NOTICE

All drawings located at the end of the document.

EG&G

ROCKY FLATS

Phase I RFI/RI Work Plan
Rocky Flats Plant other outside Closures OU10 Volume II Appendices
21100-WP-OU10.1

May, 1992

FINAL

PHASE I RFI/RI WORK PLAN

ROCKY FLATS PLANT
OTHER OUTSIDE CLOSURES
(OPERABLE UNIT NO. 10)

U.S. DEPARTMENT OF ENERGY
Rocky Flats Plant
Golden, Colorado

ENVIRONMENTAL RESTORATION PROGRAM

MAY, 1992

Volume II - Appendices

DOCUMENT CLASSIFICATION REVIEW WAIVER
PER R.B. HOFFMAN, CLASSIFICATION OFFICE
JUNE 11, 1991

21100-WP-OU10.1

WESTON

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

ORGANICS CASE NARRATIVE

Client: ROCKY FLATS
RFW #: 8811S044
W.O. #: 2029-38-01-0000

FRACTION: VOA

1. This set of samples consisted of 1 soil and 1 water sample collected on 11/14/88.

2. These samples were analyzed on 11/28/88 and 12/02/88 in accordance with SW 846 protocols.

3. All required holding times for these samples were met, with the exception of reanalysis of BH88A052 (002).

4. All tuning and calibration criteria were met for all samples.

5. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

6. Of the 15 surrogates analyzed, 3 were outside of QC limits. Samples not meeting QC limits were sample BH88A052 (002) for Toluene-d8 and Bromofluorobenzene upon first analysis on 11/28/88 and did not meet QC limits for Bromofluorobenzene on the second analysis on 12/02/88 which confirmed matrix effect.

The following data qualifiers are used in this report:

U - Indicates that the compound was analyzed for but not detected.
J - Indicates an estimated trace value.
B - Indicates the compound was found in the blank.

Approved by: R. F. Carney
Robert F. Carney
GC/MS Unit Leader
Weston Analytical Laboratories

Date: 01/12/89

WESTON ANALYTICS
VOLATILE ANALYTICAL DATA PACKAGE FOR
ROCKY FLATS

DATE RECEIVED: 11/16/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A051 Trip Blank	8811-044-001	11/14/88	NA	11/28/88
BH88A052 FOT1, #129	8811-044-002	11/14/88	NA	11/28/88
BH88A052 " "	8811-044-002 DUP	11/14/88	NA	12/02/88
LAB QC:				
BLANK 11/28	8811-044-0001BL	NA	NA	NA
BLANK 12/02	8811-044-0002BL	NA	NA	NA

R. F. Carey FOR
Norman W. Flynn
Organic Section Manager
WESTON Analytical Laboratories

01/12/89
DATE

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8811-044 Client: ROCKY FLATS

Sample Information

			Trip Blank	FCTL, #129
RFW Batch ID:	8811-044-0001BL	8811-044-0002BL	8811-044-001	8811-044-002
Customer ID:	BLANK 11/28	BLANK 12/02	BH88A051	BH88A052
Matrix:	Water	Water	Water	Soil
Units:	UG/L	UG/L	UG/L	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

Toluene-d8:	99 %	110 %	97 %	128 %
Bromofluorobenzene:	93 %	104 %	97 %	64 %
1,2-Dichloroethane-d4:	94 %	92 %	88 %	80 %

Sample Information

Chloromethane	10 U	10 U	10 U	11 U
Bromomethane	10 U	10 U	10 U	11 U
Vinyl Chloride	10 U	10 U	10 U	11 U
Chloroethane	10 U	10 U	10 U	11 U
Methylene Chloride	5.0 U	3.0 J	3.0 J	4.0 J
Acetone	10 U	10 U	10 U	11 U
Carbon Disulfide	5.0 U	5.0 U	5.0 U	5.4 U
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U	5.4 U
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U	5.4 U
Trans-1,2-Dichloroethene	5.0 U	5.0 U	5.0 U	5.4 U
Chloroform	5.0 U	5.0 U	5.0 U	5.4 U
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U	5.4 U
2-Butanone	10 U	10 U	10 U	11 U
1,1,1-Trichloroethane	5.0 U	5.0 U	5.0 U	5.4 U
Carbon Tetrachloride	5.0 U	5.0 U	5.0 U	5.4 U
Vinyl Acetate	10 U	10 U	10 U	11 U
Bromodichloromethane	5.0 U	5.0 U	5.0 U	5.4 U
1,2-Dichloropropane	5.0 U	5.0 U	5.0 U	5.4 U
Trans-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.4 U
Trichloroethene	5.0 U	5.0 U	5.0 U	5.4 U
Dibromochloromethane	5.0 U	5.0 U	5.0 U	5.4 U
1,1,2-Trichloroethane	5.0 U	5.0 U	5.0 U	5.4 U
Benzene	5.0 U	5.0 U	5.0 U	3.0 J
cis-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.4 U
2-Chloroethylvinylether	10 U	10 U	10 U	11 U
Bromoform	5.0 U	5.0 U	5.0 U	5.4 U
4-Methyl-2-pentanone	10 U	10 U	10 U	11 U
2-Hexanone	10 U	10 U	10 U	11 U
Tetrachloroethene	5.0 U	5.0 U	5.0 U	5.4 U
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	5.0 U	5.4 U
Toluene	5.0 U	5.0 U	5.0 U	10
Chlorobenzene	5.0 U	5.0 U	5.0 U	5.4 U
Ethylbenzene	5.0 U	5.0 U	5.0 U	33
Styrene	5.0 U	5.0 U	5.0 U	5.4 U
Total Xylenes	5.0 U	5.0 U	5.0 U	35

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8811-044 Client: ROCKY FLATS

Sample Information

FOTL, #29

RFW Batch ID:	8811-044-002 DUP
Customer ID:	BH88A052
Matrix:	Soil
Units:	UG/KG
Dilution Factor:	1

Sample Information

Toluene-d8:	109 %
Bromofluorobenzene:	66 %
1,2-Dichloroethane-d4:	96 %

Sample Information

Chloromethane	11	U
Bromomethane	11	U
Vinyl Chloride	11	U
Chloroethane	11	U
Methylene Chloride	14	B
Acetone	18	
Carbon Disulfide	5.4	U
1,1-Dichloroethene	5.4	U
1,1-Dichloroethane	5.4	U
Trans-1,2-Dichloroethene	5.4	U
Chloroform	5.4	U
1,2-Dichloroethane	5.4	U
2-Butanone	11	U
1,1,1-Trichloroethane	5.4	U
Carbon Tetrachloride	5.4	U
Vinyl Acetate	11	U
Bromodichloromethane	5.4	U
1,2-Dichloropropane	5.4	U
Trans-1,3-Dichloropropene	5.4	U
Trichloroethene	5.4	U
Dibromochloromethane	5.4	U
1,1,2-Trichloroethane	5.4	U
Benzene	5.0	J
cis-1,3-Dichloropropene	5.4	U
2-Chloroethylvinylether	11	U
Bromoform	5.4	U
4-Methyl-2-pentanone	11	U
2-Hexanone	11	U
Tetrachloroethene	5.4	U
1,1,2,2-Tetrachloroethane	5.4	U
Toluene	11	
Chlorobenzene	5.4	U
Ethylbenzene	40	
Styrene	5.4	U
Total Xylenes	42	

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROCKY FLATS

January 11, 1989

88-11-S044

Tentatively Identified Compounds,
VOA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/L
BLANK	11/28/88		NONE FOUND	
BLANK	12/02/88		NONE FOUND	
BH88A051	11/28/88		NONE FOUND	

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A052	11/28/88	387	UNKNOWN	220
		503	UNKNOWN	1800
		722	UNKNOWN	200
		774	UNKNOWN	320
		821	UNKNOWN	250
BH88A052 DUP	12/02/88	390	UNKNOWN HYDROCARBON	190
		503	UNKNOWN HYDROCARBON	1400
		529	UNKNOWN HYDROCARBON	270
		775	UNKNOWN HYDROCARBON	400
		821	UNKNOWN HYDROCARBON	260

Reviewed and approved R. F. Carney

Robert F. Carney
GC/MS Unit Leader
Weston Analytical Laboratories

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

ORGANICS CASE NARRATIVE

Client: ROCKY FLATS
RFW #: 8811S044
W.O. #: 2029-38-01-0000

FRACTION: BNA

1. This set of samples consisted of 1 soil sample collected on 11/14/88.

2. The sample was extracted on 11/21/88.

3. This sample was analyzed on 12/30/88 and re-analyzed on 01/03/89 in accordance with SW 846 protocols.

4. All required holding times for this sample were met, except for re-analysis on 01/03/89.

5. All tuning and calibration criteria were met for this sample.

6. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

7. Of the 24 surrogates analyzed, none were outside of QC limits.

8. Of the 22 matrix spike recoveries, none were outside of QC limits. (4-Nitrophenol was not recovered due to 1:30 dilution of matrix).

9. Of the 11 matrix spike RPD's, none were outside QC limits. No RPD for 4-Nitrophenol.

10. Sample BH88A052 had high Hydrocarbon m warranting a 1:30 dilution and re-analysis 174 - Leslie 129 - Tom

The following data qualifiers are used in this

U - Indicates that the compound was a detected.
J - Indicates an estimated trace value.

Approved by: R.F. Carney Date: 01/12/89
Robert F. Carney
GC/MS Unit Leader
Weston Analytical Laboratories

WESTON ANALYTICS
SEMIVOLATILE ANALYTICAL DATA PACKAGE FOR
RF

DATE RECEIVED: 11/16/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A052	8811-044-002	11/14/88	11/21/88	01/03/89
BH88A052	8811-044-002 MS	11/14/88	11/21/88	01/03/89
BH88A052	8811-044-002 MSD	11/14/88	11/21/88	01/03/89
LAB QC:				
BLANK 11/21	8811-044-0001BL	NA	NA	NA

R. F. Carney

Norman W. Flynn
Organic Section Manager
WESTON Analytical Laboratories

DATE

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8811-044 Client: ROCKY FLATS

Sample Information

		#174 FDT1		
RFW Batch ID:	8811-044-0001BL	8811-044-002	8811-044-002 MS	8811-044-002 MSD
Customer ID:	BLANK 11/21	BH88A052	BH88A052	BH88A052
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	30	30	30

Surrogate Recovery

2-Fluorophenol:	90 %	89 %	99 %	99 %
Phenol-d5:	101 %	66 %	83 %	86 %
2,4,6-Br3-Phenol:	87 %	77 %	86 %	87 %
Nitrobenzene-d5:	61 %	54 %	60 %	63 %
2-Fluorobiphenyl:	62 %	78 %	84 %	87 %
p-Terphenyl-d14:	79 %	111 %	108 %	114 %

Analytes

Phenol	330 U	11000 U	66 %	67 %
bis(2-Chloroethyl)Ether	330 U	11000 U	11000 U	11000 U
2-Chlorophenol	330 U	11000 U	79 %	81 %
1,3-Dichlorobenzene	330 U	11000 U	11000 U	11000 U
1,4-Dichlorobenzene	330 U	11000 U	84 %	84 %
Benzyl Alcohol	330 U	11000 U	11000 U	11000 U
1,2-Dichlorobenzene	330 U	11000 U	11000 U	11000 U
2-Methylphenol	330 U	11000 U	11000 U	11000 U
bis(2-Chloroisopropyl)Ether	330 U	11000 U	11000 U	11000 U
4-Methylphenol	330 U	11000 U	11000 U	11000 U
N-Nitroso-di-n-propylamine	330 U	11000 U	75 %	72 %
Hexachloroethane	330 U	11000 U	11000 U	11000 U
Nitrobenzene	330 U	11000 U	11000 U	11000 U
Isophorone	330 U	11000 U	11000 U	11000 U
2-Nitrophenol	330 U	11000 U	11000 U	11000 U
2,4-Dimethylphenol	330 U	11000 U	11000 U	11000 U
Benzoic Acid	1600 U	53000 U	53000 U	53000 U
bis(2-Chloroethoxy)Methane	330 U	11000 U	11000 U	11000 U
2,4-Dichlorophenol	330 U	11000 U	11000 U	11000 U
1,2,4-Trichlorobenzene	330 U	11000 U	87 %	90 %
Naphthalene	330 U	11000 U	11000 U	11000 U
4-Chloroaniline	330 U	11000 U	11000 U	11000 U
Hexachlororbutadiene	330 U	11000 U	11000 U	11000 U
4-Chloro-3-methylphenol	330 U	11000 U	59 %	68 %
2-Methylnaphthalene	330 U	7800 J	6900 J	11000 U
Hexachlorocyclopentadiene	330 U	11000 U	11000 U	11000 U
2,4,6-Trichlorophenol	330 U	11000 U	11000 U	11000 U
2,4,5-Trichlorophenol	1600 U	53000 U	53000 U	53000 U
2-Chloronaphthalene	330 U	11000 U	11000 U	11000 U
2-Nitroaniline	1600 U	53000 U	53000 U	53000 U
Dimethyl Phthalate	330 U	11000 U	11000 U	11000 U
Acenaphthylene	330 U	11000 U	11000 U	11000 U

(Modified)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8811-044 Client: ROCKY FLATS

Sample Information

		#129 FOT1		
RFW Batch ID:	8811-044-0001BL	8811-044-002	8811-044-002 MS	8811-044-002 MSD
Customer ID:	BLANK 11/21	BH88A052	BH88A052	BH88A052
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	30	30	30

Analytes

3-Nitroaniline	1600	U	53000	U	53000	U	53000	U
Acenaphthene	330	U	11000	U	108	%	117	%
2,4-Dinitrophenol	1600	U	53000	U	53000	U	53000	U
4-Nitrophenol	1600	U	53000	U	DL		DL	
Dibenzofuran	330	U	11000	U	11000	U	11000	U
2,4-Dinitrotoluene	330	U	11000	U	69	%	78	%
2,6-Dinitrotoluene	330	U	11000	U	11000	U	11000	U
Diethylphthalate	330	U	11000	U	11000	U	11000	U
4-Chlorophenyl-phenylether	330	U	11000	U	11000	U	11000	U
Fluorene	330	U	11000	U	11000	U	11000	U
4-Nitroaniline	1600	U	53000	U	53000	U	53000	U
4,6-Dinitro-2-methylphenol	1600	U	53000	U	53000	U	53000	U
N-Nitrosodiphenylamine	330	U	11000	U	11000	U	11000	U
4-Bromophenyl-phenylether	330	U	11000	U	11000	U	11000	U
Hexachlorobenzene	330	U	11000	U	11000	U	11000	U
Pentachlorophenol	1600	U	53000	U	54	%	60	%
Phenanthrene	330	U	11000	U	11000	U	11000	U
Anthracene	330	U	11000	U	11000	U	11000	U
di-n-Butyl Phthalate	330	U	11000	U	11000	U	11000	U
Fluoranthene	330	U	11000	U	11000	U	11000	U
Pyrene	330	U	7100	J	60	%	78	%
Butyl Benzyl Phthalate	330	U	11000	U	11000	U	11000	U
3,3'-Dichlorobenzidine	660	U	21000	U	21000	U	21000	U
Benzo(a)Anthracene	330	U	3600	J	2900	J	3000	J
bis(2-Ethylhexyl)Phthalate	330	U	11000	U	11000	U	11000	U
Chrysene	330	U	8100	J	7000	J	7100	J
di-n-Octyl Phthalate	330	U	11000	U	11000	U	11000	U
Benzo(b)Fluoranthene	330	U	11000	U	11000	U	11000	U
Benzo(k)Fluoranthene	330	U	11000	U	11000	U	11000	U
Benzo(a)Pyrene	330	U	11000	U	11000	U	11000	U
Indeno(1,2,3-cd)Pyrene	330	U	11000	U	11000	U	11000	U
Dibenz(a,h)Anthracene	330	U	11000	U	11000	U	11000	U
Benzo(g,h,i)Perylene	330	U	11000	U	11000	U	11000	U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROCKY FLATS

January 10, 1989
88-11-S044

Tentatively Identified Compounds,
BNA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BLANK	12/30/88	1852	UNKNOWN	10
BH88A052	01/03/89	1571	UNKNOWN HYDROCARBON	870
		1633	UNKNOWN HYDROCARBON	1980
		1691	UNKNOWN HYDROCARBON	1980
		1788	UNKNOWN HYDROCARBON	1900
		1802	UNKNOWN HYDROCARBON	1700
		1853	UNKNOWN HYDROCARBON	1700
		1902	UNKNOWN HYDROCARBON	1400
		1956	UNKNOWN HYDROCARBON	1100
		2087	UNKNOWN HYDROCARBON	1700
		2265	UNKNOWN HYDROCARBON	1050

Reviewed and approved R. F. Carney
Robert F. Carney
GC/MS Unit Leader
Weston Analytical Laboratories

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

1000

ORGANICS CASE NARRATIVE

Client: ROCKY FLATS
RFW #: 8811S049
W.O. #: 2029-38-01-0000

FRACTION: VOA

1. This set of samples consisted of 1 water and 5 soil samples collected on 11/15/88.

2. These samples were analyzed on 11/25/88 and 12/02/88 in accordance with SW 846 protocols.

3. All required holding times for these samples were met, with the exception of reanalysis of BH88A056 (-003).

4. All tuning and calibration criteria were met for all samples.

5. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

6. Of the 27 surrogates analyzed, none were outside of QC limits.

7. All soil samples required a diluted analysis due to Hydrocarbon matrix interferrence.

The following data qualifiers are used in this report:

U - Indicates that the compound was analyzed for but not detected.
J - Indicates an estimated trace value.

Approved by: R. F. Carney
Robert F. Carney
GC/MS Unit Leader
Weston Analytics Laboratories

Date: 01/12/89

WESTON

WESTON ANALYTICS
VOLATILE ANALYTICAL DATA PACKAGE FOR
RF

DATE RECEIVED: 11/17/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A054 FOT2, #129	8811-049-001	11/15/88	NA	11/25/88
BH88A055 FOT2, #129	8811-049-002	11/15/88	NA	11/25/88
BH88A056 FOT3, #129	8811-049-003	11/15/88	NA	12/02/88
BH88A057 FOT4?, #129	8811-049-004	11/15/88	NA	11/25/88
BH88A058 FOT4, #129	8811-049-005	11/15/88	NA	11/25/88
BH88A059 Field Blank	8811-049-006	11/15/88	NA	11/25/88
LAB QC:				
BLANK 11/25	8811-049-0001BL	NA	NA	NA
BLANK 12/02	8811-049-0002BL	NA	NA	NA

R. F. Carney FOR
Norman W. Flynn
Organic Section Manager
WESTON Analytical Laboratories

01/12/89
DATE

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8811-049 Client: ROCKY FLATS

Sample Information

			#129 FOT2	#129 FOT2
RFW Batch ID:	8811-049-0001BL	8811-049-0002BL	8811-049-001	8811-049-002
Customer ID:	BLANK 11/25	BLANK 12/02	BH88A054	BH88A055
Matrix:	Water	Water	Soil	Soil
Units:	UG/L	UG/L	UG/KG	UG/KG
Dilution Factor:	1	1	50	50

Surrogate Recovery

Toluene-d8:	100 %	110 %	98 %	98 %
Bromofluorobenzene:	101 %	104 %	97 %	99 %
1,2-Dichloroethane-d4:	97 %	92 %	94 %	91 %

Analytes

Chloromethane	10 U	10 U	590 U	650 U
Bromomethane	10 U	10 U	590 U	650 U
Vinyl Chloride	10 U	10 U	590 U	650 U
Chloroethane	10 U	10 U	590 U	650 U
Methylene Chloride	5.0 U	3.0 J	430	65 J
Acetone	10 U	10 U	590 U	650 U
Carbon Disulfide	5.0 U	5.0 U	300 U	320 U
1,1-Dichloroethene	5.0 U	5.0 U	300 U	320 U
1,1-Dichloroethane	5.0 U	5.0 U	300 U	320 U
Trans-1,2-Dichloroethene	5.0 U	5.0 U	300 U	320 U
Chloroform	5.0 U	5.0 U	300 U	320 U
1,2-Dichloroethane	5.0 U	5.0 U	300 U	320 U
2-Butanone	10 U	10 U	590 U	650 U
1,1,1-Trichloroethane	5.0 U	5.0 U	300 U	340
Carbon Tetrachloride	5.0 U	5.0 U	300 U	320 U
Vinyl Acetate	10 U	10 U	590 U	650 U
Bromodichloromethane	5.0 U	5.0 U	300 U	320 U
1,2-Dichloropropane	5.0 U	5.0 U	300 U	320 U
Trans-1,3-Dichloropropene	5.0 U	5.0 U	300 U	320 U
Trichloroethene	5.0 U	5.0 U	300 U	320 U
Dibromochloromethane	5.0 U	5.0 U	300 U	320 U
1,1,2-Trichloroethane	5.0 U	5.0 U	300 U	320 U
Benzene	5.0 U	5.0 U	300 U	320 U
cis-1,3-Dichloropropene	5.0 U	5.0 U	300 U	320 U
2-Chloroethylvinylether	10 U	10 U	590 U	650 U
Bromoform	5.0 U	5.0 U	300 U	320 U
4-Methyl-2-pentanone	10 U	10 U	590 U	650 U
2-Hexanone	10 U	10 U	590 U	650 U
Tetrachloroethene	5.0 U	5.0 U	300 U	320 U
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	300 U	320 U
Toluene	5.0 U	5.0 U	71 J	180 J
Chlorobenzene	5.0 U	5.0 U	300 U	320 U
Ethylbenzene	5.0 U	5.0 U	140 J	200 J
Styrene	5.0 U	5.0 U	300 U	320 U
Total Xylenes	5.0 U	5.0 U	330	1490

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8811-049 Client: ROCKY FLATS

Sample Information

	#129 FOT3	#129 FOT4	#129 FOT4	Field Blank
RFW Batch ID:	8811-049-003	8811-049-004	8811-049-005	8811-049-006
Customer ID:	BH88A056	BH88A057	BH88A058	BH88A059
Matrix:	Soil	Soil	Soil	Water
Units:	UG/KG	UG/KG	UG/KG	UG/L
Dilution Factor:	100	50	50	1

