoate	0.1		None
Disulfoton	0.05		None
EPN	0.05		None
Ethion	0.05		None
Ethoprop	0.1		None
Fensulfothion	0.1		None
Fenthion	0.05		None
Malathion	0.05		None
Merphos	0.1		None
Mevinphos	0.1		None
Monocrotophos	0.21		None
Naled	0.21		None
Parathion ethyl	0.05		None
Parathion methyl	0.05		None
Phorate	0.05		None
Ronnel	0.05		None
Sulfotepp	0.05		None
Sulprofos	0.05		None
TEPP	0.21		None
Tetrachlorvinphos	0.26		None
Trichloronate	0.05	UJ	None

SURROGATE	% RECOVERY
Methidathion	72.

4/29/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910315-060 WHC ID # 300GZ2
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-02
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.26	None
Trichloronate	0.05 UJ	None

JJ 6/29/91

SURROGATE	% RECOVERY
Methidathion	86.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

WHC # B00G26

SAMPLE ID: 910319-085
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-03
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.24 UJ	None
Chlorpyrifos	0.06	None
Chlorpyrifos methyl	0.06	None
Coumaphos	0.26	None
Demeton	0.12	None
Diazinon	0.06	None
DDVP (Dichlorvos)	0.12	None
Dimethoate	0.12	None
Disulfoton	0.06	None
EPN	0.06	None
Ethion	0.06	None
Ethoprop	0.12	None
Fensulfothion	0.12	None
Fenthion	0.06	None
Malathion	0.06	None
Merphos	0.12	None
Mevinphos	0.12	None
Monocrotophos	0.24	None
Naled	0.24	None
Parathion ethyl	0.06	None
Parathion methyl	0.06	None
Phorate	0.06	None
Ronnel	0.06	None
Sulfotepp	0.06	None
Sulprofos	0.06	None
TEPP	0.24	None
Tetrachlorvinphos	0.30	None
Trichloronate	0.06 UJ	None

JS 6/29/91

SURROGATE	% RECOVERY
Methidathion	83.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910319-086 WHC # B00H00
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-04
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.26	None
Trichloronate	0.05 UJ	None

SURROGATE	% RECOVERY
Methidathion	84.

JL 6/29/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910319-087 WHC # B00H01
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-05
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.26	None
Trichloronate	0.05 UJ	None

6/29/91

SURROGATE	% RECOVERY
Methidathion	87.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910319-089 WHC # B00H02
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-06
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.26	None
Trichloronate	0.05 UJ	None

SURROGATE	% RECOVERY
Methidathion	89.

6/29/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910321-067 WHC # B00GZ8
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-07
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.24 UJ	None
Chlorpyrifos	0.06	None
Chlorpyrifos methyl	0.06	None
Coumaphos	0.24	None
Demeton	0.12	None
Diazinon	0.06	None
DDVP (Dichlorvos)	0.12	None
Dimethoate	0.12	None
Disulfoton	0.06	None
EPN	0.06	None
Ethion	0.06	None
Ethoprop	0.12	None
Fensulfothion	0.12	None
Fenthion	0.06	None
Malathion	0.06	None
Merphos	0.12	None
Mevinphos	0.12	None
Monocrotophos	0.24	None
Naled	0.24	None
Parathion ethyl	0.06	None
Parathion methyl	0.06	None
Phorate	0.06	None
Ronnel	0.06	None
Sulfotepp	0.06	None
Sulprofos	0.06	None
TEPP	0.24	None
Tetrachlorvinphos	0.31	None
Trichloronate	0.06 UJ	None

6/29/91

SURROGATE	% RECOVERY
Methidathion	96.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910321-068 WHC # B00H03
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-08
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.26	None
Trichloronate	0.05 UJ	None

SURROGATE	% RECOVERY
Methidathion	97.

6/29/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910321-069 WHC-# B00H04
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-09
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.26	None
Trichloronate	0.05 UJ	None

JZ 6/29/91

SURROGATE	% RECOVERY
Methidathion	96.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910321-070 WHC # 300H05
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-10
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.26	None
Trichloronate	0.05 UJ	None

SURROGATE	% RECOVERY
Methidathion	100.

JJ 6/29/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910321-071 WHC # B00H06
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-11
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.22 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.22	None
Demeton	0.11	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.11	None
Dimethoate	0.11	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.11	None
Fensulfothion	0.11	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.11	None
Mevinphos	0.11	None
Monocrotophos	0.22	None
Naled	0.22	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.22	None
Tetrachlorvinphos	0.28	None
Trichloronate	0.05 UJ	None

SURROGATE	% RECOVERY
Methidathion	99.

6/29/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910325-035 WHC # B00H14
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-12
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/27/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.11	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.11	None
Dimethoate	0.11	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.11	None
Fensulfothion	0.11	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.11	None
Mevinphos	0.11	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.26	None
Trichloronate	0.05 UJ	None

JJ 6/29/91

SURROGATE	% RECOVERY
Methidathion	93%

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910328-078 WHC # B00H40
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-13
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/28/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.20 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.20	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.20	None
Naled	0.20	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.20	None
Tetrachlorvinphos	0.25	None
Trichloronate	0.05 UJ	None

SURROGATE	% RECOVERY
Methidathion	101.

6/29/91

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910401-011 WHC # 300H19
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-14
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/28/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.26	None
Trichloronate	0.05 UJ	None

6/29/91

SURROGATE	% RECOVERY
Methidathion	88.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST NAME: EPA 8140

SAMPLE ID: 910401-014 WHC # B00H23
SAMPLE DATE: not spec
LAB SAMPLE ID: T104201-15
SAMPLE MATRIX: solid
RECEIPT CONDITION: Cool
EXTRACTION DATE: 04/22/91
ANALYSIS DATE: 04/28/91

RESULTS in Milligrams per Kilogram

PARAMETER	DETECTION LIMIT	DETECTED
Azinphos methyl	0.21 UJ	None
Chlorpyrifos	0.05	None
Chlorpyrifos methyl	0.05	None
Coumaphos	0.21	None
Demeton	0.1	None
Diazinon	0.05	None
DDVP (Dichlorvos)	0.1	None
Dimethoate	0.1	None
Disulfoton	0.05	None
EPN	0.05	None
Ethion	0.05	None
Ethoprop	0.1	None
Fensulfothion	0.1	None
Fenthion	0.05	None
Malathion	0.05	None
Merphos	0.1	None
Mevinphos	0.1	None
Monocrotophos	0.21	None
Naled	0.21	None
Parathion ethyl	0.05	None
Parathion methyl	0.05	None
Phorate	0.05	None
Ronnel	0.05	None
Sulfotepp	0.05	None
Sulprofos	0.05	None
TEPP	0.21	None
Tetrachlorvinphos	0.27	None
Trichloronate	0.05 UJ	None

JF 6/27/91

SURROGATE	% RECOVERY
Methidathion	95.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: IT Analytical Services
Date: 05/09/91
Client Work ID: MMOK/48228

Work Order: T1-04-201

TEST CODE 8140 TEST NAME EPA 8140

The method of analysis for organophosphorus pesticides is taken from E.P.A. Method 8140. The samples are extracted with solvent and concentrated. Final detection is by gas chromatography using a flameless alkali salt nitrogen-phosphorus detector.

CASE NARRATIVE

Fifteen (15) soil samples were received on April 29, 1991. There were no sample dates on the paperwork received. We have insufficient data to produce control charts for Method 8140. No other problems occured with this sample batch.

DIOXINS

95133566.2794

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Mary Tyler
IT Corporation
5815 Middlebrook Pike
Knoxville, TN 37921

May 1, 1991

TDL PROJECT NUMBER: 484042 **IT JOB NO.:** 486000.09

This is the Certificate of Analysis for the following samples:

Client Project ID:	MMOK48228 **(Martin Marietta K79A)**
Date Received by Lab:	April 12, 1991
Number of Samples:	Five (5)
Sample Type:	Soil

I. Introduction/Case Narrative

Five (5) soil samples were received April 12, 1991, for the analysis of total tetra through octa ($C1_4$-$C1_8$) dioxin and furan homologs (See Appendix A, Cross Reference List and Appendix D, Chain-of-Custody and Request for Analysis records). The samples and blank were spiked prior to extraction with an internal standard solution containing 50 ng each of ^{13}C-2,3,7,8-TCDD, ^{13}C-2,3,7,8-TCDF, ^{13}C-PeCDD, ^{13}C-PeCDF, ^{13}C-HxCDD, ^{13}C-HxCDF, ^{13}C-HpCDD, ^{13}C-HpCDF and ^{13}C-OCDD. The samples and blank were extracted and cleaned up using a modified version of the EPA reference method described in "RCRA SW-846, Method 8280," revised September, 1986. Extracts were analyzed by GC/MS operating in the selected ion monitoring mode for enhanced sensitivity.

The samples were labeled with the following:

910319-086
910319-086MS
910319-086MSD
910319-089
910321-068

Reviewed and Approved:

Duane K. Root
Duane K. Root
Analytical Operations Manager

qhc-s/DIT010

[illegible] of Independent Laboratories
[illegible] Association of Environmental Testing Laboratories
American Association for Laboratory Accreditation

Mary Tyler
Martin Marietta K79A
Date: May 1, 1991
Client Project ID: MMOK48228

IT ANALYTICAL SERVICES
304 DIRECTORS DRIVE
KNOXVILLE, TENNESSEE

TDL Project No.: 484042

II. Analytical Results/Methodology

SAMPLE PREPARATION

A 10 gram aliquot of each sample and 10 grams of sodium sulfate (for the blank) were weighed into separate jars. The samples and blank were spiked with the internal standard mixture and extracted with a methanol/hexane mixture for three hours using a platform shaker. The resulting extracts were filtered into a KD flask and the volume reduced to approximately 1 ml.

SAMPLE CLEANUP

The samples and blank were cleaned up using dual column chromatography consisting of an acid-modified silica gel column followed by a neutral alumina column to aid in the removal of chemical interferences. Detailed descriptions of these cleanup techniques can be found in Option A of the U.S. Environmental Protection Agency, Region VII Protocol for "The Determination Of 2,3,7,8-TCDD In Soil And Sediment", revised September, 1983. Final extracts were concentrated to near dryness and raised to 50 µl with 25 ng ^{13}C-1,2,3,4-TCDD and 25 ng ^{13}C-1,2,3,7,8,9-HxCDD which were used as recovery standards.

GC/MS ANALYSIS

Total Dioxin and Furan - The samples and blank were analyzed for total dioxin and furan homologs from Cl_4-Cl_8. The analytical approach employed by ITAS for the determination of total dioxins and furans is considered semi-quantitative due to the lack of availability of all dioxin and furan isomer standards. The standard analyzed each shift consisted of:

Dioxins	Dibenzofurans
^{13}C-2,3,7,8-TCDD	^{13}C-2,3,7,8-TCDF
^{13}C-1,2,3,4-TCDD	^{13}C-1,2,3,7,8-PeCDF
^{13}C-1,2,3,7,8-PeCDD	^{13}C-1,2,3,4,7,8-HxCDF
^{13}C-1,2,3,6,7,8-HxCDD	^{13}C-1,2,3,4,6,7,8-HpCDF
^{13}C-1,2,3,7,8,9-HxCDD	2,3,7,8-TCDF
^{13}C-1,2,3,4,6,7,8-HpCDD	1,2,3,7,8-PeCDF
^{13}C-OCDD	2,3,4,7,8-PeCDF
2,3,7,8-TCDD	1,2,3,4,7,8-HxCDF
1,2,3,7,8-PeCDD	1,2,3,6,7,8-HxCDF
1,2,3,4,7,8-HxCDD	2,3,4,6,7,8-HxCDF
1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDF
1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDF
1,2,3,4,6,7,8-HpCDD	1,2,3,4,7,8,9-HpCDF
OCDD	OCDF

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II. Analytical Results/Methodology (continued)

GC/MS ANALYSIS (continued)

Response factors were calculated for each compound in the standard relative to its ^{13}C labeled homolog; the same response was assumed applicable to all isomers in each homologous group. Native OCDF is calculated against ^{13}C-OCDD. A five-point calibration plot was analyzed in triplicate. The mean response factors obtained from this fifteen-point calibration were used for all subsequent calculations. The shift standard, analyzed on the same day as the samples, produced a response factor within 30% of the multipoint.

The extracts were analyzed using HRGC/LRMS scanning in the selected ion monitoring mode for enhanced sensitivity. The column used for the analysis was a 60 m DB-5 fused silica capillary column.

GC/MS RESULTS

Totals - The results for the totals analysis, shown in Appendix B, are reported in ppb (ng/g) with the total amount of each homologous group calculated. When more than one isomer in a homologous group of dioxin or furan is found, all of the isomers are added together to produce a total homolog result. Detection limits are calculated from 2.5 times signal to noise when a "Not Detected" (ND) is reported. The detection limits are listed in parenthesis.

III. Quality Control

Laboratory project specific QA/QC was followed. Appendix C lists the results of the QA/QC samples. In all cases, precision and accuracy are within the limits established for acceptance of dioxin/dibenzofuran data.

Mary Tyler
Martin Marietta K79A
Date: May 1, 1991
Client Project ID: MMOK48228

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TDL Project No.: 484042

CROSS REFERENCE LIST

TDL SAMPLE NO.	CLIENT SAMPLE NO.	MATRIX
BB3482	910319-086	Soil
BB3482MS	910319-086MS	Soil
BB3482MSD	910319-086MSD	Soil
BB3483	910319-089	Soil
BB3484	910321-068	Soil

Mary Tyler
Martin Marietta K79A
Date: May 1, 1991
Client Project ID: MMOK48228

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KNOXVILLE, TENNESSEE

TDL Project No.: 484042

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910319-086 (Soil) WHC # B00H00
Sample Date: March 19, 1991
TDL Sample ID: BB3482
Extraction Date: April 16, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 19, 1991		
Dioxins			
Total TCDD	ND(0.10) UJ	^{13}C-2,3,7,8-TCDD	78
Total PeCDD	ND(0.15) UJ	^{13}C-1,2,3,7,8-PeCDD	75
Total HxCDD	ND(0.20) UJ	^{13}C-1,2,3,6,7,8-HxCDD	85
Total HpCDD	ND(0.24) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	71
OCDD	ND(0.23) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	72
Furans			
Total TCDF	ND(0.062) UJ	^{13}C-2,3,7,8-TCDF	83
Total PeCDF	ND(0.19) UJ	^{13}C-1,2,3,7,8-PeCDF	60
Total HxCDF	ND(0.23) UJ	^{13}C-1,2,3,4,7,8-HxCDF	76
Total HpCDF	ND(0.53) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	75
OCDF	ND(0.14) UJ		

JJ 6/29/91

Mary Tyler
Martin Marietta K79A
Date: May 1, 1991
Client Project ID: MMOK48228

IT ANALYTICAL SERVICES
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KNOXVILLE, TENNESSEE

TDL Project No.: 484042

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910319-089 (Soil) WHC # B00H02
Sample Date: March 19, 1991
TDL Sample ID: BB3483
Extraction Date: April 16, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 18, 1991		
Dioxins			
Total TCDD	ND(0.16) UJ	^{13}C-2,3,7,8-TCDD	59
Total PeCDD	ND(0.12) UJ	^{13}C-1,2,3,7,8-PeCDD	74
Total HxCDD	ND(0.22) UJ	^{13}C-1,2,3,6,7,8-HxCDD	72
Total HpCDD	ND(0.27) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	65
OCDD	ND(0.32) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	57
Furans			
Total TCDF	ND(0.077) UJ	^{13}C-2,3,7,8-TCDF	63
Total PeCDF	ND(0.10) UJ	^{13}C-1,2,3,7,8-PeCDF	56
Total HxCDF	ND(0.15) UJ	^{13}C-1,2,3,4,7,8-HxCDF	72
Total HpCDF	ND(0.19) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	71
OCDF	ND(0.23) UJ		

JJ 6/29/91

Mary Tyler
Martin Marietta K79A
Date: May 1, 1991
Client Project ID: MMOK48228

IT ANALYTICAL SERVICES
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KNOXVILLE, TENNESSEE

TDL Project No.: 484042

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910321-068 (Soil) WHC# B00H03
Sample Date: March 21, 1991
TDL Sample ID: BB3484
Extraction Date: April 16, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 19, 1991		
Dioxins			
Total TCDD	ND(0.12) UJ	^{13}C-2,3,7,8-TCDD	68
Total PeCDD	ND(0.38) UJ	^{13}C-1,2,3,7,8-PeCDD	98
Total HxCDD	ND(0.17) UJ	^{13}C-1,2,3,6,7,8-HxCDD	79
Total HpCDD	ND(0.17) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	70
OCDD	ND(0.15) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	68
Furans			
Total TCDF	ND(0.067) UJ	^{13}C-2,3,7,8-TCDF	70
Total PeCDF	ND(0.11) UJ	^{13}C-1,2,3,7,8-PeCDF	69
Total HxCDF	ND(0.18) UJ	^{13}C-1,2,3,4,7,8-HxCDF	75
Total HpCDF	ND(0.32) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	73
OCDF	ND(0.12) UJ		

JJ 6/29/91

INTERNATIONAL TECHNOLOGY CORPORATION

CHAIN-OF-CUSTODY RECORD

R/A Control No. 213352

C/C Control No. 113113

PROJECT NAME/NUMBER MINOK 48228

LAB DESTINATION IT/TDL

SAMPLE TEAM MEMBERS Martin Marietta K79A

CARRIER/WAYBILL NO. Delivered by I.T. courier

	Sample Number	Sample Location and Description	Date and Time Collected	Sample Type	Container Type	Condition on Receipt (Name and Date)	Disposal Record No.
BB3482	910319	086	3-19-91	Soil	250 ml amber	Cooler temp 5°C.	
BB3483	910312	082	3-18-91	↓	↓	Samples OK. MLW	
BB3484	910321	068	3-21-91	↓	↓		
NJC 4-12-91							

Special Instructions: QC is project-specific. Report by Certificate of analysis. Report dates prepped + analyzed.

Possible Sample Hazards:

SIGNATURES: (Name, Company, Date and Time)

1. Relinquished By: [illegible] Summers, ITAS 4/12/91 1200
   Received By: Bryan Donovan ITAS 4-12-91 1200
2. Relinquished By: Bryan Donovan ITAS 4-12-91 1335
   Received By: [illegible], TDL, 4-12-91 1335
3. Relinquished By:
   Received by:
4. Relinquished By:
   Received By:

WHITE - To accompany samples
YELLOW - Field copy

484042

13-4

422

9513356.2802

INTERNATIONAL TECHNOLOGY CORPORATION

REQUEST FOR ANALYSIS

R/A Control No. [illegible]
C/C Control No. 123273

PROJECT NAME: Martin Marietta K79A
PROJECT NUMBER: MMOK 48228
PROFIT CENTER NUMBER: 4620
PROJECT MANAGER:
BILL TO: ITAS / Middlebrook

DATE SAMPLES SHIPPED: 4-12-91
LAB DESTINATION: IT/TDL
LABORATORY CONTACT:
SEND LAB REPORT TO: ITAS / Middlebrook

DATE REPORT REQUIRED: 4/30/91
PROJECT CONTACT: Mary Tyler
PROJECT CONTACT PHONE NO.: 588-6404

PURCHASE ORDER NO.: 486000.09

	Sample No.	Sample Type	Sample Volume	Preservative	Requested Testing Program	Special Instructions
LB 3482	910319-086	Soil			Total Dioxins/Total Furans by Method 8280	
LB 3483	910319-089	↓				
LB 3484	910321-068	↓				

TURNAROUND TIME REQUIRED: (Rush must be approved by the Laboratory Project Manager.)
Normal ✓ Rush ___ (Subject to rush surcharge.)

QC LEVEL: (Levels II and III subject to surcharge; project-specific requirements must be submitted to lab before beginning work.)
I ___ II ___ III ___ Project Specific

POSSIBLE HAZARD IDENTIFICATION: (Please indicate if sample(s) are hazardous materials and/or suspected to contain high levels of hazardous substances.)
Non-hazard ___ Flammable ___ Skin Irritant ___ Highly Toxic ___ Other ___ (Please Specify)

SAMPLE DISPOSAL: (Please indicate disposition of sample following analysis. Lab will charge for packing, shipping, archive and disposal.)
Return to Client ___ Disposal by Lab ✓ Archive ___ (Indicate number of months.)

FOR LAB USE ONLY
Received by Mark W Lyppke, TDL Date/Time 4-12-91, 1335

NOTE: Original to accompany sample.

95133562803

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INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Diane Jones
IT Corporation
5815 Middlebrook Pike
Knoxville, TN 37921

April 17, 1991

TDL PROJECT NUMBER: 484011 **IT JOB NO.** 486000.09

This is the Certificate of Analysis for the following samples:

Client Project ID:	MMOK48098 **(Martin Marietta K39A)**
Date Received by Lab:	March 21, 1991
Number of Samples:	Twenty-six (26)
Sample Type:	Soil

I. Introduction/Case Narrative

Twenty-six (26) soil samples were received March 21, 1991, for the analysis of total tetra through octa ($C1_4$-$C1_8$) dioxin and furan homologs (See Appendix A, Cross Reference List and Appendix D, Chain-of-Custody and Request for Analysis records). The samples and blank were spiked prior to extraction with an internal standard solution containing 50 ng each of ^{13}C-2,3,7,8-TCDD, ^{13}C-2,3,7,8-TCDF, ^{13}C-PeCDD, ^{13}C-PeCDF, ^{13}C-HxCDD, ^{13}C-HxCDF, ^{13}C-HpCDD, ^{13}C-HpCDF and ^{13}C-OCDD. The samples and blank were extracted and cleaned up using a modified version of the EPA reference method described in "RCRA SW-846, Method 8280," revised September, 1986. Extracts were analyzed by GC/MS operating in the selected ion monitoring mode for enhanced sensitivity.

The samples were labeled with the following:

910215-004	910215-009	910308-110	910307-044
910215-005	910215-010	910215-011	910397-045
910215-005MS	910219-091	910215-012	910308-109
910215-005MSD	910222-063	910307-043	910308-111
910215-006	910224-067	910307-043MS	910308-113
910215-007	910304-008	910307-043MSD	910311-027
910215-008	910308-108		

Reviewed and Approved:

Duane K. Root
Analytical Operations Manager

qhc-s/NM343

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories
American Association for Laboratory Accreditation

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

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TDL Project No.: 484011

I. Introduction/Case Narrative (continued)

Some of the samples were received at the laboratory outside of the 30 day holding time from the date of collection per RCRA SW-846 Method 8280. All of the samples were extracted within eight days of receipt.

II. Analytical Results/Methodology

SAMPLE PREPARATION

A 10 gram aliquot of each sample and 10 grams of sodium sulfate (for the blanks) were weighed into separate jars. The samples and blanks were spiked with the internal standard mixture and extracted with a methanol/hexane mixture for three hours using a platform shaker. The resulting extracts were filtered into a KD flask and the volume reduced to approximately 1 ml.

SAMPLE CLEANUP

The samples and blanks were cleaned up using dual column chromatography consisting of an acid-modified silica gel column followed by a neutral alumina column to aid in the removal of chemical interferences. Detailed descriptions of these cleanup techniques can be found in Option A of the U.S. Environmental Protection Agency, Region VII Protocol for "The Determination Of 2,3,7,8-TCDD In Soil And Sediment", revised September, 1983. Final extracts were concentrated to near dryness and raised to 50 µl with 25 ng ^{13}C-1,2,3,4-TCDD and 25 ng ^{13}C-1,2,3,7,8,9-HxCDD which were used as recovery standards.

GC/MS ANALYSIS

Total Dioxin and Furan - The samples and blanks were analyzed for total dioxin and furan homologs from Cl_4-Cl_8. The analytical approach employed by ITAS for the determination of total dioxins and furans is considered semi-quantitative due to the lack of availability of all dioxin and furan isomer standards. The standard analyzed each shift consisted of:

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

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TDL Project No.: 484011

II. Analytical Results/Methodology (continued)

GC/MS ANALYSIS (continued)

Dioxins	Dibenzofurans
^{13}C-2,3,7,8-TCDD	^{13}C-2,3,7,8-TCDF
^{13}C-1,2,3,4-TCDD	^{13}C-1,2,3,7,8-PeCDF
^{13}C-1,2,3,7,8-PeCDD	^{13}C-1,2,3,4,7,8-HxCDF
^{13}C-1,2,3,6,7,8-HxCDD	^{13}C-1,2,3,4,6,7,8-HpCDF
^{13}C-1,2,3,7,8,9-HxCDD	2,3,7,8-TCDF
^{13}C-1,2,3,4,6,7,8-HpCDD	1,2,3,7,8-PeCDF
^{13}C-OCDD	2,3,4,7,8-PeCDF
2,3,7,8-TCDD	1,2,3,4,7,8-HxCDF
1,2,3,7,8-PeCDD	1,2,3,6,7,8-HxCDF
1,2,3,4,7,8-HxCDD	2,3,4,6,7,8-HxCDF
1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDF
1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8-HpCDF
1,2,3,4,6,7,8-HpCDD	1,2,3,4,7,8,9-HpCDF
OCDD	OCDF

Response factors were calculated for each compound in the standard relative to its ^{13}C labeled homolog; the same response was assumed applicable to all isomers in each homologous group. Native OCDF is calculated against ^{13}C-OCDD. A five-point calibration plot was analyzed in triplicate. The mean response factors obtained from this fifteen-point calibration were used for all subsequent calculations. The shift standard, analyzed on the same day as the samples, produced a response factor within 30% of the multipoint.