Surrogate Recovery

Toluene-d8:	80 %	98 %	97 %	99 %
Bromofluorobenzene:	86 %	100 %	98 %	101 %
1,2-Dichloroethane-d4:	103 %	91 %	91 %	96 %

Analytes

Chloromethane	1100 U	570 U	560 U	10 U
Bromomethane	1100 U	570 U	560 U	10 U
Vinyl Chloride	1100 U	570 U	560 U	10 U
Chloroethane	1100 U	570 U	560 U	10 U
Methylene Chloride	1100	60 J	57 J	5.0 U
Acetone	1100 U	370 J	560 U	10 U
Carbon Disulfide	570 U	280 U	280 U	5.0 U
1,1-Dichloroethene	570 U	280 U	280 U	5.0 U
1,1-Dichloroethane	570 U	280 U	280 U	5.0 U
Trans-1,2-Dichloroethene	570 U	280 U	280 U	5.0 U
Chloroform	570 U	280 U	280 U	11
1,2-Dichloroethane	570 U	280 U	280 U	5.0 U
2-Butanone	1100 U	570 U	560 U	10 U
1,1,1-Trichloroethane	570 U	280 U	280 U	5.0 U
Carbon Tetrachloride	570 U	280 U	280 U	5.0 U
Vinyl Acetate	1100 U	570 U	560 U	10 U
Bromodichloromethane	570 U	280 U	280 U	5.0 U
1,2-Dichloropropane	570 U	280 U	280 U	5.0 U
Trans-1,3-Dichloropropene	570 U	280 U	280 U	5.0 U
Trichloroethene	570 U	280 U	280 U	5.0 U
Dibromochloromethane	570 U	280 U	280 U	5.0 U
1,1,2-Trichloroethane	570 U	280 U	280 U	5.0 U
Benzene	570	78 J	180 J	5.0 U
cis-1,3-Dichloropropene	570 U	280 U	280 U	5.0 U
2-Chloroethylvinylether	1100 U	570 U	560 U	10 U
Bromoform	570 U	280 U	280 U	5.0 U
4-Methyl-2-pentanone	1100 U	570 U	560 U	10 U
2-Hexanone	1100 U	570 U	560 U	10 U
Tetrachloroethene	570 U	280 U	280 U	5.0 U
1,1,2,2-Tetrachloroethane	570 U	280 U	280 U	5.0 U
Toluene	1700	170 J	320	5.0 U
Chlorobenzene	570 U	280 U	280 U	5.0 U
Ethylbenzene	1600	360	490	5.0 U
Styrene	570 U	280 U	280 U	5.0 U
Total Xylenes	4700	1990	3000	5.0 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROCKY FLATS

January 11, 1989
88-11-S049

Tentatively Identified Compounds,
VOA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/L
BLANK	11/25/88		NONE FOUND	
BLANK	12/02/88		NONE FOUND	

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A054	11/25/88	503	UNKNOWN HYDROCARBON	870
		721	UNKNOWN HYDROCARBON	410
		820	UNKNOWN HYDROCARBON	880
		843	UNKNOWN CYCLIC HYDROCARBON	380
		880	UNKNOWN CYCLIC HYDROCARBON	360
BH88A055	11/25/88	589	UNKNOWN HYDROCARBON	250
		713	UNKNOWN CYCLIC HYDROCARBON	350
		721	UNKNOWN	600
		734	UNKNOWN HYDROCARBON	300
		878	UNKNOWN	300
BH88A056	12/02/88	589	UNKNOWN HYDROCARBON	560
		735	UNKNOWN HYDROCARBON	560
		822	UNKNOWN HYDROCARBON	2800
		880	UNKNOWN HYDROCARBON	530

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A057	11/25/88	503	UNKNOWN HYDROCARBON	250
		589	UNKNOWN HYDROCARBON	290
		721	UNKNOWN HYDROCARBON	690
		734	UNKNOWN HYDROCARBON	350
		878	UNKNOWN HYDROCARBON	240
		890	UNKNOWN HYDROCARBON	120
BH88A058	11/25/88	457	UNKNOWN HYDROCARBON	450
		503	UNKNOWN HYDROCARBON	1100
		589	UNKNOWN HYDROCARBON	370
		721	UNKNOWN HYDROCARBON	440
		821	UNKNOWN HYDROCARBON	1700

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/L
BH88A059	11/25/88		NONE FOUND	

Reviewed and approved R.F. Carney

Robert F. Carney
GC/MS Unit Leader
Weston Analytical Laboratories

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

			#182 LS023	#129 F0T1
RFW Batch ID:	8810-108-001 MS	8810-108-001 DUP	8810-108-002	8811-044-002
Customer ID:	BH88A048	BH88A048	BH88A049	BH88A052
Collection Date:	/ /	/ /	/ /	11/14/88
Matrix:	Soil	Soil	Soil	Soil
Units:	% RECOVERY	MG/KG	MG/KG	MG/KG

Metals

Aluminum	(Al), total.....	613 *	%	16700		10500		8110	
Antimony	(Sb), total.....	2.3	%	13.2	U	12.8	U		NR
Arsenic	(As), total.....	73.0	%	2.2	U	2.1	U	2.1	U
Barium	(Ba), total.....	92.8	%	66.1		68.3		46.6	
Beryllium	(Be), total.....	84.8	%	1.7		1.1		1.3	
Cadmium	(Cd), total.....	83.7	%	5.4		4.9		3.6	
Calcium	(Ca), total.....		NR	4740		4980		4860	
Cesium	(Cs), total.....		NR		NR		NR		NR
Chromium	(Cr), total.....	110	%	13.0		8.4		8.4	
Cobalt	(Co), total.....	99.3	%	10.8	U	10.8	U	10.6	U
Copper	(Cu), total.....	73.5	%	20.3		31.9		11.9	
Iron	(Fe), total.....	1100 *	%	16100		18400		11800	
Lead	(Pb), total.....	324	%	3.3		3.4		13.5	
Lithium	(Li), total.....		NR		NR		NR		NR
Magnesium	(Mg), total.....		NR	2720		4400		1790	
Manganese	(Mn), total.....	0 *	%	160		28.2		112	
Mercury	(Hg), total.....		NR		NR	0.23		0.47	
Molybdenum	(Mo), total.....		NR		NR		NR		NR
Nickel	(Ni), total.....	91.0	%	20.1		15.0		18.9	
Potassium	(K), total.....		NR	1830		2820		1100	
Selenium	(Se), total.....	83.0	%	1.1	U	1.1	U	1.0	U
Silver	(Ag), total.....	0	%	2.2	U	2.2	U	2.1	U
Sodium	(Na), total.....		NR	1080	U	1080	U	1060	U
Strontium	(Sr), total.....	188	%	21.6	U	21.7	U	21.1	U
Thallium	(Tl), total.....	95.2	%	2.2	U	2.1	U	2.1	U
Tin	(Sn), total.....		NR		NR		NR		NR
Vanadium	(V), total.....	98.2	%	40.1		36.0		23.3	
Zinc	(Zn), total.....	17.8	%	39.2		45.4		30.1	

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

#129
FOT2

RFW Batch ID:	8811-044-002 MS	8811-044-002 DUP	8811-049-001	8811-049-001 MS
Customer ID:	BH88A052	BH88A052	BH88A054	BH88A054
Collection Date:	11/14/88	11/14/88	11/15/88	11/15/88
Matrix:	Soil	Soil	Soil	Soil
Units:	% RECOVERY	MG/KG	MG/KG	% RECOVERY

Metals

Aluminum (Al), total.....	108 * %	6380	3880	693 %
Antimony (Sb), total.....	0 %	12.5 U	14.2 U	20.9 %
Arsenic (As), total.....	106 %	2.1 U	2.4 U	86.0 %
Barium (Ba), total.....	91.9 %	41.5 U	46.1 U	107 %
Beryllium (Be), total.....	83.3 %	1.1	1.2 U	105 %
Cadmium (Cd), total.....	93.5 %	3.1	1.5	101 %
Calcium (Ca), total.....	0 %	4770	3230	0 %
Cesium (Cs), total.....	NR	NR	NR	NR
Chromium (Cr), total.....	104 %	6.8	6.8	94.9 %
Cobalt (Co), total.....	97.0 %	10.4 U	11.5 U	97.1 %
Copper (Cu), total.....	106 %	10.6	6.4	106 %
Iron (Fe), total.....	243 * %	9090	6200	268 * %
Lead (Pb), total.....	31.0 %	13.5	4.8	264 %
Lithium (Li), total.....	NR	NR	NR	NR
Magnesium (Mg), total.....	5.6 %	1760	1150 U	30.0 %
Manganese (Mn), total.....	174 %	172	67.3	117 %
Mercury (Hg), total.....	NR	0.26	0.45	71.2 %
Molybdenum(Mo), total.....	NR	NR	NR	NR
Nickel (Ni), total.....	92.7 %	18.5	9.2 U	97.3 %
Potassium (K), total.....	NR	1100	1150 U	NR
Selenium (Se), total.....	305 %	1.0 U	1.2 U	74.0 %
Silver (Ag), total.....	0 %	2.1 U	2.3 U	0 %
Sodium (Na), total.....	NR	1040 U	NR	NR
Strontium (Sr), total.....	90.8 %	20.8 U	23.1 U	92.8 %
Thallium (Tl), total.....	95.3 %	2.1 U	2.4 U	94.1 %
Tin (Sn), total.....	NR	NR	NR	NR
Vanadium (V), total.....	93.9 %	19.9	15.5	89.4 %
Zinc (Zn), total.....	87.8 %	33.6	12.7	87.3 %

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

		#129 FOT3	#129 FOT4	FB
RFW Batch ID:	8811-049-001 DUP	8811-049-003	8811-049-004	8811-049-006
Customer ID:	BH88A054	BH88A056	BH88A057	BH88A059
Collection Date:	11/15/88	11/15/88	11/15/88	11/15/88
Matrix:	Soil	Soil	Soil	Water
Units:	MG/KG	MG/KG	MG/KG	MG/L

Metals

Aluminum	(Al), total.....	3390		9330		3500		0.20	U
Antimony	(Sb), total.....	13.6	U	12.9	U	13.3	U	0.060	U
Arsenic	(As), total.....	2.3	U	2.4		2.2	U	0.010	U
Barium	(Ba), total.....	46.1	U	43.3	U	45.4	U	0.20	U
Beryllium	(Be), total.....	1.2	U	1.1	U	1.1	U	0.0050	U
Cadmium	(Cd), total.....	1.2	U	3.4		1.1	U	0.0050	U
Calcium	(Ca), total.....	1610		1730		1130	U	5.0	U
Cesium	(Cs), total.....		NR		NR		NR		NR
Chromium	(Cr), total.....	4.2		16.2	U	4.3		0.010	U
Cobalt	(Co), total.....	11.5	U	10.8	U	11.3	U	0.050	U
Copper	(Cu), total.....	7.3		9.6		5.7	U	0.025	U
Iron	(Fe), total.....	4840		9070		3740		0.10	U
Lead	(Pb), total.....	4.6		37.8		565		0.0050	U
Lithium	(Li), total.....		NR		NR		NR		NR
Magnesium	(Mg), total.....	1150	U	1280		1130	U	5.0	U
Manganese	(Mn), total.....	56.5		87.5		41.7		0.015	U
Mercury	(Hg), total.....	0.37		0.28		0.18		0.00057	
Molybdenum	(Mo), total.....		NR		NR		NR		NR
Nickel	(Ni), total.....	9.2	U	8.7		9.1	U	0.040	U
Potassium	(K), total.....	1150	U	1080	U	1130	U	5.0	U
Selenium	(Se), total.....	1.1	U	1.1	U	1.1	U	0.0050	U
Silver	(Ag), total.....	2.3	U	2.2	U	2.3	U	0.010	U
Sodium	(Na), total.....	1150	U	1080	U	1130	U	5.0	U
Strontium	(Sr), total.....	23.1	U	21.6	U	22.7	U	0.10	U
Thallium	(Tl), total.....	2.3	U	2.1	U	2.2	U	0.010	U
Tin	(Sn), total.....		NR		NR		NR		NR
Vanadium	(V), total.....	11.6		21.9		11.3	U	0.050	U
Zinc	(Zn), total.....	25.6		19.8		15.5		0.020	U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-108-002 MS	8810-108-002 MSD	8811-044-002	8811-044-002 MS
Customer ID:	BH88A049	BH88A049	BH88A052	BH88A052
Collection Date:	10/27/88	10/27/88	11/14/88	11/14/88
Matrix:	Soil	Soil	Soil	Soil
Units:	% RECOVERY	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	62 %	76 %	89 %	99 %
Phenol-d5:	92 %	112%	66 %	83 %
2,4,6-Br3-Phenol:	78 %	92 %	77 %	86 %
Nitrobenzene-d5:	55 %	65 %	54 %	60 %
2-Fluorobiphenyl:	65 %	80 %	78 %	84 %
p-Terphenyl-d14:	85 %	100%	111%	108%

Analytes

Phenol	68 %	83 %	11000 U	66 %
bis(2-Chloroethyl)Ether	1800 U	1800 U	11000 U	11000 U
2-Chlorophenol	68 %	82 %	11000 U	79 %
1,3-Dichlorobenzene	1800 U	1800 U	11000 U	11000 U
1,4-Dichlorobenzene	45 %	57 %	11000 U	84 %
Benzyl Alcohol	1800 U	1800 U	11000 U	11000 U
1,2-Dichlorobenzene	1800 U	1800 U	11000 U	11000 U
2-Methylphenol	1800 U	1800 U	11000 U	11000 U
bis(2-Chloroisopropyl)Ether	1800 U	1800 U	11000 U	11000 U
4-Methylphenol	1800 U	1800 U	11000 U	11000 U
N-Nitroso-di-n-propylamine	60 %	71 %	11000 U	75 %
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	1800 U	1800 U	11000 U	11000 U
Nitrobenzene	1800 U	1800 U	11000 U	11000 U
Isophorone	1800 U	1800 U	11000 U	11000 U
2-Nitrophenol	1800 U	1800 U	11000 U	11000 U
2,4-Dimethylphenol	1800 U	1800 U	11000 U	11000 U
Benzoic Acid	9000 U	9000 U	53000 U	53000 U
bis(2-Chloroethoxy)Methane	1800 U	1800 U	11000 U	11000 U
2,4-Dichlorophenol	1800 U	1800 U	11000 U	11000 U
1,2,4-Trichlorobenzene	60 %	71 %	11000 U	87 %
Naphthalene	1800 U	1800 U	11000 U	11000 U
4-Chloroaniline	1800 U	1800 U	11000 U	11000 U
Hexachlororbutadiene	1800 U	1800 U	11000 U	11000 U
4-Chloro-3-methylphenol	84 %	99 %	11000 U	59 %
2-Methylnaphthalene	1800 U	1800 U	7800 J	6900 J
Hexachlorocyclopentadiene	1800 U	1800 U	11000 U	11000 U
2,4,6-Trichlorophenol	1800 U	1800 U	11000 U	11000 U
2,4,5-Trichlorophenol	9000 U	9000 U	53000 U	53000 U
2-Chloronaphthalene	1800 U	1800 U	11000 U	11000 U
2-Nitroaniline	9000 U	9000 U	53000 U	53000 U
Dimethyl Phthalate	1800 U	1800 U	11000 U	11000 U
Acenaphthylene	1800 U	1800 U	11000 U	11000 U
3-Nitroaniline	9000 U	9000 U	53000 U	53000 U
Acenaphthene	77 %	88 %	11000 U	108 %
2,4-Dinitrophenol	9000 U	9000 U	53000 U	53000 U
4-Nitrophenol	74 %	89 %	53000 U	DL
Dibenzofuran	1800 U	1800 U	11000 U	11000 U
2,4-Dinitrotoluene	96 %	110 %	11000 U	69 %
2,6-Dinitrotoluene	1800 U	1800 U	11000 U	11000 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-108-002 MS	8810-108-002 MSD	#29 FDT1 8811-044-002	8811-044-002 MS
Customer ID:	BH88A049	BH88A049	BH88A052	BH88A052
Collection Date:	10/27/88	10/27/88	11/14/88	11/14/88
Matrix:	Soil	Soil	Soil	Soil
Units:	% RECOVERY	UG/KG	UG/KG	UG/KG

Analytes

Diethylphthalate.....	1800	U	1800	U	11000	U	11000	U
4-Chlorophenyl-phenylether.....	1800	U	1800	U	11000	U	11000	U
Fluorene.....	1800	U	1800	U	11000	U	11000	U
4-Nitroaniline.....	9000	U	9000	U	53000	U	53000	U
4,6-Dinitro-2-methylphenol.....	9000	U	9000	U	53000	U	53000	U
N-Nitrosodiphenylamine.....	1800	U	1800	U	11000	U	11000	U
4-Bromophenyl-phenylether.....	1800	U	1800	U	11000	U	11000	U
Hexachlorobenzene.....	1800	U	1800	U	11000	U	11000	U
Pentachlorophenol.....	28	%	34	%	53000	U	54	%
Phenanthrene.....	1300	J	880	J	11000	U	11000	U
Anthracene.....	1800	U	1800	U	11000	U	11000	U
di-n-Butyl Phthalate.....	1800	U	1800	U	11000	U	11000	U
Fluoranthene.....	1500	J	990	J	11000	U	11000	U
Pyrene.....	103	%	105	%	7100	J	60	%
Butyl Benzyl Phthalate.....	1800	U	1800	U	11000	U	11000	U
3,3'-Dichlorobenzidine.....	3600	U	3600	U	21000	U	21000	U
Benzo(a)Anthracene.....	1800	U	1800	U	3600	J	2900	J
bis(2-Ethylhexyl)Phthalate.....	500	J	610	J	11000	U	11000	U
Chrysene.....	560	J	390	J	8100	J	7000	J
di-n-Octyl Phthalate.....	1800	U	1800	U	11000	U	11000	U
Benzo(b)Fluoranthene.....	1800	U	1800	U	11000	U	11000	U
Benzo(k)Fluoranthene.....	520	J	410	J	11000	U	11000	U
Benzo(a)Pyrene.....	660	J	480	J	11000	U	11000	U
Indeno(1,2,3-cd)Pyrene.....	1800	U	1800	U	11000	U	11000	U
Dibenz(a,h)Anthracene.....	1800	U	1800	U	11000	U	11000	U
Benzo(g,h,i)Perylene.....	1800	U	1800	U	11000	U	11000	U
Benzidine.....	NR		NR		NR		NR	

Aniline.....	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8811-044-002 MSD	8811-049-003	8811-049-004
Customer ID:	BH88A052	BH88A056	BH88A057
Collection Date:	11/14/88	11/15/88	11/15/88
Matrix:	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	99 %	DL %	DL %
Phenol-d5:	86 %	DL %	DL %
2,4,6-Br3-Phenol:	87 %	DL %	DL %
Nitrobenzene-d5:	63 %	DL %	DL %
2-Fluorobiphenyl:	87 %	DL %	DL %
p-Terphenyl-d14:	114%	DL %	DL %

Analytes

Phenol	67	%	380000	U	75000	U
bis(2-Chloroethyl)Ether	11000	U	380000	U	75000	U
2-Chlorophenol	81	%	380000	U	75000	U
1,3-Dichlorobenzene	11000	U	380000	U	75000	U
1,4-Dichlorobenzene	84	%	380000	U	75000	U
Benzyl Alcohol	11000	U	380000	U	75000	U
1,2-Dichlorobenzene	11000	U	380000	U	75000	U
2-Methylphenol	11000	U	380000	U	75000	U
bis(2-Chloroisopropyl)Ether	11000	U	380000	U	75000	U
4-Methylphenol	11000	U	380000	U	75000	U
N-Nitroso-di-n-propylamine	72	%	380000	U	75000	U
N-Nitroso-di-methylamine		NR		NR		NR
Hexachloroethane	11000	U	380000	U	75000	U
Nitrobenzene	11000	U	380000	U	75000	U
Isophorone	11000	U	380000	U	75000	U
2-Nitrophenol	11000	U	380000	U	75000	U
2,4-Dimethylphenol	11000	U	380000	U	75000	U
Benzoic Acid	53000	U	1820000	U	360000	U
bis(2-Chloroethoxy)Methane	11000	U	380000	U	75000	U
2,4-Dichlorophenol	11000	U	380000	U	75000	U
1,2,4-Trichlorobenzene	90	%	380000	U	75000	U
Naphthalene	11000	U	380000	U	75000	U
4-Chloroaniline	11000	U	380000	U	75000	U
Hexachlorobutadiene	11000	U	380000	U	75000	U
4-Chloro-3-methylphenol	68	%	380000	U	75000	U
2-Methylnaphthalene	11000	U	380000	U	75000	U
Hexachlorocyclopentadiene	11000	U	380000	U	75000	U
2,4,6-Trichlorophenol	11000	U	380000	U	75000	U
2,4,5-Trichlorophenol	53000	U	1820000	U	360000	U
2-Chloronaphthalene	11000	U	380000	U	75000	U
2-Nitroaniline	53000	U	1820000	U	360000	U
Dimethyl Phthalate	11000	U	380000	U	75000	U
Acenaphthylene	11000	U	380000	U	75000	U
3-Nitroaniline	53000	U	1820000	U	360000	U
Acenaphthene	117	%	380000	U	75000	U
2,4-Dinitrophenol	53000	U	1820000	U	360000	U
4-Nitrophenol	DL		1820000	U	360000	U
Dibenzofuran	11000	U	380000	U	75000	U
2,4-Dinitrotoluene	78	%	380000	U	75000	U
2,6-Dinitrotoluene	11000	U	380000	U	75000	U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

		#129 F073	#126 F074
RFW Batch ID:	8811-044-002 MSD	8811-049-003	8811-049-004
Customer ID:	BH88A052	BH88A056	BH88A057
Collection Date:	11/14/88	11/15/88	11/15/88
Matrix:	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG

Analytes

Diethylphthalate.....	11000	U	380000	U	75000	U
4-Chlorophenyl-phenylether.....	11000	U	380000	U	75000	U
Fluorene.....	11000	U	380000	U	75000	U
4-Nitroaniline.....	53000	U	1820000	U	360000	U
4,6-Dinitro-2-methylphenol.....	53000	U	1820000	U	360000	U
N-Nitrosodiphenylamine.....	11000	U	380000	U	75000	U
4-Bromophenyl-phenylether.....	11000	U	380000	U	75000	U
Hexachlorobenzene.....	11000	U	380000	U	75000	U
Pentachlorophenol.....	60	%	1820000	U	360000	U
Phenanthrene.....	11000	U	380000	U	75000	U
Anthracene.....	11000	U	380000	U	75000	U
di-n-Butyl Phthalate.....	11000	U	380000	U	75000	U
Fluoranthene.....	11000	U	380000	U	75000	U
Pyrene.....	78	%	380000	U	75000	U
Butyl Benzyl Phthalate.....	11000	U	380000	U	75000	U
3,3'-Dichlorobenzidine.....	21000	U	750000	U	150000	U
Benzo(a)Anthracene.....	3000	J	380000	U	75000	U
bis(2-Ethylhexyl)Phthalate.....	11000	U	380000	U	75000	U
Chrysene.....	7100	J	380000	U	75000	U
di-n-Octyl Phthalate.....	11000	U	380000	U	75000	U
Benzo(b)Fluoranthene.....	11000	U	380000	U	75000	U
Benzo(k)Fluoranthene.....	11000	U	380000	U	75000	U
Benzo(a)Pyrene.....	11000	U	380000	U	75000	U
Indeno(1,2,3-cd)Pyrene.....	11000	U	380000	U	75000	U
Dibenz(a,h)Anthracene.....	11000	U	380000	U	75000	U
Benzo(g,h,i)Perylene.....	11000	U	380000	U	75000	U
Benzidine.....		NR		NR		NR

Aniline.....	NR	NR	NR

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

		TB	Swmu 129 FOT1	
Batch ID:	8810-093-005 MSD	8811-044-001	8811-044-002	8811-044-002 DUP
Customer ID:	BH88A047	BH88A051	BH88A052	BH88A052
Collection Date:	~~10/25/88~~	11/14/88	11/14/88	11/14/88

Surrogate Recovery

Toluene-d8:	107%	97 %	128%	109%
Bromofluorobenzene:	93 %	97 %	64 %	66 %
1,2-Dichloroethane-d4:	103%	88 %	80 %	96 %

Analytes

Chloromethane.....	13	U	10	U	11	U	11	U
Bromomethane.....	13	U	10	U	11	U	11	U
Vinyl Chloride.....	13	U	10	U	11	U	11	U
Chloroethane.....	13	U	10	U	11	U	11	U
Methylene Chloride.....	17	B	3.0	J	4.0	J	14	B
Acetone.....	76		10	U	11	U	18	
Carbon Disulfide.....	6.3	U	5.0	U	5.4	U	5.4	U
1,1-Dichloroethene.....	102	%	5.0	U	5.4	U	5.4	U
1,1-Dichloroethane.....	6.3	U	5.0	U	5.4	U	5.4	U
1,2-Dichloroethene (total).....		NR		NR		NR		NR
Chloroform.....	6.3	U	5.0	U	5.4	U	5.4	U
1,2-Dichloroethane.....	6.3	U	5.0	U	5.4	U	5.4	U
2-Butanone.....	19		10	U	11	U	11	U
1,1,1-Trichloroethane.....	6.3	U	5.0	U	5.4	U	5.4	U
Carbon Tetrachloride.....	6.3	U	5.0	U	5.4	U	5.4	U
Vinyl Acetate.....	13	U	10	U	11	U	11	U
Bromodichloromethane.....	6.3	U	5.0	U	5.4	U	5.4	U
1,2-Dichloropropane.....	6.3	U	5.0	U	5.4	U	5.4	U
cis-1,3-Dichloropropene.....	6.3	U	5.0	U	5.4	U	5.4	U
Trichloroethene.....	84	%	5.0	U	5.4	U	5.4	U
Dibromochloromethane.....	6.3	U	5.0	U	5.4	U	5.4	U
1,1,2-Trichloroethane.....	6.3	U	5.0	U	5.4	U	5.4	U
Benzene.....	94	%	5.0	U	3.0	J	5.0	J
Trans-1,3-Dichloropropene.....	6.3	U	5.0	U	5.4	U	5.4	U
2-Chloroethylvinylether.....	13	U	10	U	11	U	11	U
Bromoform.....	6.3	U	5.0	U	5.4	U	5.4	U
4-Methyl-2-pentanone.....	13	U	10	U	11	U	11	U
2-Hexanone.....	13	U	10	U	11	U	11	U
Tetrachloroethene.....	6.3	U	5.0	U	5.4	U	5.4	U
1,1,2,2-Tetrachloroethane.....	6.3	U	5.0	U	5.4	U	5.4	U
Toluene.....	96	%	5.0	U	10		11	
Chlorobenzene.....	90	%	5.0	U	5.4	U	5.4	U
Ethylbenzene.....	6.3	U	5.0	U	33		40	
Styrene.....	6.3	U	5.0	U	5.4	U	5.4	U
Total Xylenes.....	2.0	J	5.0	U	35		42	

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	SWMU 129 FOT2	SWMU 129 FOT2	SWMU 129 FOT3	SWMU 129 FOT4
Batch ID:	8811-049-001	8811-049-002	8811-049-003	8811-049-004
Customer ID:	BH88A054	BH88A055	BH88A056	BH88A057
Collection Date:	11/15/88	11/15/88	11/15/88	11/15/88

Surrogate Recovery

Toluene-d8:	98 %	98 %	80 %	98 %
Bromofluorobenzene:	97 %	99 %	86 %	100%
1,2-Dichloroethane-d4:	94 %	91 %	103%	91 %

Analytes

Chloromethane.....	590	U	650	U	1100	U	570	U
Bromomethane.....	590	U	650	U	1100	U	570	U
Vinyl Chloride.....	590	U	650	U	1100	U	570	U
Chloroethane.....	590	U	650	U	1100	U	570	U
Methylene Chloride.....	430		65	J	1100		60	J
Acetone.....	590	U	650	U	1100	U	370	J
Carbon Disulfide.....	300	U	320	U	570	U	280	U
1,1-Dichloroethene.....	300	U	320	U	570	U	280	U
1,1-Dichloroethane.....	300	U	320	U	570	U	280	U
1,2-Dichloroethene (total).....		NR		NR		NR		NR
Chloroform.....	300	U	320	U	570	U	280	U
1,2-Dichloroethane.....	300	U	320	U	570	U	280	U
2-Butanone.....	590	U	650	U	1100	U	570	U
1,1,1-Trichloroethane.....	300	U	340		570	U	280	U
Carbon Tetrachloride.....	300	U	320	U	570	U	280	U
Vinyl Acetate.....	590	U	650	U	1100	U	570	U
Bromodichloromethane.....	300	U	320	U	570	U	280	U
1,2-Dichloropropane.....	300	U	320	U	570	U	280	U
cis-1,3-Dichloropropene.....	300	U	320	U	570	U	280	U
Trichloroethene.....	300	U	320	U	570	U	280	U
Dibromochloromethane.....	300	U	320	U	570	U	280	U
1,1,2-Trichloroethane.....	300	U	320	U	570	U	280	U
Benzene.....	300	U	320	U	570		78	J
Trans-1,3-Dichloropropene.....	300	U	320	U	570	U	280	U
2-Chloroethylvinylether.....	590	U	650	U	1100	U	570	U
Bromoform.....	300	U	320	U	570	U	280	U
4-Methyl-2-pentanone.....	590	U	650	U	1100	U	570	U
2-Hexanone.....	590	U	650	U	1100	U	570	U
Tetrachloroethene.....	300	U	320	U	570	U	280	U
1,1,2,2-Tetrachloroethane.....	300	U	320	U	570	U	280	U
Toluene.....	71	J	180	J	1700		170	J
Chlorobenzene.....	300	U	320	U	570	U	280	U
Ethylbenzene.....	140	J	200	J	1600		360	
Styrene.....	300	U	320	U	570	U	280	U
Total Xylenes.....	330		1490		4700		1990	

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	SWMU 129 FOT4	FB
Batch ID:	8811-049-005	8811-049-006
Customer ID:	BH88A058	BH88A059
Collection Date:	11/15/88	11/15/88

Surrogate Recovery

Toluene-d8:	97 %	99 %
Bromofluorobenzene:	98 %	101%
1,2-Dichloroethane-d4:	91 %	96 %

Analytes

Chloromethane	560	U	10	U
Bromomethane	560	U	10	U
Vinyl Chloride	560	U	10	U
Chloroethane	560	U	10	U
Methylene Chloride	57	J	5.0	U
Acetone	560	U	10	U
Carbon Disulfide	280	U	5.0	U
1,1-Dichloroethene	280	U	5.0	U
1,1-Dichloroethane	280	U	5.0	U
1,2-Dichloroethene (total)		NR		NR
Chloroform	280	U	11	
1,2-Dichloroethane	280	U	5.0	U
2-Butanone	560	U	10	U
1,1,1-Trichloroethane	280	U	5.0	U
Carbon Tetrachloride	280	U	5.0	U
Vinyl Acetate	560	U	10	U
Bromodichloromethane	280	U	5.0	U
1,2-Dichloropropane	280	U	5.0	U
cis-1,3-Dichloropropene	280	U	5.0	U
Trichloroethene	280	U	5.0	U
Dibromochloromethane	280	U	5.0	U
1,1,2-Trichloroethane	280	U	5.0	U
Benzene	180	J	5.0	U
Trans-1,3-Dichloropropene	280	U	5.0	U
2-Chloroethylvinylether	560	U	10	U
Bromoform	280	U	5.0	U
4-Methyl-2-pentanone	560	U	10	U
2-Hexanone	560	U	10	U
Tetrachloroethene	280	U	5.0	U
1,1,2,2-Tetrachloroethane	280	U	5.0	U
Toluene	320		5.0	U
Chlorobenzene	280	U	5.0	U
Ethylbenzene	490		5.0	U
Styrene	280	U	5.0	U
Total Xylenes	3000		5.0	U

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

ORGANICS CASE NARRATIVE

Client: ROCKWELL
RFW #: 8810S051
W.O. #: 2029-38-01-0000

FRACTION: VOA

1. This set of samples consisted of 2 soil and 1 water samples collected on 10/14/88.

2. These samples were analyzed on 10/20/88 and 10/21/88 in accordance with SW 846 protocols.

3. All required holding times for these samples were met.

4. All tuning and calibration criteria were met for all samples.

5. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

6. Of the 21 surrogates analyzed, none were outside of QC limits.

7. Of the 10 matrix spike recoveries, none were outside of QC limits.

8. Of the 5 matrix spike RPD's, none were outside QC limits.

The following data qualifiers are used in this report:

U - Indicates that the compound was analyzed for but not detected.
J - Indicates an estimated ~~trace~~ value.

Date: 11/16/88

Approved by: R. F. Carney

WESTON

WESTON ANALYTICS
VOLATILE ANALYTICAL DATA PACKAGE FOR
RF

DATE RECEIVED: 10/19/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A020 Trip Blank	8810-051-001	10/14/88	NA	10/21/88
BH88A021 CS016, #170	8810-051-002	10/14/88	NA	10/21/88
BH88A022 CS017, #170	8810-051-003	10/14/88	NA	10/20/88
BH88A022	8810-051-003 MS	10/14/88	NA	10/20/88
BH88A022	8810-051-003 MSD	10/14/88	NA	10/20/88
LAB QC:				
BLANK 10/20	8810-051-0001BL	NA	NA	10/20/88
BLANK 10/21	8810-051-0002BL	NA	NA	10/21/88

R.F. Carney 11/16/88
DATE

WESTON Analytical Laboratories

WESTON ANALYTICS
VOALTILE DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RW Batch Number: 8810-051 | Client: ROCKY FLATS | Page: 1

Sample Information

			Trip Blank	#170 CSO'6
RFW Batch ID:	8810-051-0001BL	8810-051-0002BL	8810-051-001	8810-051-002
Customer ID:	BLANK 10/20	BLANK 10/21	BH88A020	BH88A021
Matrix:	Water	Water	Water	Soil
Units:	UG/L	UG/L	UG/L	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	100 %	98 %	99 %	117 %
Bromofluorobenzene:	99 %	100 %	101 %	80 %
1,2-Dichloroethane-d4:	92 %	99 %	97 %	93 %

Analytes

Chloromethane.....	10 U	10 U	10 U	11 U
Bromomethane.....	10 U	10 U	10 U	11 U
Vinyl Chloride.....	10 U	10 U	10 U	11 U
Chloroethane.....	10 U	10 U	10 U	11 U
Methylene Chloride.....	6.0	1.0 J	2.0 JB	4.0 JB
Acetone.....	10 U	10 U	10 U	11 U
Carbon Disulfide.....	5.0 U	5.0 U	5.0 U	5.3 U
1,1-Dichloroethene.....	5.0 U	5.0 U	5.0 U	5.3 U
1,1-Dichloroethane.....	5.0 U	5.0 U	5.0 U	5.3 U
Trans-1,2-Dichloroethene.....	5.0 U	5.0 U	5.0 U	5.3 U
hloroform.....	5.0 U	5.0 U	5.0 U	5.3 U
,2-Dichloroethane.....	5.0 U	5.0 U	5.0 U	5.3 U
2-Butanone.....	10 U	10 U	10 U	11 U
1,1,1-Trichloroethane.....	5.0 U	5.0 U	5.0 U	5.3 U
Carbon Tetrachloride.....	5.0 U	5.0 U	5.0 U	5.3 U
Vinyl Acetate.....	10 U	10 U	10 U	11 U
Bromodichloromethane.....	5.0 U	5.0 U	5.0 U	5.3 U
1,2-Dichloropropane.....	5.0 U	5.0 U	5.0 U	5.3 U
Trans-1,3-Dichloropropene.....	5.0 U	5.0 U	5.0 U	5.3 U
Trichloroethene.....	5.0 U	5.0 U	5.0 U	5.3 U
Dibromochloromethane.....	5.0 U	5.0 U	5.0 U	5.3 U
1,1,2-Trichloroethane.....	5.0 U	5.0 U	5.0 U	5.3 U
Benzene.....	5.0 U	5.0 U	5.0 U	5.3 U
cis-1,3-Dichloropropene.....	5.0 U	5.0 U	5.0 U	5.3 U
2-Chloroethylvinylether.....	10 U	10 U	10 U	11 U
Bromoform.....	5.0 U	5.0 U	5.0 U	5.3 U
4-Methyl-2-pentanone.....	10 U	10 U	10 U	11 U
2-Hexanone.....	10 U	10 U	10 U	11 U
Tetrachloroethene.....	5.0 U	5.0 U	5.0 U	5.3 U
1,1,2,2-Tetrachloroethane.....	5.0 U	5.0 U	5.0 U	5.3 U
Toluene.....	5.0 U	5.0 U	5.0 U	5.3 U
Chlorobenzene.....	5.0 U	5.0 U	5.0 U	5.3 U
Ethylbenzene.....	5.0 U	5.0 U	5.0 U	5.3 U
Styrene.....	5.0 U	5.0 U	5.0 U	5.3 U
Total Xylenes.....	5.0 U	5.0 U	5.0 U	5.3 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
VOALTILE DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

FW Batch Number: 8810-051 | Client: ROCKY FLATS | Page: 2

Sample Information

#170
CS017

RFW Batch ID:	8810-051-003	8810-051-003 MS	8810-051-003 MSD
Customer ID:	BH88A022	BH88A022	BH88A022
Matrix:	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1

Surrogate Recovery

Toluene-d8:	114 %	117 %	115 %
Bromofluorobenzene:	85 %	80 %	80 %
1,2-Dichloroethane-d4:	95 %	97 %	94 %

Analytes

Chloromethane	11 U	11 U	11 U
Bromomethane	11 U	11 U	11 U
Vinyl Chloride	11 U	11 U	11 U
Chloroethane	11 U	11 U	11 U
Methylene Chloride	3.0 JB	18 B	18 B
Acetone	12	4.0 J	4.0 J
Carbon Disulfide	5.3 U	11	12
1,1-Dichloroethene	5.3 U	85 %	90 %
1,1-Dichloroethane	5.3 U	5.3 U	5.3 U
Trans-1,2-Dichloroethene	5.3 U	5.3 U	5.3 U
Chloroform	5.3 U	5.3 U	5.3 U
1,2-Dichloroethane	5.3 U	5.3 U	5.3 U
2-Butanone	11 U	11 U	11 U
1,1,1-Trichloroethane	5.3 U	5.3 U	5.3 U
Carbon Tetrachloride	5.3 U	5.3 U	5.3 U
Vinyl Acetate	11 U	11 U	11 U
Bromodichloromethane	5.3 U	5.3 U	5.3 U
1,2-Dichloropropane	5.3 U	5.3 U	5.3 U
Trans-1,3-Dichloropropene	5.3 U	5.3 U	5.3 U
Trichloroethene	5.3 U	81 %	87 %
Dibromochloromethane	5.3 U	5.3 U	5.3 U
1,1,2-Trichloroethane	5.3 U	5.3 U	5.3 U
Benzene	5.3 U	85 %	90 %
cis-1,3-Dichloropropene	5.3 U	5.3 U	5.3 U
2-Chloroethylvinylether	11 U	11 U	11 U
Bromoform	5.3 U	5.3 U	5.3 U
4-Methyl-2-pentanone	11 U	11 U	11 U
2-Hexanone	11 U	11 U	11 U
Tetrachloroethene	5.3 U	5.3 U	5.3 U
1,1,2,2-Tetrachloroethane	5.3 U	5.3 U	5.3 U
Toluene	1.0 J	96 %	99 %
Chlorobenzene	5.3 U	83 %	87 %
Ethylbenzene	5.3 U	5.3 U	5.3 U
Styrene	5.3 U	5.3 U	5.3 U
Total Xylenes	5.3 U	2.0 J	5.3 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROCKY FLATS

November 16, 1988

88-10-S051

Tentatively Identified Compounds,
VOA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/L
BLANK	10/20/88		NO TICS FOUND	
BLANK	10/21/88		NO TICS FOUND	
BH88A020	10/21/88		NO TICS FOUND	

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A021	10/21/88		NO TICS FOUND	
BH88A022	10/20/88		NO TICS FOUND	

Reviewed and approved R. F. Carney
Robert Carney
Unit Leader

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

ORGANICS CASE NARRATIVE

semivols

Client: ROCKWELL
RFW #: 8810S051
W.O. #: 2029-38-01-0000

FRACTION: BNA

1. This set of samples consisted of 2 soil samples collected on 10/14/88.

2. The samples were extracted on 10/21/88.

3. These samples were analyzed on 11/15/88 and 11/17/88 in accordance with SW 846 protocols.

4. All required holding times for these samples were met.

5. All tuning and calibration criteria were met for all samples.

6. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

7. Of the 18 surrogates analyzed, 1 was outside of QC limits.

The following data qualifiers are used in this report:

U - Indicates that the compound was analyzed for but not detected.
J - Indicates an estimated trace value.
B - Indicates the compound was found in the blank.