The extracts were analyzed using HRGC/LRMS scanning in the selected ion monitoring mode for enhanced sensitivity. The column used for the analysis was a 60 m DB-5 fused silica capillary column.

GC/MS RESULTS

Totals - The results for the totals analysis, shown in Appendix B, are reported in ppb (ng/g) with the total amount of each homologous group calculated. When more than one isomer in a homologous group of dioxin or furan is found, all of the isomers are added together to produce a total homolog result. Detection limits are calculated from 2.5 times signal to noise when a "Not Detected" (ND) is reported. The detection limits are listed in parenthesis.

III. Quality Control

Laboratory project specific QA/QC was followed. Appendix C lists the results of the QA/QC samples. In all cases, precision and accuracy are within the limits established for acceptance of dioxin/dibenzofuran data.

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

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TDL Project No.: 484011

CROSS REFERENCE LIST

TDL SAMPLE NO.	CLIENT SAMPLE NO.	MATRIX
BB3409	910215-004	Soil
BB3410	910215-005	Soil
BB3410MS	910215-005MS	Soil
BB3410MSD	910215-005MSD	Soil
BB3411	910215-006	Soil
BB3412	910215-007	Soil
BB3413	910215-008	Soil
BB3414	910215-009	Soil
BB3415	910215-010	Soil
BB3416	910219-091	Soil
BB3417	910222-063	Soil
BB3418	910224-067	Soil
BB3419	910304-008	Soil
BB3420	910308-108	Soil
BB3421	910308-110	Soil
BB3422	910215-011	Soil
BB3423	910215-012	Soil
BB3424	910307-043	Soil
BB3424MS	910307-043MS	Soil
BB3424MSD	910307-043MSD	Soil
BB3425	910307-044	Soil
BB3426	910307-045	Soil
BB3427	910308-109	Soil
BB3428	910308-111	Soil
BB3429	910308-113	Soil
BB3430	910311-027	Soil

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

IT ANALYTICAL SERVICES
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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910215-004 (Soil) WHC # B00FK6
Sample Date: February 7, 1991
TDL Sample ID: BB3409
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 10,1991		
Dioxins			
Total TCDD	ND(0.062) UJ	^{13}C-2,3,7,8-TCDD	52
Total PeCDD	ND(0.13) UJ	^{13}C-1,2,3,7,8-PeCDD	59
Total HxCDD	ND(0.12) UJ	^{13}C-1,2,3,6,7,8-HxCDD	64
Total HpCDD	ND(0.15) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	61
OCDD	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	58
Furans			
Total TCDF	ND(0.11) UJ	^{13}C-2,3,7,8-TCDF	40
Total PeCDF	ND(0.039) UJ	^{13}C-1,2,3,7,8-PeCDF	66
Total HxCDF	ND(0.11) UJ	^{13}C-1,2,3,4,7,8-HxCDF	88
Total HpCDF	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	82
OCDF	ND(0.069) UJ		

JJ 7/4/91

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

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KNOXVILLE, TENNESSEE

884

TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910215-005 (Soil) WHC # B00FK7
Sample Date: February 7, 1991
TDL Sample ID: BB3410
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Isomer Specific Analysis Date: April 12, 1991			
2,3,7,8-TCDD	ND(0.088) UJ	^{13}C-2,3,7,8-TCDD	60
2,3,7,8-TCDF	ND(0.10) UJ	^{13}C-2,3,7,8-TCDF	42
Totals Analysis Date: April 10,1991			
Dioxins			
Total TCDD	ND(0.060) UJ	^{13}C-2,3,7,8-TCDD	53
Total PeCDD	ND(0.17) UJ	^{13}C-1,2,3,7,8-PeCDD	56
Total HxCDD	ND(0.18) UJ	^{13}C-1,2,3,6,7,8-HxCDD	60
Total HpCDD	ND(0.21) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	58
OCDD	ND(0.21) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	55
Furans			
Total TCDF	ND(0.077) UJ	^{13}C-2,3,7,8-TCDF	41
Total PeCDF	ND(0.053) UJ	^{13}C-1,2,3,7,8-PeCDF	59
Total HxCDF	ND(0.11) UJ	^{13}C-1,2,3,4,7,8-HxCDF	80
Total HpCDF	ND(0.17) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	71
OCDF	ND(0.19) UJ		

JF 7/4/91

9513356.2810

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

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KNOXVILLE, TENNESSEE

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910215-006 (Soil) WHC # B00FK8
Sample Date: February 7, 1991
TDL Sample ID: BB3411
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 10,1991		
Dioxins			
Total TCDD	ND(0.056) UJ	^{13}C-2,3,7,8-TCDD	65
Total PeCDD	ND(0.13) UJ	^{13}C-1,2,3,7,8-PeCDD	61
Total HxCDD	ND(0.13) UJ	^{13}C-1,2,3,6,7,8-HxCDD	65
Total HpCDD	ND(0.19) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	64
OCDD	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	63
Furans			
Total TCDF	ND(0.058) UJ	^{13}C-2,3,7,8-TCDF	50
Total PeCDF	ND(0.046) UJ	^{13}C-1,2,3,7,8-PeCDF	71
Total HxCDF	ND(0.085) UJ	^{13}C-1,2,3,4,7,8-HxCDF	89
Total HpCDF	ND(0.11) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	81
OCDF	ND(0.077) UJ		

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Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910215-007 (Soil) WHC # B00FK9
Sample Date: February 7, 1991
TDL Sample ID: BB3412
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 10,1991		
Dioxins			
Total TCDD	ND(0.11) UJ	^{13}C-2,3,7,8-TCDD	51
Total PeCDD	ND(0.10) UJ	^{13}C-1,2,3,7,8-PeCDD	53
Total HxCDD	ND(0.40) UJ	^{13}C-1,2,3,6,7,8-HxCDD	56
Total HpCDD	ND(0.19) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	55
OCDD	ND(0.11) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	53
Furans			
Total TCDF	ND(0.085) UJ	^{13}C-2,3,7,8-TCDF	39
Total PeCDF	ND(0.058) UJ	^{13}C-1,2,3,7,8-PeCDF	61
Total HxCDF	ND(0.14) UJ	^{13}C-1,2,3,4,7,8-HxCDF	79
Total HpCDF	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	73
OCDF	ND(0.096) UJ		

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910215-008 (Soil) WHC # B00FLO
Sample Date: February 7, 1991
TDL Sample ID: BB3413
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 9,1991		
Dioxins			
Total TCDD	ND(0.071) UJ	^{13}C-2,3,7,8-TCDD	59
Total PeCDD	ND(0.16) UJ	^{13}C-1,2,3,7,8-PeCDD	56
Total HxCDD	ND(0.17) UJ	^{13}C-1,2,3,6,7,8-HxCDD	61
Total HpCDD	ND(0.16) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	54
OCDD	ND(0.16) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	80
Furans			
Total TCDF	ND(0.071) UJ	^{13}C-2,3,7,8-TCDF	48
Total PeCDF	ND(0.047) UJ	^{13}C-1,2,3,7,8-PeCDF	60
Total HxCDF	ND(0.11) UJ	^{13}C-1,2,3,4,7,8-HxCDF	82
Total HpCDF	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	75
OCDF	ND(0.12) UJ		

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910215-009 (Soil) WHC # B00FL1
Sample Date: February 8, 1991
TDL Sample ID: BB3414
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 9,1991		
Dioxins			
Total TCDD	ND(0.068) UJ	^{13}C-2,3,7,8-TCDD	60
Total PeCDD	ND(0.22) UJ	^{13}C-1,2,3,7,8-PeCDD	62
Total HxCDD	ND(0.15) UJ	^{13}C-1,2,3,6,7,8-HxCDD	64
Total HpCDD	ND(0.23) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	57
OCDD	ND(0.17) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	82
Furans			
Total TCDF	ND(0.079) UJ	^{13}C-2,3,7,8-TCDF	51
Total PeCDF	ND(0.050) UJ	^{13}C-1,2,3,7,8-PeCDF	61
Total HxCDF	ND(0.11) UJ	^{13}C-1,2,3,4,7,8-HxCDF	80
Total HpCDF	ND(0.19) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	73
OCDF	ND(0.14) UJ		

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910215-010 (Soil) WHC # B00FL3
Sample Date: February 11, 1991
TDL Sample ID: BB3415
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 9,1991		
Dioxins			
Total TCDD	ND(0.042) UJ	^{13}C-2,3,7,8-TCDD	77
Total PeCDD	ND(0.15) UJ	^{13}C-1,2,3,7,8-PeCDD	76
Total HxCDD	ND(0.11) UJ	^{13}C-1,2,3,6,7,8-HxCDD	80
Total HpCDD	ND(0.17) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	70
OCDD	ND(0.15) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	98
Furans			
Total TCDF	ND(0.061) UJ	^{13}C-2,3,7,8-TCDF	63
Total PeCDF	ND(0.036) UJ	^{13}C-1,2,3,7,8-PeCDF	83
Total HxCDF	ND(0.072) UJ	^{13}C-1,2,3,4,7,8-HxCDF	103
Total HpCDF	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	92
OCDF	ND(0.059) UJ		

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Date: April 17, 1991
Client Project ID: MMOK48098 TDL Project No.: 484011

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Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910219-091 (Soil) WHC # B00654
Sample Date: February 14, 1991
TDL Sample ID: BB3416
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 9,1991		
Dioxins			
Total TCDD	ND(0.17) UJ	^{13}C-2,3,7,8-TCDD	37
Total PeCDD	ND(0.30) UJ	^{13}C-1,2,3,7,8-PeCDD	36
Total HxCDD	ND(0.29) UJ	^{13}C-1,2,3,6,7,8-HxCDD	44
Total HpCDD	ND(0.24) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	43
OCDD	ND(0.23) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	68
Furans			
Total TCDF	ND(0.14) UJ	^{13}C-2,3,7,8-TCDF	26
Total PeCDF	ND(0.069) UJ	^{13}C-1,2,3,7,8-PeCDF	51
Total HxCDF	ND(0.084) UJ	^{13}C-1,2,3,4,7,8-HxCDF	70
Total HpCDF	ND(0.15) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	65
OCDF	ND(0.030) UJ		

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910222-063 (Soil) WHC # B00GS9
Sample Date: February 15, 1991
TDL Sample ID: BB3417
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 9,1991		
Dioxins			
Total TCDD	ND(0.12) UJ	^{13}C-2,3,7,8-TCDD	40
Total PeCDD	ND(0.35) UJ	^{13}C-1,2,3,7,8-PeCDD	39
Total HxCDD	ND(0.25) UJ	^{13}C-1,2,3,6,7,8-HxCDD	46
Total HpCDD	ND(0.27) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	45
OCDD	ND(0.27) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	73
Furans			
Total TCDF	ND(0.14) UJ	^{13}C-2,3,7,8-TCDF	28
Total PeCDF	ND(0.067) UJ	^{13}C-1,2,3,7,8-PeCDF	55
Total HxCDF	ND(0.15) UJ	^{13}C-1,2,3,4,7,8-HxCDF	79
Total HpCDF	ND(0.14) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	73
OCDF	ND(0.19) UJ		

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910224-067 (Soil) WHC # B00GT7
Sample Date: February 21, 1991
TDL Sample ID: BB3418
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 9,1991		
Dioxins			
Total TCDD	ND(0.063) UJ	^{13}C-2,3,7,8-TCDD	64
Total PeCDD	ND(0.21) UJ	^{13}C-1,2,3,7,8-PeCDD	64
Total HxCDD	ND(0.14) UJ	^{13}C-1,2,3,6,7,8-HxCDD	63
Total HpCDD	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	62
OCDD	ND(0.12) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	89
Furans			
Total TCDF	ND(0.058) UJ	^{13}C-2,3,7,8-TCDF	48
Total PeCDF	ND(0.057) UJ	^{13}C-1,2,3,7,8-PeCDF	84
Total HxCDF	ND(0.086) UJ	^{13}C-1,2,3,4,7,8-HxCDF	95
Total HpCDF	ND(0.23) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	87
OCDF	ND(0.12) UJ		

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910304-008 (Soil) WHC # B00GV5
Sample Date: February 28, 1991
TDL Sample ID: BB3419
Extraction Date: March 29, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 9,1991		
Dioxins			
Total TCDD	ND(0.086) UJ	^{13}C-2,3,7,8-TCDD	50
Total PeCDD	ND(0.20) UJ	^{13}C-1,2,3,7,8-PeCDD	53
Total HxCDD	ND(0.28) UJ	^{13}C-1,2,3,6,7,8-HxCDD	53
Total HpCDD	ND(0.14) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	52
OCDD	ND(0.090) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	78
Furans			
Total TCDF	ND(0.084) UJ	^{13}C-2,3,7,8-TCDF	41
Total PeCDF	ND(0.052) UJ	^{13}C-1,2,3,7,8-PeCDF	60
Total HxCDF	ND(0.072) UJ	^{13}C-1,2,3,4,7,8-HxCDF	73
Total HpCDF	ND(0.12) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	69
OCDF	ND(0.13) UJ		

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Date: April 17, 1991
Client Project ID: MMOK48098

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910308-108 (Soil) WHC # B00GV9
Sample Date: March 5, 1991
TDL Sample ID: BB3420
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 10,1991		
Dioxins			
Total TCDD	ND(0.048) UJ	^{13}C-2,3,7,8-TCDD	78
Total PeCDD	ND(0.11) UJ	^{13}C-1,2,3,7,8-PeCDD	81
Total HxCDD	ND(0.14) UJ	^{13}C-1,2,3,6,7,8-HxCDD	79
Total HpCDD	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	63
OCDD	ND(0.067) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	58
Furans			
Total TCDF	ND(0.038) UJ	^{13}C-2,3,7,8-TCDF	79
Total PeCDF	ND(0.051) UJ	^{13}C-1,2,3,7,8-PeCDF	69
Total HxCDF	ND(0.095) UJ	^{13}C-1,2,3,4,7,8-HxCDF	85
Total HpCDF	ND(0.14) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	73
OCDF	ND(0.13) UJ		

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Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910308-110 (Soil) WHC # B00GW0
Sample Date: March 5, 1991
TDL Sample ID: BB3421
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 10,1991		
Dioxins			
Total TCDD	ND(0.032) UJ	^{13}C-2,3,7,8-TCDD	75
Total PeCDD	ND(0.057) UJ	^{13}C-1,2,3,7,8-PeCDD	74
Total HxCDD	ND(0.098) UJ	^{13}C-1,2,3,6,7,8-HxCDD	79
Total HpCDD	ND(0.11) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	63
OCDD	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	59
Furans			
Total TCDF	ND(0.033) UJ	^{13}C-2,3,7,8-TCDF	73
Total PeCDF	ND(0.046) UJ	^{13}C-1,2,3,7,8-PeCDF	63
Total HxCDF	ND(0.073) UJ	^{13}C-1,2,3,4,7,8-HxCDF	84
Total HpCDF	ND(0.084) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	73
OCDF	ND(0.066) UJ		

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910215-011 (Soil) WHC# B00FL4
Sample Date: February 11, 1991
TDL Sample ID: BB3422
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 10,1991		
Dioxins			
Total TCDD	ND(0.056) UJ	^{13}C-2,3,7,8-TCDD	61
Total PeCDD	ND(0.16) UJ	^{13}C-1,2,3,7,8-PeCDD	59
Total HxCDD	ND(0.15) UJ	^{13}C-1,2,3,6,7,8-HxCDD	59
Total HpCDD	ND(0.15) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	50
OCDD	ND(0.15) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	44
Furans			
Total TCDF	ND(0.055) UJ	^{13}C-2,3,7,8-TCDF	62
Total PeCDF	ND(0.049) UJ	^{13}C-1,2,3,7,8-PeCDF	51
Total HxCDF	ND(0.13) UJ	^{13}C-1,2,3,4,7,8-HxCDF	61
Total HpCDF	ND(0.23) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	55
OCDF	ND(0.11) UJ		

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910215-012 (Soil) WHC # B00GR9
Sample Date: February 11, 1991
TDL Sample ID: BB3423
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 10,1991		
Dioxins			
Total TCDD	ND(0.051) UJ	^{13}C-2,3,7,8-TCDD	68
Total PeCDD	ND(0.084) UJ	^{13}C-1,2,3,7,8-PeCDD	67
Total HxCDD	ND(0.18) UJ	^{13}C-1,2,3,6,7,8-HxCDD	71
Total HpCDD	ND(0.27) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	55
OCDD	ND(0.21) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	51
Furans			
Total TCDF	ND(0.047) UJ	^{13}C-2,3,7,8-TCDF	68
Total PeCDF	ND(0.058) UJ	^{13}C-1,2,3,7,8-PeCDF	57
Total HxCDF	ND(0.10) UJ	^{13}C-1,2,3,4,7,8-HxCDF	77
Total HpCDF	ND(0.14) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	63
OCDF	ND(0.20) UJ		

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Date: April 17, 1991
Client Project ID: MMOK48098 TDL Project No.: 484011

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Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910307-043 (Soil) WHC # B00GV6
Sample Date: March 4, 1991
TDL Sample ID: BB3424
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 11,1991		
Dioxins			
Total TCDD	ND(0.070) UJ	^{13}C-2,3,7,8-TCDD	62
Total PeCDD	ND(0.16) UJ	^{13}C-1,2,3,7,8-PeCDD	61
Total HxCDD	ND(0.19) UJ	^{13}C-1,2,3,6,7,8-HxCDD	61
Total HpCDD	ND(0.19) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	52
OCDD	ND(0.25) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	45
Furans			
Total TCDF	ND(0.051) UJ	^{13}C-2,3,7,8-TCDF	62
Total PeCDF	ND(0.082) UJ	^{13}C-1,2,3,7,8-PeCDF	49
Total HxCDF	ND(0.10) UJ	^{13}C-1,2,3,4,7,8-HxCDF	65
Total HpCDF	ND(0.14) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	58
OCDF	ND(0.21) UJ		

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TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910307-044 (Soil) WHC# B00GV7
Sample Date: March 4, 1991
TDL Sample ID: BB3425
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 11,1991		
Dioxins			
Total TCDD	ND(0.044) UJ	^{13}C-2,3,7,8-TCDD	77
Total PeCDD	ND(0.12) UJ	^{13}C-1,2,3,7,8-PeCDD	79
Total HxCDD	ND(0.15) UJ	^{13}C-1,2,3,6,7,8-HxCDD	74
Total HpCDD	ND(0.12) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	61
OCDD	ND(0.15) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	54
Furans			
Total TCDF	ND(0.038) UJ	^{13}C-2,3,7,8-TCDF	78
Total PeCDF	ND(0.035) UJ	^{13}C-1,2,3,7,8-PeCDF	63
Total HxCDF	ND(0.094) UJ	^{13}C-1,2,3,4,7,8-HxCDF	77
Total HpCDF	ND(0.097) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	69
OCDF	ND(0.10) UJ		

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KNOXVILLE, TENNESSEE

TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910307-045 (Soil) WHC # B00GV8
Sample Date: March 4, 1991
TDL Sample ID: BB3426
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 11,1991		
Dioxins			
Total TCDD	ND(0.036) UJ	^{13}C-2,3,7,8-TCDD	84
Total PeCDD	ND(0.087) UJ	^{13}C-1,2,3,7,8-PeCDD	78
Total HxCDD	ND(0.15) UJ	^{13}C-1,2,3,6,7,8-HxCDD	79
Total HpCDD	ND(0.11) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	68
OCDD	ND(0.12) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	59
Furans			
Total TCDF	ND(0.033) UJ	^{13}C-2,3,7,8-TCDF	83
Total PeCDF	ND(0.036) UJ	^{13}C-1,2,3,7,8-PeCDF	67
Total HxCDF	ND(0.093) UJ	^{13}C-1,2,3,4,7,8-HxCDF	85
Total HpCDF	ND(0.080) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	75
OCDF	ND(0.13) UJ		

7/4/91

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

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IT ANALYTICAL SERVICES
304 DIRECTORS DRIVE
KNOXVILLE, TENNESSEE

906

TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910308-109 (Soil) WHC # B00GW1
Sample Date: March 5, 1991
TDL Sample ID: BB3427
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 11,1991		
Dioxins			
Total TCDD	ND(0.041) UJ	^{13}C-2,3,7,8-TCDD	76
Total PeCDD	ND(0.080) UJ	^{13}C-1,2,3,7,8-PeCDD	71
Total HxCDD	ND(0.11) UJ	^{13}C-1,2,3,6,7,8-HxCDD	74
Total HpCDD	ND(0.15) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	59
OCDD	ND(0.15) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	51
Furans			
Total TCDF	ND(0.035) UJ	^{13}C-2,3,7,8-TCDF	74
Total PeCDF	ND(0.047) UJ	^{13}C-1,2,3,7,8-PeCDF	60
Total HxCDF	ND(0.11) UJ	^{13}C-1,2,3,4,7,8-HxCDF	78
Total HpCDF	ND(0.10) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	70
OCDF	ND(0.094) UJ		

JJ 7/4/91

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

IT ANALYTICAL SERVICES
304 DIRECTORS DRIVE
KNOXVILLE, TENNESSEE

TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910308-111 (Soil) WHC # B00GW4
Sample Date: March 5, 1991
TDL Sample ID: BB3428
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 11,1991		
Dioxins			
Total TCDD	ND(0.031) UJ	^{13}C-2,3,7,8-TCDD	75
Total PeCDD	ND(0.090) UJ	^{13}C-1,2,3,7,8-PeCDD	77
Total HxCDD	ND(0.087) UJ	^{13}C-1,2,3,6,7,8-HxCDD	79
Total HpCDD	ND(0.11) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	66
OCDD	ND(0.14) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	57
Furans			
Total TCDF	ND(0.050) UJ	^{13}C-2,3,7,8-TCDF	70
Total PeCDF	ND(0.045) UJ	^{13}C-1,2,3,7,8-PeCDF	64
Total HxCDF	ND(0.066) UJ	^{13}C-1,2,3,4,7,8-HxCDF	80
Total HpCDF	ND(0.079) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	75
OCDF	ND(0.11) UJ		

JJ 7/4/91

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

IT ANALYTICAL SERVICES
304 DIRECTORS DRIVE
KNOXVILLE, TENNESSEE

TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910308-113 (Soil) WHC# B00GW8
Sample Date: March 6, 1991
TDL Sample ID: BB3429
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 11,1991		
Dioxins			
Total TCDD	ND(0.044) UJ	^{13}C-2,3,7,8-TCDD	77
Total PeCDD	ND(0.13) UJ	^{13}C-1,2,3,7,8-PeCDD	73
Total HxCDD	ND(0.16) UJ	^{13}C-1,2,3,6,7,8-HxCDD	73
Total HpCDD	ND(0.13) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	61
OCDD	ND(0.11) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	52
Furans			
Total TCDF	ND(0.052) UJ	^{13}C-2,3,7,8-TCDF	75
Total PeCDF	ND(0.035) UJ	^{13}C-1,2,3,7,8-PeCDF	62
Total HxCDF	ND(0.11) UJ	^{13}C-1,2,3,4,7,8-HxCDF	75
Total HpCDF	ND(0.082) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	69
OCDF	ND(0.13) UJ		

JJ 7/4/91

Diane Jones
Martin Marietta K39A
Date: April 17, 1991
Client Project ID: MMOK48098

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IT ANALYTICAL SERVICES
304 DIRECTORS DRIVE
KNOXVILLE, TENNESSEE

TDL Project No.: 484011

Dioxin/Furan Analysis - Modified Method 8280

Client Sample ID: 910311-027 (Soil) WHC # B00GW3
Sample Date: March 5, 1991
TDL Sample ID: BB3430
Extraction Date: March 27, 1991

Analyte	Conc. (ng/g)	Internal Standard	% Recovery
Totals Analysis Date:	April 11,1991		
Dioxins			
Total TCDD	ND(0.047) UJ	^{13}C-2,3,7,8-TCDD	81
Total PeCDD	ND(0.12) UJ	^{13}C-1,2,3,7,8-PeCDD	82
Total HxCDD	ND(0.12) UJ	^{13}C-1,2,3,6,7,8-HxCDD	82
Total HpCDD	ND(0.14) UJ	^{13}C-1,2,3,4,6,7,8-HpCDD	70
OCDD	ND(0.096) UJ	^{13}C-1,2,3,4,6,7,8,9-OCDD	63
Furans			
Total TCDF	ND(0.039) UJ	^{13}C-2,3,7,8-TCDF	78
Total PeCDF	ND(0.038) UJ	^{13}C-1,2,3,7,8-PeCDF	69
Total HxCDF	ND(0.088) UJ	^{13}C-1,2,3,4,7,8-HxCDF	85
Total HpCDF	ND(0.10) UJ	^{13}C-1,2,3,4,6,7,8-HpCDF	79
OCDF	ND(0.16) UJ		