Date: 12/8/88

Approved by: R. F. Carey

WESTON

WESTON ANALYTICS
SEMIVOLATILE ANALYTICAL DATA PACKAGE FOR
ROCKY FLATS

DATE RECEIVED: 10/19/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A021	8810-051-002	10/14/88	10/21/88	11/16/88
BH88A022	8810-051-003	10/14/88	10/21/88	11/17/88
LAB QC:				
BLANK	8810-051-0001BL	NA	NA	NA

R. F. Carney FOR
Norman W. Flynn
Organic Section Manager
WESTON Analytical Laboratories

12/8/88
DATE

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-051 Client: ROCKY FLATS

Sample Information

		#170 CS016	#170 CS017
RFW Batch ID:	8810-051-0001BL	8810-051-002	8810-051-003
Customer ID:	BLANK	BH88A021	BH88A022
Matrix:	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	5

Surrogate Recovery

2-Fluorophenol:	118 %	77 %	63 %
Phenol-d5:	142 %	101 %	75 %
2,4,6-Br3-Phenol:	82 %	72 %	97 %
Nitrobenzene-d5:	92 %	59 %	46 %
2-Fluorobiphenyl:	78 %	53 %	53 %
p-Terphenyl-d14:	89 %	51 %	90 %

Analytes

Phenol	330 U	350 U	1800 U
bis(2-Chloroethyl)Ether	330 U	350 U	1800 U
2-Chlorophenol	330 U	350 U	1800 U
1,3-Dichlorobenzene	330 U	350 U	1800 U
1,4-Dichlorobenzene	330 U	350 U	1800 U
Benzyl Alcohol	330 U	350 U	1800 U
1,2-Dichlorobenzene	330 U	350 U	1800 U
2-Methylphenol	330 U	350 U	1800 U
bis(2-Chloroisopropyl)Ether	330 U	350 U	1800 U
4-Methylphenol	330 U	350 U	1800 U
N-Nitroso-di-n-propylamine	330 U	350 U	1800 U
Hexachloroethane	330 U	350 U	1800 U
Nitrobenzene	330 U	350 U	1800 U
Isophorone	330 U	350 U	1800 U
2-Nitrophenol	330 U	350 U	1800 U
2,4-Dimethylphenol	330 U	350 U	1800 U
Benzoic Acid	1600 U	1800 U	8800 U
bis(2-Chloroethoxy)Methane	330 U	350 U	1800 U
2,4-Dichlorophenol	330 U	350 U	1800 U
1,2,4-Trichlorobenzene	330 U	350 U	1800 U
Naphthalene	330 U	350 U	1800 U
4-Chloroaniline	330 U	350 U	1800 U
Hexachlororbutadiene	330 U	350 U	1800 U
4-Chloro-3-methylphenol	330 U	350 U	1800 U
2-Methylnaphthalene	330 U	350 U	1800 U
Hexachlorocyclopentadiene	330 U	350 U	1800 U
2,4,6-Trichlorophenol	330 U	350 U	1800 U
2,4,5-Trichlorophenol	1600 U	1800 U	8800 U
2-Chloronaphthalene	330 U	350 U	1800 U
2-Nitroaniline	1600 U	1800 U	8800 U
Dimethyl Phthalate	330 U	350 U	1800 U
Acenaphthylene	330 U	350 U	1800 U

Modified)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-051 Client: ROCKY FLATS

Sample Information

		#170 CS016	#170 CS017
RFW Batch ID:	8810-051-0001BL	8810-051-002	8810-051-003
Customer ID:	BLANK	BH88A021	BH88A022
Matrix:	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	5

Analytes

3-Nitroaniline	1600	U	1800	U	8800	U
Acenaphthene	330	U	350	U	1800	U
2,4-Dinitrophenol	1600	U	1800	U	8800	U
4-Nitrophenol	1600	U	1800	U	8800	U
Dibenzofuran	330	U	350	U	1800	U
2,4-Dinitrotoluene	330	U	350	U	1800	U
2,6-Dinitrotoluene	330	U	350	U	1800	U
Diethylphthalate	330	U	350	U	1800	U
4-Chlorophenyl-phenylether	330	U	350	U	1800	U
Fluorene	330	U	350	U	1800	U
4-Nitroaniline	1600	U	1800	U	8800	U
4,6-Dinitro-2-methylphenol	1600	U	1800	U	8800	U
N-Nitrosodiphenylamine	330	U	350	U	490	J
4-Bromophenyl-phenylether	330	U	350	U	1800	U
Hexachlorobenzene	330	U	350	U	1800	U
Pentachlorophenol	1600	U	1800	U	8800	U
Phenanthrene	330	U	350	U	1800	U
Anthracene	330	U	350	U	1800	U
di-n-Butyl Phthalate	110	J	590	B	810	JB
Fluoranthene	330	U	110	J	1800	U
Pyrene	330	U	350	U	1800	U
Butyl Benzyl Phthalate	330	U	350	U	1800	U
3,3'-Dichlorobenzidine	660	U	700	U	3500	U
Benzo(a)Anthracene	330	U	350	U	1800	U
bis(2-Ethylhexyl)Phthalate	330	U	96	J	1800	U
Chrysene	330	U	350	U	1800	U
di-n-Octyl Phthalate	330	U	350	U	1800	U
Benzo(b)Fluoranthene	330	U	350	U	1800	U
Benzo(k)Fluoranthene	330	U	350	U	1800	U
Benzo(a)Pyrene	330	U	350	U	1800	U
Indeno(1,2,3-cd)Pyrene	330	U	350	U	1800	U
Dibenz(a,h)Anthracene	330	U	350	U	1800	U
Benzo(g,h,i)Perylene	330	U	350	U	1800	U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROCKY FLATS

December 8, 1988

88-10-S051

Tentatively Identified Compounds,
BNA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BLANK	11/16/88	526	UNKNOWN	200
		1826	UNKNOWN	700
BH88A021	11/16/88	1863	UNKNOWN	12000
		2037	UNKNOWN	670
		2207	UNKNOWN	1000
		2837	UNKNOWN	4400
		2891	UNKNOWN	4400
BH88A022	11/17/88	1862	UNKNOWN	6000
		2826	UNKNOWN	5300
		2878	UNKNOWN	2500

Reviewed and approved R.F. Carney
Robert Carney
Unit Leader

Inorganics (Metals) 170

WESTON

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

INORGANICS CASE NARRATIVE

Client: ROCKWELL INTERNATIONAL
RFW #: 8810S051
W.O. #: 2029-38-01-0000

1. All required holding times were met.

2. All method blanks were analyzed below detection limits.

3. All LCS (blank spike) recoveries were within control limits.

4. Matrix spike recoveries for Antimony, Arsenic, Nickel and Silver were outside of the 75% - 125% control windows established by the USEPA-CLP. This may be due to matrix interferences present in the sample matrix. The USEPA-CLP has waived matrix spike recovery limits for Silver due to documented difficulties in obtaining reliable results.

5. The following data qualifiers are used in the enclosed report:
   - U - Indicates that the sample was analyzed for but not detected.
   - * - Indicates that the original sample result was greater than 4 x the spike amount added. The USEPA-CLP has determined that spike sample calculations where this occurs have been proven to be unreliable.

6. Methodology unless otherwise indicated follows the USEPA-CLP SOW-787 for metals analysis; Methods for Chemical Analysis of Water and Wastes for conventional water analyses; and SW-846 for nonmetallic soil parameters.

Date: 12/8/8

Approved: [signature]

WESTON ANALYTICS
METALS ANALYTICAL DATA PACKAGE FOR
ROCKWELL INTERNATIONAL - RF

DATE RECEIVED: 10/19/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A021	8810-051-002	10/14/88	NA	NA
BH88A021	8810-051-002 DUP	10/14/88	NA	NA
BH88A021	8810-051-002 MS	10/14/88	NA	NA
BH88A022	8810-051-003	10/14/88	NA	NA
LCS	8810-051-LCS	NA	NA	NA
LAB QC:				
BLANK	8810-051-0001BL	NA	NA	NA

12/8/88
DATE

WESTON Analytical Laboratories

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-051 Client: ROCKY FLATS

Sample Information

170
05016

RFW Batch ID:	8810-051-0001BL	8810-051-002	8810-051-002 DUP	8810-051-002 MS
Customer ID:	BLANK	BH88A021	BH88A021	BH88A021
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Metals

Silver	(Ag), total	2.0	U	2.0		2.0	U	0	%
Aluminum	(Al), total	40.0	U	10200		10800		*	
Arsenic	(As), total	2.0	U	4.9		4.9		65	%
Barium	(Ba), total	40.0	U	83.2		76.4		98	%
Beryllium	(Be), total	1.0	U	1.0	U	1.0	U	101	%
Calcium	(Ca), total	200	U	2370		2310		NS	
Cadmium	(Cd), total	1.0	U	2.9		2.2		86	%
Cobalt	(Co), total	10.0	U	10.3		10.1		88	%
Chromium	(Cr), total	2.0	U	11.9		11.9		97	%
Cesium	(Cs), total	NA		NA		NA			
Copper	(Cu), total	5.0	U	11.6		11.1		99	%
Iron	(Fe), total	20.0	U	13300		13800		NS	
Mercury	(Hg), total	0.1	U	0.1	U	0.1	U	12	%
Potassium	(K), total	100	U	1630		1550		NS	
Lithium	(Li), total	NA		NA		NA			
Magnesium	(Mg), total	200	U	1630		1820		NS	
Manganese	(Mn), total	3.0	U	200		194		92	%
Molybdenum	(Mo), total	NA		NA		NA			
Sodium	(Na), total	200	U	405		1370		NS	
Nickel	(Ni), total	8.0	U	37.3		33.1		152	%
Lead	(Pb), total	1.0	U	20.4		19.3		*	
Antimony	(Sb), total	12.0	U	12.0		12.7		8.6	%
Selenium	(Se), total	1.0	U	1.0	U	1.1	U	100	%
Strontium	(Sr), total	40.0	U	41.2		40.4	U	101	%
Thallium	(Tl), total	2.0	U	2.0	U	2.1	U	99	%
Vanadium	(V), total	10.0	U	31.9		30.5		89	%
Zinc	(Zn), total	4.0	U	110		108		91	%

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-051 Client: ROCKY FLATS

Sample Information #170 CS017

RFW Batch ID:	8810-051-003	8810-051-LCS
Customer ID:	BH88A022	LCS
Matrix:	Soil	Soil
Units:	MG/KG	% RECOVERY

Metals

Silver	(Ag), total	2.1	U	106	%
Aluminum	(Al), total	11900		100	%
Arsenic	(As), total	2.9		104	%
Barium	(Ba), total	101		90	%
Beryllium	(Be), total	1.1	U	90	%
Calcium	(Ca), total	5860		90	%
Cadmium	(Cd), total	2.9		90	%
Cobalt	(Co), total	10.5	U	90	%
Chromium	(Cr), total	13.3		90	%
Cesium	(Cs), total				
Copper	(Cu), total	23.4		100	%
Iron	(Fe), total	20800		100	%
Mercury	(Hg), total	0.1	U	90	%
Potassium	(K), total	2920		90	%
Lithium	(Li), total				
Magnesium	(Mg), total	4700		90	%
Manganese	(Mn), total	469		90	%
Molybdenum	(Mo), total				
Sodium	(Na), total	1320		80	%
Nickel	(Ni), total	43.3		90	%
Lead	(Pb), total	16.8		100	%
Antimony	(Sb), total	12.5	U	100	%
Selenium	(Se), total	1.0	U	100	%
Strontium	(Sr), total	42.0	U	100	%
Thallium	(Tl), total	2.1	U	101	%
Vanadium	(V), total	40.4		92	%
Zinc	(Zn), total	72.5		88	%

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

ORGANICS CASE NARRATIVE

Client: ROCKWELL
RFW #: 8810S036
W.O. #: 2029-38-01-0000

FRACTION: VOA

1. This set of samples consisted of 16 soil and 3 water samples collected on 10/12/88 and 10/13/88.

2. These samples were analyzed on 10/21/88, 10/22/88, 10/24/88, 10/25/88 and 10/26/88 in accordance with SW 846 protocols.

3. All required holding times for these samples were met.

4. All tuning and calibration criteria were met for all samples.

5. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

6. Of the 78 surrogates analyzed, 11 were outside of QC limits. Samples not meeting QC limits were BH88A012; BH88A013 and BH88A014.

7. Of the 10 matrix spike recoveries, none were outside of QC limits.

8. Of the 5 matrix spike RPD's, none were outside QC limits.

9. Matrix effect verified for BH88A012,BH88A014 by re-analysis. Matrix effect verified for BH88A013 (SS2 out in matrix/MS/MSD). Surrogate concentrations were outside QC limits due to non-homogenious nature of matrix. Unknown TIC co-eleuted with Bromofluorobenzene surrogate in sample BH88A016.

The following data qualifiers are used in this report:

U - Indicates that the compound was analyzed for but not detected.
J - Indicates an estimated trace value.

Date: 11/16/88

Approved by: R. F. Carney

WESTON

WESTON ANALYTICS
VOLATILE ANALYTICAL DATA PACKAGE FOR
ROCKWELL INTERNATIONAL - RF

DATE RECEIVED: 10/15/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A001 Trip Blank	8810-036-001	10/12/88	NA	10/22/88
BH88A002 CS005, #174	8810-036-002	10/12/88	NA	10/21/88
BH88A003 CS002, #174	8810-036-003	10/12/88	NA	10/21/88
BH88A004 CS004, #174	8810-036-004	10/12/88	NA	10/26/88
BH88A005 CS008, #174	8810-036-005	10/12/88	NA	10/25/88
BH88A006 CS009, #174	8810-036-006	10/12/88	NA	10/21/88
BH88A007 CS006, #174	8810-036-007	10/12/88	NA	10/21/88
BH88A008 CS007, #174	8810-036-008	10/12/88	NA	10/21/88
BH88A009 CS012, #174	8810-036-009	10/12/88	NA	10/22/88
BH88A010 Trip Blank	8810-036-010	10/13/88	NA	10/22/88
BH88A011 CS015, #174	8810-036-011	10/13/88	NA	10/22/88
BH88A012 CS013, #174	8810-036-012	10/13/88	NA	10/22/88
BH88A012 " "	8810-036-012 DUP	10/13/88	NA	10/25/88
BH88A013 [illegible]	8810-036-013	10/13/88	NA	10/24/88
BH88A013	8810-036-013 MS	10/13/88	NA	10/24/88
BH88A013	8810-036-013 MSD	10/13/88	NA	10/24/88
BH88A014 CS011, #174	8810-036-014	10/13/88	NA	10/22/88
BH88A014 " "	8810-036-014 DUP	10/13/88	NA	10/25/88
BH88A015 Trip Blank	8810-036-015	10/13/88	NA	10/22/88
BH88A016 CS014, #174	8810-036-016	10/13/88	NA	10/24/88
BH88A017 CS010, #174	8810-036-017	10/13/88	NA	10/24/88
BH99A018 CS003, #174	8810-036-018	10/13/88	NA	10/24/88
BH88A019 CS001, #174	8810-036-019	10/13/88	NA	10/24/88
LAB QC:				
BLANK 10/21	8810-036-0001BL	NA	NA	10/21/88
BLANK 10/22	8810-036-0002BL	NA	NA	10/22/88
BLANK 10/24	8810-036-0003BL	NA	NA	10/24/88
BLANK 10/25	8810-036-0004BL	NA	NA	10/25/88
BLANK 10/26	8810-036-0005BL	NA	NA	10/26/88

R. F. Carney 11/16/88
DATE

WESTON Analytical Laboratories

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

FW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

RFW Batch ID:	8810-036-0001BL	8810-036-0002BL	8810-036-0003BL	8810-036-0004BL
Customer ID:	BLANK 10/21	BLANK 10/22	BLANK 10/24	BLANK 10/25
Matrix:	Water	Water	Water	Water
Units:	UG/L	UG/L	UG/L	UG/L
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	98 %	101 %	99 %	100 %
Bromofluorobenzene:	100 %	99 %	101 %	100 %
1,2-Dichloroethane-d4:	99 %	97 %	95 %	98 %

Analytes

Chloromethane	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Methylene Chloride	1.0 J	2.0 J	3.0 J	1.0 J
Acetone	10 U	10 U	10 U	10 U
Carbon Disulfide	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Trans-1,2-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Acetate	10 U	10 U	10 U	10 U
Bromodichloromethane	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	5.0 U	5.0 U	5.0 U	5.0 U
Trans-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloroethylvinylether	10 U	10 U	10 U	10 U
Bromoform	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Tetrachloroethene	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	5.0 U	5.0 U	5.0 U	5.0 U
Total Xylenes	5.0 U	5.0 U	5.0 U	5.0 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

		Trip Blank	#174 CS005	#174 CS002
RFW Batch ID:	8810-036-0005BL	8810-036-001	8810-036-002	8810-036-003
Customer ID:	BLANK 10/26	BH88A001	BH88A002	BH88A003
Matrix:	Water	Water	Soil	Soil
Units:	UG/L	UG/L	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	100 %	99 %	112 %	121 %
Bromofluorobenzene:	101 %	98 %	76 %	77 %
1,2-Dichloroethane-d4:	106 %	93 %	96 %	96 %

Analytes

Chloromethane	10 U	10 U	11 U	11 U
Bromomethane	10 U	10 U	11 U	11 U
Vinyl Chloride	10 U	10 U	11 U	11 U
Chloroethane	10 U	10 U	11 U	11 U
Methylene Chloride	2.0 J	7.0 B	12 B	7.0 B
Acetone	3.0 J	10 U	32	11 U
Carbon Disulfide	5.0 U	5.0 U	5.6 U	5.4 U
1,1-Dichloroethene	5.0 U	5.0 U	5.6 U	5.4 U
1,1-Dichloroethane	5.0 U	5.0 U	5.6 U	5.4 U
Trans-1,2-Dichloroethene	5.0 U	5.0 U	5.6 U	5.4 U
Chloroform	5.0 U	5.0 U	5.6 U	5.4 U
1,2-Dichloroethane	5.0 U	5.0 U	5.6 U	5.4 U
2-Butanone	10 U	10 U	11 U	11 U
1,1,1-Trichloroethane	5.0 U	5.0 U	160	5.4 U
Carbon Tetrachloride	5.0 U	5.0 U	5.6 U	5.4 U
Vinyl Acetate	10 U	10 U	11 U	11 U
Bromodichloromethane	5.0 U	5.0 U	5.6 U	5.4 U
1,2-Dichloropropane	5.0 U	5.0 U	5.6 U	5.4 U
Trans-1,3-Dichloropropene	5.0 U	5.0 U	5.6 U	5.4 U
Trichloroethene	5.0 U	5.0 U	5.6 U	5.4 U
Dibromochloromethane	5.0 U	5.0 U	5.6 U	5.4 U
1,1,2-Trichloroethane	5.0 U	5.0 U	5.6 U	5.4 U
Benzene	5.0 U	5.0 U	5.6 U	5.4 U
cis-1,3-Dichloropropene	5.0 U	5.0 U	5.6 U	5.4 U
2-Chloroethylvinylether	10 U	10 U	11 U	11 U
Bromoform	5.0 U	5.0 U	5.6 U	5.4 U
4-Methyl-2-pentanone	10 U	10 U	11 U	11 U
2-Hexanone	10 U	10 U	11 U	11 U
Tetrachloroethene	5.0 U	5.0 U	4.0 J	2.0 J
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	5.6 U	5.4 U
Toluene	5.0 U	5.0 U	4.0 J	2.0 J
Chlorobenzene	5.0 U	5.0 U	5.6 U	5.4 U
Ethylbenzene	5.0 U	5.0 U	5.6 U	5.4 U
Styrene	5.0 U	5.0 U	5.6 U	5.4 U
Total Xylenes	5.0 U	5.0 U	3.0 J	5.4 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information	#174 CS004	#174 CS008	#174 CS009	#174 CS006
RFW Batch ID:	8810-036-004	8810-036-005	8810-036-006	8810-036-007
Customer ID:	BH88A004	BH88A005	BH88A006	BH88A007
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery				
Toluene-d8:	101 %	115 %	115 %	112 %
Bromofluorobenzene:	102 %	81 %	81 %	80 %
1,2-Dichloroethane-d4:	101 %	94 %	96 %	93 %

Analytes				
Chloromethane	11 U	11 U	11 U	11 U
Bromomethane	11 U	11 U	11 U	11 U
Vinyl Chloride	11 U	11 U	11 U	11 U
Chloroethane	11 U	11 U	11 U	11 U
Methylene Chloride	20 B	5.0 JB	7.0 B	26 B
Acetone	11 U	11 U	7.0 J	11 U
Carbon Disulfide	5.4 U	5.5 U	5.3 U	5.4 U
1,1-Dichloroethene	5.4 U	5.5 U	5.3 U	5.4 U
1,1-Dichloroethane	5.4 U	5.5 U	5.3 U	5.4 U
Trans-1,2-Dichloroethene	5.4 U	5.5 U	5.3 U	5.4 U
Chloroform	5.4 U	5.5 U	5.3 U	5.4 U
1,2-Dichloroethane	5.4 U	5.5 U	5.3 U	5.4 U
2-Butanone	11 U	11 U	11 U	11 U
1,1,1-Trichloroethane	5.4 U	5.5 U	5.3 U	5.4 U
Carbon Tetrachloride	5.4 U	5.5 U	5.3 U	5.4 U
Vinyl Acetate	11 U	11 U	11 U	11 U
Bromodichloromethane	5.4 U	5.5 U	5.3 U	5.4 U
1,2-Dichloropropane	5.4 U	5.5 U	5.3 U	5.4 U
Trans-1,3-Dichloropropene	5.4 U	5.5 U	5.3 U	5.4 U
Trichloroethene	5.4 U	5.5 U	5.3 U	5.4 U
Dibromochloromethane	5.4 U	5.5 U	5.3 U	5.4 U
1,1,2-Trichloroethane	5.4 U	5.5 U	5.3 U	5.4 U
Benzene	5.4 U	5.5 U	5.3 U	5.4 U
cis-1,3-Dichloropropene	5.4 U	5.5 U	5.3 U	5.4 U
2-Chloroethylvinylether	11 U	11 U	11 U	11 U
Bromoform	5.4 U	5.5 U	5.3 U	5.4 U
4-Methyl-2-pentanone	11 U	11 U	11 U	11 U
2-Hexanone	11 U	11 U	11 U	11 U
Tetrachloroethene	94	5.5 U	5.3 U	5.4 U
1,1,2,2-Tetrachloroethane	5.4 U	5.5 U	5.3 U	5.4 U
Toluene	5.4 U	5.5 U	2.0 J	1.0 J
Chlorobenzene	5.4 U	5.5 U	5.3 U	5.4 U
Ethylbenzene	5.4 U	5.5 U	5.3 U	5.4 U
Styrene	5.4 U	5.5 U	5.3 U	5.4 U
Total Xylenes	5.4 U	5.5 U	1.0 J	5.4 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information	#174 CS007	#174 CS012	Trip Blank	#174 CS015
RFW Batch ID:	8810-036-008	8810-036-009	8810-036-010	8810-036-011
Customer ID:	BH88A008	BH88A009	BH88A010	BH88A011
Matrix:	Soil	Soil	Water	Soil
Units:	UG/KG	UG/KG	UG/L	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	116 %	109 %	100 %	117 %
Bromofluorobenzene:	79 %	85 %	98 %	75 %
1,2-Dichloroethane-d4:	93 %	95 %	97 %	97 %

Analytes

Chloromethane	11 U	11 U	10 U	11 U
Bromomethane	11 U	11 U	10 U	11 U
Vinyl Chloride	11 U	11 U	10 U	11 U
Chloroethane	11 U	11 U	10 U	11 U
Methylene Chloride	22 B	32 B	8.0 B	31 B
Acetone	11 U	4.0 J	10 U	11 U
Carbon Disulfide	5.6 U	5.4 U	5.0 U	5.5 U
1,1-Dichloroethene	5.6 U	5.4 U	5.0 U	5.5 U
1,1-Dichloroethane	5.6 U	5.4 U	5.0 U	5.5 U
Trans-1,2-Dichloroethene	5.6 U	5.4 U	5.0 U	5.5 U
Chloroform	5.6 U	5.4 U	5.0 U	5.5 U
1,2-Dichloroethane	5.6 U	5.4 U	5.0 U	5.5 U
2-Butanone	11 U	11 U	10 U	11 U
1,1,1-Trichloroethane	5.6 U	5.4 U	5.0 U	5.5 U
Carbon Tetrachloride	5.6 U	5.4 U	5.0 U	5.5 U
Vinyl Acetate	11 U	11 U	10 U	11 U
Bromodichloromethane	5.6 U	5.4 U	5.0 U	5.5 U
1,2-Dichloropropane	5.6 U	5.4 U	5.0 U	5.5 U
Trans-1,3-Dichloropropene	5.6 U	5.4 U	5.0 U	5.5 U
Trichloroethene	5.6 U	5.4 U	5.0 U	5.5 U
Dibromochloromethane	5.6 U	5.4 U	5.0 U	5.5 U
1,1,2-Trichloroethane	5.6 U	5.4 U	5.0 U	5.5 U
Benzene	5.6 U	5.4 U	5.0 U	5.5 U
cis-1,3-Dichloropropene	5.6 U	5.4 U	5.0 U	5.5 U
2-Chloroethylvinylether	11 U	11 U	10 U	11 U
Bromoform	5.6 U	5.4 U	5.0 U	5.5 U
4-Methyl-2-pentanone	11 U	11 U	10 U	11 U
2-Hexanone	11 U	11 U	10 U	11 U
Tetrachloroethene	5.6 U	5.4 U	5.0 U	5.5 U
1,1,2,2-Tetrachloroethane	5.6 U	5.4 U	5.0 U	5.5 U
Toluene	1.0 J	5.4 U	5.0 U	1.0 J
Chlorobenzene	5.6 U	5.4 U	5.0 U	5.5 U
Ethylbenzene	5.6 U	5.4 U	5.0 U	5.5 U
Styrene	5.6 U	5.4 U	5.0 U	5.5 U
Total Xylenes	5.6 U	5.4 U	5.0 U	5.5 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

#194 CS013 → notonlist

RFW Batch ID:	8810-036-012	8810-036-012 DUP	8810-036-013	8810-036-013 MS
Customer ID:	BH88A012	BH88A012	BH88A013	BH88A013
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	% RECOVERY
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	121 %	143 %	126 %	138 %
Bromofluorobenzene:	69 %	77 %	81 %	74 %
1,2-Dichloroethane-d4:	92 %	89 %	102 %	110 %

Analytes

Chloromethane	11 U	11 U	11 U	11 U
Bromomethane	11 U	11 U	11 U	11 U
Vinyl Chloride	11 U	11 U	11 U	11 U
Chloroethane	11 U	11 U	11 U	11 U
Methylene Chloride	36 B	17 B	15 B	15 B
Acetone	10 J	11 U	11 U	13
Carbon Disulfide	5.4 U	5.4 U	5.4 U	5.4 U
1,1-Dichloroethene	5.4 U	5.4 U	5.4 U	88 %
1,1-Dichloroethane	5.4 U	5.4 U	5.4 U	5.4 U
Trans-1,2-Dichloroethene	5.4 U	5.4 U	5.4 U	5.4 U
Chloroform	5.4 U	5.4 U	5.4 U	5.4 U
1,2-Dichloroethane	5.4 U	5.4 U	5.4 U	5.4 U
2-Butanone	11 U	11 U	11 U	11 U
1,1,1-Trichloroethane	5.4 U	5.4 U	5.4 U	5.4 U
Carbon Tetrachloride	5.4 U	5.4 U	5.4 U	5.4 U
Vinyl Acetate	11 U	11 U	11 U	11 U
Bromodichloromethane	5.4 U	5.4 U	5.4 U	5.4 U
1,2-Dichloropropane	5.4 U	5.4 U	5.4 U	5.4 U
Trans-1,3-Dichloropropene	5.4 U	5.4 U	5.4 U	5.4 U
Trichloroethene	5.4 U	5.4 U	5.4 U	72 %
Dibromochloromethane	5.4 U	5.4 U	5.4 U	5.4 U
1,1,2-Trichloroethane	5.4 U	5.4 U	5.4 U	5.4 U
Benzene	5.4 U	5.4 U	5.4 U	92 %
cis-1,3-Dichloropropene	5.4 U	5.4 U	5.4 U	5.4 U
2-Chloroethylvinylether	11 U	11 U	11 U	11 U
Bromoform	5.4 U	5.4 U	5.4 U	5.4 U
4-Methyl-2-pentanone	11 U	11 U	11 U	11 U
2-Hexanone	11 U	11 U	11 U	11 U
Tetrachloroethene	5.4 U	5.4 U	5.4 U	5.4 U
1,1,2,2-Tetrachloroethane	5.4 U	5.4 U	5.4 U	5.4 U
Toluene	3.0 J	5.0 J	1.0 J	111 %
Chlorobenzene	5.4 U	5.4 U	5.4 U	84 %
Ethylbenzene	5.4 U	1.0 J	5.4 U	5.4 U
Styrene	5.4 U	5.4 U	5.4 U	5.4 U
Total Xylenes	5.4 U	5.4 U	5.4 U	5.4 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

	not on list	#194 CS011		Field Blank
RFW Batch ID:	8810-036-013 MSD	8810-036-014	8810-036-014 DUP	8810-036-015
Customer ID:	BH88A013	BH88A014	BH88A014	BH88A015
Matrix:	Soil	Soil	Soil	Water
Units:	UG/KG	UG/KG	UG/KG	UG/L
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	132 %	137 %	139 %	99 %
Bromofluorobenzene:	84 %	59 %	69 %	98 %
1,2-Dichloroethane-d4:	119 %	89 %	100 %	99 %

Analytes

Chloromethane	11 U	11 U	11 U	10 U
Bromomethane	11 U	11 U	11 U	10 U
Vinyl Chloride	11 U	11 U	11 U	10 U
Chloroethane	11 U	11 U	11 U	10 U
Methylene Chloride	16 B	40 B	24 B	6.0 B
Acetone	18	7.0 J	11 U	10 U
Carbon Disulfide	5.4 U	5.3 U	5.4 U	5.0 U
1,1-Dichloroethene	95 %	5.3 U	5.4 U	5.0 U
1,1-Dichloroethane	5.4 U	5.3 U	5.4 U	5.0 U
Trans-1,2-Dichloroethene	5.4 U	5.3 U	5.4 U	5.0 U
Chloroform	5.4 U	5.3 U	5.4 U	3.0 J
1,2-Dichloroethane	5.4 U	5.3 U	5.4 U	5.0 U
2-Butanone	11 U	11 U	11 U	10 U
1,1,1-Trichloroethane	5.4 U	5.3 U	5.4 U	5.0 U
Carbon Tetrachloride	5.4 U	5.3 U	5.4 U	5.0 U
Vinyl Acetate	11 U	11 U	11 U	10 U
Bromodichloromethane	5.4 U	5.3 U	5.4 U	5.0 U
1,2-Dichloropropane	5.4 U	5.3 U	5.4 U	5.0 U
Trans-1,3-Dichloropropene	5.4 U	5.3 U	5.4 U	5.0 U
Trichloroethene	73 %	5.3 U	5.4 U	5.0 U
Dibromochloromethane	5.4 U	5.3 U	5.4 U	5.0 U
1,1,2-Trichloroethane	5.4 U	5.3 U	5.4 U	5.0 U
Benzene	95 %	5.3 U	5.4 U	5.0 U
cis-1,3-Dichloropropene	5.4 U	5.3 U	5.4 U	5.0 U
2-Chloroethylvinylether	11 U	11 U	11 U	10 U
Bromoform	5.4 U	5.3 U	5.4 U	5.0 U
4-Methyl-2-pentanone	11 U	11 U	11 U	10 U
2-Hexanone	11 U	11 U	11 U	10 U
Tetrachloroethene	5.4 U	5.3 U	5.4 U	5.0 U
1,1,2,2-Tetrachloroethane	5.4 U	5.3 U	5.4 U	5.0 U
Toluene	112 %	1.0 J	2.0 J	5.0 U
Chlorobenzene	90 %	5.3 U	5.4 U	5.0 U
Ethylbenzene	5.4 U	5.3 U	5.4 U	5.0 U
Styrene	5.4 U	5.3 U	5.4 U	5.0 U
Total Xylenes	5.4 U	5.3 U	5.4 U	5.0 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information	#174 CS014	#174 CS010	#174 CS008	#174 CS001
RFW Batch ID:	8810-036-016	8810-036-017	8810-036-018	8810-036-019
Customer ID:	BH88A016	BH88A017	BH99A018	BH88A019
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	114 %	116 %	117 %	113 %
Bromofluorobenzene:	81 %	80 %	75 %	78 %
1,2-Dichloroethane-d4:	95 %	103 %	108 %	107 %

Analytes

Chloromethane	11 U	10 U	10 U	10 U
Bromomethane	11 U	10 U	10 U	10 U
Vinyl Chloride	11 U	10 U	10 U	10 U
Chloroethane	11 U	10 U	10 U	10 U
Methylene Chloride	8.0 B	7.0 B	8.0 B	9.0 B
Acetone	11 U	10 U	10 U	5.0 J
Carbon Disulfide	5.3 U	5.1 U	5.2 U	5.2 U
1,1-Dichloroethene	5.3 U	5.1 U	5.2 U	5.2 U
1,1-Dichloroethane	5.3 U	5.1 U	5.2 U	5.2 U
Trans-1,2-Dichloroethene	5.3 U	5.1 U	5.2 U	5.2 U
Chloroform	5.3 U	5.1 U	5.2 U	5.2 U
1,2-Dichloroethane	5.3 U	5.1 U	5.2 U	5.2 U
2-Butanone	11 U	10 U	10 U	10 U
1,1,1-Trichloroethane	5.3 U	5.1 U	5.2 U	5.2 U
Carbon Tetrachloride	5.3 U	5.1 U	5.2 U	5.2 U
Vinyl Acetate	11 U	10 U	10 U	10 U
Bromodichloromethane	5.3 U	5.1 U	5.2 U	5.2 U
1,2-Dichloropropane	5.3 U	5.1 U	5.2 U	5.2 U
Trans-1,3-Dichloropropene	5.3 U	5.1 U	5.2 U	5.2 U
Trichloroethene	5.3 U	5.1 U	5.2 U	5.2 U
Dibromochloromethane	5.3 U	5.1 U	5.2 U	5.2 U
1,1,2-Trichloroethane	5.3 U	5.1 U	5.2 U	5.2 U
Benzene	5.3 U	5.1 U	5.2 U	5.2 U
cis-1,3-Dichloropropene	5.3 U	5.1 U	5.2 U	5.2 U
2-Chloroethylvinylether	11 U	10 U	10 U	10 U
Bromoform	5.3 U	5.1 U	5.2 U	5.2 U
4-Methyl-2-pentanone	11 U	10 U	10 U	10 U
2-Hexanone	11 U	10 U	10 U	10 U
Tetrachloroethene	5.3 U	5.1 U	5.2 U	5.2 U
1,1,2,2-Tetrachloroethane	5.3 U	5.1 U	5.2 U	5.2 U
Toluene	2.0 J	1.0 J	2.0 J	2.0 J
Chlorobenzene	5.3 U	5.1 U	5.2 U	5.2 U
Ethylbenzene	5.3 U	5.1 U	5.2 U	5.2 U
Styrene	5.3 U	5.1 U	5.2 U	5.2 U
Total Xylenes	2.0 J	2.0 J	2.0 J	2.0 J

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROCKY FLATS

November 16, 1988

88-10-S036

Tentatively Identified Compounds,
VOA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/L
BLANK	10/21/88		NONE FOUND	
BLANK	10/22/88		NONE FOUND	
BLANK	10/24/88		NONE FOUND	
BLANK	10/25/88		NONE FOUND	
BLANK	10/26/88		NONE FOUND	
BH88A001	10/22/88		NONE FOUND	
BH88A010	10/22/88		NONE FOUND	
BH88A015	10/22/88		NONE FOUND	

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A002	10/21/88	689	UNKNOWN	14
BH88A003	10/21/88		NONE FOUND	
BH88A004	10/26/88		NONE FOUND	
BH88A005	10/25/88		NONE FOUND	
BH88A006	10/21/88		NONE FOUND	
BH88A007	10/21/88		NONE FOUND	
BH88A008	10/21/88		NONE FOUND	
BH88A009	10/22/88		NONE FOUND	
BH88A011	10/22/88		NONE FOUND	
BH88A012	10/22/88		NONE FOUND	
BH88A012	10/25/88	743	UNKNOWN	13
BH88A013	10/24/88	743	UNKNOWN	93

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A014	10/22/88		NONE FOUND	
BH88A014	10/25/88	831	UNKNOWN	7
BH88A016	10/24/88	792	UNKNOWN	135
BH88A017	10/24/88	750	UNKNOWN	11
BH88A018	10/24/88		NONE FOUND	
BH88A819	10/24/88		NONE FOUND	

Reviewed and approved R. F. Carney
Robert Carney
Unit Leader

WESTON
MANAGERS DESIGNERS/CONSULTANTS
215 UNION BOULEVARD
SUITE 600
LAKEWOOD, CO 80228
PHONE: (303) 980-6800

metals 174

17 January 1989

Mr. Kirk McKinley
RCRA/CERCLA Program
Rockwell International
Rocky Flats Plant
P.O. Box 464
Golden, Colorado 80402-0464

Subject: Transmittal of Container Storage Soil Sampling Results
WESTON Work Order Number 2029-29-03

Dear Mr. McKinley:

Enclosed are analytical results for soil sampling at the container storage areas and Building 443 No. 4 fuel oil tank. Also enclosed is a database printout from our sample tracking system. This list indicates all data have been received from the laboratory for this project. Please call Peg Beaty in our Stockton Laboratory (209)957-3405 or Betty Freeman in our Denver Office (303)980-6800 if you have questions or comments.

Sincerely,

ROY F. WESTON, INC.

Michael A. Anderson

Michael A. Anderson, Ph.D., P.E.
Project Director

MAA/llr
enclosures

cc: Tom Greengard (Rockwell International)
Brent Lewis (Rockwell International)
Peg Beaty (WESTON, Stockton)
Suzanne Paschke (WESTON, Denver)
Betty Freeman (WESTON, Denver)

WESTON
MANAGERS DESIGNERS/CONSULTANTS
7720 LORRAINE AVENUE
SUITE 105
STOCKTON, CA 95210
PHONE: 209-957-3405

JAN 3 1989

December 30, 1988

Kirk McKinley
Rockwell International

Dear Mr. McKinley:

Enclosed are data packages for samples received by our laboratory in October and November.

The following data are included in this package:

8810-036	-	Corrected Metals package
8810-062	-	Corrected Metals package
8810-070	-	Metals package
8810-093	-	Metals package, Anions
8810-108	-	Volatiles, Semi-Volatiles, Metals, Anions
8811-044	-	Metals
8811-049	-	Metals

Please call me, if you have any questions.

Sincerely,

ROY F. WESTON, INC.

Peg Beaty

Peg Beaty
Senior Project Manager

PB:te

cc: Tom Greengard
Brent Lewis

Originals

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

174
CS005

RFW Batch ID:	8810-036-0001BL	8810-036-0002BL	8810-036-002	8810-036-002 DUP
Customer ID:	BLANK	BLANK	BH88A002	BH88A002
Matrix:	Soil	Water	Soil	Soil
Units:	MG/KG	MG/L	MG/KG	MG/KG

Sample Information

Silver (Ag), total.....	2.0 U	0.010 U	2.2 U	2.3 U
Aluminum (Al), total.....	40.0 U	0.200 U	7080	6820
Arsenic (As), total.....	2.0 U	0.010 U	3.3	
Barium (Ba), total.....	40.0 U	0.200 U	80.6	79.4
Beryllium (Be), total.....	1.0 U	0.005 U	14.3	9.7
Calcium (Ca), total.....	200.0 U	5.0 U	1590	1610
Cadmium (Cd), total.....	1.0 U	0.005 U	2.4	1.6
Cobalt (Co), total.....	10.0 U	0.050 U	10.9 U	11.3 U
Chromium (Cr), total.....	2.0 U	0.010 U	13.0	12.7
Cesium (Cs), total.....				
Copper (Cu), total.....	5.0 U	0.025 U	10.3	10.7
Iron (Fe), total.....	20.0 U	0.100 U	7730	8080
Mercury (Hg), total.....	0.1 U	0.0002 U	0.1 U	0.1 U
Potassium (K), total.....	1000.0 U	5.0 U	1700	1630
Lithium (Li), total.....				
Magnesuim (Mg), total.....	200.0 U	5.0 U	1470	1430
Manganese (Mn), total.....	3.0 U	0.015 U	241	244
Molybdenum(Mo), total.....				
Sodium (Na), total.....	200.0 U	5.0 U	688	226 U
Nickel (Ni), total.....	8.0 U	0.040 U	10.4	10.5
Lead (Pb), total.....	1.0 U	0.005 U	16.4	
Antimony (Sb), total.....	12.0 U	0.060 U	13.4 U	
Selenium (Se), total.....	1.0 U	0.005 U	1.1 U	
Strontium (Sr), total.....	40.0 U	0.200 U	43.8 U	45.1 U
Thallium (Tl), total.....	2.0 U	0.010 U	2.2 U	
Vanadium (V), total.....	10.0 U	0.050 U	2120	2140
Zinc (Zn), total.....	4.0 U	0.020 U	43.1	43.3

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

#174
CS002

RFW Batch ID:	8810-036-002 MS	8810-036-003	8810-036-003 DUP	8810-036-003 MS
Customer ID:	BH88A002	BH88A003	BH88A003	BH88A003
Matrix:	Soil	Soil	Soil	Soil
Units:	% RECOVERY	MG/KG	MG/KG	% RECOVERY

Sample Information

Silver	(Ag), total.....	55	%	2.1	U			
Aluminum	(Al), total.....	*		8640				
Arsenic	(As), total.....			3.7		4.1		65 %
Barium	(Ba), total.....	101	%	82.2				
Beryllium	(Be), total.....	80	%	1.1	U			
Calcium	(Ca), total.....	*		2130				
Cadmium	(Cd), total.....	104	%	2.2				
Cobalt	(Co), total.....	93	%	10.5	U			
Chromium	(Cr), total.....	92	%	10.0				
Cesium	(Cs), total.....							
Copper	(Cu), total.....	112	%	8.1				
Iron	(Fe), total.....	*		10900				
Mercury	(Hg), total.....	86	%	0.1	U			
Potassium	(K), total.....	*		1510				
Lithium	(Li), total.....							
Magnesuim	(Mg), total.....	*		1480				
Manganese	(Mn), total.....	*		178				
Molybdenum	(Mo), total.....							
Sodium	(Na), total.....	NS		831				
Nickel	(Ni), total.....	86	%	8.4	U			
Lead	(Pb), total.....			18.7		20.2		*
Antimony	(Sb), total.....			12.6	U	13.3	U	0 %
Selenium	(Se), total.....			1.1	U	1.1	U	83 %
Strontium	(Sr), total.....	100	%	42.0	U			
Thallium	(Tl), total.....			2.1	U	2.2	U	106 %
Vanadium	(V), total.....	*		41.2				
Zinc	(Zn), total.....	95	%	33.2				

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information	#174 CS004	#174 CS008	#174 CS009	#174 CS006
RFW Batch ID:	8810-036-004	8810-036-005	8810-036-006	8810-036-007
Customer ID:	BH88A004	BH88A005	BH88A006	BH88A007
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Sample Information

Silver (Ag), total.....	2.2 U	2.1 U	2.1 U	2.2 U
Aluminum (Al), total.....	6170	7900	10200	5180
Arsenic (As), total.....	2.9	2.1 U	3.8	2.5
Barium (Ba), total.....	66.7	81.5	93.1	60.0
Beryllium (Be), total.....	1.1 U	1.1 U	13.1	1.1 U
Calcium (Ca), total.....	1380	1670	2160	1540
Cadmium (Cd), total.....	1.3	1.5	1.3	1.6
Cobalt (Co), total.....	10.8 U	10.6 U	10.7 U	10.8 U
Chromium (Cr), total.....	6.5	7.8	9.8	4.1
Cesium (Cs), total.....				
Copper (Cu), total.....	9.8	10.9	8.4	8.2
Iron (Fe), total.....	7530	10600	12700	8360
Mercury (Hg), total.....	0.1 U	0.1 U	0.1 U	0.1 U
Potassium (K), total.....	1550	1710	1850	1330
Lithium (Li), total.....				
Magnesuim (Mg), total.....	1570	1590	1610	1300
Manganese (Mn), total.....	154	228	232	193
Molybdenum(Mo), total.....				
Sodium (Na), total.....	592	480	468	478
Nickel (Ni), total.....	8.6 U	8.5 U	8.5 U	8.6 U
Lead (Pb), total.....	19.0	20.5	16.6	28.6
Antimony (Sb), total.....	12.4 U	12.6 U	12.5 U	12.4 U
Selenium (Se), total.....	1.0 U	1.1 U	1.0 U	1.0 U
Strontium (Sr), total.....	43.0 U	42.5 U	42.7 U	43.0 U
Thallium (Tl), total.....	2.1 U	2.1 U	2.1 U	2.1 U
Vanadium (V), total.....	20.6	25.3	2590	16.8
Zinc (Zn), total.....	52.0	35.9	28.0	42.8

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information	#174 CS007	#174 CS012	#174 CS015	#174 CS013
RFW Batch ID:	8810-036-008	8810-036-009	8810-036-011	8810-036-012
Customer ID:	BH88A008	BH88A009	BH88A011	BH88A012
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Sample Information