7/4/91

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ICP METALS

95133564.2830

ANALYSIS DATA REPORT

14-JUN-1991 08:12
Date Printed:
14-JUN-1991 08:12

AnaLIS ID: 910215-004
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00FK6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10311A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6600	7440-23-5	Sodium	170
7440-36-0	Antimony	5.6U	7440-62-2	Vanadium	45
7440-38-2	Arsenic	10	7440-66-6	Zinc	42
7440-39-3	Barium	72			
7440-41-7	Beryllium	0.36			
7440-42-8	Boron	4.5			
7440-43-9	Cadmium	0.98			
7440-70-2	Calcium	3400			
7440-47-3	Chromium	7.4			
7440-48-4	Cobalt	9.4			
7440-50-8	Copper	10			
7439-89-6	Iron	19000			
7439-92-1	Lead	5.6U			
7439-95-4	Magnesium	3900			
7439-96-5	Manganese	330 J			
7439-98-7	Molybdenum	1.1U			
7440-02-0	Nickel	8.5			
7440-09-7	Potassium	1400			
7782-49-2	Selenium	5.6U			
7440-21-3	Silicon	860			
7440-22-4	Silver	0.67U			

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:16

AnaLIS ID: 910215-005
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00FK7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10311A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6900	7440-23-5	Sodium	240
7440-36-0	Antimony	5.4U	7440-62-2	Vanadium	67
7440-38-2	Arsenic	5.4U	7440-66-6	Zinc	51
7440-39-3	Barium	81			
7440-41-7	Beryllium	0.43			
7440-42-8	Boron	8.6			
7440-43-9	Cadmium	1.2			
7440-70-2	Calcium	5300			
7440-47-3	Chromium	6.6			
7440-48-4	Cobalt	13			
7440-50-8	Copper	15			
7439-89-6	Iron	26000			
7439-92-1	Lead	5.4U			
7439-95-4	Magnesium	5300			
7439-96-5	Manganese	390 J			
7439-98-7	Molybdenum	1.1U			
7440-02-0	Nickel	10.0			
7440-09-7	Potassium	1200			
7782-49-2	Selenium	5.4U			
7440-21-3	Silicon	540			
7440-22-4	Silver	0.64U			

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:20

AnaLIS ID: 910215-006
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00FK8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10311A

[] : Result has been Corrected for Spike

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	3800	7440-23-5	Sodium	230
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	81
7440-38-2	Arsenic	9.1	7440-66-6	Zinc	51
7440-39-3	Barium	61			
7440-41-7	Beryllium	0.36			
7440-42-8	Boron	3.2			
7440-43-9	Cadmium	1.6			
7440-70-2	Calcium	8100			
7440-47-3	Chromium	3.3			
7440-48-4	Cobalt	15			
7440-50-8	Copper	17			
7439-89-6	Iron	29000			
7439-92-1	Lead	5.1U			
7439-95-4	Magnesium	5200			
7439-96-5	Manganese	400 J			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	5.9			
7440-09-7	Potassium	590			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	550			
7440-22-4	Silver	0.61U			

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:24

AnaLIS ID: 910215-007
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00FK9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10311A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	4500	7440-23-5	Sodium	230
7440-36-0	Antimony	4.8U	7440-62-2	Vanadium	59
7440-38-2	Arsenic	4.8U	7440-66-6	Zinc	45
7440-39-3	Barium	55			
7440-41-7	Beryllium	0.31			
7440-42-8	Boron	4.8			
7440-43-9	Cadmium	0.85			
7440-70-2	Calcium	8400			
7440-47-3	Chromium	5.9			
7440-48-4	Cobalt	12			
7440-50-8	Copper	16			
7439-89-6	Iron	24000			
7439-92-1	Lead	4.8U			
7439-95-4	Magnesium	4300			
7439-96-5	Manganese	300 J			
7439-98-7	Molybdenum	0.96U			
7440-02-0	Nickel	7.7			
7440-09-7	Potassium	560			
7782-49-2	Selenium	4.8U			
7440-21-3	Silicon	320			
7440-22-4	Silver	0.58U			

JZ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:45

AnaLIS ID: 910215-008
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOFLO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10311A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5200	7440-23-5	Sodium	290
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	86
7440-38-2	Arsenic	5.1U	7440-66-6	Zinc	54
7440-39-3	Barium	69			
7440-41-7	Beryllium	0.53			
7440-42-8	Boron	3.5			
7440-43-9	Cadmium	1.2			
7440-70-2	Calcium	9200			
7440-47-3	Chromium	7.4			
7440-48-4	Cobalt	14			
7440-50-8	Copper	16			
7439-89-6	Iron	29000			
7439-92-1	Lead	5.1U			
7439-95-4	Magnesium	4500			
7439-96-5	Manganese	360 J			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	10			
7440-09-7	Potassium	600			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	500			
7440-22-4	Silver	0.62U			

J 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:48

AnaLIS ID: 910215-009
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOFL1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10311A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5600	7440-23-5	Sodium	320
7440-36-0	Antimony	5.4U	7440-62-2	Vanadium	81
7440-38-2	Arsenic	5.4U	7440-66-6	Zinc	55
7440-39-3	Barium	75			
7440-41-7	Beryllium	0.40			
7440-42-8	Boron	7.4			
7440-43-9	Cadmium	1.3			
7440-70-2	Calcium	12000			
7440-47-3	Chromium	5.9			
7440-48-4	Cobalt	14			
7440-50-8	Copper	21			
7439-89-6	Iron	28000			
7439-92-1	Lead	5.4U			
7439-95-4	Magnesium	5100			
7439-96-5	Manganese	370 J			
7439-98-7	Molybdenum	1.1U			
7440-02-0	Nickel	7.5			
7440-09-7	Potassium	840			
7782-49-2	Selenium	5.4U			
7440-21-3	Silicon	510			
7440-22-4	Silver	0.64U			

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:30

AnaLIS ID: 910215-010
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00FL3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10311A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	130	7440-23-5	Sodium	20
7440-36-0	Antimony	5.0U	7440-62-2	Vanadium	0.50U
7440-38-2	Arsenic	5.0U	7440-66-6	Zinc	2.1
7440-39-3	Barium	1.6			
7440-41-7	Beryllium	0.030U			
7440-42-8	Boron	3.7			
7440-43-9	Cadmium	0.30U			
7440-70-2	Calcium	36			
7440-47-3	Chromium	0.99U			
7440-48-4	Cobalt	0.50U			
7440-50-8	Copper	0.40U			
7439-89-6	Iron	190			
7439-92-1	Lead	5.0U			
7439-95-4	Magnesium	19			
7439-96-5	Manganese	4.5 J			
7439-98-7	Molybdenum	0.99U			
7440-02-0	Nickel	0.99U			
7440-09-7	Potassium	59U			
7782-49-2	Selenium	5.0U			
7440-21-3	Silicon	58			
7440-22-4	Silver	0.59U			

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:33

AnaLIS ID: 910215-011
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00FL4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10311A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	4700	7440-23-5	Sodium	220
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	78
7440-38-2	Arsenic	5.1U	7440-66-6	Zinc	48
7440-39-3	Barium	67			
7440-41-7	Beryllium	0.38			
7440-42-8	Boron	4.7			
7440-43-9	Cadmium	0.54			
7440-70-2	Calcium	9300			
7440-47-3	Chromium	3.5			
7440-48-4	Cobalt	13			
7440-50-8	Copper	17			
7439-89-6	Iron	28000			
7439-92-1	Lead	5.1U			
7439-95-4	Magnesium	4000			
7439-96-5	Manganese	360 J			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	6.4			
7440-09-7	Potassium	530			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	370			
7440-22-4	Silver	0.62			

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:55

AnaLIS ID: 910215-012
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00GR9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 11-MAR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10311A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	3900	7440-23-5	Sodium	240
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	78
7440-38-2	Arsenic	6.8	7440-66-6	Zinc	47
7440-39-3	Barium	54			
7440-41-7	Beryllium	0.34			
7440-42-8	Boron	5.3			
7440-43-9	Cadmium	0.72			
7440-70-2	Calcium	6900			
7440-47-3	Chromium	4.9			
7440-48-4	Cobalt	13			
7440-50-8	Copper	14			
7439-89-6	Iron	25000			
7439-92-1	Lead	5.1U			
7439-95-4	Magnesium	3600			
7439-96-5	Manganese	300 J			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	6.4			
7440-09-7	Potassium	530			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	370			
7440-22-4	Silver	0.61U			

6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:38

AnaLIS ID: 910215-092
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00GS1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 20-MAR-1991
Analysis Procedure Number: TP-0908
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10320A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6100	7440-23-5	Sodium	280
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	68
7440-38-2	Arsenic	12	7440-66-6	Zinc	56
7440-39-3	Barium	71			
7440-41-7	Beryllium	0.41			
7440-42-8	Boron	0.42U			
7440-43-9	Cadmium	1.6			
7440-70-2	Calcium	12000			
7440-47-3	Chromium	9.6			
7440-48-4	Cobalt	13			
7440-50-8	Copper	16			
7439-89-6	Iron	27000			
7439-92-1	Lead	6.9			
7439-95-4	Magnesium	6600			
7439-96-5	Manganese	410			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	15			
7440-09-7	Potassium	900			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	400			
7440-22-4	Silver	1.5			

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:52

AnaLIS ID: 910219-089
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00GS2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 20-MAR-1991
Analysis Procedure Number: TP-0908
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10320A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5200	7440-23-5	Sodium	270
7440-36-0	Antimony	6.5	7440-62-2	Vanadium	68
7440-38-2	Arsenic	4.9U	7440-66-6	Zinc	52
7440-39-3	Barium	65			
7440-41-7	Beryllium	0.35			
7440-42-8	Boron	0.39U			
7440-43-9	Cadmium	0.99			
7440-70-2	Calcium	7700			
7440-47-3	Chromium	7.7			
7440-48-4	Cobalt	11			
7440-50-8	Copper	16			
7439-89-6	Iron	26000			
7439-92-1	Lead	8.4			
7439-95-4	Magnesium	5300			
7439-96-5	Manganese	300			
7439-98-7	Molybdenum	0.97U			
7440-02-0	Nickel	13			
7440-09-7	Potassium	750			
7782-49-2	Selenium	4.9U			
7440-21-3	Silicon	330			
7440-22-4	Silver	1.0			

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:52

AnaLIS ID: 910219-090
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00GS3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 20-MAR-1991
Analysis Procedure Number: TP-0908
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10320A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5300	7440-23-5	Sodium	280
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	68
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	51
7440-39-3	Barium	72			
7440-41-7	Beryllium	0.35			
7440-42-8	Boron	0.42U			
7440-43-9	Cadmium	0.69			
7440-70-2	Calcium	9300			
7440-47-3	Chromium	3.9			
7440-48-4	Cobalt	12			
7440-50-8	Copper	17			
7439-89-6	Iron	26000			
7439-92-1	Lead	5.2U			
7439-95-4	Magnesium	5100			
7439-96-5	Manganese	350			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	12			
7440-09-7	Potassium	800			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	280			
7440-22-4	Silver	1.1			

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:39

AnaLIS ID: 910219-091
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00GS4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 20-MAR-1991
Analysis Procedure Number: TP-0908
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10320A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	8700	7440-23-5	Sodium	250
7440-36-0	Antimony	5.5U	7440-62-2	Vanadium	58
7440-38-2	Arsenic	5.5U	7440-66-6	Zinc	60
7440-39-3	Barium	91			
7440-41-7	Beryllium	0.50			
7440-42-8	Boron	1.3			
7440-43-9	Cadmium	0.33U			
7440-70-2	Calcium	14000			
7440-47-3	Chromium	8.1			
7440-48-4	Cobalt	12			
7440-50-8	Copper	20			
7439-89-6	Iron	27000			
7439-92-1	Lead	16			
7439-95-4	Magnesium	8700			
7439-96-5	Manganese	440			
7439-98-7	Molybdenum	1.1U			
7440-02-0	Nickel	12			
7440-09-7	Potassium	1500			
7782-49-2	Selenium	5.5U			
7440-21-3	Silicon	480			
7440-22-4	Silver	1.1			

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 08:59

AnaLIS ID: 910219-092
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00GS8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 20-MAR-1991
Analysis Procedure Number: TP-0908
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10320A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	4800	7440-23-5	Sodium	330
7440-36-0	Antimony	4.9U	7440-62-2	Vanadium	62
7440-38-2	Arsenic	4.9U	7440-66-6	Zinc	45
7440-39-3	Barium	66			
7440-41-7	Beryllium	0.31			
7440-42-8	Boron	0.39U			
7440-43-9	Cadmium	0.34			
7440-70-2	Calcium	6700			
7440-47-3	Chromium	3.5			
7440-48-4	Cobalt	12			
7440-50-8	Copper	15			
7439-89-6	Iron	24000			
7439-92-1	Lead	4.9U			
7439-95-4	Magnesium	4300			
7439-96-5	Manganese	300			
7439-98-7	Molybdenum	0.99U			
7440-02-0	Nickel	7.1			
7440-09-7	Potassium	670			
7782-49-2	Selenium	4.9U			
7440-21-3	Silicon	310			
7440-22-4	Silver	0.66			

ANALYSIS DATA REPORT

Date Printed:
12-JUN-1991 08:06

AnaLIS ID: 910222-063
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00GS9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 20-MAR-1991
Analysis Procedure Number: TP-0908
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10320A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5500	7440-23-5	Sodium	310
7440-36-0	Antimony	5.9	7440-62-2	Vanadium	74
7440-38-2	Arsenic	5.1U	7440-66-6	Zinc	52
7440-39-3	Barium	75			
7440-41-7	Beryllium	0.35			
7440-42-8	Boron	0.41U			
7440-43-9	Cadmium	0.31U			
7440-70-2	Calcium	8000			
7440-47-3	Chromium	3.1			
7440-48-4	Cobalt	12			
7440-50-8	Copper	18			
7439-89-6	Iron	27000			
7439-92-1	Lead	5.3			
7439-95-4	Magnesium	4600			
7439-96-5	Manganese	340			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	7.0			
7440-09-7	Potassium	710			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	270			
7440-22-4	Silver	0.77			

ANALYSIS DATA REPORT

Date Printed:
12-JUN-1991 08:13

AnaLIS ID: 910222-064
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00GT1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 20-MAR-1991
Analysis Procedure Number: TP-0908
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10320A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	9600	7440-23-5	Sodium	180
7440-36-0	Antimony	5.7U	7440-62-2	Vanadium	41
7440-38-2	Arsenic	5.7U	7440-66-6	Zinc	42
7440-39-3	Barium	83			
7440-41-7	Beryllium	0.37			
7440-42-8	Boron	0.46U			
7440-43-9	Cadmium	0.34U			
7440-70-2	Calcium	11000			
7440-47-3	Chromium	13			
7440-48-4	Cobalt	8.4			
7440-50-8	Copper	13			
7439-89-6	Iron	19000			
7439-92-1	Lead	9.5			
7439-95-4	Magnesium	6600			
7439-96-5	Manganese	360			
7439-98-7	Molybdenum	1.1U			
7440-02-0	Nickel	16			
7440-09-7	Potassium	1800			
7782-49-2	Selenium	5.7U			
7440-21-3	Silicon	450			
7440-22-4	Silver	0.83			

ANALYSIS DATA REPORT

Date Printed:
12-JUN-1991 08:10

AnaLIS ID: 910222-065
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: B00GT3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 20-MAR-1991
Analysis Procedure Number: TP-0908
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10320A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	230	7440-23-5	Sodium	16
7440-36-0	Antimony	4.8U	7440-62-2	Vanadium	0.48U
7440-38-2	Arsenic	4.8U	7440-66-6	Zinc	0.60
7440-39-3	Barium	4.6			
7440-41-7	Beryllium	0.029U			
7440-42-8	Boron	0.38U			
7440-43-9	Cadmium	0.29U			
7440-70-2	Calcium	64			
7440-47-3	Chromium	0.96U			
7440-48-4	Cobalt	0.48U			
7440-50-8	Copper	0.57			
7439-89-6	Iron	890			
7439-92-1	Lead	4.8U			
7439-95-4	Magnesium	38			
7439-96-5	Manganese	7.5			
7439-98-7	Molybdenum	0.96U			
7440-02-0	Nickel	0.96U			
7440-09-7	Potassium	57U			
7782-49-2	Selenium	4.8U			
7440-21-3	Silicon	87			
7440-22-4	Silver	0.57U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:01

AnaLIS ID: 910224-065
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGT4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6500	7440-23-5	Sodium	200
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	38
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	34
7440-39-3	Barium	56			
7440-41-7	Beryllium	0.23			
7440-42-8	Boron	8.2			
7440-43-9	Cadmium	0.49			
7440-70-2	Calcium	7400			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	7.0			
7440-50-8	Copper	12			
7439-89-6	Iron	16000 J			
7439-92-1	Lead	5.2U			
7439-95-4	Magnesium	4700			
7439-96-5	Manganese	250 J			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	11			
7440-09-7	Potassium	1000			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	440			
7440-22-4	Silver	0.63U			

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:02

AnaLIS ID: 910224-066
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGT5
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6300	7440-23-5	Sodium	160
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	40
7440-38-2	Arsenic	13	7440-66-6	Zinc	33
7440-39-3	Barium	52			
7440-41-7	Beryllium	0.25			
7440-42-8	Boron	8.3			
7440-43-9	Cadmium	0.58			
7440-70-2	Calcium	8300			
7440-47-3	Chromium	9.4			
7440-48-4	Cobalt	7.4			
7440-50-8	Copper	13			
7439-89-6	Iron	16000 J			
7439-92-1	Lead	5.7			
7439-95-4	Magnesium	4000			
7439-96-5	Manganese	260 J			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	10			
7440-09-7	Potassium	830			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	550			
7440-22-4	Silver	0.62U			

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 10:50

AnaLIS ID: 910224-067
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGT7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g
7429-90-5	Aluminum	6600
7440-36-0	Antimony	4.8U
7440-38-2	Arsenic	4.8U
7440-39-3	Barium	75
7440-41-7	Beryllium	0.28
7440-42-8	Boron	8.2
7440-43-9	Cadmium	0.58
7440-70-2	Calcium	6300
7440-47-3	Chromium	12
7440-48-4	Cobalt	10
7440-50-8	Copper	16
7439-89-6	Iron	20000 J
7439-92-1	Lead	8.2
7439-95-4	Magnesium	4300
7439-96-5	Manganese	260 J
7439-98-7	Molybdenum	1.3
7440-02-0	Nickel	10
7440-09-7	Potassium	800
7782-49-2	Selenium	4.8U
7440-21-3	Silicon	470
7440-22-4	Silver	0.58U
7440-23-5	Sodium	540
7440-62-2	Vanadium	52
7440-66-6	Zinc	37

JZ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:38

AnaLIS ID: 910227-087
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGT8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	7600	7440-23-5	Sodium	740
7440-36-0	Antimony	14	7440-62-2	Vanadium	73
7440-38-2	Arsenic	8.2	7440-66-6	Zinc	51
7440-39-3	Barium	87			
7440-41-7	Beryllium	0.35			
7440-42-8	Boron	8.0			
7440-43-9	Cadmium	0.76			
7440-70-2	Calcium	7800			
7440-47-3	Chromium	16			
7440-48-4	Cobalt	14			
7440-50-8	Copper	27			
7439-89-6	Iron	29000 J			
7439-92-1	Lead	160			
7439-95-4	Magnesium	5500			
7439-96-5	Manganese	340 J			
7439-98-7	Molybdenum	1.9			
7440-02-0	Nickel	15			
7440-09-7	Potassium	1100			
7782-49-2	Selenium	5.0U			
7440-21-3	Silicon	560			
7440-22-4	Silver	0.61U			

6/27/91

ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:39

AnaLIS ID: 910301-012
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGV0
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6500	7440-23-5	Sodium	490
7440-36-0	Antimony	4.6U	7440-62-2	Vanadium	56
7440-38-2	Arsenic	4.6U	7440-66-6	Zinc	42
7440-39-3	Barium	71			
7440-41-7	Beryllium	0.29			
7440-42-8	Boron	8.8			
7440-43-9	Cadmium	0.28U			
7440-70-2	Calcium	5800			
7440-47-3	Chromium	9.5			
7440-48-4	Cobalt	12			
7440-50-8	Copper	16			
7439-89-6	Iron	21000 J			
7439-92-1	Lead	4.6U			
7439-95-4	Magnesium	3800			
7439-96-5	Manganese	250 J			
7439-98-7	Molybdenum	1.1			
7440-02-0	Nickel	11			
7440-09-7	Potassium	930			
7782-49-2	Selenium	4.6U			
7440-21-3	Silicon	450			
7440-22-4	Silver	0.56U			

JZ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:41

AnaLIS ID: 910304-008
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGV5
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6100	7440-23-5	Sodium	600
7440-36-0	Antimony	8.0	7440-62-2	Vanadium	69
7440-38-2	Arsenic	5.4U	7440-66-6	Zinc	45
7440-39-3	Barium	53			
7440-41-7	Beryllium	0.28			
7440-42-8	Boron	9.3			
7440-43-9	Cadmium	0.62			
7440-70-2	Calcium	6400			
7440-47-3	Chromium	16			
7440-48-4	Cobalt	14			
7440-50-8	Copper	45			
7439-89-6	Iron	25000 J			
7439-92-1	Lead	61			
7439-95-4	Magnesium	5100			
7439-96-5	Manganese	280 J			
7439-98-7	Molybdenum	2.4			
7440-02-0	Nickel	24			
7440-09-7	Potassium	550			
7782-49-2	Selenium	5.4U			
7440-21-3	Silicon	320			
7440-22-4	Silver	0.65U			

6/29/91

ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:45

AnaLIS ID: 910306-006
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGV1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	300	7440-23-5	Sodium	58
7440-36-0	Antimony	4.6U	7440-62-2	Vanadium	3.1
7440-38-2	Arsenic	4.6U	7440-66-6	Zinc	7.4
7440-39-3	Barium	6.4			
7440-41-7	Beryllium	0.12			
7440-42-8	Boron	5.9			
7440-43-9	Cadmium	0.27U			
7440-70-2	Calcium	60			
7440-47-3	Chromium	0.91U			
7440-48-4	Cobalt	0.72			
7440-50-8	Copper	1.4			
7439-89-6	Iron	1300 J			
7439-92-1	Lead	4.6U			
7439-95-4	Magnesium	42			
7439-96-5	Manganese	13 J			
7439-98-7	Molybdenum	0.91U			
7440-02-0	Nickel	0.91U			
7440-09-7	Potassium	83			
7782-49-2	Selenium	4.6U			
7440-21-3	Silicon	82			
7440-22-4	Silver	0.55U			

JZ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:46

AnaLIS ID: 910306-007
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGV2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	7400	7440-23-5	Sodium	810
7440-36-0	Antimony	4.6U	7440-62-2	Vanadium	65
7440-38-2	Arsenic	4.6U	7440-66-6	Zinc	43
7440-39-3	Barium	77			
7440-41-7	Beryllium	0.30			
7440-42-8	Boron	7.4			
7440-43-9	Cadmium	0.60			
7440-70-2	Calcium	8000			
7440-47-3	Chromium	10			
7440-48-4	Cobalt	13			
7440-50-8	Copper	23			
7439-89-6	Iron	24000 J			
7439-92-1	Lead	6.8			
7439-95-4	Magnesium	3800			
7439-96-5	Manganese	290 J			
7439-98-7	Molybdenum	1.5			
7440-02-0	Nickel	9.8			
7440-09-7	Potassium	870			
7782-49-2	Selenium	4.6U			
7440-21-3	Silicon	330			
7440-22-4	Silver	0.56U			

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ANALYSIS DATA REPORT

Date Printed:
23-MAY-1991 09:46

AnaLIS ID: 910306-008
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGV3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	7100	7440-23-5	Sodium	770
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	61
7440-38-2	Arsenic	5.7	7440-66-6	Zinc	43
7440-39-3	Barium	110			
7440-41-7	Beryllium	0.30			
7440-42-8	Boron	9.1			
7440-43-9	Cadmium	0.64			
7440-70-2	Calcium	7600			
7440-47-3	Chromium	14			
7440-48-4	Cobalt	14			
7440-50-8	Copper	22			
7439-89-6	Iron	24000 J			
7439-92-1	Lead	8.5			
7439-95-4	Magnesium	4300			
7439-96-5	Manganese	290 J			
7439-98-7	Molybdenum	1.9			
7440-02-0	Nickel	16			
7440-09-7	Potassium	860			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	510			
7440-22-4	Silver	0.62U			

6/29/91

ANALYSIS DATA REPORT

30-MAY-1991 07:39
Date Printed:
30-MAY-1991 07:39

AnaLIS ID: 910307-043
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGV6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g		CAS		ug/g
7429-90-5	Aluminum	4500		7440-23-5	Sodium	320
7440-36-0	Antimony	5.0U		7440-62-2	Vanadium	64
7440-38-2	Arsenic	5.0U		7440-66-6	Zinc	48
7440-39-3	Barium	62				
7440-41-7	Beryllium	0.32				
7440-42-8	Boron	8.7				
7440-43-9	Cadmium	0.67				
7440-70-2	Calcium	6900				
7440-47-3	Chromium	8.7				
7440-48-4	Cobalt	12				
7440-50-8	Copper	16				
7439-89-6	Iron	24000	J			
7439-92-1	Lead	5.8				
7439-95-4	Magnesium	3600				
7439-96-5	Manganese	280	J			
7439-98-7	Molybdenum	1.2				
7440-02-0	Nickel	8.2				
7440-09-7	Potassium	680				
7782-49-2	Selenium	5.0U				
7440-21-3	Silicon	340				
7440-22-4	Silver	0.60U				

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:04

AnaLIS ID: 910307-044
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGV7
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g		CAS		ug/g
7429-90-5	Aluminum	5200		7440-23-5	Sodium	360
7440-36-0	Antimony	4.9U		7440-62-2	Vanadium	72
7440-38-2	Arsenic	4.9U		7440-66-6	Zinc	50
7440-39-3	Barium	70				
7440-41-7	Beryllium	0.33				
7440-42-8	Boron	7.6				
7440-43-9	Cadmium	0.50				
7440-70-2	Calcium	7700				
7440-47-3	Chromium	8.6				
7440-48-4	Cobalt	14				
7440-50-8	Copper	17				
7439-89-6	Iron	25000	J			
7439-92-1	Lead	6.3				
7439-95-4	Magnesium	3800				
7439-96-5	Manganese	340	J			
7439-98-7	Molybdenum	1.4				
7440-02-0	Nickel	8.9				
7440-09-7	Potassium	660				
7782-49-2	Selenium	4.9U				
7440-21-3	Silicon	330				
7440-22-4	Silver	0.58U				

JZ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:17

AnaLIS ID: 910307-045
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGV8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5300	7440-23-5	Sodium	340
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	70
7440-38-2	Arsenic	9.6	7440-66-6	Zinc	52
7440-39-3	Barium	87			
7440-41-7	Beryllium	0.35			
7440-42-8	Boron	8.9			
7440-43-9	Cadmium	0.31U			
7440-70-2	Calcium	7700			
7440-47-3	Chromium	14			
7440-48-4	Cobalt	13			
7440-50-8	Copper	19			
7439-89-6	Iron	26000 J			
7439-92-1	Lead	7.8			
7439-95-4	Magnesium	4000			
7439-96-5	Manganese	350 J			
7439-98-7	Molybdenum	1.5			
7440-02-0	Nickel	13			
7440-09-7	Potassium	670			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	360			
7440-22-4	Silver	0.62U			

6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:08

AnaLIS ID: 910308-108
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGV9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

[] : Result has been Corrected for Spike

CAS		ug/g		CAS		ug/g
7429-90-5	Aluminum	150		7440-23-5	Sodium	34
7440-36-0	Antimony	5.0U		7440-62-2	Vanadium	0.50U
7440-38-2	Arsenic	5.0U		7440-66-6	Zinc	4.1
7440-39-3	Barium	2.0				
7440-41-7	Beryllium	0.030				
7440-42-8	Boron	7.5				
7440-43-9	Cadmium	0.30U				
7440-70-2	Calcium	37				
7440-47-3	Chromium	1.3				
7440-48-4	Cobalt	0.50U				
7440-50-8	Copper	5.7				
7439-89-6	Iron	270	J			
7439-92-1	Lead	5.0U				
7439-95-4	Magnesium	22				
7439-96-5	Manganese	5.4	J			
7439-98-7	Molybdenum	1.00U				
7440-02-0	Nickel	1.4				
7440-09-7	Potassium	60U				
7782-49-2	Selenium	5.0U				
7440-21-3	Silicon	110				
7440-22-4	Silver	0.60U				

6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:12

AnaLIS ID: 910308-109
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGW1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g		CAS		ug/g
7429-90-5	Aluminum	5000		7440-23-5	Sodium	230
7440-36-0	Antimony	5.1U		7440-62-2	Vanadium	78
7440-38-2	Arsenic	5.1U		7440-66-6	Zinc	50
7440-39-3	Barium	64				
7440-41-7	Beryllium	0.35				
7440-42-8	Boron	6.6				
7440-43-9	Cadmium	0.80				
7440-70-2	Calcium	8700				
7440-47-3	Chromium	5.1				
7440-48-4	Cobalt	14				
7440-50-8	Copper	25				
7439-89-6	Iron	28000	J			
7439-92-1	Lead	6.5				
7439-95-4	Magnesium	5000				
7439-96-5	Manganese	360	J			
7439-98-7	Molybdenum	1.4				
7440-02-0	Nickel	8.2				
7440-09-7	Potassium	780				
7782-49-2	Selenium	5.1U				
7440-21-3	Silicon	280				
7440-22-4	Silver	0.61U				

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ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:51

AnaLIS ID: 910308-110
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGWO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g		CAS		ug/g
7429-90-5	Aluminum	7200		7440-23-5	Sodium	210
7440-36-0	Antimony	5.3U		7440-62-2	Vanadium	52
7440-38-2	Arsenic	14		7440-66-6	Zinc	48
7440-39-3	Barium	80				
7440-41-7	Beryllium	0.40				
7440-42-8	Boron	6.1				
7440-43-9	Cadmium	0.80				
7440-70-2	Calcium	13000				
7440-47-3	Chromium	9.7				
7440-48-4	Cobalt	11				
7440-50-8	Copper	19				
7439-89-6	Iron	23000	J			
7439-92-1	Lead	8.8				
7439-95-4	Magnesium	7000				
7439-96-5	Manganese	410	J			
7439-98-7	Molybdenum	1.3				
7440-02-0	Nickel	11				
7440-09-7	Potassium	1300				
7782-49-2	Selenium	5.3U				
7440-21-3	Silicon	260				
7440-22-4	Silver	0.64U				

JZ 6/29/91

ANALYSIS DATA REPORT

Date printed:
30-MAY-1991 07:54

AnaLIS ID: 910308-111
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGW4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	4900	7440-23-5	Sodium	280
7440-36-0	Antimony	4.8U	7440-62-2	Vanadium	76
7440-38-2	Arsenic	4.8U	7440-66-6	Zinc	45
7440-39-3	Barium	78			
7440-41-7	Beryllium	0.35			
7440-42-8	Boron	5.8			
7440-43-9	Cadmium	0.84			
7440-70-2	Calcium	7600			
7440-47-3	Chromium	7.2			
7440-48-4	Cobalt	13			
7440-50-8	Copper	18			
7439-89-6	Iron	25000 J			
7439-92-1	Lead	4.8U			
7439-95-4	Magnesium	4200			
7439-96-5	Manganese	340 J			
7439-98-7	Molybdenum	0.95U			
7440-02-0	Nickel	8.8			
7440-09-7	Potassium	670			
7782-49-2	Selenium	4.8U			
7440-21-3	Silicon	220			
7440-22-4	Silver	0.57U			

6/29/91

ANALYSIS DATA REPORT

Date printed:
30-MAY-1991 08:21

AnaLIS ID: 910308-112
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGW6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

[] : Result has been Corrected for Spike

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	7000	7440-23-5	Sodium	260
7440-36-0	Antimony	5.3U	7440-62-2	Vanadium	82
7440-38-2	Arsenic	10	7440-66-6	Zinc	51
7440-39-3	Barium	75			
7440-41-7	Beryllium	0.42			
7440-42-8	Boron	8.0			
7440-43-9	Cadmium	0.90			
7440-70-2	Calcium	10000			
7440-47-3	Chromium	8.1			
7440-48-4	Cobalt	14			
7440-50-8	Copper	17			
7439-89-6	Iron	30000 J			
7439-92-1	Lead	5.3U			
7439-95-4	Magnesium	5800			
7439-96-5	Manganese	400 J			
7439-98-7	Molybdenum	1.1U			
7440-02-0	Nickel	10			
7440-09-7	Potassium	870			
7782-49-2	Selenium	5.3U			
7440-21-3	Silicon	300			
7440-22-4	Silver	0.63U			

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ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 07:58

AnaLIS ID: 910308-113
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGW8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g
7429-90-5	Aluminum	6000
7440-36-0	Antimony	5.1U
7440-38-2	Arsenic	12
7440-39-3	Barium	76
7440-41-7	Beryllium	0.35
7440-42-8	Boron	7.2
7440-43-9	Cadmium	0.80
7440-70-2	Calcium	7600
7440-47-3	Chromium	6.8
7440-48-4	Cobalt	14
7440-50-8	Copper	18
7439-89-6	Iron	29000 J
7439-92-1	Lead	5.7
7439-95-4	Magnesium	4600
7439-96-5	Manganese	360 J
7439-98-7	Molybdenum	1.0U
7440-02-0	Nickel	8.3
7440-09-7	Potassium	740
7782-49-2	Selenium	5.1U
7440-21-3	Silicon	240
7440-22-4	Silver	0.61U
7440-23-5	Sodium	450
7440-62-2	Vanadium	76
7440-66-6	Zinc	50

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:01

AnaLIS ID: 910308-114
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGW9
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6500	7440-23-5	Sodium	560
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	87
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	50
7440-39-3	Barium	96			
7440-41-7	Beryllium	0.38			
7440-42-8	Boron	8.1			
7440-43-9	Cadmium	0.60			
7440-70-2	Calcium	7300			
7440-47-3	Chromium	9.4			
7440-48-4	Cobalt	15			
7440-50-8	Copper	21			
7439-89-6	Iron	29000 J			
7439-92-1	Lead	5.2U			
7439-95-4	Magnesium	4200			
7439-96-5	Manganese	340 J			
7439-98-7	Molybdenum	1.0			
7440-02-0	Nickel	11			
7440-09-7	Potassium	730			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	240			
7440-22-4	Silver	0.62U			

JJ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
30-MAY-1991 08:15

AnaLIS ID: 910308-115
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGX2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g		CAS		ug/g
7429-90-5	Aluminum	5500		7440-23-5	Sodium	390
7440-36-0	Antimony	5.1U		7440-62-2	Vanadium	82
7440-38-2	Arsenic	11		7440-66-6	Zinc	49
7440-39-3	Barium	65				
7440-41-7	Beryllium	0.37				
7440-42-8	Boron	6.8				
7440-43-9	Cadmium	0.96				
7440-70-2	Calcium	7200				
7440-47-3	Chromium	7.6				
7440-48-4	Cobalt	14				
7440-50-8	Copper	17				
7439-89-6	Iron	27000	J			
7439-92-1	Lead	7.3				
7439-95-4	Magnesium	3800				
7439-96-5	Manganese	320	J			
7439-98-7	Molybdenum	1.0				
7440-02-0	Nickel	8.9				
7440-09-7	Potassium	660				
7782-49-2	Selenium	5.1U				
7440-21-3	Silicon	250				
7440-22-4	Silver	0.62U				

6/29/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:52

AnaLIS ID: 910311-027
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGW3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	4600	7440-23-5	Sodium	340
7440-36-0	Antimony	5.0U	7440-62-2	Vanadium	71
7440-38-2	Arsenic	5.0U	7440-66-6	Zinc	46
7440-39-3	Barium	80			
7440-41-7	Beryllium	0.35			
7440-42-8	Boron	5.8			
7440-43-9	Cadmium	1.7			
7440-70-2	Calcium	7100			
7440-47-3	Chromium	14			
7440-48-4	Cobalt	13			
7440-50-8	Copper	19			
7439-89-6	Iron	27000			
7439-92-1	Lead	5.0U			
7439-95-4	Magnesium	4900			
7439-96-5	Manganese	300			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	11			
7440-09-7	Potassium	850			
7782-49-2	Selenium	5.0U			
7440-21-3	Silicon	300			
7440-22-4	Silver	0.60U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:56

AnaLIS ID: 910313-099
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGX3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5700	7440-23-5	Sodium	520
7440-36-0	Antimony	5.0U	7440-62-2	Vanadium	77
7440-38-2	Arsenic	5.0U	7440-66-6	Zinc	44
7440-39-3	Barium	63			
7440-41-7	Beryllium	0.33			
7440-42-8	Boron	5.2			
7440-43-9	Cadmium	1.6			
7440-70-2	Calcium	6500			
7440-47-3	Chromium	9.6			
7440-48-4	Cobalt	13			
7440-50-8	Copper	18			
7439-89-6	Iron	24000			
7439-92-1	Lead	5.0U			
7439-95-4	Magnesium	3800			
7439-96-5	Manganese	270			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	9.2			
7440-09-7	Potassium	710			
7782-49-2	Selenium	5.0U			
7440-21-3	Silicon	290			
7440-22-4	Silver	0.60U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:56

AnaLIS ID: 910313-100
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGX4
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5600	7440-23-5	Sodium	420
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	76
7440-38-2	Arsenic	5.1U	7440-66-6	Zinc	46
7440-39-3	Barium	75			
7440-41-7	Beryllium	0.37			
7440-42-8	Boron	4.7			
7440-43-9	Cadmium	1.7			
7440-70-2	Calcium	6800			
7440-47-3	Chromium	5.9			
7440-48-4	Cobalt	14			
7440-50-8	Copper	19			
7439-89-6	Iron	27000			
7439-92-1	Lead	5.1U			
7439-95-4	Magnesium	4600			
7439-96-5	Manganese	310			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	10			
7440-09-7	Potassium	780			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	410			
7440-22-4	Silver	0.61U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:00

AnaLIS ID: 910313-101
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGX5
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6000	7440-23-5	Sodium	550
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	72
7440-38-2	Arsenic	5.1U	7440-66-6	Zinc	46
7440-39-3	Barium	95			
7440-41-7	Beryllium	0.36			
7440-42-8	Boron	7.1			
7440-43-9	Cadmium	1.2			
7440-70-2	Calcium	6600			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	13			
7440-50-8	Copper	21			
7439-89-6	Iron	27000			
7439-92-1	Lead	5.1U			
7439-95-4	Magnesium	4200			
7439-96-5	Manganese	300			
7439-98-7	Molybdenum	1.5			
7440-02-0	Nickel	9.7			
7440-09-7	Potassium	910			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	390			
7440-22-4	Silver	0.62U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 10:57

AnaLIS ID: 910313-102
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGX8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	7400	7440-23-5	Sodium	450
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	54
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	40
7440-39-3	Barium	84			
7440-41-7	Beryllium	0.32			
7440-42-8	Boron	3.7			
7440-43-9	Cadmium	1.3			
7440-70-2	Calcium	8000			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	9.5			
7440-50-8	Copper	14			
7439-89-6	Iron	21000			
7439-92-1	Lead	5.5			
7439-95-4	Magnesium	4800			
7439-96-5	Manganese	300			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	12			
7440-09-7	Potassium	1200			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	400			
7440-22-4	Silver	0.62U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:12

AnaLIS ID: 910313-103
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGX6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5400	7440-23-5	Sodium	420
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	68
7440-38-2	Arsenic	5.1U	7440-66-6	Zinc	43
7440-39-3	Barium	75			
7440-41-7	Beryllium	0.34			
7440-42-8	Boron	4.2			
7440-43-9	Cadmium	1.5			
7440-70-2	Calcium	7700			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	12			
7440-50-8	Copper	17			
7439-89-6	Iron	25000			
7439-92-1	Lead	5.6			
7439-95-4	Magnesium	4400			
7439-96-5	Manganese	310			
7439-98-7	Molybdenum	1.2			
7440-02-0	Nickel	12			
7440-09-7	Potassium	770			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	450			
7440-22-4	Silver	0.61U			

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:08

AnaLIS ID: 910315-057
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGYO
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	200	7440-23-5	Sodium	51
7440-36-0	Antimony	4.9U	7440-62-2	Vanadium	0.59
7440-38-2	Arsenic	4.9U	7440-66-6	Zinc	3.3
7440-39-3	Barium	3.6			
7440-41-7	Beryllium	0.054			
7440-42-8	Boron	6.0			
7440-43-9	Cadmium	0.29U			
7440-70-2	Calcium	49			
7440-47-3	Chromium	0.98U			
7440-48-4	Cobalt	0.49U			
7440-50-8	Copper	1.5			
7439-89-6	Iron	970 J			
7439-92-1	Lead	4.9U			
7439-95-4	Magnesium	32			
7439-96-5	Manganese	18 J			
7439-98-7	Molybdenum	0.98U			
7440-02-0	Nickel	0.99			
7440-09-7	Potassium	65			
7782-49-2	Selenium	4.9U			
7440-21-3	Silicon	100			
7440-22-4	Silver	0.59U			

JZ 6/29/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:08

AnaLIS ID: 910315-058
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGY1
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g		CAS		ug/g
7429-90-5	Aluminum	8400		7440-23-5	Sodium	610
7440-36-0	Antimony	5.2U		7440-62-2	Vanadium	45
7440-38-2	Arsenic	37		7440-66-6	Zinc	40
7440-39-3	Barium	80				
7440-41-7	Beryllium	0.29				
7440-42-8	Boron	12				
7440-43-9	Cadmium	0.66				
7440-70-2	Calcium	8700				
7440-47-3	Chromium	19				
7440-48-4	Cobalt	9.1				
7440-50-8	Copper	26				
7439-89-6	Iron	30000	J			
7439-92-1	Lead	15				
7439-95-4	Magnesium	4300				
7439-96-5	Manganese	370	J			
7439-98-7	Molybdenum	2.0				
7440-02-0	Nickel	12				
7440-09-7	Potassium	970				
7782-49-2	Selenium	5.2U				
7440-21-3	Silicon	290				
7440-22-4	Silver	0.62U				

JL 6/24/91

ANALYSIS DATA REPORT

Date Printed: 14-JUN-1991 09:26

AnaLIS ID: 910315-059
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGY2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g		CAS		ug/g
7429-90-5	Aluminum	7200		7440-23-5	Sodium	410
7440-36-0	Antimony	5.2U		7440-62-2	Vanadium	45
7440-38-2	Arsenic	9.7		7440-66-6	Zinc	36
7440-39-3	Barium	63				
7440-41-7	Beryllium	0.29				
7440-42-8	Boron	8.7				
7440-43-9	Cadmium	0.82				
7440-70-2	Calcium	8000				
7440-47-3	Chromium	17				
7440-48-4	Cobalt	8.9				
7440-50-8	Copper	22				
7439-89-6	Iron	29000	J			
7439-92-1	Lead	12				
7439-95-4	Magnesium	4400				
7439-96-5	Manganese	350	J			
7439-98-7	Molybdenum	1.4				
7440-02-0	Nickel	14				
7440-09-7	Potassium	1100				
7782-49-2	Selenium	5.2U				
7440-21-3	Silicon	260				
7440-22-4	Silver	0.65				

6/29/91

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 11:25

AnaLIS ID: 910315-060
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGZ2
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 1-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10401B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	7300	7440-23-5	Sodium	710
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	67
7440-38-2	Arsenic	5.6	7440-66-6	Zinc	40
7440-39-3	Barium	84			
7440-41-7	Beryllium	0.31			
7440-42-8	Boron	6.9			
7440-43-9	Cadmium	1.0			
7440-70-2	Calcium	7000			
7440-47-3	Chromium	18			
7440-48-4	Cobalt	12			
7440-50-8	Copper	33			
7439-89-6	Iron	26000 J			
7439-92-1	Lead	8.9			
7439-95-4	Magnesium	3900			
7439-96-5	Manganese	300 J			
7439-98-7	Molybdenum	1.9			
7440-02-0	Nickel	13			
7440-09-7	Potassium	780			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	250			
7440-22-4	Silver	0.61U			

JZ 7/4/91

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:26

AnaLIS ID: 910318-101
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGZ3
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6900	7440-23-5	Sodium	500
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	58
7440-38-2	Arsenic	5.1U	7440-66-6	Zinc	39
7440-39-3	Barium	66			
7440-41-7	Beryllium	0.30			
7440-42-8	Boron	5.0			
7440-43-9	Cadmium	1.1			
7440-70-2	Calcium	5800			
7440-47-3	Chromium	20			
7440-48-4	Cobalt	11			
7440-50-8	Copper	19			
7439-89-6	Iron	22000			
7439-92-1	Lead	5.1U			
7439-95-4	Magnesium	4600			
7439-96-5	Manganese	280			
7439-98-7	Molybdenum	1.4			
7440-02-0	Nickel	15			
7440-09-7	Potassium	1200			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	430			
7440-22-4	Silver	0.61U			

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:10

AnaLIS ID: 910319-085
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGZ6
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	17000	7440-23-5	Sodium	210
7440-36-0	Antimony	5.8U	7440-62-2	Vanadium	38
7440-38-2	Arsenic	5.8U	7440-66-6	Zinc	56
7440-39-3	Barium	88			
7440-41-7	Beryllium	0.88			
7440-42-8	Boron	7.6			
7440-43-9	Cadmium	1.3			
7440-70-2	Calcium	5000			
7440-47-3	Chromium	25			
7440-48-4	Cobalt	9.5			
7440-50-8	Copper	19			
7439-89-6	Iron	23000			
7439-92-1	Lead	12			
7439-95-4	Magnesium	8400			
7439-96-5	Manganese	270			
7439-98-7	Molybdenum	1.2U			
7440-02-0	Nickel	21			
7440-09-7	Potassium	3000			
7782-49-2	Selenium	5.8U			
7440-21-3	Silicon	430			
7440-22-4	Silver	0.70U			

ANALYSIS DATA REPORT

Date printed:
14-JUN-1991 09:13

AnaLIS ID: 910319-086
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH00
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6000	7440-23-5	Sodium	560
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	77
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	51
7440-39-3	Barium	53			
7440-41-7	Beryllium	0.41			
7440-42-8	Boron	8.3			
7440-43-9	Cadmium	2.0			
7440-70-2	Calcium	11000			
7440-47-3	Chromium	6.0			
7440-48-4	Cobalt	13			
7440-50-8	Copper	17			
7439-89-6	Iron	28000			
7439-92-1	Lead	5.2U			
7439-95-4	Magnesium	5000			
7439-96-5	Manganese	370			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	9.4			
7440-09-7	Potassium	1100			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	350			
7440-22-4	Silver	0.62U			

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:15

AnaLIS ID: 910319-087
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH01
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6200	7440-23-5	Sodium	470
7440-36-0	Antimony	5.0U	7440-62-2	Vanadium	62
7440-38-2	Arsenic	5.0U	7440-66-6	Zinc	41
7440-39-3	Barium	50			
7440-41-7	Beryllium	0.36			
7440-42-8	Boron	5.8			
7440-43-9	Cadmium	1.0			
7440-70-2	Calcium	5900			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	11			
7440-50-8	Copper	19			
7439-89-6	Iron	23000			
7439-92-1	Lead	5.6			
7439-95-4	Magnesium	4600			
7439-96-5	Manganese	290			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	11			
7440-09-7	Potassium	830			
7782-49-2	Selenium	5.0U			
7440-21-3	Silicon	460			
7440-22-4	Silver	0.60U			

ANALYSIS DATA REPORT

Date Printed:
14-JUN-1991 09:21

AnaLIS ID: 910319-089
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH02
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6500	7440-23-5	Sodium	620
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	78
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	57
7440-39-3	Barium	60			
7440-41-7	Beryllium	0.39			
7440-42-8	Boron	7.7			
7440-43-9	Cadmium	1.2			
7440-70-2	Calcium	6900			
7440-47-3	Chromium	13			
7440-48-4	Cobalt	14			
7440-50-8	Copper	26			
7439-89-6	Iron	29000			
7439-92-1	Lead	7.9			
7439-95-4	Magnesium	5000			
7439-96-5	Manganese	350			
7439-98-7	Molybdenum	1.8			
7440-02-0	Nickel	13			
7440-09-7	Potassium	970			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	300			
7440-22-4	Silver	0.62U			

ANALYSIS DATA REPORT

20-MAY-1991 12:47
Date Printed:
20-MAY-1991 12:47

AnaLIS ID: 910321-067
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOGZ8
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 21-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: EA HESTER
QA File Number: 104218

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	13000	7440-23-5	Sodium	180
7440-36-0	Antimony	4.9U	7440-62-2	Vanadium	34
7440-38-2	Arsenic	4.9U	7440-66-6	Zinc	43
7440-39-3	Barium	87			
7440-41-7	Beryllium	0.56			
7440-42-8	Boron	9.5			
7440-43-9	Cadmium	1.8			
7440-70-2	Calcium	3000			
7440-47-3	Chromium	18			
7440-48-4	Cobalt	7.3			
7440-50-8	Copper	13			
7439-89-6	Iron	17000			
7439-92-1	Lead	7.0			
7439-95-4	Magnesium	6000			
7439-96-5	Manganese	270			
7439-98-7	Molybdenum	0.99U			
7440-02-0	Nickel	14			
7440-09-7	Potassium	2000			
7782-49-2	Selenium	4.9U			
7440-21-3	Silicon	290			
7440-22-4	Silver	0.59U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:01