Silver (Ag), total.....	2.2 U	2.1 U	2.2 U	2.1 U
Aluminum (Al), total.....	8350	8220	11200	7840
Arsenic (As), total.....	3.6	3.4	3.3	3.4
Barium (Ba), total.....	75.3	73.8	87.4	77.1
Beryllium (Be), total.....	1.1 U	1.0 U	1.1 U	1.3
Calcium (Ca), total.....	1800	1990	2160	1530
Cadmium (Cd), total.....	3.5	27.2	3.0	1.3
Cobalt (Co), total.....	11.2 U	10.5 U	11.0 U	10.6 U
Chromium (Cr), total.....	7.4	10.0	11.7	8.0
Cesium (Cs), total.....				
Copper (Cu), total.....	9.0	13.8	12.8	11.5
Iron (Fe), total.....	10300	10700	14800	9420
Mercury (Hg), total.....	0.1 U	0.1 U	0.1 U	0.1 U
Potassium (K), total.....	1700	1590	1980	1670
Lithium (Li), total.....				
Magnesuim (Mg), total.....	1620	1710	2000	1540
Manganese (Mn), total.....	201	211	216	211
Molybdenum(Mo), total.....				
Sodium (Na), total.....	559	539	252	299
Nickel (Ni), total.....	8.9 U	8.4 U	9.8	8.5 U
Lead (Pb), total.....	24.8	22.3	21.0	20.2
Antimony (Sb), total.....	12.9 U	12.9 U	13.0 U	13.0 U
Selenium (Se), total.....	1.1 U	1.1 U	1.1 U	1.1 U
Strontium (Sr), total.....	44.7 U	41.8 U	43.8 U	42.6 U
Thallium (Tl), total.....	2.1 U	2.2 U	2.2 U	2.2 U
Vanadium (V), total.....	24.4	27.4	29.1	140
Zinc (Zn), total.....	37.5	38.1	38.8	38.3

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

		#174 CS011	FB	#174 CS014
RFW Batch ID:	8810-036-013	8810-036-014	8810-036-015	8810-036-016
Customer ID:	BH88A013	BH88A014	BH88A015	BH88A016
Matrix:	Soil	Soil	Water	Soil
Units:	MG/KG	MG/KG	MG/L	MG/KG

Sample Information

Silver (Ag), total.....	5.3	4.2	0.010 U	2.0 U
Aluminum (Al), total.....	8290	5460	0.200 U	8280
Arsenic (As), total.....	2.7	3.3	0.010 U	4.0
Barium (Ba), total.....	73.2	61.5	0.200 U	75.4
Beryllium (Be), total.....	1.1 U	1.0 U	0.005 U	1.0 U
Calcium (Ca), total.....	1610	1840	5.0 U	1890
Cadmium (Cd), total.....	1.5	1.0 U	0.005 U	2.3
Cobalt (Co), total.....	10.8 U	10.2 U	0.050 U	10.0 U
Chromium (Cr), total.....	7.6	6.0	0.010 U	9.0
Cesium (Cs), total.....				
Copper (Cu), total.....	12.1	12.7	0.025 U	8.2
Iron (Fe), total.....	11600	8680	0.100 U	11000
Mercury (Hg), total.....	0.1 U	0.1 U	0.0002 U	0.1 U
Potassium (K), total.....	1630	1530	5.0 U	1650
Lithium (Li), total.....				
Magnesuim (Mg), total.....	1650	1640	5.0 U	1580
Manganese (Mn), total.....	229	187	0.015 U	191
Molybdenum(Mo), total.....				
Sodium (Na), total.....	417	321	5.0 U	400
Nickel (Ni), total.....	8.7 U	8.2 U	0.040 U	8.0 U
Lead (Pb), total.....	16.2	26.4	0.005 U	18.5
Antimony (Sb), total.....	12.4 U	12.3 U	0.060 U	12.8 U
Selenium (Se), total.....	1.0 U	1.0 U	0.005 U	1.1 U
Strontium (Sr), total.....	43.3 U	40.8 U	0.200 U	39.9 U
Thallium (Tl), total.....	2.1 U	2.0 U	0.010 U	2.1 U
Vanadium (V), total.....	41.0	14.5	0.050 U	24.1
Zinc (Zn), total.....	37.1	71.1	0.020 U	28.5

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

	#174 CS010	#174 CS003	#174 CS001	
RFW Batch ID:	8810-036-017	8810-036-018	8810-036-019	8810-036-LCS1
Customer ID:	BH88A017	BH88A018	BH88A019	LCS
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	% RECOVERY

Sample Information

Silver	(Ag), total.....	2.0	U	2.0	U	2.1	U	80	%
Aluminum	(Al), total.....	9740		6930		7900		90	%
Arsenic	(As), total.....	4.4		2.3		3.4		94	%
Barium	(Ba), total.....	84.4		67.1		77.0		90	%
Beryllium	(Be), total.....	1.0	U	1.0	U	1.0	U	90	%
Calcium	(Ca), total.....	2030		1210		1910		90	%
Cadmium	(Cd), total.....	3.6		3.3		2.9		88	%
Cobalt	(Co), total.....	10.2	U	10.2	U	10.4	U	90	%
Chromium	(Cr), total.....	5.0		2.5		4.0		90	%
Cesium	(Cs), total.....								
Copper	(Cu), total.....	5.1	U	5.3		5.2	U	90	%
Iron	(Fe), total.....	12300		9420		10300		90	%
Mercury	(Hg), total.....	0.1	U	0.1	U	0.1	U	80	%
Potassium	(K), total.....	1740		1610		1510		80	%
Lithium	(Li), total.....								
Magnesuim	(Mg), total.....	1640		1440		1430		90	%
Manganese	(Mn), total.....	180		154		209		90	%
Molybdenum	(Mo), total.....								
Sodium	(Na), total.....	379		917		255		80	%
Nickel	(Ni), total.....	9.9		8.2	U	8.3	U	80	%
Lead	(Pb), total.....	19.4		25.4		23.9		110	%
Antimony	(Sb), total.....	12.1	U	12.0	U	12.2	U	62	%
Selenium	(Se), total.....	1.0	U	1.0	U	1.0	U	100	%
Strontium	(Sr), total.....	41.0	U	40.8	U	41.6	U	100	%
Thallium	(Tl), total.....	2.0	U	2.0	U	2.0	U	107	%
Vanadium	(V), total.....	27.9		19.6		21.4		90	%
Zinc	(Zn), total.....	35.7		35.1		36.2		90	%

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

RFW Batch ID: 8810-036-LCS2
Customer ID: LCS
Matrix: Water
Units: % RECOVERY

Sample Information

Silver	(Ag), total.....	101 %
Aluminum	(Al), total.....	96 %
Arsenic	(As), total.....	94 %
Barium	(Ba), total.....	103 %
Beryllium	(Be), total.....	98 %
Calcium	(Ca), total.....	98 %
Cadmium	(Cd), total.....	104 %
Cobalt	(Co), total.....	102 %
Chromium	(Cr), total.....	98 %
Cesium	(Cs), total.....	
Copper	(Cu), total.....	100 %
Iron	(Fe), total.....	103 %
Mercury	(Hg), total.....	82 %
Potassium	(K), total.....	88 %
Lithium	(Li), total.....	
Magnesuim	(Mg), total.....	103 %
Manganese	(Mn), total.....	103 %
Molybdenum	(Mo), total.....	
Sodium	(Na), total.....	84 %
Nickel	(Ni), total.....	102 %
Lead	(Pb), total.....	99 %
Antimony	(Sb), total.....	111 %
Selenium	(Se), total.....	90 %
Strontium	(Sr), total.....	103 %
Thallium	(Tl), total.....	111 %
Vanadium	(V), total.....	102 %
Zinc	(Zn), total.....	99 %

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

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INORGANICS CASE NARRATIVE

Client: ROCKWELL
RFW #: 8810S036
W.O. #: 2029-38-01-0000

1. All required holding times were met.

2. All method blanks were analyzed below detection limits.

3. All LCS (blank spike) recoveries were within control limits.

4. Matrix spike recoveries for Silver, Arsenic and Antimony were outside of the 75%-125% control windows established by the USEPA-CLP. This may be due to matrix interferences present in the sample matrix.

5. The following data qualifiers are used in the enclosed report:

   U - Indicates that the sample was analyzed for but not detected.

   * - Indicates that the original sample result was greater than 4 x the spike amount added. The USEPA-CLP has determined that spike sample calculations where this occurs have been proven to be unreliable.

6. Methodology unless otherwise indicated follows the USEPA-CLP SOW-787 for metals analysis; Methods for Chemical Analysis of Water and Wastes for conventional water analyses; and SW-846 for nonmetallic soil parameters.

Date: 12/8/88

Approved: Geo E. O'Shea

WESTON ANALYTICS
METALS ANALYTICAL DATA PACKAGE FOR
ROCKWELL INTERNATIONAL - ROCKY FLATS

DATE RECEIVED: 10/15/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A002	8810-036-002	10/12/88	NA	NA
BH88A002	8810-036-002 DUP	10/12/88	NA	NA
BH88A002	8810-036-002 MS	10/12/88	NA	NA
BH88A003	8810-036-003	10/12/88	NA	NA
BH88A003	8810-036-003 DUP	10/12/88	NA	NA
BH88A003	8810-036-003 MS	10/12/88	NA	NA
BH88A004	8810-036-004	10/12/88	NA	NA
BH88A005	8810-036-005	10/12/88	NA	NA
BH88A006	8810-036-006	10/12/88	NA	NA
BH88A007	8810-036-007	10/12/88	NA	NA
BH88A008	8810-036-008	10/12/88	NA	NA
BH88A009	8810-036-009	10/12/88	NA	NA
BH88A011	8810-036-011	10/13/88	NA	NA
BH88A012	8810-036-012	10/13/88	NA	NA
BH88A013	8810-036-013	10/13/88	NA	NA
BH88A014	8810-036-014	10/13/88	NA	NA
BH88A016	8810-036-016	10/13/88	NA	NA
BH88A017	8810-036-017	10/13/88	NA	NA
BH88A018	8810-036-018	10/13/88	NA	NA
BH88A019	8810-036-019	10/13/88	NA	NA
LCS	8810-036-LCS	NA	NA	NA
LAB QC:				
BLANK	8810-036-0001BL	NA	NA	NA

Geo E. O'Shea 12/8/88
DATE

WESTON Analytical Laboratories

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

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C5005

RFW Batch ID:	8810-036-0001BL	8810-036-002	8810-036-002 DUP	8810-036-002 MS
Customer ID:	BLANK	BH88A002	BH88A002	BH88A002
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	% RECOVERY

Sample Information

Silver (Ag), total.....	2.0 U	2.2 U	2.3 U	55 %
Aluminum (Al), total.....	40.0 U	7080	6820	*
Arsenic (As), total.....	2.0 U	3.3		
Barium (Ba), total.....	40.0 U	80.6	79.4	101 %
Beryllium (Be), total.....	1.0 U	14.3	9.7	80 %
Calcium (Ca), total.....	200.0 U	1590	1610	*
Cadmium (Cd), total.....	1.0 U	2.4	1.6	104 %
Cobalt (Co), total.....	10.0 U	10.9 U	11.3 U	93 %
Chromium (Cr), total.....	2.0 U	13.0	12.7	92 %
Cesium (Cs), total.....				
Copper (Cu), total.....	5.0 U	10.3	10.7	112 %
Iron (Fe), total.....	20.0 U	7730	8080	*
Mercury (Hg), total.....	0.1 U	0.1 U	0.1 U	86 %
Potassium (K), total.....	1000.0 U	1700	1630	*
Lithium (Li), total.....				
Magnesuim (Mg), total.....	200.0 U	1470	1430	*
Manganese (Mn), total.....	3.0 U	241	244	*
Molybdenum(Mo), total.....				
Sodium (Na), total.....	200.0 U	688	226 U	NS
Nickel (Ni), total.....	8.0 U	10.4	10.5	86 %
Lead (Pb), total.....	1.0 U	16.4		
Antimony (Sb), total.....	12.0 U	13.4 U		
Selenium (Se), total.....	1.0 U	1.1 U		
Strontium (Sr), total.....	40.0 U	43.8 U	45.1 U	100 %
Thallium (Tl), total.....	2.0 U	2.2 U		
Vanadium (V), total.....	10.0 U	2120	2140	*
Zinc (Zn), total.....	4.0 U	43.1	43.3	95 %

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

FW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information	#174 C5002			#174 C5002
RFW Batch ID:	8810-036-003	8810-036-003 DUP	8810-036-003 MS	8810-036-004
Customer ID:	BH88A003	BH88A003	BH88A003	BH88A004
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	% RECOVERY	MG/KG

Sample Information

Silver	(Ag), total	2.1	U					2.2	U
Aluminum	(Al), total	8640						6170	
Arsenic	(As), total	3.7		4.1		65	%	2.9	
Barium	(Ba), total	82.2						66.7	
Beryllium	(Be), total	1.1	U					1.1	U
Calcium	(Ca), total	2130						1380	
Cadmium	(Cd), total	2.2						1.3	
Cobalt	(Co), total	10.5	U					10.8	U
Chromium	(Cr), total	10.0						6.5	
Cesium	(Cs), total								
Copper	(Cu), total	8.1						9.8	
Iron	(Fe), total	10900						7530	
Mercury	(Hg), total	0.1	U					0.1	U
Potassium	(K), total	1510						1550	
Lithium	(Li), total								
Magnesuim	(Mg), total	1480						1570	
Manganese	(Mn), total	178						154	
Molybdenum	(Mo), total								
Sodium	(Na), total	831						592	
Nickel	(Ni), total	8.4	U					8.6	U
Lead	(Pb), total	18.7		20.2		*		19.0	
Antimony	(Sb), total	12.6	U	13.3	U	0	%	12.4	U
Selenium	(Se), total	1.1	U	1.1	U	83	%	1.0	U
Strontium	(Sr), total	42.0	U					43.0	U
Thallium	(Tl), total	2.1	U	2.2	U	106	%	2.1	U
Vanadium	(V), total	41.2						20.6	
Zinc	(Zn), total	33.2						52.0	

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

	#174 CS008	#174 CS009	#174 CS006	#174 CS007
RFW Batch ID:	8810-036-005	8810-036-006	8810-036-007	8810-036-008
Customer ID:	BH88A005	BH88A006	BH88A007	BH88A008
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Sample Information

Silver (Ag), total.....	2.1 U	2.1 U	2.2 U	2.2 U
Aluminum (Al), total.....	7900	10200	5180	8350
Arsenic (As), total.....	2.1 U	3.8	2.5	3.6
Barium (Ba), total.....	81.5	93.1	60.0	75.3
Beryllium (Be), total.....	1.1 U	13.1	1.1 U	1.1 U
Calcium (Ca), total.....	1670	2160	1540	1800
Cadmium (Cd), total.....	1.5	1.3	1.6	3.5
Cobalt (Co), total.....	10.6 U	10.7 U	10.8 U	11.2 U
Chromium (Cr), total.....	7.8	9.8	4.1	7.4
Cesium (Cs), total.....				
Copper (Cu), total.....	10.9	8.4	8.2	9.0
Iron (Fe), total.....	10600	12700	8360	10300
Mercury (Hg), total.....	0.1 U	0.1 U	0.1 U	0.1 U
Potassium (K), total.....	1710	1850	1330	1700
Lithium (Li), total.....				
Magnesuim (Mg), total.....	1590	1610	1300	1620
Manganese (Mn), total.....	228	232	193	201
Molybdenum(Mo), total.....				
Sodium (Na), total.....	480	468	478	559
Nickel (Ni), total.....	8.5 U	8.5 U	8.6 U	8.9 U
Lead (Pb), total.....	20.5	16.6	28.6	24.8
Antimony (Sb), total.....	12.6 U	12.5 U	12.4 U	12.9 U
Selenium (Se), total.....	1.1 U	1.0 U	1.0 U	1.1 U
Strontium (Sr), total.....	42.5 U	42.7 U	43.0 U	44.7 U
Thallium (Tl), total.....	2.1 U	2.1 U	2.1 U	2.1 U
Vanadium (V), total.....	25.3	2590	16.8	24.4
Zinc (Zn), total.....	35.9	28.0	42.8	37.5

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

	#174 CS012	#174 CS015	#174 CS013	
RFW Batch ID:	8810-036-009	8810-036-011	8810-036-012	8810-036-013
Customer ID:	BH88A009	BH88A011	BH88A012	BH88A013
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Sample Information

Silver (Ag), total.....	2.1 U	2.2 U	2.1 U	5.3
Aluminum (Al), total.....	8220	11200	7840	8290
Arsenic (As), total.....	3.4	3.3	3.4	2.7
Barium (Ba), total.....	73.8	87.4	77.1	73.2
Beryllium (Be), total.....	1.0 U	1.1 U	1.3	1.1 U
Calcium (Ca), total.....	1990	2160	1530	1610
Cadmium (Cd), total.....	27.2	3.0	1.3	1.5
Cobalt (Co), total.....	10.5 U	11.0 U	10.6 U	10.8 U
Chromium (Cr), total.....	10.0	11.7	8.0	7.6
Cesium (Cs), total.....				
Copper (Cu), total.....	13.8	12.8	11.5	12.1
Iron (Fe), total.....	10700	14800	9420	11600
Mercury (Hg), total.....	0.1 U	0.1 U	0.1 U	0.1 U
Potassium (K), total.....	1590	1980	1670	1630
Lithium (Li), total.....				
Magnesuim (Mg), total.....	1710	2000	1540	1650
Manganese (Mn), total.....	211	216	211	229
Molybdenum(Mo), total.....				
Sodium (Na), total.....	539	252	299	417
Nickel (Ni), total.....	8.4 U	9.8	8.5 U	8.7 U
Lead (Pb), total.....	22.3	21.0	20.2	16.2
Antimony (Sb), total.....	12.9 U	13.0 U	13.0 U	12.4 U
Selenium (Se), total.....	1.1 U	1.1 U	1.1 U	1.0 U
Strontium (Sr), total.....	41.8 U	43.8 U	42.6 U	43.3 U
Thallium (Tl), total.....	2.2 U	2.2 U	2.2 U	2.1 U
Vanadium (V), total.....	27.4	29.1	140	41.0
Zinc (Zn), total.....	38.1	38.8	38.3	37.1

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information	#174 CS011	#174 CS016	#174 CS017	#174 CS003
RFW Batch ID:	8810-036-014	8810-036-016	8810-036-017	8810-036-018
Customer ID:	BH88A014	BH88A016	BH88A017	BH88A018
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Sample Information

Silver	(Ag), total.....	4.2		2.0	U	2.0	U	2.0	U
Aluminum	(Al), total.....	5460		8280		9740		6930	
Arsenic	(As), total.....	3.3		4.0		4.4		2.3	
Barium	(Ba), total.....	61.5		75.4		84.4		67.1	
Beryllium	(Be), total.....	1.0	U	1.0	U	1.0	U	1.0	U
Calcium	(Ca), total.....	1840		1890		2030		1210	
Cadmium	(Cd), total.....	1.0	U	2.3		3.6		3.3	
Cobalt	(Co), total.....	10.2	U	10.0	U	10.2	U	10.2	U
Chromium	(Cr), total.....	6.0		9.0		5.0		2.5	
Cesium	(Cs), total.....								
Copper	(Cu), total.....	12.7		8.2		5.1	U	5.3	
Iron	(Fe), total.....	8680		11000		12300		9420	
Mercury	(Hg), total.....	0.1	U	0.1	U	0.1	U	0.1	U
Potassium	(K), total.....	1530		1650		1740		1610	
Lithium	(Li), total.....								
Magnesuim	(Mg), total.....	1640		1580		1640		1440	
Manganese	(Mn), total.....	187		191		180		154	
Molybdenum	(Mo), total.....								
Sodium	(Na), total.....	321		400		379		917	
Nickel	(Ni), total.....	8.2	U	8.0	U	9.9		8.2	U
Lead	(Pb), total.....	26.4		18.5		19.4		25.4	
Antimony	(Sb), total.....	12.3	U	12.8	U	12.1	U	12.0	U
Selenium	(Se), total.....	1.0	U	1.1	U	1.0	U	1.0	U
Strontium	(Sr), total.....	40.8	U	39.9	U	41.0	U	40.8	U
Thallium	(Tl), total.....	2.0	U	2.1	U	2.0	U	2.0	U
Vanadium	(V), total.....	14.5		24.1		27.9		19.6	
Zinc	(Zn), total.....	71.1		28.5		35.7		35.1	

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

Sample Information

	#174	
	C5001	
RFW Batch ID:	8810-036-019	8810-036-LCS
Customer ID:	BH88A019	LCS
Matrix:	Soil	Soil
Units:	MG/KG	% RECOVERY

Sample Information

Silver	(Ag), total.....	2.1	U	80	%
Aluminum	(Al), total.....	7900		90	%
Arsenic	(As), total.....	3.4		94	%
Barium	(Ba), total.....	77.0		90	%
Beryllium	(Be), total.....	1.0	U	90	%
Calcium	(Ca), total.....	1910		90	%
Cadmium	(Cd), total.....	2.9		88	%
Cobalt	(Co), total.....	10.4	U	90	%
Chromium	(Cr), total.....	4.0		90	%
Cesium	(Cs), total.....				
Copper	(Cu), total.....	5.2	U	90	%
Iron	(Fe), total.....	10300		90	%
Mercury	(Hg), total.....	0.1	U	80	%
Potassium	(K), total.....	1510		80	%
Lithium	(Li), total.....				
Magnesuim	(Mg), total.....	1430		90	%
Manganese	(Mn), total.....	209		90	%
Molybdenum	(Mo), total.....				
Sodium	(Na), total.....	255		80	%
Nickel	(Ni), total.....	8.3	U	80	%
Lead	(Pb), total.....	23.9		110	%
Antimony	(Sb), total.....	12.2	U	62	%
Selenium	(Se), total.....	1.0	U	100	%
Strontium	(Sr), total.....	41.6	U	100	%
Thallium	(Tl), total.....	2.0	U	107	%
Vanadium	(V), total.....	21.4		90	%
Zinc	(Zn), total.....	36.2		90	%

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

ple Information

	~~BLK~~ CS001	
RFW Batch ID:	8810-036-019	8810-036-LCS
Customer ID:	BH88A019	LCS
Matrix:	Soil	Soil
Units:	MG/KG	% RECOVERY