AnaLIS ID: 910321-068
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH03
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 21-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: EA HESTER
QA File Number: 10421B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5400	7440-23-5	Sodium	450
7440-36-0	Antimony	5.0U	7440-62-2	Vanadium	62
7440-38-2	Arsenic	5.0U	7440-66-6	Zinc	49
7440-39-3	Barium	88			
7440-41-7	Beryllium	0.29			
7440-42-8	Boron	11			
7440-43-9	Cadmium	2.5			
7440-70-2	Calcium	6800			
7440-47-3	Chromium	7.6			
7440-48-4	Cobalt	13			
7440-50-8	Copper	16			
7439-89-6	Iron	25000			
7439-92-1	Lead	5.0U			
7439-95-4	Magnesium	4500			
7439-96-5	Manganese	300			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	10			
7440-09-7	Potassium	940			
7782-49-2	Selenium	5.0U			
7440-21-3	Silicon	410			
7440-22-4	Silver	0.60U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:53

AnaLIS ID: 910321-069
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH04
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 21-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: EA HESTER
QA File Number: 104218

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6000	7440-23-5	Sodium	510
7440-36-0	Antimony	5.0U	7440-62-2	Vanadium	69
7440-38-2	Arsenic	5.0U	7440-66-6	Zinc	49
7440-39-3	Barium	92			
7440-41-7	Beryllium	0.21			
7440-42-8	Boron	12			
7440-43-9	Cadmium	2.3			
7440-70-2	Calcium	7300			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	13			
7440-50-8	Copper	18			
7439-89-6	Iron	26000			
7439-92-1	Lead	6.9			
7439-95-4	Magnesium	4500			
7439-96-5	Manganese	320			
7439-98-7	Molybdenum	2.2			
7440-02-0	Nickel	11			
7440-09-7	Potassium	960			
7782-49-2	Selenium	5.0U			
7440-21-3	Silicon	290			
7440-22-4	Silver	0.60U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 12:56

AnaLIS ID: 910321-070
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH05
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 21-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: EA HESTER
QA File Number: 10421B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	7100	7440-23-5	Sodium	540
7440-36-0	Antimony	4.9U	7440-62-2	Vanadium	58
7440-38-2	Arsenic	4.9U	7440-66-6	Zinc	39
7440-39-3	Barium	79			
7440-41-7	Beryllium	0.26			
7440-42-8	Boron	9.4			
7440-43-9	Cadmium	2.1			
7440-70-2	Calcium	7600			
7440-47-3	Chromium	20			
7440-48-4	Cobalt	12			
7440-50-8	Copper	16			
7439-89-6	Iron	22000			
7439-92-1	Lead	4.9U			
7439-95-4	Magnesium	5500			
7439-96-5	Manganese	300			
7439-98-7	Molybdenum	1.0			
7440-02-0	Nickel	29			
7440-09-7	Potassium	790			
7782-49-2	Selenium	4.9U			
7440-21-3	Silicon	260			
7440-22-4	Silver	0.59U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:07

AnaLIS ID: 910321-071
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH06
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 21-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: EA HESTER
QA File Number: 10421B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	4900	7440-23-5	Sodium	390
7440-36-0	Antimony	5.3U	7440-62-2	Vanadium	85
7440-38-2	Arsenic	5.3U	7440-66-6	Zinc	54
7440-39-3	Barium	76			
7440-41-7	Beryllium	0.30			
7440-42-8	Boron	12			
7440-43-9	Cadmium	2.3			
7440-70-2	Calcium	6800			
7440-47-3	Chromium	4.1			
7440-48-4	Cobalt	15			
7440-50-8	Copper	17			
7439-89-6	Iron	30000			
7439-92-1	Lead	5.3U			
7439-95-4	Magnesium	5000			
7439-96-5	Manganese	400			
7439-98-7	Molybdenum	1.1U			
7440-02-0	Nickel	7.0			
7440-09-7	Potassium	670			
7782-49-2	Selenium	5.3U			
7440-21-3	Silicon	290			
7440-22-4	Silver	0.63U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:11

AnaLIS ID: 910322-210
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH09
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 21-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: EA HESTER
QA File Number: 104218

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	4600	7440-23-5	Sodium	310
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	55
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	38
7440-39-3	Barium	170			
7440-41-7	Beryllium	0.23			
7440-42-8	Boron	14			
7440-43-9	Cadmium	1.7			
7440-70-2	Calcium	5300			
7440-47-3	Chromium	4.6			
7440-48-4	Cobalt	10			
7440-50-8	Copper	13			
7439-89-6	Iron	21000			
7439-92-1	Lead	5.2U			
7439-95-4	Magnesium	3700			
7439-96-5	Manganese	250			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	6.8			
7440-09-7	Potassium	550			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	290			
7440-22-4	Silver	0.62U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:19

AnaLIS ID: 910325-035
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH14
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5600	7440-23-5	Sodium	440
7440-36-0	Antimony	4.8U	7440-62-2	Vanadium	69
7440-38-2	Arsenic	4.8U	7440-66-6	Zinc	49
7440-39-3	Barium	73			
7440-41-7	Beryllium	0.35			
7440-42-8	Boron	4.9			
7440-43-9	Cadmium	1.7			
7440-70-2	Calcium	6800			
7440-47-3	Chromium	5.7			
7440-48-4	Cobalt	12			
7440-50-8	Copper	17			
7439-89-6	Iron	26000			
7439-92-1	Lead	4.8U			
7439-95-4	Magnesium	4100			
7439-96-5	Manganese	290			
7439-98-7	Molybdenum	0.97U			
7440-02-0	Nickel	9.6			
7440-09-7	Potassium	860			
7782-49-2	Selenium	4.8U			
7440-21-3	Silicon	260			
7440-22-4	Silver	0.58U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:23

AnaLIS ID: 910328-073
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH15
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 21-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: EA HESTER
QA File Number: 10421B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	6000	7440-23-5	Sodium	520
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	60
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	42
7440-39-3	Barium	56			
7440-41-7	Beryllium	0.27			
7440-42-8	Boron	10			
7440-43-9	Cadmium	1.9			
7440-70-2	Calcium	6200			
7440-47-3	Chromium	7.1			
7440-48-4	Cobalt	12			
7440-50-8	Copper	15			
7439-89-6	Iron	23000			
7439-92-1	Lead	5.2U			
7439-95-4	Magnesium	3700			
7439-96-5	Manganese	280			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	7.9			
7440-09-7	Potassium	720			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	250			
7440-22-4	Silver	0.62U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:21

AnaLIS ID: 910328-074
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH16
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 21-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: EA HESTER
QA File Number: 10421B

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5500	7440-23-5	Sodium	510
7440-36-0	Antimony	5.3U	7440-62-2	Vanadium	72
7440-38-2	Arsenic	5.3U	7440-66-6	Zinc	46
7440-39-3	Barium	84			
7440-41-7	Beryllium	0.26			
7440-42-8	Boron	12			
7440-43-9	Cadmium	2.3			
7440-70-2	Calcium	9400			
7440-47-3	Chromium	6.3			
7440-48-4	Cobalt	13			
7440-50-8	Copper	15			
7439-89-6	Iron	26000			
7439-92-1	Lead	5.3U			
7439-95-4	Magnesium	4300			
7439-96-5	Manganese	290			
7439-98-7	Molybdenum	1.1U			
7440-02-0	Nickel	12			
7440-09-7	Potassium	750			
7782-49-2	Selenium	5.3U			
7440-21-3	Silicon	270			
7440-22-4	Silver	0.64U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:23

AnaLIS ID: 910328-075
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH17
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 13-MAY-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10513A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5500	7440-23-5	Sodium	440
7440-36-0	Antimony	5.1U	7440-62-2	Vanadium	68
7440-38-2	Arsenic	5.1U	7440-66-6	Zinc	45
7440-39-3	Barium	78			
7440-41-7	Beryllium	0.32			
7440-42-8	Boron	0.41U			
7440-43-9	Cadmium	0.62			
7440-70-2	Calcium	5800			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	14			
7440-50-8	Copper	19			
7439-89-6	Iron	25000			
7439-92-1	Lead	5.1U			
7439-95-4	Magnesium	4800			
7439-96-5	Manganese	310			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	14			
7440-09-7	Potassium	670			
7782-49-2	Selenium	5.1U			
7440-21-3	Silicon	300			
7440-22-4	Silver	0.61U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:25

AnaLIS ID: 910328-076
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH18
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 13-MAY-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10513A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	5800	7440-23-5	Sodium	430
7440-36-0	Antimony	5.3U	7440-62-2	Vanadium	85
7440-38-2	Arsenic	5.3U	7440-66-6	Zinc	54
7440-39-3	Barium	69			
7440-41-7	Beryllium	0.35			
7440-42-8	Boron	0.42U			
7440-43-9	Cadmium	1.7			
7440-70-2	Calcium	7800			
7440-47-3	Chromium	7.3			
7440-48-4	Cobalt	16			
7440-50-8	Copper	17			
7439-89-6	Iron	31000			
7439-92-1	Lead	5.4			
7439-95-4	Magnesium	4900			
7439-96-5	Manganese	390			
7439-98-7	Molybdenum	1.2			
7440-02-0	Nickel	8.9			
7440-09-7	Potassium	770			
7782-49-2	Selenium	5.3U			
7440-21-3	Silicon	370			
7440-22-4	Silver	0.64U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:13

AnaLIS ID: 910328-077
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH11
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 13-MAY-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10513A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	4700	7440-23-5	Sodium	270
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	68
7440-38-2	Arsenic	7.2	7440-66-6	Zinc	47
7440-39-3	Barium	69			
7440-41-7	Beryllium	0.30			
7440-42-8	Boron	0.42U			
7440-43-9	Cadmium	1.0			
7440-70-2	Calcium	6200			
7440-47-3	Chromium	5.7			
7440-48-4	Cobalt	13			
7440-50-8	Copper	14			
7439-89-6	Iron	25000			
7439-92-1	Lead	5.2U			
7439-95-4	Magnesium	3900			
7439-96-5	Manganese	300			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	14			
7440-09-7	Potassium	630			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	270			
7440-22-4	Silver	0.62U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:13

AnaLIS ID: 910328-078
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH10
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 13-MAY-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10513A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	260	7440-23-5	Sodium	31
7440-36-0	Antimony	4.9U	7440-62-2	Vanadium	0.53
7440-38-2	Arsenic	4.9U	7440-66-6	Zinc	5.5
7440-39-3	Barium	3.0			
7440-41-7	Beryllium	0.066			
7440-42-8	Boron	3.4			
7440-43-9	Cadmium	0.29U			
7440-70-2	Calcium	75			
7440-47-3	Chromium	0.98U			
7440-48-4	Cobalt	0.49U			
7440-50-8	Copper	0.39U			
7439-89-6	Iron	650			
7439-92-1	Lead	4.9U			
7439-95-4	Magnesium	44			
7439-96-5	Manganese	12			
7439-98-7	Molybdenum	0.98U			
7440-02-0	Nickel	0.98U			
7440-09-7	Potassium	59U			
7782-49-2	Selenium	4.9U			
7440-21-3	Silicon	100			
7440-22-4	Silver	0.59U			

ANALYSIS DATA REPORT

22-MAY-1991 09:35
Date Printed:
22-MAY-1991 09:35

AnaLIS ID: 910401-011
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH19
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	7000	7440-23-5	Sodium	410
7440-36-0	Antimony	5.3U	7440-62-2	Vanadium	38
7440-38-2	Arsenic	5.3U	7440-66-6	Zinc	34
7440-39-3	Barium	97			
7440-41-7	Beryllium	0.29			
7440-42-8	Boron	4.5			
7440-43-9	Cadmium	1.2			
7440-70-2	Calcium	6500			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	8.1			
7440-50-8	Copper	15			
7439-89-6	Iron	17000			
7439-92-1	Lead	7.2			
7439-95-4	Magnesium	4200			
7439-96-5	Manganese	270			
7439-98-7	Molybdenum	1.3			
7440-02-0	Nickel	11			
7440-09-7	Potassium	1100			
7782-49-2	Selenium	5.3U			
7440-21-3	Silicon	430			
7440-22-4	Silver	0.63U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:26

AnaLIS ID: 910401-012
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH20
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	7300	7440-23-5	Sodium	570
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	63
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	41
7440-39-3	Barium	70			
7440-41-7	Beryllium	0.33			
7440-42-8	Boron	4.0			
7440-43-9	Cadmium	1.7			
7440-70-2	Calcium	7400			
7440-47-3	Chromium	11			
7440-48-4	Cobalt	11			
7440-50-8	Copper	19			
7439-89-6	Iron	23000			
7439-92-1	Lead	5.2U			
7439-95-4	Magnesium	4500			
7439-96-5	Manganese	290			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	10			
7440-09-7	Potassium	1100			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	310			
7440-22-4	Silver	0.62U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:27

AnaLIS ID: 910401-013
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH21
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	150	7440-23-5	Sodium	56
7440-36-0	Antimony	5.0U	7440-62-2	Vanadium	0.50U
7440-38-2	Arsenic	5.0U	7440-66-6	Zinc	2.2
7440-39-3	Barium	2.4			
7440-41-7	Beryllium	0.040			
7440-42-8	Boron	3.9			
7440-43-9	Cadmium	0.30U			
7440-70-2	Calcium	92			
7440-47-3	Chromium	7.2			
7440-48-4	Cobalt	0.50U			
7440-50-8	Copper	0.40U			
7439-89-6	Iron	270			
7439-92-1	Lead	5.0U			
7439-95-4	Magnesium	45			
7439-96-5	Manganese	6.9			
7439-98-7	Molybdenum	0.99U			
7440-02-0	Nickel	4.1			
7440-09-7	Potassium	60U			
7782-49-2	Selenium	5.0U			
7440-21-3	Silicon	76			
7440-22-4	Silver	0.60U			

ANALYSIS DATA REPORT

Date Printed:
20-MAY-1991 13:29

AnaLIS ID: 910401-014
Laboratory: Inductively Coupled Plasma Laboratory
File ID:
Instrument ID:
Authorized By: M. J. Scheuer

Customer Sample ID: BOOH23
Customer: KESSNER/FANCHER
Sample Matrix: SOIL
Requisition Number:
Date Sample Received:

24 Element Scan by ICP Spectrometry - HSL

Date Extracted/Prepared:
Preparation Procedure Number: EPA-3050
Percent Moisture:
Percent Moisture (decanted):
Associated Blank:
[] : Result has been Corrected for Spike

Date Analyzed: 28-APR-1991
Analysis Procedure Number: EPA-6010
Dilution Factor:
Analyst: ML BAIN
QA File Number: 10428A

CAS		ug/g	CAS		ug/g
7429-90-5	Aluminum	8300	7440-23-5	Sodium	730
7440-36-0	Antimony	5.2U	7440-62-2	Vanadium	61
7440-38-2	Arsenic	5.2U	7440-66-6	Zinc	42
7440-39-3	Barium	100			
7440-41-7	Beryllium	0.37			
7440-42-8	Boron	3.5			
7440-43-9	Cadmium	1.3			
7440-70-2	Calcium	7600			
7440-47-3	Chromium	27			
7440-48-4	Cobalt	12			
7440-50-8	Copper	23			
7439-89-6	Iron	25000			
7439-92-1	Lead	5.2U			
7439-95-4	Magnesium	5800			
7439-96-5	Manganese	310			
7439-98-7	Molybdenum	1.0U			
7440-02-0	Nickel	18			
7440-09-7	Potassium	1000			
7782-49-2	Selenium	5.2U			
7440-21-3	Silicon	350			
7440-22-4	Silver	0.63U			

GFAA METALS

95133356.2900

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:12

AnaLIS ID: 910215-004 Project: G132 031 Customer Sample ID: B00FK6
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 7-FEB-1991 Date Sample Received: 9-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-74	28-FEB-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	2-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	2.6		ug/g	LD WELCH	10304E	7-MAR-1991
	EPA-3050 EPA-7421	Lead	5.1		ug/g	LD WELCH	10304F	20-MAR-1991
	EPA-3050 EPA-7740	Selenium	<0.54		ug/g	LD WELCH	10304G	20-MAR-1991
	EPA-3050 EPA-7841	Thallium	<1.1		ug/g	LD WELCH	10304H	16-MAR-1991
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10310C	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2516	1-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	26-FEB-1991
160203	EPA-900.0	Alpha Activity	5.34	+/- 2.9	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160303	EPA-900.0	Beta Activity	-2.21E-1	+/- 4.8	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160803	EPA-905.0	Strontium-90	12.70	+/- 8.4E-1	pCi/g	SM KINNEBREW	ENV-484	12-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-1	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	2		ug/g	RJ CAMPBELL	91-W18	28-FEB-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0	UJ	ug/g	DM OBANION	91-12	1-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991

Prep (BNA- SW-846-Sox)

Analyst = JH KREIS
Date Extracted = 24-FEB-1991
Sample Weight Extracted (g) = 10.00
Percent Solids = 88.4

JH 6/29/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:16

AnaLIS ID: 910215-005 Project: G132 031 Customer Sample ID: B00FK7
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 7-FEB-1991 Date Sample Received: 9-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	28-FEB-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	2-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	2.86		ug/g	LD WELCH	10304E	7-MAR-1991
	EPA-3050 EPA-7421	Lead	5.1		ug/g	LD WELCH	10304F	20-MAR-1991
	EPA-3050 EPA-7740	Selenium	<0.54		ug/g	LD WELCH	10304G	20-MAR-1991
	EPA-3050 EPA-7841	Thallium	<1.1		ug/g	LD WELCH	10304H	16-MAR-1991
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10310C	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2516	1-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	24-FEB-1991
160203	EPA-900.0	Alpha Activity	4.50	+/- 2.9	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160303	EPA-900.0	Beta Activity	5.00	+/- 5.0	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160803	EPA-905.0	Strontium-90	3.47	+/- 5.1E-1	pCi/g	SM KINNEBREW	ENV-484	12-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-2	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	1.4		ug/g	RJ CAMPBELL	91-W18	28-FEB-1991
184403	EPA-9010	Cyanide Colorimetric	0.12	J	ug/g	DM OBANION	91-12	2-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991

Prep (BNA- SW-846-Sox)

Analyst = JH KREIS
Date Extracted = 24-FEB-1991
Sample Weight Extracted (g) = 10.00
Percent Solids = 89.1

JJ 6/29/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:24

AnaLIS ID: 910215-007 Project: G132 031 Customer Sample ID: B00FK9
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 7-FEB-1991 Date Sample Received: 9-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	28-FEB-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	2-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	2.0		ug/g	LD WELCH	10304E	7-MAR-1991
	EPA-3050 EPA-7421	Lead	3.83		ug/g	LD WELCH	10304F	20-MAR-1991
	EPA-3050 EPA-7740	Selenium	<0.52		ug/g	LD WELCH	10304G	20-MAR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	LD WELCH	10304H	16-MAR-1991
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10310C	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2516	1-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	26-FEB-1991
160203	EPA-900.0	Alpha Activity	2.40	+/- 2.7	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160303	EPA-900.0	Beta Activity	-2.61	+/- 4.8	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160803	EPA-905.0	Strontium-90	3.86	+/- 5.2E-1	pCi/g	SM KINNEBREW	ENV-484	12-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-2	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	0.6		ug/g	RJ CAMPBELL	91-W18	28-FEB-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0	UJ	ug/g	DM OBANION	91-12	2-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991

Prep (BNA- SW-846-Sox)

Analyst = JH KREIS
Date Extracted = 24-FEB-1991
Sample Weight Extracted (g) = 10.00
Percent Solids = 93.3

6/29/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:45

AnaLIS ID: 910215-008 Project: G132 031 Customer Sample ID: B00FL0
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 7-FEB-1991 Date Sample Received: 9-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	28-FEB-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	2-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.7		ug/g	LD WELCH	10304E	7-MAR-1991
	EPA-3050 EPA-7421	Lead	3.18		ug/g	LD WELCH	10304F	20-MAR-1991
	EPA-3050 EPA-7740	Selenium	<0.52		ug/g	LD WELCH	10304G	20-MAR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	LD WELCH	10304H	16-MAR-1991
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10310C	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2516	1-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	26-FEB-1991
160203	EPA-900.0	Alpha Activity	-2.42	+/- 2.3	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160303	EPA-900.0	Beta Activity	-9.51	+/- 4.5	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160803	EPA-905.0	Strontium-90	1.43	+/- 4.0	pCi/g	SM KINNEBREW	ENV-484	12-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-2	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	0.6		ug/g	RJ CAMPBELL	91-W18	28-FEB-1991
184403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-11	27-FEB-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Sulfate	24		ug/g	CL WILLIS	91-19T	21-FEB-1991

Prep (BNA- SW-846-Sox)

Analyst = JH KREIS
Date Extracted = 24-FEB-1991
Sample Weight Extracted (g) = 10.00
Percent Solids = 93.2

JJ 6/29/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:48

AnaLIS ID: 910215-009 Project: G132 031 Customer Sample ID: BOOFL1
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 8-FEB-1991 Date Sample Received: 12-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	28-FEB-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	2-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	2.6		ug/g	LD WELCH	10304E	6-MAR-1991
	EPA-3050 EPA-7421	Lead	4.0		ug/g	LD WELCH	10304F	20-MAR-1991
	EPA-3050 EPA-7740	Selenium	<0.50		ug/g	LD WELCH	10304G	20-MAR-1991
	EPA-3050 EPA-7841	Thallium	<0.99		ug/g	LD WELCH	10304H	16-MAR-1991
103203	EPA-7471	Mercury	<1.0	~~UJ~~	ug/g	SA BURGESS	10310C	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2516	1-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	26-FEB-1991
160203	EPA-900.0	Alpha Activity	2.37	+/- 2.7	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160303	EPA-900.0	Beta Activity	-1.43	+/- 4.8	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160803	EPA-905.0	Strontium-90	3.16E-11	+/- 4.1E-1	pCi/g	SM KINNEBREW	ENV-484	12-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-2	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	0.8		ug/g	RJ CAMPBELL	91-W18	28-FEB-1991
184403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-11	27-FEB-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991

Prep (BNA- SW-846-Sox)

Analyst = JH KREIS
Date Extracted = 24-FEB-1991
Sample Weight Extracted (g) = 10.00
Percent Solids = 88.8

JJ 7/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:30

AnaLIS ID: 910215-010 Project: G132 031 Customer Sample ID: B00FL3
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 11-FEB-1991 Date Sample Received: 13-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	28-FEB-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	2-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	<0.49		ug/g	LD WELCH	10304E	6-MAR-1991
	EPA-3050 EPA-7421	Lead	<0.39		ug/g	LD WELCH	10304F	20-MAR-1991
	EPA-3050 EPA-7740	Selenium	<0.49		ug/g	LD WELCH	10304G	20-MAR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	LD WELCH	10304H	16-MAR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310C	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2517	3-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	26-FEB-1991
160203	EPA-900.0	Alpha Activity	-7.70E-1	+/- 2.4	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160303	EPA-900.0	Beta Activity	-10.50	+/- 4.4	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160803	EPA-905.0	Strontium-90	-6.86E-2	+/- 2.9E-1	pCi/g	SM KINNEBREW	ENV-484	12-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-2	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	0.4		ug/g	RJ CAMPBELL	91-W18	28-FEB-1991
184403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-11	27-FEB-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CL WILLIS	91-19T	21-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CL WILLIS	91-19T	21-FEB-1991

Prep (BNA- SW-846-Sox)

Analyst = JH KREIS
Date Extracted = 24-FEB-1991
Sample Weight Extracted (g) = 10.00
Percent Solids = 100

JJ 7/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:33

AnaLIS ID: 910215-011 Project: G132 031 Customer Sample ID: B00FL4
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 11-FEB-1991 Date Sample Received: 13-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

ctiv. umber	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
80103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	28-FEB-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	2-MAR-1991
02003	EPA-3050 EPA-7060	Arsenic	1.3		ug/g	P BUCKLEY	10304E1	7-APR-1991
	EPA-3050 EPA-7421	Lead	2.6		ug/g	P BUCKLEY	10304F1	13-APR-1991
	EPA-3050 EPA-7740	Selenium	<1.0		ug/g	LD WELCH	10304G	20-MAR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	LD WELCH	10304H	16-MAR-1991
03203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310C	11-MAR-1991
30703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2517	3-MAR-1991
32703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
35003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	26-FEB-1991
60203		Alpha Activity		+/-		SM KINNEBREW	ENV-484	2-MAY-1991
	EPA-900.0	Alpha Activity	-1.08	+/- 2.4	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
60303	EPA-900.0	Beta Activity	1.16	+/- 4.4	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
60803	EPA-905.0	Strontium-90	2.26E-1	+/- 7.4E-2	pCi/g	SM KINNEBREW	ENV-484	16-MAY-1991
76203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-2	21-MAR-1991
83103	EPA-340.2	Fluoride SIE	0.6		ug/g	RJ CAMPBELL	91-W18	28-FEB-1991
84403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-11	27-FEB-1991
85103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
85403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991

'rep (BNA- SW-846-Sox)

ıalyst = JH KREIS
ıate Extracted = 24-FEB-1991
ample Weight Extracted (g) = 10.00

JJ 1/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:55

AnaLIS ID: 910215-012 Project: G132 031 Customer Sample ID: B00GR9
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 11-FEB-1991 Date Sample Received: 13-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	28-FEB-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	2-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.1		ug/g	P BUCKLEY	10304E1	7-APR-1991
	EPA-3050 EPA-7421	Lead	2.6		ug/g	P BUCKLEY	10304F1	13-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.46		ug/g	LD WELCH	10304G	20-MAR-1991
	EPA-3050 EPA-7841	Thallium	<0.92		ug/g	LD WELCH	10304H	16-MAR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310C	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2517	3-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	26-FEB-1991
160203	EPA-900.0	Alpha Activity	-2.44	+/- 2.3	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160303	EPA-900.0	Beta Activity	-12.60	+/- 4.4	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160803	EPA-905.0	Strontium-90	3.27	+/- 5.0E-1	pCi/g	SM KINNEBREW	ENV-484	12-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-2	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	0.6		ug/g	RJ CAMPBELL	91-W18	28-FEB-1991
184403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-11	27-FEB-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991

Prep (BNA- SW-846-Sox)

Analyst = JH KREIS
Date Extracted = 24-FEB-1991
Sample Weight Extracted (g) = 10.00
Percent Solids = 94.7

JJ 1/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:37

AnaLIS ID: 910215-013 Project: G132 031 Customer Sample ID: B00GS0
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 11-FEB-1991 Date Sample Received: 13-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	28-FEB-1991
102003	EPA-3050 EPA-7060	Arsenic	0.97		ug/g	P BUCKLEY	10304E1	7-APR-1991
	EPA-3050 EPA-7421	Lead	3.0		ug/g	P BUCKLEY	10304F1	13-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310C	11-MAR-1991
160203	EPA-900.0	Alpha Activity	-3.09E-1	+/- 2.5	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160303	EPA-900.0	Beta Activity	-11.30	+/- 4.4	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	1.2		ug/g	RJ CAMPBELL	91-W20	9-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991

Replicate Results of Analysis

Analysis	Results	Replicate Results	RPD
Alpha Activity	-3.09E-1	-2.03	*****
Beta Activity	-11.30	--15.00	*****

JJ 1/5/91

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:38

AnaLIS ID: 910215-092 Project: G132 031 Customer Sample ID: B00GS1
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 12-FEB-1991 Date Sample Received: 15-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	8-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	13-MAR-1991
102003	EPA-3050	Arsenic	2.1		ug/g	P BUCKLEY	10310G	7-APR-1991
	EPA-7060							
	EPA-3050	Lead	4.2		ug/g	P BUCKLEY	10310H	13-APR-1991
	EPA-7421							
103203	EPA-7841	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
160203	EPA-900.0	Alpha Activity	-2.39	+/- 2.3	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
160303	EPA-900.0	Beta Activity	-11.20	+/- 4.4	pCi/g	SM KINNEBREW	ENV-484	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	2.2		ug/g	RJ CAMPBELL	91-W20	9-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	20-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
ALPHA ACTIVITY	-2.39	1351.35	996	pCi/g	998.	73.9
BETA ACTIVITY	-11.20	1351.35	1350	pCi/g	1361.	100.7
CHLORIDE IC		20	18	ug/g	18.	90.00
NITRATE		100	90	ug/g	90.	90.00
SULFATE		200	187	ug/g	187.	93.50

JJ 7/5/91

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:52

AnaLIS ID: 910219-089 Project: G132 031 Customer Sample ID: B00GS2
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 13-FEB-1991 Date Sample Received: 16-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	8-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	13-MAR-1991
102003	EPA-3050	Arsenic	1.5		ug/g	P BUCKLEY	10310G	7-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.6		ug/g	P BUCKLEY	10310H	13-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
160203	EPA-900.0	Alpha Activity	-3.37E-1	+/- 1.9	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
160303	EPA-900.0	Beta Activity	2.33	+/- 4.7	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	1.0		ug/g	RJ CAMPBELL	91-W20	9-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	26-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

7/5/91

Date Printed:
14-JUN-1991 08:52

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910219-090 Project: G132 031 Customer Sample ID: B00GS3
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 13-FEB-1991 Date Sample Received: 16-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	8-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	13-MAR-1991
102003	EPA-3050	Arsenic	1.9		ug/g	P BUCKLEY	10310G	7-APR-1991
	EPA-7060							
	EPA-3050	Lead	3.1		ug/g	P BUCKLEY	10310H	13-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
160203	EPA-900.0	Alpha Activity	1.05	+/- 2.1	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
160303	EPA-900.0	Beta Activity	6.72	+/- 4.9	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	1.0		ug/g	RJ CAMPBELL	91-W20	9-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	26-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991

7/5/91

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:39

AnaLIS ID: 910219-091 Project: G132 031 Customer Sample ID: B00GS4
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 14-FEB-1991 Date Sample Received: 16-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	8-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	13-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	4.2		ug/g	P BUCKLEY	10310G	7-APR-1991
	EPA-3050 EPA-7421	Lead	11		ug/g	P BUCKLEY	10310H1	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<1.1 D		ug/g	NB HAROLD	10310I	3-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.1		ug/g	LD WELCH	10310J	16-MAR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2517	3-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	26-FEB-1991
160203	EPA-900.0	Alpha Activity	2.28	+/- 2.3	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
160303	EPA-900.0	Beta Activity	4.82	+/- 4.8	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
160803	EPA-905.0	Strontium-90	1.30E-1	+/- 4.6E-1	pCi/g	SM KINNEBREW	ENV-492	12-JUN-1991
161203	EC-134	Cesium-137	6.02E-1	+/- 3.1E-1	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
	EC-134	Protactinium-234m	26.03	+/- 52.7	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
	EC-134	Thorium-234	3.84	+/- 6.0	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-2	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W21	12-MAR-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0	UJ	ug/g	DM OBANION	91-16	21-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	26-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991

Prep (BNA- SW-846-Sox)

JJ 1/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 08:59

AnaLIS ID: 910219-092 Project: G132 031 Customer Sample ID: B00GS8
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 14-FEB-1991 Date Sample Received: 16-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	8-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	13-MAR-1991
102003	EPA-3050	Arsenic	1.5		ug/g	P BUCKLEY	10310G	7-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.5		ug/g	P BUCKLEY	10310H	13-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
160203	EPA-900.0	Alpha Activity	7.11E-1	+/- 2.0	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
160303	EPA-900.0	Beta Activity	3.32	+/- 4.7	pCi/g	SM KINNEBREW	ENV-492	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W21	12-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-1	26-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Nitrate	<20 UJ		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-23 IA	23-FEB-1991

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

JJ 7/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
12-JUN-1991 08:06

AnaLIS ID: 910222-063 Project: G132 031 Customer Sample ID: B00GS9
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 15-FEB-1991 Date Sample Received: 21-FEB-1991
Sampled By: Date Sample Completed: 7-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	8-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-75	13-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.3		ug/g	P BUCKLEY	10310G	7-APR-1991
	EPA-3050 EPA-7421	Lead	2.8		ug/g	P BUCKLEY	10310H	13-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.99 D		ug/g	NB HAROLD	10310I	3-APR-1991
	EPA-3050 EPA-7841	Thallium	<0.99		ug/g	LD WELCH	10310J	16-MAR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2517	3-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			DS ZINGG	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2415	26-FEB-1991
135803	CLP10/86 SVD19	Percent Solids	92.7		%	JH KREIS	X	26-FEB-1991
160203	EPA-900.0	Alpha Activity	1.48	+/- 0.48	pCi/g	DL HAYNES	W/P-838	26-MAR-1991
160303	EPA-900.0	Beta Activity	2.26	+/- 0.87	pCi/g	DL HAYNES	W/P-838	26-MAR-1991
160803	EPA-905.0	Strontium-90	3.79E2	+/- 3.3E2	pCi/g	DL HAYNES	W/P-838	7-JUN-1991
161203	EC-134	Cesium-137	0.34	+/- 0.2	pci/g	DL HAYNES	W/P-838	30-APR-1991
	EC-134	Gamma Activity	N/A	+/-	pCi/g	DL HAYNES	W/P-838	30-APR-1991
	EC-134	Protactinium-234m	7.10	+/- 33.7	pci/g	DL HAYNES	W/P-838	30-APR-1991
	EC-134	Thorium-234	0.94	+/- 3.8	pci/g	DL HAYNES	W/P-838	30-APR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-2	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W26	17-MAR-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0	UJ	ug/g	DM OBANION	91-16	21-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	28-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CL WILLIS	91-24T	3-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CL WILLIS	91-24T	3-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CL WILLIS	91-24T	3-MAR-1991

7/5/91

Prep (BNA- SW-846-Sox)

Analyst = JH KREIS
Date Extracted = 24-FEB-1991
Sample Weight Extracted (g) = 10.00
Percent Solids = 92.7
Calculated Dried Weight (g) = 9.27
Extraction Method = Soxhlet
Extraction Solvent = Methlylene Chloride/Acetone
Extraction Cleanup = Sodium Sulfate
Final Volume of Extract (mL) = 1
Associated Blank = 910225-170

Prep (Herb- SW-846)

Analyst = MF MCMYLER
Date Extracted = 28-FEB-1991
Sample Weight Extracted (g) = 54.02
Percent Solids = 92.7
Calculated Dried Weight (g) = 50.08
Extraction Method = SHAKER
Extraction Solvent = ETHER/ACETONE
Extraction Cleanup = Florisil, Acidic Sodium Sulfate
Final Volume of Extract (mL) = 10.0
Associated Blank = 910303-011

Prep (PCB/Pest- SW-846-Sox)

Analyst = DS ZINGG
Date Extracted = 28-FEB-1991
Sample Weight Extracted (g) = 10.00
Percent Solids = 92.7
Calculated Dried Weight (g) = 9.27
Extraction Method = Soxhlet
Extraction Solvent = Hexane/Acetone
Extraction Cleanup = Sodium Sulfate
Final Volume of Extract (mL) = 10
Associated Blank = 910301-273

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
CHLORIDE IC		200	168	ug/g	168.	84.00
NITRATE		200	176	ug/g	176.	88.00
SULFATE		200	190	ug/g	190.	95.00

Program Manager: D. L. Amburgey
Date Approved: 12-JUN-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
12-JUN-1991 08:13

AnaLIS ID: 910222-064 Project: G132 031 Customer Sample ID: B00GT1
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 19-FEB-1991 Date Sample Received: 21-FEB-1991
Sampled By: Date Sample Completed: 23-APR-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	8-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	13-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.2		ug/g	P BUCKLEY	10310G	7-APR-1991
	EPA-3050 EPA-7421	Lead	5.1		ug/g	P BUCKLEY	10310H	13-APR-1991
	EPA-3050 EPA-7740	Selenium	<1.1 D		ug/g	NB HAROLD	10310I	3-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.1		ug/g	LD WELCH	10310J	16-MAR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
160203	EPA-900.0	Alpha Activity	1.67	+/- 0.51	pCi/g	DL HAYNES	W/P-838	26-MAR-1991
160303	EPA-900.0	Beta Activity	3.35	+/- 0.93	pCi/g	DL HAYNES	W/P-838	26-MAR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W26	17-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	28-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CL WILLIS	91-24T	3-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CL WILLIS	91-24T	3-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CL WILLIS	91-24T	3-MAR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
AMMONIA	0.0	10.0	10.0	ug/g	10.0	100.0
ARSENIC	10.7	40.0	46.9	UG/L	36.2	90.5
LEAD	45.56	40.0	83.34	UG/L	37.78	94.4
SELENIUM		40.0	32.72	UG/L	32.72	81.8
THALLIUM	0.0	40	40.8	UG/L	40.8	102.0
CADMIUM	0.0	2.00	2.05	mg/L	2.05	102.5
CHROMIUM	0.116	2.00	2.02	mg/L	1.90	95.2
COPPER	0.116	2.00	2.11	mg/L	1.99	99.7
LEAD	0.0824	2.00	2.24	mg/L	2.16	107.9
MANGANESE	3.17	2.00	5.21	mg/L	2.04	102.0
NICKEL	0.137	2.00	2.07	mg/L	1.93	96.7
ZINC	0.369	2.00	2.49	mg/L	2.12	106.1

JJ 1/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
12-JUN-1991 08:10

AnaLIS ID: 910222-065 Project: G132 031 Customer Sample ID: B00GT3
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 20-FEB-1991 Date Sample Received: 21-FEB-1991
Sampled By: Date Sample Completed: 14-APR-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-75	8-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	13-MAR-1991
102003	EPA-3050	Arsenic	<0.44		ug/g	P BUCKLEY	10310G	7-APR-1991
	EPA-7060							
	EPA-3050	Lead	0.45		ug/g	P BUCKLEY	10310H	13-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
160203	EPA-900.0	Alpha Activity	0.76	+/- 0.11	pCi/g	DL HAYNES	W/P-838	26-MAR-1991
160303	EPA-900.0	Beta Activity	0.67	+/- 0.13	pCi/g	DL HAYNES	W/P-838	26-MAR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W26	17-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	28-FEB-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CL WILLIS	91-24T	3-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CL WILLIS	91-24T	3-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CL WILLIS	91-24T	3-MAR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
AMMONIA		10.0	10.0	ug/g	10.0	100.00

JJ 1/5/91

Program Manager: D. L. Amburgey
Date Approved: 12-JUN-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 09:02

AnaLIS ID: 910224-065 Project: G132 031 Customer Sample ID: BOOGT4
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 21-FEB-1991 Date Sample Received: 24-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050	Arsenic	1.6		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.1		ug/g	P BUCKLEY	10402F	14-APR-1991
	EPA-7421							
103203	EPA-7841	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
160203	EPA-900.0	Alpha Activity	2.46	+/- 2.3	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
160303	EPA-900.0	Beta Activity	8.24	+/- 5.0	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W26	17-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	28-FEB-1991
185403	EPA-300.0	Chloride IC	<1		ug/g	KE EDWARDS	91-25T	8-MAR-1991
	EPA-300.0	Nitrate	<1	UJ	ug/g	KE EDWARDS	91-25T	8-MAR-1991
	EPA-300.0	Sulfate	<1		ug/g	KE EDWARDS	91-25T	8-MAR-1991

Replicate Results of Analysis

Analysis	Results	Replicate Results	RPD
Arsenic	1.6	1.4	13.3
Lead	2.1	2.3	9.1

JJ 1/5/91

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
MERCURY	0.00	1.00	1.00	UG/L	1.00	100.0

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 09:06

AnaLIS ID: 910224-066 Project: G132 031 Customer Sample ID: BOOGT5
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 21-FEB-1991 Date Sample Received: 24-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.7		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-3050 EPA-7421	Lead	2.5		ug/g	P BUCKLEY	10402F	14-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
160203	EPA-900.0	Alpha Activity	1.84	+/- 2.2	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
160303	EPA-900.0	Beta Activity	5.49	+/- 4.8	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W26	17-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	28-FEB-1991
185403	EPA-300.0	Chloride IC	<1		ug/g	KE EDWARDS	91-25T	8-MAR-1991
	EPA-300.0	Nitrate	<1	UJ	ug/g	KE EDWARDS	91-25T	8-MAR-1991
	EPA-300.0	Sulfate	<1		ug/g	KE EDWARDS	91-25T	8-MAR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
ALUMINUM	60.3	2.00	59.9	mg/L	-0.4	-20.0
CADMIUM	0.00550	2.00	2.00	mg/L	1.99	99.7
CHROMIUM	0.0902	2.00	2.14	mg/L	2.05	102.5
COPPER	0.125	2.00	2.17	mg/L	2.05	102.3
IRON	154	2.00	173	mg/L	19.	950.0
LEAD	0.0549	2.00	2.01	mg/L	1.96	97.8
MANGANESE	2.50	2.00	5.69	mg/L	3.19	159.5
NICKEL	0.0996	2.00	2.21	mg/L	2.11	105.5
ZINC	0.316	2.00	2.37	mg/L	2.05	102.7

JJ 1/5/91

***** Comments from the Inductively Coupled Plasma Laboratory *****

The concentration of Aluminum in this sample is more than four times the amount used as a spike. Therefore the spike data should not have been reported for aluminum. Disregard the information for aluminum under the Spike header.

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 10:50

AnaLIS ID: 910224-067 Project: G132 031 Customer Sample ID: BOOGT7
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 21-FEB-1991 Date Sample Received: 24-FEB-1991
Sampled By: Date Sample Completed: 12-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.2		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-3050 EPA-7421	Lead	4.3		ug/g	P BUCKLEY	10402F	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.49		ug/g	LD WELCH	10402G	3-APR-1991
	EPA-3050 EPA-7841	Thallium	<0.97		ug/g	P BUCKLEY	10402H	8-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310A	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2517	3-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2433	1-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2434	28-FEB-1991
135803	CLP10/86 SVD19	Percent Solids	96.0		%	JH KREIS	0001	28-FEB-1991
160203	EPA-900.0	Alpha Activity	1.81	+/- 2.2	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
160303	EPA-900.0	Beta Activity	8.15E-1	+/- 4.6	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
160803	EPA-905.0	Strontium-90	36.10	+/- 1.7	pCi/g	SM KINNEBREW	ENV-494	12-JUN-1991
161203	EC-134	Cesium-137	1.93-E2	+/- 2.3E-1	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
	EC-134	Protactinium-234m	22.73	+/- 37.4	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
	EC-134	Thorium-234	9.45E-2	+/- 4.1	pCi/g	SM KINNEBREW	ENV-494	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1		ug/g	KD HUTSON	91-2	21-MAR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
184403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-18	27-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	28-FEB-1991
185403	EPA-300.0	Chloride IC	<1		ug/g	KE EDWARDS	91-25T	8-MAR-1991
	EPA-300.0	Nitrate	<1	UJ	ug/g	KE EDWARDS	91-25T	8-MAR-1991
	EPA-300.0	Sulfate	<1		ug/g	KE EDWARDS	91-25T	8-MAR-1991

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Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
23-MAY-1991 09:38

AnaLIS ID: 910227-087 Project: G132 031 Customer Sample ID: BOOGT8
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 20-FEB-1991 Date Sample Received: 26-FEB-1991
Sampled By: Date Sample Completed: 14-APR-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.5		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-3050 EPA-7421	Lead	9.3		ug/g	P BUCKLEY	10402F	14-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
160203	EPA-900.0	Alpha Activity	42.59	+/- 5.5	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
160303	EPA-900.0	Beta Activity	4.94	+/- 5.2	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
183103	EPA-340.2	Fluoride SIE	2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	5-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Nitrate	<20 UJ		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Sulfate	21		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991

Program Manager: D. L. Amburgey
Date Approved: 22-MAY-1991

1/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
23-MAY-1991 09:39

AnaLIS ID: 910301-012 Project: G132 031 Customer Sample ID: B00GV0
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 26-FEB-1991 Date Sample Received: 28-FEB-1991
Sampled By: Date Sample Completed: 14-APR-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050	Arsenic	0.94		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.8		ug/g	P BUCKLEY	10402F	14-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
160203	EPA-900.0	Alpha Activity	1.74	+/- 1.9	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
160303	EPA-900.0	Beta Activity	-2.12	+/- 4.8	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
185103	EPA-350.3	Ammonia	<.001		ug/g	JS SMITH	91-5	5-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991

7/5/91

Program Manager: D. L. Amburgey
Date Approved: 22-MAY-1991

9513356.2924

Date Printed:
23-MAY-1991 09:41

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910304-008 Project: G132 031 Customer Sample ID: BOOGV5
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 28-FEB-1991 Date Sample Received: 2-MAR-1991
Sampled By: Date Sample Completed: 19-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

JJ 7/15/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	28-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	0.94		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-3050 EPA-7421	Lead	18		ug/g	P BUCKLEY	10403AE1	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.54		ug/g	P BUCKLEY	10403AF	9-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.1		ug/g	P BUCKLEY	10403AG	8-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2454	10-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2562	8-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2569	8-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	92.0		%	JH KREIS	0003	8-MAR-1991
160203	EPA-900.0	Alpha Activity	3.52	+/- 2.2	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
160303	EPA-900.0	Beta Activity	7.43	+/- 5.3	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
160803	EPA-905.0	Strontium-90	1.00	+/- 4.33E-1	pCi/g	SM KINNEBREW	ENV-500	16-MAY-1991
161203	EC-134	Cesium-137	1.36E-1	+/- 3.0E-1	pCi/g	SM KINNEBREW	ENV-500	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-500	2-MAY-1991
	EC-134	Protactinium-234m	55.35	+/- 43.2	pCi/g	SM KINNEBREW	ENV-500	2-MAY-1991
	EC-134	Thorium-234	1.78	+/- 5.9	pCi/g	SM KINNEBREW	ENV-500	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	92-2	3-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
184403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-17	25-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	5-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
23-MAY-1991 09:45

AnaLIS ID: 910306-006 Project: G132 031 Customer Sample ID: BOOGV1
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 27-FEB-1991 Date Sample Received: 4-MAR-1991
Sampled By: Date Sample Completed: 14-APR-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	<0.50		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-3050 EPA-7421	Lead	0.52		ug/g	P BUCKLEY	10402F	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.50		ug/g	P BUCKLEY	10402G	3-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
160203	EPA-900.0	Alpha Activity	1.45	+/- 1.9	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
160303	EPA-900.0	Beta Activity	-0.26	+/- 4.9	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
ARSENIC	1.0	40.0	38.6	UG/L	37.6	93.9
FLUORIDE SIE	0.0	20	19.2	ug/g	19.2	96.0
LEAD	5.22	40.0	44.52	UG/L	39.30	98.2
MERCURY	0.00	1.00	0.90	UG/L	0.90	90.0
SELENIUM	0.88	40.0	32.74	UG/L	31.86	79.7

JJ 7/5/91

***** Comments from the Spectrochemistry Laboratory *****

This sample was spiked for Tl, but Tl was not a requested element. The results are as follows: Sample concentration 1.17ug/L and the spike concentration 36.49ug/L thus yielding a 88% recovery.