Sample Information

Silver	(Ag), total	2.1	U	80	%
Aluminum	(Al), total	7900		90	%
Arsenic	(As), total	3.4		94	%
Barium	(Ba), total	77.0		90	%
Beryllium	(Be), total	1.0	U	90	%
Calcium	(Ca), total	1910		90	%
Cadmium	(Cd), total	2.9		88	%
Cobalt	(Co), total	10.4	U	90	%
Chromium	(Cr), total	4.0		90	%
Cesium	(Cs), total				
Copper	(Cu), total	5.2	U	90	%
Iron	(Fe), total	10300		90	%
Mercury	(Hg), total	0.1	U	80	%
Potassium	(K), total	1510		80	%
Lithium	(Li), total				
Magnesuim	(Mg), total	1430		90	%
Manganese	(Mn), total	209		90	%
Molybdenum	(Mo), total				
Sodium	(Na), total	255		80	%
ickel	(Ni), total	8.3	U	80	%
Lead	(Pb), total	23.9		110	%
Antimony	(Sb), total	12.2	U	62	%
Selenium	(Se), total	1.0	U	100	%
Strontium	(Sr), total	41.6	U	100	%
Thallium	(Tl), total	2.0	U	107	%
Vanadium	(V), total	21.4		90	%
Zinc	(Zn), total	36.2		90	%

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

mple Information	#174 CS011	#174 CS016	#174 CS015	#174 CS003
RFW Batch ID:	8810-036-014	8810-036-016	8810-036-017	8810-036-018
Customer ID:	BH88A014	BH88A016	BH88A017	BH88A018
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Sample Information

Silver (Ag), total.....	4.2	2.0 U	2.0 U	2.0 U
Aluminum (Al), total.....	5460	8280	9740	6930
Arsenic (As), total.....	3.3	4.0	4.4	2.3
Barium (Ba), total.....	61.5	75.4	84.4	67.1
Beryllium (Be), total.....	1.0 U	1.0 U	1.0 U	1.0 U
Calcium (Ca), total.....	1840	1890	2030	1210
Cadmium (Cd), total.....	1.0 U	2.3	3.6	3.3
Cobalt (Co), total.....	10.2 U	10.0 U	10.2 U	10.2 U
Chromium (Cr), total.....	6.0	9.0	5.0	2.5
Cesium (Cs), total.....				
Copper (Cu), total.....	12.7	8.2	5.1 U	5.3
Iron (Fe), total.....	8680	11000	12300	9420
Mercury (Hg), total.....	0.1 U	0.1 U	0.1 U	0.1 U
Potassium (K), total.....	1530	1650	1740	1610
Lithium (Li), total.....				
Magnesuim (Mg), total.....	1640	1580	1640	1440
Manganese (Mn), total.....	187	191	180	154
Molybdenum(Mo), total.....				
Sodium (Na), total.....	321	400	379	917
Nickel (Ni), total.....	8.2 U	8.0 U	9.9	8.2 U
Lead (Pb), total.....	26.4	18.5	19.4	25.4
Antimony (Sb), total.....	12.3 U	12.8 U	12.1 U	12.0 U
Selenium (Se), total.....	1.0 U	1.1 U	1.0 U	1.0 U
Strontium (Sr), total.....	40.8 U	39.9 U	41.0 U	40.8 U
Thallium (Tl), total.....	2.0 U	2.1 U	2.0 U	2.0 U
Vanadium (V), total.....	14.5	24.1	27.9	19.6
Zinc (Zn), total.....	71.1	28.5	35.7	35.1

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

	#174 CS012	#174 CS015	#174 CS013	
RFW Batch ID:	8810-036-009	8810-036-011	8810-036-012	8810-036-013
Customer ID:	BH88A009	BH88A011	BH88A012	BH88A013
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Sample Information

Silver	(Ag),	total.....	2.1	U	2.2	U	2.1	U	5.3
Aluminum	(Al),	total.....	8220		11200		7840		8290
Arsenic	(As),	total.....	3.4		3.3		3.4		2.7
Barium	(Ba),	total.....	73.8		87.4		77.1		73.2
Beryllium	(Be),	total.....	1.0	U	1.1	U	1.3		1.1 U
Calcium	(Ca),	total.....	1990		2160		1530		1610
Cadmium	(Cd),	total.....	27.2		3.0		1.3		1.5
Cobalt	(Co),	total.....	10.5	U	11.0	U	10.6	U	10.8 U
Chromium	(Cr),	total.....	10.0		11.7		8.0		7.6
Cesium	(Cs),	total.....							
Copper	(Cu),	total.....	13.8		12.8		11.5		12.1
Iron	(Fe),	total.....	10700		14800		9420		11600
Mercury	(Hg),	total.....	0.1	U	0.1	U	0.1	U	0.1 U
Potassium	(K),	total.....	1590		1980		1670		1630
Lithium	(Li),	total.....							
Magnesuim	(Mg),	total.....	1710		2000		1540		1650
Manganese	(Mn),	total.....	211		216		211		229
Molybdenum	(Mo),	total.....							
Sodium	(Na),	total.....	539		252		299		417
Nickel	(Ni),	total.....	8.4	U	9.8		8.5	U	8.7 U
Lead	(Pb),	total.....	22.3		21.0		20.2		16.2
Antimony	(Sb),	total.....	12.9	U	13.0	U	13.0	U	12.4 U
Selenium	(Se),	total.....	1.1	U	1.1	U	1.1	U	1.0 U
Strontium	(Sr),	total.....	41.8	U	43.8	U	42.6	U	43.3 U
Thallium	(Tl),	total.....	2.2	U	2.2	U	2.2	U	2.1 U
Vanadium	(V),	total.....	27.4		29.1		140		41.0
Zinc	(Zn),	total.....	38.1		38.8		38.3		37.1

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

	#174 CS008	#174 CS009	#174 CS006	#174 CS007
RFW Batch ID:	8810-036-005	8810-036-006	8810-036-007	8810-036-008
Customer ID:	BH88A005	BH88A006	BH88A007	BH88A008
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Sample Information

Silver	(Ag),	total.....	2.1	U	2.1	U	2.2	U	2.2	U
Aluminum	(Al),	total.....	7900		10200		5180		8350	
Arsenic	(As),	total.....	2.1	U	3.8		2.5		3.6	
Barium	(Ba),	total.....	81.5		93.1		60.0		75.3	
Beryllium	(Be),	total.....	1.1	U	13.1		1.1	U	1.1	U
Calcium	(Ca),	total.....	1670		2160		1540		1800	
Cadmium	(Cd),	total.....	1.5		1.3		1.6		3.5	
Cobalt	(Co),	total.....	10.6	U	10.7	U	10.8	U	11.2	U
Chromium	(Cr),	total.....	7.8		9.8		4.1		7.4	
Cesium	(Cs),	total.....								
Copper	(Cu),	total.....	10.9		8.4		8.2		9.0	
Iron	(Fe),	total.....	10600		12700		8360		10300	
Mercury	(Hg),	total.....	0.1	U	0.1	U	0.1	U	0.1	U
Potassium	(K),	total.....	1710		1850		1330		1700	
Lithium	(Li),	total.....								
Magnesuim	(Mg),	total.....	1590		1610		1300		1620	
Manganese	(Mn),	total.....	228		232		193		201	
Molybdenum	(Mo),	total.....								
Sodium	(Na),	total.....	480		468		478		559	
Nickel	(Ni),	total.....	8.5	U	8.5	U	8.6	U	8.9	U
Lead	(Pb),	total.....	20.5		16.6		28.6		24.8	
Antimony	(Sb),	total.....	12.6	U	12.5	U	12.4	U	12.9	U
Selenium	(Se),	total.....	1.1	U	1.0	U	1.0	U	1.1	U
Strontium	(Sr),	total.....	42.5	U	42.7	U	43.0	U	44.7	U
Thallium	(Tl),	total.....	2.1	U	2.1	U	2.1	U	2.1	U
Vanadium	(V),	total.....	25.3		2590		16.8		24.4	
Zinc	(Zn),	total.....	35.9		28.0		42.8		37.5	

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information	#174 CS002			#174 CS004
RFW Batch ID:	8810-036-003	8810-036-003 DUP	8810-036-003 MS	8810-036-004
Customer ID:	BH88A003	BH88A003	BH88A003	BH88A004
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	% RECOVERY	MG/KG

Sample Information

Silver (Ag), total.....	2.1 U			2.2 U
Aluminum (Al), total.....	8640			6170
Arsenic (As), total.....	3.7	4.1	65 %	2.9
Barium (Ba), total.....	82.2			66.7
Beryllium (Be), total.....	1.1 U			1.1 U
Calcium (Ca), total.....	2130			1380
Cadmium (Cd), total.....	2.2			1.3
Cobalt (Co), total.....	10.5 U			10.8 U
Chromium (Cr), total.....	10.0			6.5
Cesium (Cs), total.....				
Copper (Cu), total.....	8.1			9.8
Iron (Fe), total.....	10900			7530
Mercury (Hg), total.....	0.1 U			0.1 U
Potassium (K), total.....	1510			1550
Lithium (Li), total.....				
Magnesuim (Mg), total.....	1480			1570
Manganese (Mn), total.....	178			154
Molybdenum(Mo), total.....				
Sodium (Na), total.....	831			592
Nickel (Ni), total.....	8.4 U			8.6 U
Lead (Pb), total.....	18.7	20.2	*	19.0
Antimony (Sb), total.....	12.6 U	13.3 U	0 %	12.4 U
Selenium (Se), total.....	1.1 U	1.1 U	83 %	1.0 U
Strontium (Sr), total.....	42.0 U			43.0 U
Thallium (Tl), total.....	2.1 U	2.2 U	106 %	2.1 U
Vanadium (V), total.....	41.2			20.6
Zinc (Zn), total.....	33.2			52.0

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-036 Client: ROCKY FLATS

Sample Information

174
CSCC 5

RFW Batch ID:	8810-036-0001BL	8810-036-002	8810-036-002 DUP	8810-036-002 MS
Customer ID:	BLANK	BH88A002	BH88A002	BH88A002
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	% RECOVERY

Sample Information

Silver (Ag), total.....	2.0 U	2.2 U	2.3 U	55 %
Aluminum (Al), total.....	40.0 U	7080	6820	*
Arsenic (As), total.....	2.0 U	3.3		
Barium (Ba), total.....	40.0 U	80.6	79.4	101 %
Beryllium (Be), total.....	1.0 U	14.3	9.7	80 %
Calcium (Ca), total.....	200.0 U	1590	1610	*
Cadmium (Cd), total.....	1.0 U	2.4	1.6	104 %
Cobalt (Co), total.....	10.0 U	10.9 U	11.3 U	93 %
Chromium (Cr), total.....	2.0 U	13.0	12.7	92 %
Cesium (Cs), total.....				
Copper (Cu), total.....	5.0 U	10.3	10.7	112 %
Iron (Fe), total.....	20.0 U	7730	8080	*
Mercury (Hg), total.....	0.1 U	0.1 U	0.1 U	86 %
Potassium (K), total.....	1000.0 U	1700	1630	*
Lithium (Li), total.....				
Magnesuim (Mg), total.....	200.0 U	1470	1430	*
Manganese (Mn), total.....	3.0 U	241	244	*
Molybdenum(Mo), total.....				
Sodium (Na), total.....	200.0 U	688	226 U	NS
Nickel (Ni), total.....	8.0 U	10.4	10.5	86 %
Lead (Pb), total.....	1.0 U	16.4		
Antimony (Sb), total.....	12.0 U	13.4 U		
Selenium (Se), total.....	1.0 U	1.1 U		
Strontium (Sr), total.....	40.0 U	43.8 U	45.1 U	100 %
Thallium (Tl), total.....	2.0 U	2.2 U		
Vanadium (V), total.....	10.0 U	2120	2140	*
Zinc (Zn), total.....	4.0 U	43.1	43.3	95 %

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Sample Information

RFW Batch ID:	2000-110-100	2000-111-100	2000-112-100
Customer ID:	BH88A011	BH88A012	BH88A013+MS+MSD
Laboratory ID:	9299-28388-9-1	9299-28388-9-2	9299-28388-9-3
Matrix:	Soil	Soil	Soil

Radio Chemistry

Gross Alpha.....	28 ± 10	pci/g	18 ± 9	pci/g	26 ± 10	pci/g
Gross Beta.....	35 ± 6	pci/g	26 ± 6	pci/g	39 ± 6	pci/g
Uranium 233, 234.....	0.63 ± 0.13	pci/g	0.83 ± 0.12	pci/g	0.63 ± 0.09	pci/g
Uranium 235.....						
Uranium 238.....	0.81 ± 0.13	pci/g	0.81 ± 0.11	pci/g	0.49 ± 0.08	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.05 ± 0.03	pci/g	0.01 ± 0.03	pci/g	0.02 ± 0.03	pci/g
Americium 241.....	0.00 ± 0.04	pci/g	0.03 ± 0.05	pci/g	0.00 ± 0.04	pci/g
Cesium 137.....						
Tritium.....	-0.01 ± 0.15	pci/ml	-0.08 ± 0.15	pci/ml	-0.05 ± 0.15	pci/ml
% Moisture.....	5.0		5.4		3.8	

Sample Information

RFW Batch ID:	2000-113-100	2000-114-100	2000-115-100
Customer ID:	BH88A014	BH88A015	BH88A016
Laboratory ID:	9299-28388-9-4	9299-28388-9-5	9299-28388-9-6
Matrix:	Soil	Water	Soil

Radio Chemistry

Gross Alpha.....	42 ± 12	pci/g	0 ± 3	pci/l	25 ± 10	pci/g
Gross Beta.....	36 ± 6	pci/g	5 ± 8	pci/l	19 ± 5	pci/g
Uranium 233, 234.....	0.87 ± 0.11	pci/g	0.0 ± 0.3	pci/l	0.72 ± 0.20	pci/g
Uranium 235.....						
Uranium 238.....	0.84 ± 0.11	pci/g	-0.1 ± 0.4	pci/l	0.72 ± 0.20	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.03 ± 0.03	pci/g	**		0.00 ± 0.02	pci/g
Americium 241.....	0.02 ± 0.05	pci/g	**		-0.01 ± 0.03	pci/g
Cesium 137.....						
Tritium.....	0.00 ± 0.15	pci/ml	30 ± 150	pci/l	-0.05 ± 0.15	pci/ml
% Moisture.....	3.4		never mind!		3.1	

** Insufficient Sample.

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 2

Sample Information	[illegible] CS017	[illegible] CS003	[illegible]
RFW Batch ID:	2000-116-100	2000-117-100	2000-118-100
Customer ID:	BH88A017	BH88A018	BH88A019
Laboratory ID:	9299-28388-9-7	9299-28388-9-8	9299-28388-9-9
Matrix:	Soil	Soil	Soil

Radio Chemistry

Gross Alpha.....	14 ± 8	pci/g	28 ± 10	pci/g	27 ± 10	pci/g
Gross Beta.....	22 ± 5	pci/g	22 ± 6	pci/g	22 ± 5	pci/g
Uranium 233, 234.....	0.48 ± 0.08	pci/g	0.70 ± 0.10	pci/g	0.65 ± 0.10	pci/g
Uranium 235.....						
Uranium 238.....	0.50 ± 0.08	pci/g	0.69 ± 0.10	pci/g	0.73 ± 0.11	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.00 ± 0.03	pci/g	0.02 ± 0.03	pci/g	0.01 ± 0.03	pci/g
Americium 241.....	-0.01 ± 0.03	pci/g	0.01 ± 0.03	pci/g	0.04 ± 0.05	pci/g
Cesium 137.....						
Tritium.....	0.08 ± 0.15	pci/ml	0.07 ± 0.15	pci/ml	0.00 ± 0.15	pci/ml
% Moisture.....	2.0		1.3		2.4	

ACCU LABS RESEARCH, INC.
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RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Sample Information	[illegible] CS005		[illegible] CS002		[illegible] CS004	
RFW Batch ID:	2000-100-100		2000-101-100		2000-102-100	
Customer ID:	BH88A002		BH88A003		BH88A004	
Laboratory ID:	9299-28380-8-1		9299-28380-8-2		9299-28380-8-3	
Matrix:	Soil		Soil		Soil	
Radio Chemistry						
Gross Alpha.....	11 ± 8	pci/g	18 ± 9	pci/g	15 ± 7	pci/g
Gross Beta.....	22 ± 6	pci/g	18 ± 6	pci/g	27 ± 6	pci/g
Uranium 233, 234.....	0.65 ± 0.11	pci/g	0.50 ± 0.10	pci/g	0.67 ± 0.13	pci/g
Uranium 235.....						
Uranium 238.....	0.55 ± 0.10	pci/g	0.64 ± 0.11	pci/g	0.65 ± 0.13	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.01 ± 0.03	pci/g	0.01 ± 0.02	pci/g	0.04 ± 0.03	pci/g
Americium 241.....	0.00 ± 0.03	pci/g	0.00 ± 0.03	pci/g	0.01 ± 0.03	pci/g
Cesium 137.....						
Tritium.....	0.22 ± 0.16	pci/ml	0.10 ± 0.16	pci/ml	-0.05 ± 0.15	pci/ml
% Moisture.....	7.4		3.8		4.7	

Sample Information	[illegible] CS005		[illegible] CS009		[illegible] CS006	
RFW Batch ID:	2000-103-100		2000-104-100		2000-105-100	
Customer ID:	BH88A005		BH88A006		BH88A007	
Laboratory ID:	9299-28380-8-4		9299-28380-8-5		9299-28380-8-6	
Matrix:	Soil		Soil		Soil	
Radio Chemistry						
Gross Alpha.....	16 ± 9	pci/g	12 ± 8	pci/g	20 ± 9	pci/g
Gross Beta.....	15 ± 5	pci/g	24 ± 6	pci/g	31 ± 6	pci/g
Uranium 233, 234.....	0.63 ± 0.09	pci/g	0.72 ± 0.11	pci/g	0.90 ± 0.12	pci/g
Uranium 235.....						
Uranium 238.....	0.65 ± 0.09	pci/g	0.84 ± 0.12	pci/g	0.77 ± 0.11	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.01 ± 0.03	pci/g	0.01 ± 0.03	pci/g	0.07 ± 0.05	pci/g
Americium 241.....	-0.01 ± 0.03	pci/g	0.00 ± 0.03	pci/g	-0.01 ± 0.02	pci/g
Cesium 137.....						
Tritium.....	0.01 ± 0.15	pci/ml	0.06 ± 0.15	pci/ml	0.10 ± 0.16	pci/ml
% Moisture.....	5.1		4.0		3.3	

ADCO LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 2

Sample Information			
RFW Batch ID:	2000-106-100	2000-107-100	2000-108-100
Customer ID:	BH88A008	BH88A009	BH88A021
Laboratory ID:	9299-28380-8-7	9299-28380-8-8	9299-28412-2-1
Matrix:	Soil	Soil	Soil

Radio Chemistry

Gross Alpha.....	13 ± 8	pci/g	26 ± 10	pci/g	21 ± 9	pci/g
Gross Beta.....	24 ± 6	pci/g	29 ± 6	pci/g	15 ± 5	pci/g
Uranium 233, 234.....	0.59 ± 0.09	pci/g	0.80 ± 0.11	pci/g	0.58 ± 0.09	pci/g
Uranium 235.....						
Uranium 238.....	0.66 ± 0.09	pci/g	0.69 ± 0.10	pci/g	0.53 ± 0.09	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.01 ± 0.03	pci/g	0.01 ± 0.03	pci/g	0.03 ± 0.03	pci/g
Americium 241.....	-0.01 ± 0.03	pci/g	-0.01 ± 0.02	pci/g	0.03 ± 0.05	pci/g
Cesium 137.....						
Tritium.....	0.08 ± 0.16	pci/ml	0.05 ± 0.15	pci/ml	0.21 ± 0.16	pci/ml
% Moisture.....	4.0		5.1		3.1	

Sample Information	
RFW Batch ID:	2000-109-100
Customer ID:	BH88A022
Laboratory ID:	9299-28412-2-2
Matrix:	Soil

Radio Chemistry

Gross Alpha.....	15 ± 6	pci/g
Gross Beta.....	24 ± 5	pci/g
Uranium 233, 234.....	0.70 ± 0.11	pci/g
Uranium 235.....		
Uranium 238.....	0.70 ± 0.11	pci/g
Strontium 89, 90.....		
Plutonium 239, 240.....	0.05 ± 0.03	pci/g
Americium 241.....	-0.01 ± 0.03	pci/g
Cesium 137.....		
Tritium.....	0.07 ± 0.15	pci/ml
% Moisture.....	4.5	

semivols

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

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ORGANICS CASE NARRATIVE

Client: ROCKWELL
RFW #: 8810S036
W.O. #: 2029-38-01-0000

FRACTION: BNA

1. This set of samples consisted of 16 soil and 1 water samples collected on 10/12/88 and 10/13/88.

2. The samples were extracted on 10/18/88 and 10/19/88.

3. These samples were analyzed on 11/04/88, 11/06/88 and 11/10/88 in accordance with SW 846 protocols.

4. All required holding times for these samples were met.

5. All tuning and calibration criteria were met for all samples.

6. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

7. Of the 120 surrogates analyzed, 15 were outside of QC limits. Samples not meeting QC limits were BH88A005 (8810S036-005), BH88A007 (8810S036-007), BH88A012 (8810S036-012) and BH88A013 (8810S036-013).

8. Of the 22 matrix spike recoveries, 2 were outside of QC limits. Compounds not meeting QC limits were 4-Chloro-3-Methylpenol and Pentachlorophenol.

9. Of the 11 matrix spike RPD's, 1 was outside QC limits. Compound not meeting QC limits was Pentachlorophenol.

10. Above mentioned samples did not meet QC criteria because of dirty, oily nature of matrices.

The following data qualifiers are used in this report:

U - Indicates that the compound was analyzed for but not detected.
J - Indicates an estimated trace value.