Program Manager: D. L. Amburgey

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
23-MAY-1991 09:46

AnaLIS ID: 910306-008 Project: G132 031 Customer Sample ID: B00GV3
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 27-FEB-1991 Date Sample Received: 4-MAR-1991
Sampled By: Date Sample Completed: 14-APR-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	0.82		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-3050 EPA-7421	Lead	4.6		ug/g	P BUCKLEY	10402F	14-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
160203	EPA-900.0	Alpha Activity	2.16	+/- 2.0	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
160303	EPA-900.0	Beta Activity	5.84	+/- 5.2	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
ALPHA ACTIVITY	2.16	2016.94	1955.55	pCi/g	1953.39	96.8
BETA ACTIVITY	5.84	2016.94	2436.10	pCi/g	2430.26	120.5

7/5/91

Program Manager: D. L. Amburgey
Date Approved: 22-MAY-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
23-MAY-1991 09:46

AnaLIS ID: 910306-007 Project: G132 031 Customer Sample ID: BOOGV2
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 27-FEB-1991 Date Sample Received: 4-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	0.79		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-3050 EPA-7421	Lead	5.0		ug/g	P BUCKLEY	10402F	14-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
160203	EPA-900.0	Alpha Activity	1.93	+/- 1.9	pCi/g	ES WILLIAMS	ENV-500	9-APR-1991
160303	EPA-900.0	Beta Activity	-0.22	+/- 4.9	pCi/g	SM KINNEBREW	ENV-500	9-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991

Replicate Results of Analysis

Analysis	Results	Replicate Results	RPD
Alpha Activity	1.93	1.73	10.9
Beta Activity	-0.22	-0.22	0.0

JJ 1/5/91

Program Manager: D. L. Amburgey
Date Approved: 22-MAY-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 07:39

AnaLIS ID: 910307-043 Project: G132 031 Customer Sample ID: B00GV6
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 4-MAR-1991 Date Sample Received: 6-MAR-1991
Sampled By: Date Sample Completed: 29-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

JJ 7/5/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.0		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-3050 EPA-7421	Lead	2.6		ug/g	P BUCKLEY	10402F	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.50		ug/g	LD WELCH	10402G	3-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10402H	8-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2454	10-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2562	8-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2569	8-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	95.0		%	JH KREIS	0003	8-MAR-1991
160203	EPA-900.0	Alpha Activity	2.21	+/- 1.7	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	1.65	+/- 4.7	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160803	EPA-905.0	Strontium-90	R -1.82E-1	+/- 4.4E-1	pCi/g	SM KINNEBREW	ENV-501	29-MAY-1991
161203	EC-134	Cesium-137	2.62E-1	+/- 2.3E-1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Protactinium-234m	-12.00	+/- 49.7	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Thorium-234	-1.69	+/- 5.9	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	15-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
184403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-17	22-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-5	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991

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Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 08:04

AnaLIS ID: 910307-044 Project: G132 031 Customer Sample ID: B00GV7
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 4-MAR-1991 Date Sample Received: 6-MAR-1991
Sampled By: Date Sample Completed: 29-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

JJ 7/5/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050	Arsenic	2.0		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-7060							
	EPA-3050	Lead	3.4		ug/g	P BUCKLEY	10402F	14-APR-1991
	EPA-7421							
	EPA-3050	Selenium	<0.52		ug/g	LD WELCH	10402G	3-APR-1991
	EPA-7740							
	EPA-3050	Thallium	<1.0		ug/g	P BUCKLEY	10402H	8-APR-1991
	EPA-7841							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2454	10-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2562	8-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2569	8-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	96.0		%	JH KREIS	0003	8-MAR-1991
160203	EPA-900.0	Alpha Activity	4.82	+/- 2.2	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	5.78	+/- 5.0	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160803	EPA-905.0	Strontium-90	R 1.25	+/- 5.5E-1	pCi/g	SM KINNEBREW	ENV-501	29-MAY-1991
161203	EC-134	Cesium-137	3.74E-2	+/- 2.3E-1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Protactinium-234m	-6.03	+/- 37.9	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Thorium-234	-1.95	+/- 4.1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1		ug/g	KD HUTSON	92-2	3-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0	UJ	ug/g		91-17	22-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 08:17

AnaLIS ID: 910307-045 Project: G132 031 Customer Sample ID: BOOGV8
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 4-MAR-1991 Date Sample Received: 6-MAR-1991
Sampled By: Date Sample Completed: 29-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

JJ 7/5/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-76	21-MAR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	26-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.6		ug/g	P BUCKLEY	10402E	7-APR-1991
	EPA-3050 EPA-7421	Lead	3.5		ug/g	P BUCKLEY	10402F	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.52		ug/g	LD WELCH	10402G	3-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.1		ug/g	P BUCKLEY	10402H	8-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10310B	11-MAR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2454	10-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JH KREIS	2562	8-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JH KREIS	2569	8-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	95.0		%	JH KREIS	0003	8-MAR-1991
160203	EPA-900.0	Alpha Activity	1.83	+/- 1.7	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	5.93	+/- 5.0	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160803	EPA-905.0	Strontium-90	R 1.14	+/- 5.4E-1	pCi/g	SM KINNEBREW	ENV-501	29-MAY-1991
161203	EC-134	Cesium-137	4.46E-1	+/- 2.7E-1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Protactinium-234m	21.38	+/- 47.3	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Thorium-234	9.68E-2	+/- 6.0	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1		ug/g	KD HUTSON	92-2	3-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W27	20-MAR-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0 UJ		ug/g		91-17	22-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Nitrate	<20 UJ		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 IA	10-MAR-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 08:08

AnaLIS ID: 910308-108 Project: G132 031 Customer Sample ID: BOOGV9
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 5-MAR-1991 Date Sample Received: 7-MAR-1991
Sampled By: Date Sample Completed: 29-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

JJ 6/29/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	28-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	<0.50		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-3050 EPA-7421	Lead	0.50		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.05		ug/g	P BUCKLEY	10403AF	9-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10403AG	8-APR-1991
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10402D	7-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2454	10-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2587	12-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2585	12-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	100.0		%	JH KREIS	0004	10-MAR-1991
160203	EPA-900.0	Alpha Activity	2.95	+/- 1.9	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	-0.72	+/- 4.6	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160803	EPA-905.0	Strontium-90	R -1.60E-2	+/- 4.5E-1	pCi/g	SM KINNEBREW	ENV-501	29-MAY-1991
161203	EC-134	Cesium-137	3.10E-1	+/- 3.1E-1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Protactinium-234m	-22.05	+/- 51.0	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Thorium-234	-2.43	+/- 5.9	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	15-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W30	2-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	KM HOWERTON	91-21	15-APR-1991
185103	EPA-350.3	Ammonia	0.001		ug/g	JS SMITH	91-6	19-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-28 T	23-MAR-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 08:12

AnaLIS ID: 910308-109 Project: G132 031 Customer Sample ID: B00GW1
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 5-MAR-1991 Date Sample Received: 7-MAR-1991
Sampled By: Date Sample Completed: 29-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

6/29/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	28-MAR-1991
102003	EPA-3050	Arsenic	3.7		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-7060							
	EPA-3050	Lead	4.1		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-7421							
	EPA-3050	Selenium	<0.50		ug/g	P BUCKLEY	10403AF	9-APR-1991
	EPA-7740							
	EPA-3050	Thallium	<1.0		ug/g	P BUCKLEY	10403AG	8-APR-1991
	EPA-7841							
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10402D	7-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2454	10-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2587	12-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2585	12-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	96.9		%	JH KREIS	0004	10-MAR-1991
160203	EPA-900.0	Alpha Activity	2.43	+/- 1.8	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	3.28	+/- 4.8	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160803	EPA-905.0	Strontium-90	R 2.22E-1	+/- 4.7E-1	pCi/g	SM KINNEBREW	ENV-501	29-MAY-1991
161203	EC-134	Cesium-137	6.35E-2	+/- 2.4E-1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Protactinium-234m	11.10	+/- 40.7	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Thorium-234	7.02E-1	+/- 4.1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	15-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W30	2-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	KM HOWERTON	91-21	15-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	19-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-28 T	23-MAR-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 07:51

AnaLIS ID: 910308-110 Project: G132 031 Customer Sample ID: B00GW0
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 5-MAR-1991 Date Sample Received: 7-MAR-1991
Sampled By: Date Sample Completed: 29-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

6/29/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	28-MAR-1991
102003	EPA-3050	Arsenic	7.1		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-7060							
	EPA-3050	Lead	13		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-7421							
	EPA-3050	Selenium	<0.53		ug/g	P BUCKLEY	10403AF	9-APR-1991
	EPA-7740							
	EPA-3050	Thallium	<1.1		ug/g	P BUCKLEY	10403AG	8-APR-1991
	EPA-7841							
103203	EPA-7841	Mercury	<1.0	UJ	ug/g	SA BURGESS	10402D	7-APR-1991
	EPA-7471							
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2454	10-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2587	12-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2585	12-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	100.0		%	JH KREIS	0004	10-MAR-1991
160203	EPA-900.0	Alpha Activity	3.27	+/- 1.9	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	8.75	+/- 5.1	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160803	EPA-905.0	Strontium-90	R 36.50	+/- 1.7	pCi/g	SM KINNEBREW	ENV-501	29-MAY-1991
161203	EC-134	Cesium-137	2.38E-2	+/- 2.2E-1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Protactinium-234m	21.30	+/- 39.2	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Thorium-234	-1.13	+/- 4.1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	15-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W30	2-APR-1991
184403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-17	25-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	19-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-28 T	23-MAR-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 07:54

AnaLIS ID: 910308-111 Project: G132 031 Customer Sample ID: BOOGW4
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 5-MAR-1991 Date Sample Received: 7-MAR-1991
Sampled By: Date Sample Completed: 29-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

6/29/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-76	28-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	2.4		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-3050 EPA-7421	Lead	3.6		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.51		ug/g	P BUCKLEY	10403AF	9-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10403AG	8-APR-1991
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10402D	7-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2454	10-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2587	12-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2585	12-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	97.0		%	JH KREIS	0004	10-MAR-1991
160203	EPA-900.0	Alpha Activity	4.02	+/- 2.1	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	3.42	+/- 4.8	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160803	EPA-905.0	Strontium-90	R 1.06	+/- 5.3E-1	pCi/g	SM KINNEBREW	ENV-501	29-MAY-1991
161203	EC-134	Cesium-137	4.95E-1	+/- 2.7E-1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Protactinium-234m	-24.68	+/- 45.6	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Thorium-234	-1.94E-1	+/- 5.9	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	15-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W30	2-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	KM HOWERTON	91-21	15-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	19-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-28 T	23-MAR-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 08:21

AnaLIS ID: 910308-112 Project: G132 031 Customer Sample ID: B00GW6
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 5-MAR-1991 Date Sample Received: 7-MAR-1991
Sampled By: Date Sample Completed: 14-APR-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	28-MAR-1991
102003	EPA-3050	Arsenic	2.6		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-7060							
	EPA-3050	Lead	4.7		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-7421							
103203	EPA-7841	Mercury	<1.0	UJ	ug/g	SA BURGESS	10402D	7-APR-1991
	EPA-7471							
160203	EPA-900.0	Alpha Activity	3.89	+/- 2.0	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	6.84	+/- 5.0	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W30	2-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-28 T	23-MAR-1991

Program Manager: D. L. Amburgey
Date Approved: 29-MAY-1991

JJ 6/29/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 07:58

AnaLIS ID: 910308-113 Project: G132 031 Customer Sample ID: B00GW8
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 5-MAR-1991 Date Sample Received: 7-MAR-1991
Sampled By: Date Sample Completed: 29-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

JJ 6/29/91

Activ. Number	Procedure No.	Analysis		Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)			C		LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)			C		LE COLLINS	10897-77	28-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic			2.2	ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-3050 EPA-7421	Lead			3.0	ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-3050 EPA-7740	Selenium			<0.52	ug/g	P BUCKLEY	10403AF	9-APR-1991
	EPA-3050 EPA-7841	Thallium			<1.0	ug/g	P BUCKLEY	10403AG	8-APR-1991
103203	EPA-7471	Mercury			<1.0 UJ	ug/g	SA BURGESS	10402D	7-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)			C		MF MCMYLER	2454	10-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)			C		JM MAHER	2587	12-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)			C		JM MAHER	2585	12-MAR-1991
135803	CLP10/86 SVD19	Percent Solids			96.9%	%	JH KREIS	0004	10-MAR-1991
160203	EPA-900.0	Alpha Activity			1.43 +/- 1.6	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity			0.48 +/- 4.7	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160803	EPA-905.0	Strontium-90	R		1.47 +/- 5.6E-1	pCi/g	SM KINNEBREW	ENV-501	29-MAY-1991
161203	EC-134	Cesium-137			-8.18E-2 +/- 2.3E-1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Gamma Activity			NA +/-	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Protactinium-234m			27.83 +/- 40.0	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
	EC-134	Thorium-234			-1.03 +/- 4.1	pCi/g	SM KINNEBREW	ENV-501	2-MAY-1991
176203	EPA-376.1	Sulfide			<0.1 UJ	ug/g	KD HUTSON	91-3	15-APR-1991
183103	EPA-340.2	Fluoride SIE			<2	ug/g	AZ FOWLER	91-W30	2-APR-1991
184403	EPA-9010	Cyanide Colorimetric			< 1.0 UJ	ug/g		91-17	25-MAR-1991
185103	EPA-350.3	Ammonia			<0.001	ug/g	JS SMITH	91-6	18-MAR-1991
185403	EPA-300.0	Chloride IC			<20	ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Nitrate			<20 UJ	ug/g	CA SEDLACEK	91-28 T	23-MAR-1991
	EPA-300.0	Sulfate			<20	ug/g	CA SEDLACEK	91-28 T	23-MAR-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 08:01

AnaLIS ID: 910308-114 Project: G132 031 Customer Sample ID: BOOGW9
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 6-MAR-1991 Date Sample Received: 8-MAR-1991
Sampled By: Date Sample Completed: 14-APR-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	28-MAR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.2		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-3050 EPA-7421	Lead	2.9		ug/g	P BUCKLEY	10403AE	13-APR-1991
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10402D	7-APR-1991
160203	EPA-900.0	Alpha Activity	1.82	+/- 1.7	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	1.36	+/- 4.7	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
183103	EPA-340.2	Fluoride SIE	2		ug/g	AZ FOWLER	91-W30	2-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

***** Comments from the Mercury Laboratory *****

THIS SAMPLE CONTAINED VERY LARGE ROCKS AND VERY LITTLE SOIL.

6/29/91

Program Manager: D. L. Amburgey
Date Approved: 29-MAY-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
30-MAY-1991 08:15

AnaLIS ID: 910308-115 Project: G132 031 Customer Sample ID: BOOGX2
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 6-MAR-1991 Date Sample Received: 8-MAR-1991
Sampled By: Date Sample Completed: 14-APR-1991
Material Description: SOIL [] : Result has been Corrected for Spike'

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	28-MAR-1991
102003	EPA-3050	Arsenic	0.93		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-7060							
	EPA-3050	Lead	3.0		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10402D	7-APR-1991
160203	EPA-900.0	Alpha Activity	4.28	+/- 2.1	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
160303	EPA-900.0	Beta Activity	3.59	+/- 4.8	pCi/g	SM KINNEBREW	ENV-501	9-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W30	2-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
CHLORIDE IC	0	200	164	ug/g	164.	82.0
NITRATE	0	200	180	ug/g	180.	90.0
SULFATE	0	200	179	ug/g	179.	89.5

JZ 6/29/91

Program Manager: D. L. Amburgey
Date Approved: 29-MAY-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 10:52

AnaLIS ID: 910311-027 Project: G132 031 Customer Sample ID: BOOGW3
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 5-MAR-1991 Date Sample Received: 8-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.6	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 3.8	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-905.0	Strontium-90	--------	+/- 4.0E-1	pCi/g	SM KINNEBREW	ENV-504	19-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050 EPA-7060	Arsenic	6.6		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-3050 EPA-7421	Lead	3.2		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.51		ug/g	P BUCKLEY	10413T	16-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10413U	16-APR-1991
103203	EPA-7471	Mercury	<1.0	UJ	ug/g	SA BURGESS	10402D	7-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2602	18-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2587	12-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2585	12-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	97.0%		%	JH KREIS	0006	13-MAR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	15-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W32	4-APR-1991
184403	EPA-9010	Cyanide Colorimetric	< 1.0	UJ	ug/g		91-17	25-MAR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 12-MAR-1991
Sample Weight Extracted (g) = 10

JJ 7/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 10:56

AnaLIS ID: 910313-099 Project: G132 031 Customer Sample ID: BOOGX3
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 7-MAR-1991 Date Sample Received: 12-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.0	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 3.8	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050	Arsenic	0.68		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.3		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W32	4-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug7g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

***** Comments from the Mercury Laboratory *****

THIS SAMPLE CONTAINED LARGE ROCKS AND VERY LITTLE SOIL.

JJ 7/5/91

Program Manager: D. L. Amburgey
Date Approved:

Date Printed:
20-MAY-1991 10:56

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910313-100 Project: G132 031 Customer Sample ID: BOOGX4
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 7-MAR-1991 Date Sample Received: 12-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.8	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 3.9	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050	Arsenic	0.82		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.5		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
183103	EPA-340.2	Fluoride SIE	2.6		ug/g	AZ FOWLER	91-W33	7-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

***** Comments from the Mercury Laboratory *****

This sample contained very large rocks and very little soil.

JJ 7/5/91

Program Manager: D. L. Amburgey
Date Approved:

9513556.2942

570

Date Printed:
20-MAY-1991 11:00

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910313-101 Project: G132 031 Customer Sample ID: BOOGX5
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 8-MAR-1991 Date Sample Received: 12-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.9	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 3.9	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050	Arsenic	0.90		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.7		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
183103	EPA-340.2	Fluoride SIE	2.4		ug/g	RJ CAMPBELL	91-W32	4-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

Program Manager: D. L. Amburgey
Date Approved:

7/5/91

Date Printed:
20-MAY-1991 10:57

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910313-102 Project: G132 031 Customer Sample ID: BOOGX8
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 8-MAR-1991 Date Sample Received: 12-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.8	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.0	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050	Arsenic	1.5		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-7060							
	EPA-3050	Lead	3.1		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W32	4-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

Replicate Results of Analysis

Analysis	Results	Replicate Results	RPD
Arsenic	1.5	1.3	14.3
Lead	3.1	2.8	10.2

JJ 7/5/91

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
FLUORIDE SIE	0	20	20	ug/g	20.	100.0

Program Manager: D. L. Amburgey
Date Approved:

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 11:12

AnaLIS ID: 910313-103 Project: G132 031 Customer Sample ID: BOOGX6
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 8-MAR-1991 Date Sample Received: 12-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.4	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 3.9	pCi/g	SM KINNEBREW	ENV-504	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-905.0	Strontium-90	--------	+/- 3.8E-1	pCi/g	SM KINNEBREW	ENV-504	19-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050 EPA-7060	Arsenic	0.61		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-3050 EPA-7421	Lead	2.2		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.52		ug/g	P BUCKLEY	10413T	16-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10413U	16-APR-1991
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2602	18-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2614	20-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2609	19-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2609	19-MAR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	15-APR-1991
183103	EPA-340.2	Fluoride SIE	2.0		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	KM HOWERTON	91-21	15-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-6	18-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 19-MAR-1991
Sample Weight Extracted (g) = 10

JJ 7/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 09:08

AnaLIS ID: 910315-057 Project: G132 031 Customer Sample ID: BOOGYO
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 12-MAR-1991 Date Sample Received: 13-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	28-MAR-1991
102003	EPA-3050	Arsenic	<0.50		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-7060							
	EPA-3050	Lead	0.43		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
160203	EPA-900.0	Alpha Activity	-4.70E-1	+/- 2.3	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160303	EPA-900.0	Beta Activity	-5.90E-1	+/- 4.1	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W33	7-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20 UJ		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
AMMONIA	0.0	10.0	10.0	ug/g	10.0	100.0

JJ 7/5/91

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

9513356.2946

332

Date Printed:
14-JUN-1991 09:08

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910315-058 Project: G132 031 Customer Sample ID: BOOGY1
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 12-MAR-1991 Date Sample Received: 13-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	28-MAR-1991
102003	EPA-3050	Arsenic	1.6		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-7060							
	EPA-3050	Lead	20		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-7421							
103203	EPA-7841	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
	EPA-7471							
160203	EPA-900.0	Alpha Activity	-9.40E-1	+/- 2.3	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160303	EPA-900.0	Beta Activity	-4.10E-1	+/- 4.1	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W33	7-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	39		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

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Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 09:26

AnaLIS ID: 910315-059 Project: G132 031 Customer Sample ID: BOOGY2
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 12-MAR-1991 Date Sample Received: 13-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	28-MAR-1991
102003	EPA-3050	Arsenic	1.9		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-7060							
	EPA-3050	Lead	8.8		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
160203	EPA-900.0	Alpha Activity	1.14	+/- 2.5	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160303	EPA-900.0	Beta Activity	4.57	+/- 4.4	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	2.0		ug/g	AZ FOWLER	91-W33	7-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20 UJ		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	46		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

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Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 11:25

AnaLIS ID: 910315-060 Project: G132 031 Customer Sample ID: BOOGZ2
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 12-MAR-1991 Date Sample Received: 13-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.0	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.3	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-3550	Prep (BNA- SW-846-Sox)	--------					
	EPA-905.0	Strontium-90	--------	+/- 3.4E-1	pCi/g	SM KINNEBREW	ENV-517	19-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-77	3-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	28-MAR-1991
102003	EPA-3050	Arsenic	1.2		ug/g	P BUCKLEY	10403AD	9-APR-1991
	EPA-7060							
	EPA-3050	Lead	9.9		ug/g	P BUCKLEY	10403AE	13-APR-1991
	EPA-7421							
	EPA-3050	Selenium	<0.51		ug/g	P BUCKLEY	10403AF	9-APR-1991
	EPA-7740							
	EPA-3050	Thallium	<1.0		ug/g	P BUCKLEY	10403AG	8-APR-1991
	EPA-7841							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			MF MCMYLER	2602	18-MAR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2614	20-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2614	20-MAR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	15-APR-1991
183103	EPA-340.2	Fluoride SIE	2.2		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	KM HOWERTON	91-21	15-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-29 T	24-MAR-1991
	EPA-300.0	Sulfate	36		ug/g	CA SEDLACEK	91-29 T	24-MAR-1991

Prep (Herb- SW-846)

Analyst = MF MCMYLER
Date Extracted = 16-MAR-1991
Sample Weight Extracted (g) = 50.93
Percent Solids = 95.8

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Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 09:26

AnaLIS ID: 910318-101 Project: G132 031 Customer Sample ID: BOOGZ3
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 14-MAR-1991 Date Sample Received: 16-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050	Arsenic	0.98		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.9		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
160203	EPA-900.0	Alpha Activity	-1.77	+/- 2.2	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160303	EPA-900.0	Beta Activity	1.37	+/- 4.2	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
183103	EPA-340.2	Fluoride SIE	2.0		ug/g	AZ FOWLER	91-W33	7-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Sulfate	25		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991

Program Manager: D. L. Amburgey
Date Approved: 13-JUN-1991

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Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 09:10

JJ 7/5/91

AnaLIS ID: 910319-085 Project: G132 031 Customer Sample ID: BOOGZ6
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 15-MAR-1991 Date Sample Received: 19-MAR-1991
Sampled By: Date Sample Completed: 13-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

ctiv. umber	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
80103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
02003	EPA-3050 EPA-7060	Arsenic	<0.59		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-3050 EPA-7421	Lead	8.5		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.54		ug/g	P BUCKLEY	10413T	16-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10413U	16-APR-1991
03203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
30703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2477	9-APR-1991
32703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2625	25-MAR-1991
35003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2672	25-MAR-1991
35803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2625	21-MAR-1991
60203	EPA-900.0	Alpha Activity	-4.60E-1	+/- 2.3	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
60303	EPA-900.0	Beta Activity	1.49	+/- 4.2	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
60803	EPA-905.0	Strontium-90	9.17	+/- 7.8-E1	pCi/g	SM KINNEBREW	ENV-517	19-MAY-1991
61203	EC-134	Cesium-137	3.20E-1	+/- 2.0E-1	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Protactinium-234m	25.62	+/- 29.4	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Thorium-234	1.27	+/- 3.7	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	3.0		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0	UJ	ug/g	JS SMITH	91-21	17-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Sulfate	28		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991

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Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 09:13

AnaLIS ID: 910319-086 Project: G132 031 Customer Sample ID: BOOH00
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 15-MAR-1991 Date Sample Received: 19-MAR-1991
Sampled By: Date Sample Completed: 13-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

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Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050	Arsenic	2.5		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-7060							
	EPA-3050	Lead	3.9		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-7421							
	EPA-3050	Selenium	<0.51		ug/g	P BUCKLEY	10413T1	22-APR-1991
	EPA-7740							
	EPA-3050	Thallium	<1.0		ug/g	P BUCKLEY	10413U	16-APR-1991
	EPA-7841							
103203	EPA-7841	Mercury	<1.0		ug/g	GL EMERSON	10411P	16-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2477	9-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2625	25-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2672	25-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2625	21-MAR-1991
160203	EPA-900.0	Alpha Activity	-1.45	+/- 2.2	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160303	EPA-900.0	Beta Activity	-3.00E-1	+/- 4.1	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160803	EPA-905.0	Strontium-90	1.31	+/- 3.8E-1	pCi/g	SM KINNEBREW	ENV-517	19-MAY-1991
161203	EC-134	Cesium-137	2.68E-2	+/- 1.8E-1	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Protactinium-234m	1.04	+/- 31.1	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Thorium-234	-3.83	+/- 2.4	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Uranium-235	3.08E-1	+/- 2.1E-1	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	2.0		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0	UJ	ug/g	JS SMITH	91-21	17-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 09:15

AnaLIS ID: 910319-087 Project: G132 031 Customer Sample ID: BOOH01
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 15-MAR-1991 Date Sample Received: 19-MAR-1991
Sampled By: Date Sample Completed: 13-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

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Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.9		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-3050 EPA-7421	Lead	3.1		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.51		ug/g	P BUCKLEY	10413T1	22-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10413U	16-APR-1991
103203	EPA-7841	Mercury	<1.0		ug/g	GL EMERSON	10411P	16-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2477	9-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2626	25-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2672	25-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2625	21-MAR-1991
160203	EPA-900.0	Alpha Activity	-6.50E-1	+/- 2.3	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160303	EPA-900.0	Beta Activity	-7.80E-1	+/- 4.1	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160803	EPA-905.0	Strontium-90	1.37	+/- 3.9E-1	pCi/g	SM KINNEBREW	ENV-517	19-MAY-1991
161203	EC-134	Cesium-137	-5.89E-2	+/- 2.0E-1	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Protactinium-234m	10.02	+/- 36.5	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Thorium-234	8.58E-1	+/- 3.3	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	2.2		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0	UJ	ug/g	JS SMITH	91-21	17-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991

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Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
14-JUN-1991 09:21

AnaLIS ID: 910319-089 Project: G132 031 Customer Sample ID: BOOH02
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 15-MAR-1991 Date Sample Received: 19-MAR-1991
Sampled By: Date Sample Completed: 13-JUN-1991
Material Description: SOIL [] : Result has been Corrected for Spike

JJ 7/5/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050 EPA-7060	Arsenic	2.3		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-3050 EPA-7421	Lead	30		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.52		ug/g	P BUCKLEY	10413T1	22-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10413U	16-APR-1991
103203	EPA-7841	Mercury	<1.0		ug/g	GL EMERSON	10411P	16-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2477	9-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2625	25-MAR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2672	25-MAR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2625	21-MAR-1991
160203	EPA-900.0	Alpha Activity	-2.25	+/- 2.1	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160303	EPA-900.0	Beta Activity	3.00E-1	+/- 4.1	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
160803	EPA-905.0	Strontium-90	2.86	+/- .49E-1	pCi/g	SM KINNEBREW	ENV-517	19-MAY-1991
161203	EC-134	Cesium-137	7.08E-2	+/- 1.9E-1	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Gamma Activity	NA	+/-	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Protactinium-234m	1.04	+/- 32.4	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
	EC-134	Thorium-234	-1.49E-1	+/- 3.7	pCi/g	SM KINNEBREW	ENV-517	13-JUN-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	2.2		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<1.0	UJ	ug/g	JS SMITH	91-21	17-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991

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Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 12:47

AnaLIS ID: 910321-067 Project: G132 031 Customer Sample ID: BOOGZ8
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 19-MAR-1991 Date Sample Received: 20-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

JJ 7/5/91

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.3	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
	EPA-3550	BNA (TCL) SOIL	--------		ug/Kg	C MEEHAN	910405CM-0116	5-APR-1991
	ACD 2470							
	EPA-900.0	Beta Activity	--------	+/- 4.3	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-905.0	Strontium-90	--------	+/- 4.6E-1	pCi/g	SM KINNEBREW	ENV-518	19-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050	Arsenic	7.2		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-7060							
	EPA-3050	Lead	7.2		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-7421							
	EPA-3050	Selenium	<0.61		ug/g	P BUCKLEY	10418L	22-APR-1991
	EPA-7740							
	EPA-3050	Thallium	<1.2		ug/g	P BUCKLEY	10418M	19-APR-1991
	EPA-7841							
103203	EPA-7841	Mercury	<1.0		ug/g	GL EMERSON	10411P	16-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2480	12-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2647	1-APR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2726	4-APR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2647	31-MAR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	JS SMITH	91-21	17-APR-1909
185103	EPA-350.3	Ammonia	<0.001		ug/g	SD CALVIN	91-09	15-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Sulfate	26		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER

9513356.2955

700

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:01

AnaLIS ID: 910321-068 Project: G132 031 Customer Sample ID: BOOH03
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 19-MAR-1991 Date Sample Received: 20-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.5	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.2	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-905.0	Strontium-90	--------	+/- 4.7E-1	pCi/g	SM KINNEBREW	ENV-518	19-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050 EPA-7060	Arsenic	2.1		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-3050 EPA-7421	Lead	2.5		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.52		ug/g	P BUCKLEY	10418L	22-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10418M	19-APR-1991
103203	EPA-7841	Mercury	<1.0		ug/g	GL EMERSON	10411P	16-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2480	12-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2647	1-APR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2726	4-APR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2647	31-MAR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	JS SMITH	91-21	17-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	SD CALVIN	91-09	15-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 4-APR-1991
Sample Weight Extracted (g) = 10

JJ 1/5/91

Date Printed:
20-MAY-1991 12:53

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910321-069 Project: G132 031 Customer Sample ID: B00H04
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 19-MAR-1991 Date Sample Received: 20-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.4	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.0	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-905.0	Strontium-90	--------	+/- 4.2E-1	pCi/g	SM KINNEBREW	ENV-518	19-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.8		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-3050 EPA-7421	Lead	2.6		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.52		ug/g	P BUCKLEY	10418L	22-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10418M	19-APR-1991
103203	EPA-7841	Mercury	<1.0		ug/g	GL EMERSON	10411P	16-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2480	12-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2647	1-APR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2726	4-APR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2647	31-MAR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	JS SMITH	91-21	17-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	SD CALVIN	91-09	15-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Sulfate	26		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 4-APR-1991
Sample Weight Extracted (g) = 10

JJ 7/15/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 12:56

AnaLIS ID: 910321-070 Project: G132 031 Customer Sample ID: B00H05
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 19-MAR-1991 Date Sample Received: 20-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.3	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.1	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-905.0	Strontium-90	--------	+/- 4.1E-1	pCi/g	SM KINNEBREW	ENV-518	19-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.3		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-3050 EPA-7421	Lead	2.6		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.51		ug/g	P BUCKLEY	10418L	22-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10418M	19-APR-1991
103203	EPA-7841	Mercury	<1.0		ug/g	GL EMERSON	10411P	16-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2480	12-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2647	1-APR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2726	4-APR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2647	31-MAR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	JS SMITH	91-21	17-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	SD CALVIN	91-09	15-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Sulfate	21		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 4-APR-1991
Sample Weight Extracted (g) = 10

JJ 7/5/91

Date Printed:
20-MAY-1991 13:07

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910321-071 Project: G132 031 Customer Sample ID: BOOH06
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 19-MAR-1991 Date Sample Received: 20-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.5	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.3	pCi/g	SM KINNEBREW	ENV-518	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-905.0	Strontium-90	--------	+/- 3.7E-1	pCi/g	SM KINNEBREW	ENV-518	19-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050 EPA-7060	Arsenic	1.7		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-3050 EPA-7421	Lead	2.5		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.52		ug/g	P BUCKLEY	10418L	22-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10418M	19-APR-1991
103203	EPA-7841	Mercury	<1.0		ug/g	GL EMERSON	10411P	16-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2480	12-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2647	1-APR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2726	4-APR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2647	31-MAR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W33	7-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	JS SMITH	91-24	29-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	SD CALVIN	91-09	16-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 4-APR-1991
Sample Weight Extracted (g) = 10

JJ 7/5/91

Date Printed:
22-MAY-1991 12:33

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910318-101 Project: G132 031 Customer Sample ID: 800GZ3
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 14-MAR-1991 Date Sample Received: 16-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.2	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.2	pCi/g	SM KINNEBREW	ENV-517	2-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	12-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-77	5-APR-1991
102003	EPA-3050	Arsenic	0.98		ug/g	LD WELCH	10413R	17-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.9		ug/g	P BUCKLEY	10413S	14-APR-1991
	EPA-7421							
103203	EPA-7471	Mercury	<1.0		ug/g	SA BURGESS	10402D	7-APR-1991
183103	EPA-340.2	Fluoride SIE	2.0		ug/g	AZ FOWLER	91-W33	7-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-9	25-MAR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991
	EPA-300.0	Sulfate	25		ug/g	CA SEDLACEK	91-33 IA	24-MAR-1991

Program Manager: D. L. Amburgey
Date Approved:

JJ 7/5/91

9513356.2960

777

Date Printed:
20-MAY-1991 13:11

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910322-210 Project: G132 031 Customer Sample ID: B00H09
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 19-MAR-1991 Date Sample Received: 22-MAR-1991
Sampled By: Date Sample Completed: 2-MAY-1991
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.6	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.2	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050	Arsenic	0.80		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-7060							
	EPA-3050	Lead	1.9		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-7421							
103203	EPA-7841	Mercury	<1.0		ug/g	GL EMERSON	10411P	16-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	AZ FOWLER	91-W33	7-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	SD CALVIN	91-09	16-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-35 IA	31-MAR-1991

Program Manager: D. L. Amburgey
Date Approved:

7/5/91

9513356.2961

779

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:19

AnaLIS ID: 910325-035 Project: G132 031 Customer Sample ID: BOOH14
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 21-MAR-1991 Date Sample Received: 23-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.8	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-3050	Arsenic	--------		ug/g	KM COOLEY	10425I	26-APR-1991
	EPA-7060							
	EPA-900.0	Beta Activity	--------	+/- 4.2	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-3050	Lead	--------		ug/g	LD WELCH	10425J	29-APR-1991
	EPA-7421							
	EPA-7841	Mercury	--------		ug/g			
	EPA-3050	Selenium	--------		ug/g	LD WELCH	10425K	7-MAY-1991
	EPA-7740							
		Strontium-90	--------	+/-	pCi/g			
	EPA-3050	Thallium	--------		ug/g	P BUCKLEY	10425L	7-MAY-1991
	EPA-7841							
		VOA (TCL) SOIL	--------		ug/Kg			
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-79	25-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-79	23-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN	2480	12-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER	2728	4-APR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER	2726	4-APR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2726	4-APR-1991
176203	EPA-376.1	Sulfide	<0.1		ug/g	KD HUTSON	91-3	21-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	HJ CULBERT JR	91-W35	9-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	JS SMITH	91-1	29-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	SD CALVIN	91-09	16-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	KE EDWARDS	91-371A	5-APR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	KE EDWARDS	91-371A	5-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	KE EDWARDS	91-371A	5-APR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 4-APR-1991
Sample Weight Extracted (g) = 10
Percent Solids = 91.3

JJ 7/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:23

AnaLIS ID: 910328-073 Project: G132 031 Customer Sample ID: BOOH15
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 25-MAR-1991 Date Sample Received: 28-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.0	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 3.6	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-7841	Mercury	--------		ug/g			
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-78	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050	Arsenic	0.65		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-7060							
	EPA-3050	Lead	1.8		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-7421							
183103	EPA-340.2	Fluoride SIE	<2		ug/g	HJ CULBERT JR	91-W35	9-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	SD CALVIN	91-09	16-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
CHLORIDE IC	0	20	18	ug/g	18.	90.0
NITRATE	0	100	95	ug/g	95.	95.0
SULFATE	0	200	232	ug/g	232.	116.0

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Program Manager: D. L. Amburgey
Date Approved:

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:21

AnaLIS ID: 910328-074 Project: G132 031 Customer Sample ID: BOOH16
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 25-MAR-1991 Date Sample Received: 28-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.8	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.1	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-7841	Mercury	--------		ug/g			
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-79	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050	Arsenic	0.76		ug/g	P BUCKLEY	10148J	21-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.0		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-7421							
183103	EPA-340.2	Fluoride SIE	<2		ug/g	HJ CULBERT JR	91-W35	9-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-10A	28-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Program Manager: D. L. Amburgey
Date Approved:

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Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:23

AnaLIS ID: 910328-075 Project: G132 031 Customer Sample ID: BOOH17
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 25-MAR-1991 Date Sample Received: 28-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.9	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.0	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-7841	Mercury	--------		ug/g			
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-79	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050	Arsenic	<0.50		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-7060							
	EPA-3050	Lead	1.9		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-7421							
183103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W36	11-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-10S	28-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Program Manager: D. L. Amburgey
Date Approved:

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Date Printed:
20-MAY-1991 13:25

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

AnaLIS ID: 910328-076 Project: G132 031 Customer Sample ID: BOOH18
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 25-MAR-1991 Date Sample Received: 28-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.6	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.0	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-7841	Mercury	--------		ug/g			
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-79	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050	Arsenic	0.73		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.1		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-7421							
183103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W36	11-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-10S	28-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
FLUORIDE SIE	0	20	21	ug/g	21.	105.0

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Program Manager: D. L. Amburgey
Date Approved:

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:13

AnaLIS ID: 910328-077 Project: G132 031 Customer Sample ID: BOOH11
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 20-MAR-1991 Date Sample Received: 22-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.8	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.0	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-7841	Mercury	--------		ug/g			
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-79	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050	Arsenic	0.82		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-7060							
	EPA-3050	Lead	2.5		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-7421							
183103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W36	11-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-10S	28-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Program Manager: D. L. Amburgey
Date Approved:

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Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:13

AnaLIS ID: 910328-078 Project: G132 031 Customer Sample ID: BOOH10
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 20-MAR-1991 Date Sample Received: 22-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
							ENV-519	2-MA
	EPA-900.0	Alpha Activity	--------	+/- 1.4	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-900.0	Beta Activity	--------	+/- 4.0	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-7841	Mercury	--------		ug/g			
		Strontium-90	--------	+/-	pCi/g			
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-79	18-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-78	16-APR-1991
102003	EPA-3050 EPA-7060	Arsenic	<0.50		ug/g	P BUCKLEY	10418J	21-APR-1991
	EPA-3050 EPA-7421	Lead	0.51		ug/g	P BUCKLEY	10418K	21-APR-1991
	EPA-3050 EPA-7740	Selenium	<0.50		ug/g	P BUCKLEY	10418L	22-APR-1991
	EPA-3050 EPA-7841	Thallium	<1.0		ug/g	P BUCKLEY	10418M	19-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)	C			GL HAHN 2728	2480 4-APR-1991	12-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)	C			JM MAHER 2726	2728	4-APR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)	C			JM MAHER 27	2726	4-APR-1991
135803	CLP10/86 SVD19	Percent Solids	C		%	JM MAHER	2726	4-APR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-4	6-MAY-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W36	11-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	DM OBANION	91-26	7-MAY-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-10S	28-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 4-APR-1991
Sample Weight Extracted (g) = 10
Percent Solids = 99.9

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Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
22-MAY-1991 09:35

AnaLIS ID: 910401-011 Project: G132 031 Customer Sample ID: BOOH19
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 26-MAR-1991 Date Sample Received: 28-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 1.4	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-3050	Arsenic	--------		ug/g	KM COOLEY	10425I	26-APR-1991
	EPA-7060							
	EPA-900.0	Beta Activity	--------	+/- 3.7	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-3050	Lead	--------		ug/g	LD WELCH	10425J	29-APR-1991
	EPA-7421							
	EPA-7841	Mercury	--------		ug/g			
	EPA-3050	Selenium	--------		ug/g	LD WELCH	10425K	7-MAY-1991
	EPA-7740							
		Strontium-90	--------	+/-	pCi/g			
	EPA-3050	Thallium	--------		ug/g	P BUCKLEY	10425L	6-MAY-1991
	EPA-7841							
080103	EPA-3050 (7.6)	Prep (AA, 7.6)		C		LE COLLINS	10897-79	25-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)		C		LE COLLINS	10897-79	23-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)		C		GL HAHN	2480	12-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)		C		JM MAHER	2728	4-APR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)		C		JM MAHER	2726	4-APR-1991
135803	CLP10/86 SVD19	Percent Solids		C	%	JM MAHER	2726	4-APR-1991
176203	EPA-376.1	Sulfide		<0.1 UJ	ug/g	KD HUTSON	91-4	6-MAY-1991
183103	EPA-340.2	Fluoride SIE		<2	ug/g	RJ CAMPBELL	91-W36	11-APR-1991
184403	EPA-9010	Cyanide Colorimetric		0.17 J	ug/g	DM OBANION	91-25	2-MAY-1991
185103	EPA-350.3	Ammonia		<0.001	ug/g	JS SMITH	91-10S	28-APR-1991
185403	EPA-300.0	Chloride IC		<20	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate		<20 UJ	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate		<20	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 4-APR-1991
Sample Weight Extracted (g) = 10
Percent Solids = 93.9
Calculated Dried Weight (g) = 9.39
Extraction Method = Soxhlet

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Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:26

AnaLIS ID: 910401-012 Project: G132 031 Customer Sample ID: BOOH20
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 27-MAR-1991 Date Sample Received: 31-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

ctiv. umber	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.0	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-3050	Arsenic	--------		ug/g	KM COOLEY	10425I	26-APR-1991
	EPA-7060							
	EPA-900.0	Beta Activity	--------	+/- 5.1	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-3050	Lead	--------		ug/g	LD WELCH	10425J	29-APR-1991
	EPA-7421							
	EPA-7841	Mercury	--------		ug/g			
80103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-79	25-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-79	23-APR-1991
83103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W36	11-APR-1991
85103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-10S	28-APR-1991
85403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate	<20 UJ		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Program Manager: D. L. Amburgey
Date Approved:

7/5/91

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:27

AnaLIS ID: 910401-013 Project: G132 031 Customer Sample ID: BOOH21
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 27-MAR-1991 Date Sample Received: 31-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.0	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-3050	Arsenic	--------		ug/g	KM COOLEY	10425I	26-APR-1991
	EPA-7060							
	EPA-900.0	Beta Activity	--------	+/- 4.7	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-3050	Lead	--------		ug/g	LD WELCH	10425J	29-APR-1991
	EPA-7421							
	EPA-7841	Mercury	--------		ug/g			
	EPA 3050	Selenium	--------		ug/g	P BUCKLEY	10425K	7-MAY-1991
	EPA-7740							
	EPA 3050	Thallium	--------		ug/g	P BUCKLEY	10425L	7-MAY-1991
	EPA-7841							
080103	EPA-3050 (7.6)	Prep (AA, 7.6)	C			LE COLLINS	10897-79	25-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)	C			LE COLLINS	10897-79	23-APR-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W36	11-APR-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-10S	28-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Spike Recovery Data

Analysis	Unspike Result	Amount Spike	Spike Result	Units	Amount Recovered	Percent Recovered
ARSENIC	0.0	4.0	3.48	UG/G	3.48	87.0
LEAD	0.0	40.0	41.41	UG/G	41.41	103.5
SELENIUM	0.0	40.0	34.83	UG/G	34.83	87.1
THALLIUM	0.0	40.0	39.2	UG/G	39.2	98.0

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Program Manager: D. L. Amburgey
Date Approved:

Oak Ridge K-25 Site
Analytical Chemistry Department
Results of Analyses

Date Printed:
20-MAY-1991 13:29

AnaLIS ID: 910401-014 Project: G132 031 Customer Sample ID: BOOH23
Customer: KESSNER/FANCHER Requisition Number:
Date Sampled: 27-MAR-1991 Date Sample Received: 31-MAR-1991
Sampled By: Date Sample Completed:
Material Description: SOIL [] : Result has been Corrected for Spike

Activ. Number	Procedure No.	Analysis	Result	Limit of Error	Units	Analyst	QA File Number	Date Completed
	EPA-900.0	Alpha Activity	--------	+/- 2.0	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
	EPA-3050	Arsenic	--------		ug/g	KM COOLEY	10425I	26-APR-1991
	EPA-7060							
	EPA-900.0	Beta Activity	--------	+/- 4.9	pCi/g	SM KINNEBREW	ENV-519	2-MAY-1991
		Gamma Activity	--------	+/-	pCi/g			
	EPA-3050	Lead	--------		ug/g	LD WELCH	10425J	29-APR-1991
	EPA-7421							
	EPA-7841	Mercury	--------		ug/g			
	EPA-3050	Selenium	--------		ug/g	LD WELCH	10425K	7-MAY-1991
	EPA-7740							
		Strontium-90	--------	+/-	pCi/g			
	EPA-3050	Thallium	--------		ug/g	P BUCKLEY	10425L	7-MAY-1991
	EPA-7841							
080103	EPA-3050 (7.6)	Prep (AA, 7.6)		C		LE COLLINS	10897-79	25-APR-1991
	EPA-3050 (7.5)	Prep (ICP, 7.5)		C		LE COLLINS	10897-79	23-APR-1991
130703	EPA-8150	Prep (Herb- SW-846)		C		GL HAHN	2480	12-APR-1991
132703	EPA-3540	Prep (PCB/Pest- SW-846-Sox)		C		JM MAHER	2728	4-APR-1991
135003	EPA-3550	Prep (BNA- SW-846-Sox)		C		JM MAHER	2726	4-APR-1991
135803	CLP10/86 SVD19	Percent Solids		C	%	JM MAHER	2726	4-APR-1991
176203	EPA-376.1	Sulfide	<0.1	UJ	ug/g	KD HUTSON	91-4	6-MAY-1991
183103	EPA-340.2	Fluoride SIE	<2		ug/g	RJ CAMPBELL	91-W36	11-APR-1991
184403	EPA-9010	Cyanide Colorimetric	<0.1	UJ	ug/g	DM OBANION	91-26	7-MAY-1991
185103	EPA-350.3	Ammonia	<0.001		ug/g	JS SMITH	91-10S	28-APR-1991
185403	EPA-300.0	Chloride IC	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Nitrate	<20	UJ	ug/g	CA SEDLACEK	91-38 IA	6-APR-1991
	EPA-300.0	Sulfate	<20		ug/g	CA SEDLACEK	91-38 IA	6-APR-1991

Prep (BNA- SW-846-Sox)

Analyst = JM MAHER
Date Extracted = 4-APR-1991
Sample Weight Extracted (g) = 10
Percent Solids = 77.7
Calculated Dried Weight (g) = 7.77

JJ 1/5/91

B-Pond

Rec'd 8/9/91
CK
Data Entered in Spreadsheet

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 07/31.

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE
4-2067	LL-0857-F4	04/15/91	05/18/91	

MS JOSIE KING
WESTON/WESTINGHOUSE/HANFORD
208 WELSH POOL ROAD
PICKERING CREEK INDUSTRIAL PARK
LIONVILLE PA 19341-1313

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
35218	800G5[redacted]	9102L600-001	02/15				GR-A	3.4 +-1.3 E 00		07/18			3
							GR-B	3.3 +-0.2 E 01		07/18			3
							SR-90	L.T. 4. E-02		07/09			3
							BE-7	L.T. 1. E 00		06/25			4
							K-40	1.40+-0.14E 01		06/25			4
							MN-54	L.T. 4. E-02		06/25			4
							CO-58	L.T. 8. E-02		06/25			4
							FE-59	L.T. 4. E-01		06/25			4
							CO-60	L.T. 3. E-02		06/25			4
							ZN-65	L.T. 1. E-01		06/25			4
							ZR-95	L.T. 1. E-01		06/25			4
							RU-103	L.T. 3. E-01		06/25			4
							RU-106	L.T. 3. E-01		06/25			4
							I-131	L.T. 2. E 03		06/25			4
							CS-134	L.T. 4. E-02		06/25			4
							CS-137	L.T. 3. E-02		06/25			4
							BA-140	L.T. 3. E 01		06/25			4
							CE-141	L.T. 6. E-01		06/25			4
							CE-144	L.T. 3. E-01		06/25			4
							RA-226	1.90+-0.48E 00		06/25			4
							TH-228	8.64+-0.86E-01		06/25			4
35223	800GT[redacted]	9102L694-001	02/21				GR-A	L.T. 3. E 00		07/11			3
							GR-B	1.9 +-0.2 E 01		07/11			3
35230	800GV[redacted]	9103L788-001	02/27				GR-A	L.T. 2. E 00		07/11			3
							GR-B	2.6 +-0.3 E 01		07/11			3

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SENT BY: XEROX Telecopier 7017; 7-31-91 ; 16:27 ; 9513372016→Weston Lionville Lab:#17

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 07/31

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MS JOSIE KING
WESTON/WESTINGHOUSE/HANFORD
208 WELSH POOL ROAD
PICKERING CREEK INDUSTRIAL PARK
LIONVILLE PA 19341-1313

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
35240	B00GW5 9103L843-001		03/05				GR-A	L.T. 1. E 00		07/18			3
							GR-B	1.9 +-0.2 E 01		07/18			3
							SR-90	L.T. 4. E-02		07/09			3
							BE-7	L.T. 8. E-01		06/25			4
							K-40	9.76+-0.98E 00		06/25			4
							MN-54	L.T. 3. E-02		06/25			4
							CO-58	L.T. 6. E-02		06/25			4
							FE-59	L.T. 3. E-01		06/25			4
							CO-60	L.T. 3. E-02		06/25			4
							ZN-65	L.T. 8. E-02		06/25			4
							ZR-95	L.T. 8. E-02		06/25			4
							RU-103	L.T. 2. E-01		06/25			4
							RU-106	L.T. 2. E-01		06/25			4
							I-131	L.T. 3. E 02		06/25			4
							CS-134	L.T. 3. E-02		06/25			4
							CS-137	L.T. 2. E-02		06/25			4
							BA-140	L.T. 1. E 01		06/25			4
							CE-141	L.T. 4. E-01		06/25			4
							CE-144	L.T. 2. E-01		06/25			4
							RA-226	8.53+-3.59E-01		06/25			4
							TH-228	4.20+-0.42E-01		06/25			4
35256	B00GT3 9103L933-001		03/12				GR-A	2.7 +-1.2 E 00		07/18			3
							GR-B	3.1 +-0.2 E 01		07/18			3
35267	B00H07 9103L003-001		03/18				GR-A	1.9 +-1.0 E 00		07/18			3
							GR-B	2.5 +-0.2 E 01		07/18			3
							SR-90	L.T. 4. E-02		07/09			3
							BE-7	L.T. 6. E-01		06/25			4
							K-40	1.01+-0.10E 01		06/25			4
							MN-54	L.T. 3. E-02		06/25			4
							CO-58	L.T. 5. E-02		06/25			4

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 07/31/9

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE
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S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
35267	800H07 9103L003-001		03/18				FE-59	L.T. 2. E-01		06/25			4
							CO-60	L.T. 2. E-02		06/25			4
							ZN-65	L.T. 8. E-02		06/25			4
							ZR-95	L.T. 7. E-02		06/25			4
							RU-103	L.T. 1. E-01		06/25			4
							RU-106	L.T. 2. E-01		06/25			4
							I-131	L.T. 1. E 02		06/25			4
							CS-134	L.T. 3. E-02		06/25			4
							CS-137	L.T. 2. E-02		06/25			4
							BA-140	L.T. 5. E 00		06/25			4
							CE-141	L.T. 2. E-01		06/25			4
							CE-144	L.T. 1. E-01		06/25			4
							RA-226	5.13+-2.97E-01		06/25			4
							TH-228	5.57+-0.56E-01		06/25			4

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