Date: 11/18/88

Approved by: [signature] for R.F. Cumey

WESTON ANALYTICS
SEMIVOLATILE ANALYTICAL DATA PACKAGE FOR
ROCKWELL INTERNATIONAL - RF

DATE RECEIVED: 10/15/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A002	8810-036-002	10/12/88	10/18/88	11/04/88
BH88A003	8810-036-003	10/12/88	10/18/88	11/04/88
BH88A004	8810-036-004	10/12/88	10/18/88	11/06/88
BH88A005	8810-036-005	10/12/88	10/18/88	11/06/88
BH88A006	8810-036-006	10/12/88	10/18/88	11/06/88
BH88A007	8810-036-007	10/12/88	10/18/88	11/06/88
BH88A008	8810-036-008	10/12/88	10/18/88	11/06/88
BH88A009	8810-036-009	10/12/88	10/18/88	11/06/88
BH88A011	8810-036-011	10/13/88	10/18/88	11/06/88
BH88A012	8810-036-012	10/13/88	10/18/88	11/06/88
BH88A013	8810-036-013	10/13/88	10/18/88	11/06/88
BH88A013	8810-036-013 MS	10/13/88	10/18/88	11/10/88
BH88A013	8810-036-013 MSD	10/13/88	10/18/88	11/10/88
BH88A014	8810-036-014	10/13/88	10/18/88	11/06/88
BH88A015	8810-036-015	10/13/88	10/18/88	11/04/88
BH88A016	8810-036-016	10/13/88	10/18/88	11/10/88
BH88A017	8810-036-017	10/13/88	10/18/88	11/10/88
BH88A018	8810-036-018	10/13/88	10/18/88	11/10/88
BH88A019	8810-036-019	10/13/88	10/18/88	11/10/88
LAB QC:				
BLANK 10/19	8810-036-0001BL	NA	10/19/88	11/04/88

11/18/88
DATE

WESTON Analytical Laboratories

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

FW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

		#174 CS005	#174 CS002	#174 CS004
RFW Batch ID:	8810-036-0001BL	8810-036-002	8810-036-003	8810-036-004
Customer ID:	BLANK 10/19	BH88A002	BH88A003	BH88A004
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	5	5	2

Surrogate Recovery

2-Fluorophenol:	75 %	101 %	102 %	41 %
Phenol-d5:	83 %	128 %	131 %	52 %
2,4,6-Br3-Phenol:	68 %	117 %	116 %	92 %
Nitrobenzene-d5:	53 %	66 %	64 %	36 %
2-Fluorobiphenyl:	55 %	67 %	71 %	38 %
p-Terphenyl-d14:	106 %	60 %	99 %	61 %

Analytes

Phenol	10 U	1800 U	1800 U	320 J
bis(2-Chloroethyl)Ether	10 U	1800 U	1800 U	720 U
2-Chlorophenol	10 U	1800 U	1800 U	720 U
1,3-Dichlorobenzene	10 U	1800 U	1800 U	720 U
1,4-Dichlorobenzene	10 U	1800 U	1800 U	720 U
Benzyl Alcohol	10 U	1800 U	1800 U	720 U
1,2-Dichlorobenzene	10 U	1800 U	1800 U	720 U
2-Methylphenol	10 U	1800 U	1800 U	720 U
bis(2-Chloroisopropyl)Ether	10 U	1800 U	1800 U	720 U
4-Methylphenol	10 U	1800 U	1800 U	720 U
N-Nitroso-di-n-propylamine	10 U	1800 U	1800 U	720 U
Hexachloroethane	10 U	1800 U	1800 U	720 U
Nitrobenzene	10 U	1800 U	1800 U	720 U
Isophorone	10 U	1800 U	1800 U	720 U
2-Nitrophenol	10 U	1800 U	1800 U	720 U
2,4-Dimethylphenol	10 U	1800 U	1800 U	720 U
Benzoic Acid	50 U	9300 U	8900 U	400 J
bis(2-Chloroethoxy)Methane	10 U	1800 U	1800 U	720 U
2,4-Dichlorophenol	10 U	1800 U	1800 U	720 U
1,2,4-Trichlorobenzene	10 U	1800 U	1800 U	720 U
Naphthalene	10 U	1800 U	1800 U	720 U
4-Chloroaniline	10 U	1800 U	1800 U	720 U
Hexachlorobutadiene	10 U	1800 U	1800 U	720 U
4-Chloro-3-methylphenol	10 U	1800 U	1800 U	740
2-Methylnaphthalene	10 U	1800 U	1800 U	720 U
Hexachlorocyclopentadiene	10 U	1800 U	1800 U	720 U
2,4,6-Trichlorophenol	10 U	1800 U	1800 U	720 U
2,4,5-Trichlorophenol	50 U	9300 U	8900 U	3600 U
2-Chloronaphthalene	10 U	1800 U	1800 U	720 U
2-Nitroaniline	50 U	9300 U	8900 U	3600 U
Dimethyl Phthalate	10 U	1800 U	1800 U	720 U
Acenaphthylene	10 U	1800 U	1800 U	720 U

Modified)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

		#174 C5005	#174 C5002	#174 C5004
RFW Batch ID:	8810-036-0001BL	8810-036-002	8810-036-003	8810-036-004
Customer ID:	BLANK 10/19	BH88A002	BH88A003	BH88A004
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	5	5	2

Analytes

3-Nitroaniline	50	U	9300	U	8900	U	3600	U
Acenaphthene	10	U	1800	U	1800	U	720	U
2,4-Dinitrophenol	50	U	9300	U	8900	U	3600	U
4-Nitrophenol	50	U	9300	U	8900	U	3600	U
Dibenzofuran	10	U	1800	U	1800	U	720	U
2,4-Dinitrotoluene	10	U	1800	U	1800	U	720	U
2,6-Dinitrotoluene	10	U	1800	U	1800	U	720	U
Diethylphthalate	10	U	1800	U	1800	U	720	U
4-Chlorophenyl-phenylether	10	U	1800	U	1800	U	720	U
Fluorene	10	U	1800	U	1800	U	720	U
4-Nitroaniline	50	U	9300	U	8900	U	3600	U
4,6-Dinitro-2-methylphenol	50	U	9300	U	8900	U	3600	U
N-Nitrosodiphenylamine	10	U	1800	U	1800	U	720	U
4-Bromophenyl-phenylether	10	U	1800	U	1800	U	720	U
Hexachlorobenzene	10	U	1800	U	1800	U	720	U
Pentachlorophenol	50	U	9300	U	8900	U	3600	U
Phenanthrene	10	U	1800	U	1800	U	720	U
Anthracene	10	U	1800	U	1800	U	180	J
di-n-Butyl Phthalate	10	U	1800	U	1800	U	720	U
Fluoranthene	10	U	1800	U	1800	U	720	U
Pyrene	10	U	1800	U	1800	U	720	U
Butyl Benzyl Phthalate	10	U	1800	U	1800	U	720	U
3,3'-Dichlorobenzidine	20	U	3700	U	3500	U	1400	U
Benzo(a)Anthracene	10	U	1800	U	1800	U	720	U
bis(2-Ethylhexyl)Phthalate	10	U	1700	J	1400	J	1700	
Chrysene	10	U	1800	U	1800	U	720	U
di-n-Octyl Phthalate	10	U	1800	U	1800	U	720	U
Benzo(b)Fluoranthene	10	U	1800	U	1800	U	720	U
Benzo(k)Fluoranthene	10	U	1800	U	1800	U	720	U
Benzo(a)Pyrene	10	U	1800	U	1800	U	720	U
Indeno(1,2,3-cd)Pyrene	10	U	1800	U	1800	U	720	U
Dibenz(a,h)Anthracene	10	U	1800	U	1800	U	720	U
Benzo(g,h,i)Perylene	10	U	1800	U	1800	U	720	U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

	#174 CS008	#174 CS009	#174 CS006	#174 CS007
RFW Batch ID:	8810-036-005	8810-036-006	8810-036-007	8810-036-008
Customer ID:	BH88A005	BH88A006	BH88A007	BH88A008
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	5	1

Surrogate Recovery

2-Fluorophenol:	97 %	75 %	95 %	55 %
Phenol-d5:	136 %	112 %	123 %	85 %
2,4,6-Br3-Phenol:	161 %	156 %	151 %	103 %
Nitrobenzene-d5:	75 %	59 %	75 %	42 %
2-Fluorobiphenyl:	87 %	79 %	79 %	56 %
p-Terphenyl-d14:	89 %	90 %	88 %	65 %

Analytes

Phenol	360 U	360 U	1800 U	370 U
bis(2-Chloroethyl)Ether	360 U	360 U	1800 U	370 U
2-Chlorophenol	360 U	360 U	1800 U	370 U
1,3-Dichlorobenzene	360 U	360 U	1800 U	370 U
1,4-Dichlorobenzene	360 U	360 U	1800 U	370 U
Benzyl Alcohol	360 U	360 U	1800 U	370 U
1,2-Dichlorobenzene	360 U	360 U	1800 U	370 U
2-Methylphenol	360 U	360 U	1800 U	370 U
bis(2-Chloroisopropyl)Ether	360 U	360 U	1800 U	370 U
4-Methylphenol	360 U	360 U	1800 U	370 U
N-Nitroso-di-n-propylamine	360 U	360 U	1800 U	370 U
Hexachloroethane	360 U	360 U	1800 U	370 U
Nitrobenzene	360 U	360 U	1800 U	370 U
Isophorone	360 U	360 U	1800 U	370 U
2-Nitrophenol	360 U	360 U	1800 U	370 U
2,4-Dimethylphenol	360 U	360 U	1800 U	370 U
Benzoic Acid	1800 U	1800 U	9000 U	1800 U
bis(2-Chloroethoxy)Methane	360 U	360 U	1800 U	370 U
2,4-Dichlorophenol	360 U	360 U	1800 U	370 U
1,2,4-Trichlorobenzene	360 U	360 U	1800 U	370 U
Naphthalene	360 U	360 U	1800 U	370 U
4-Chloroaniline	360 U	360 U	1800 U	370 U
Hexachlororbutadiene	360 U	360 U	1800 U	370 U
4-Chloro-3-methylphenol	360 U	360 U	1800 U	370 U
2-Methylnaphthalene	360 U	360 U	1800 U	370 U
Hexachlorocyclopentadiene	360 U	360 U	1800 U	370 U
2,4,6-Trichlorophenol	360 U	360 U	1800 U	370 U
2,4,5-Trichlorophenol	1800 U	1800 U	9000 U	1800 U
2-Chloronaphthalene	360 U	360 U	1800 U	370 U
2-Nitroaniline	1800 U	1800 U	9000 U	1800 U
Dimethyl Phthalate	360 U	360 U	1800 U	370 U
Acenaphthylene	360 U	360 U	1800 U	370 U
3-Nitroaniline	1800 U	1800 U	9000 U	1800 U

Modified)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information	#174 CS008	#174 CS009	#174 CS006	#174 CS007
RFW Batch ID:	8810-036-005	8810-036-006	8810-036-007	8810-036-008
Customer ID:	BH88A005	BH88A006	BH88A007	BH88A008
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	5	1

Analytes				
Acenaphthene	360 U	360 U	1800 U	370 U
2,4-Dinitrophenol	1800 U	1800 U	9000 U	1800 U
4-Nitrophenol	1800 U	1800 U	9000 U	1800 U
Dibenzofuran	360 U	360 U	1800 U	370 U
2,4-Dinitrotoluene	360 U	360 U	1800 U	370 U
2,6-Dinitrotoluene	360 U	360 U	1800 U	370 U
Diethylphthalate	360 U	360 U	1800 U	370 U
4-Chlorophenyl-phenylether	360 U	360 U	1800 U	370 U
Fluorene	360 U	360 U	1800 U	370 U
4-Nitroaniline	1800 U	1800 U	9000 U	1800 U
4,6-Dinitro-2-methylphenol	1800 U	1800 U	9000 U	1800 U
N-Nitrosodiphenylamine	360 U	360 U	1800 U	370 U
4-Bromophenyl-phenylether	360 U	360 U	1800 U	370 U
Hexachlorobenzene	360 U	360 U	1800 U	370 U
Pentachlorophenol	1800 U	1800 U	9000 U	1800 U
Phenanthrene	360 U	360 U	1800 U	76 J
Anthracene	360 U	360 U	1800 U	370 U
di-n-Butyl Phthalate	360 U	360 U	1800 U	370 U
Fluoranthene	1900	360 U	1800 U	130 J
Pyrene	360 U	360 U	1800 U	86 J
Butyl Benzyl Phthalate	360 U	360 U	1800 U	370 U
3,3'-Dichlorobenzidine	720 U	720 U	3600 U	730 U
Benzo(a)Anthracene	360 U	360 U	1800 U	370 U
bis(2-Ethylhexyl)Phthalate	430	630	1700 J	430
Chrysene	360 U	360 U	1800 U	370 U
di-n-Octyl Phthalate	360 U	360 U	1800 U	370 U
Benzo(b)Fluoranthene	360 U	360 U	1800 U	370 U
Benzo(k)Fluoranthene	360 U	360 U	1800 U	370 U
Benzo(a)Pyrene	360 U	360 U	1800 U	370 U
Indeno(1,2,3-cd)Pyrene	360 U	360 U	1800 U	370 U
Dibenz(a,h)Anthracene	360 U	360 U	1800 U	370 U
Benzo(g,h,i)Perylene	360 U	360 U	1800 U	370 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

	#174 CS012	#174 CS015	#174 CS013	?
RFW Batch ID:	8810-036-009	8810-036-011	8810-036-012	8810-036-013
Customer ID:	BH88A009	BH88A011	BH88A012	BH88A013
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

2-Fluorophenol:	86 %	74 %	90 %	96 %
Phenol-d5:	127 %	110 %	127 %	140 %
2,4,6-Br3-Phenol:	155 %	128 %	160 %	150 %
Nitrobenzene-d5:	66 %	56 %	76 %	71 %
2-Fluorobiphenyl:	81 %	68 %	72 %	70 %
p-Terphenyl-d14:	100 %	86 %	108 %	114 %

Analytes

Phenol	360 U	370 U	360 U	92 J
bis(2-Chloroethyl)Ether	360 U	370 U	360 U	360 U
2-Chlorophenol	360 U	370 U	360 U	360 U
1,3-Dichlorobenzene	360 U	370 U	360 U	360 U
1,4-Dichlorobenzene	360 U	370 U	360 U	360 U
Benzyl Alcohol	360 U	370 U	360 U	360 U
1,2-Dichlorobenzene	360 U	370 U	360 U	360 U
2-Methylphenol	360 U	370 U	360 U	360 U
bis(2-Chloroisopropyl)Ether	360 U	370 U	360 U	360 U
4-Methylphenol	360 U	370 U	360 U	360 U
N-Nitroso-di-n-propylamine	360 U	370 U	360 U	360 U
Hexachloroethane	360 U	370 U	360 U	360 U
Nitrobenzene	360 U	370 U	360 U	360 U
Isophorone	360 U	370 U	360 U	360 U
2-Nitrophenol	360 U	370 U	360 U	360 U
2,4-Dimethylphenol	360 U	370 U	360 U	360 U
Benzoic Acid	1800 U	1800 U	1800 U	1800 U
bis(2-Chloroethoxy)Methane	360 U	370 U	360 U	360 U
2,4-Dichlorophenol	360 U	370 U	360 U	360 U
1,2,4-Trichlorobenzene	360 U	370 U	360 U	360 U
Naphthalene	360 U	370 U	360 U	360 U
4-Chloroaniline	360 U	370 U	360 U	360 U
Hexachlororbutadiene	360 U	370 U	360 U	360 U
4-Chloro-3-methylphenol	360 U	370 U	720	960
2-Methylnaphthalene	360 U	370 U	360 U	360 U
Hexachlorocyclopentadiene	360 U	370 U	360 U	360 U
2,4,6-Trichlorophenol	360 U	370 U	360 U	360 U
2,4,5-Trichlorophenol	1800 U	1800 U	1800 U	1800 U
2-Chloronaphthalene	360 U	370 U	360 U	360 U
2-Nitroaniline	1800 U	1800 U	1800 U	1800 U
Dimethyl Phthalate	360 U	370 U	360 U	81 J
Acenaphthylene	360 U	370 U	360 U	360 U
3-Nitroaniline	1800 U	1800 U	1800 U	1800 U

Modified)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information	#174 CS012	#174 CS015	#174 CS013	?
RFW Batch ID:	8810-036-009	8810-036-011	8810-036-012	8810-036-013
Customer ID:	BH88A009	BH88A011	BH88A012	BH88A013
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Analytes				
Acenaphthene	360 U	370 U	360 U	360 U
2,4-Dinitrophenol	1800 U	1800 U	1800 U	1800 U
4-Nitrophenol	1800 U	1800 U	1800 U	1800 U
Dibenzofuran	360 U	370 U	360 U	360 U
2,4-Dinitrotoluene	360 U	370 U	360 U	360 U
2,6-Dinitrotoluene	360 U	370 U	360 U	360 U
Diethylphthalate	360 U	370 U	360 U	360 U
4-Chlorophenyl-phenylether	360 U	370 U	360 U	360 U
Fluorene	360 U	370 U	360 U	360 U
4-Nitroaniline	1800 U	1800 U	1800 U	1800 U
4,6-Dinitro-2-methylphenol	1800 U	1800 U	1800 U	1800 U
N-Nitrosodiphenylamine	360 U	370 U	360 U	360 U
4-Bromophenyl-phenylether	360 U	370 U	360 U	360 U
Hexachlorobenzene	360 U	370 U	360 U	360 U
Pentachlorophenol	1800 U	1800 U	1800 U	1800 U
Phenanthrene	360 U	370 U	360 U	360 U
Anthracene	360 U	370 U	360 U	360 U
di-n-Butyl Phthalate	360 U	370 U	360 U	140 J
Fluoranthene	360 U	370 U	360 U	360 U
Pyrene	360 U	370 U	360 U	360 U
Butyl Benzyl Phthalate	360 U	370 U	360 U	360 U
3,3'-Dichlorobenzidine	710 U	730 U	720 U	720 U
Benzo(a)Anthracene	360 U	370 U	360 U	360 U
bis(2-Ethylhexyl)Phthalate	410	380	590	360 U
Chrysene	360 U	370 U	360 U	360 U
di-n-Octyl Phthalate	360 U	370 U	360 U	360 U
Benzo(b)Fluoranthene	360 U	370 U	360 U	360 U
Benzo(k)Fluoranthene	360 U	370 U	360 U	360 U
Benzo(a)Pyrene	360 U	370 U	360 U	360 U
Indeno(1,2,3-cd)Pyrene	360 U	370 U	360 U	360 U
Dibenz(a,h)Anthracene	360 U	370 U	360 U	360 U
Benzo(g,h,i)Perylene	360 U	370 U	360 U	360 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

			#174 CS011	FB
RFW Batch ID:	8810-036-013 MS	8810-036-013 MSD	8810-036-014	8810-036-015
Customer ID:	BH88A013	BH88A013	BH88A014	BH88A015
Matrix:	Soil	Soil	Soil	Water
Units:	UG/KG	UG/KG	UG/KG	UG/L
Dilution Factor:	1	1	5	1

Surrogate Recovery

2-Fluorophenol:	66 %	72 %	63 %	49 %
Phenol-d5:	97 %	104 %	99 %	76 %
2,4,6-Br3-Phenol:	60 %	109 %	118 %	45 %
Nitrobenzene-d5:	52 %	57 %	65 %	50 %
2-Fluorobiphenyl:	53 %	54 %	75 %	42 %
p-Terphenyl-d14:	86 %	84 %	82 %	83 %

Analytes

Phenol	71 %	76 %	1700 U	10 U
bis(2-Chloroethyl)Ether	360 U	360 U	1700 U	10 U
2-Chlorophenol	70 %	74 %	1700 U	10 U
1,3-Dichlorobenzene	360 U	360 U	1700 U	10 U
1,4-Dichlorobenzene	45 %	47 %	1700 U	10 U
Benzyl Alcohol	360 U	360 U	1700 U	10 U
1,2-Dichlorobenzene	360 U	360 U	1700 U	10 U
2-Methylphenol	360 U	360 U	1700 U	10 U
bis(2-Chloroisopropyl)Ether	360 U	360 U	1700 U	10 U
4-Methylphenol	360 U	360 U	1700 U	10 U
N-Nitroso-di-n-propylamine	63 %	66 %	1700 U	10 U
Hexachloroethane	360 U	360 U	1700 U	10 U
Nitrobenzene	360 U	360 U	1700 U	10 U
Isophorone	360 U	360 U	1700 U	10 U
2-Nitrophenol	360 U	360 U	1700 U	10 U
2,4-Dimethylphenol	360 U	360 U	1700 U	10 U
Benzoic Acid	1800 U	1800 U	8700 U	50 U
bis(2-Chloroethoxy)Methane	360 U	360 U	1700 U	10 U
2,4-Dichlorophenol	360 U	360 U	1700 U	10 U
1,2,4-Trichlorobenzene	56 %	59 %	1700 U	10 U
Naphthalene	360 U	360 U	1700 U	10 U
4-Chloroaniline	360 U	360 U	1700 U	10 U
Hexachlororbutadiene	360 U	360 U	1700 U	10 U
4-Chloro-3-methylphenol	94 %	99 %	1700 U	10 U
2-Methylnaphthalene	360 U	360 U	1700 U	10 U
Hexachlorocyclopentadiene	360 U	360 U	1700 U	10 U
2,4,6-Trichlorophenol	360 U	360 U	1700 U	10 U
2,4,5-Trichlorophenol	1800 U	1800 U	8700 U	50 U
2-Chloronaphthalene	360 U	360 U	1700 U	10 U
2-Nitroaniline	1800 U	1800 U	8700 U	50 U
Dimethyl Phthalate	360 U	360 U	1700 U	10 U
Acenaphthylene	360 U	360 U	1700 U	10 U
3-Nitroaniline	1800 U	1800 U	8700 U	50 U

Modified)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

FW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

			#174 CS011	FB
RFW Batch ID:	8810-036-013 MS	8810-036-013 MSD	8810-036-014	8810-036-015
Customer ID:	BH88A013	BH88A013	BH88A014	BH88A015
Matrix:	Soil	Soil	Soil	Water
Units:	UG/KG	UG/KG	UG/KG	UG/L
Dilution Factor:	1	1	5	1

Analytes

Acenaphthene	63	%	66	%	1700	U	10	U
2,4-Dinitrophenol	1800	U	1800	U	8700	U	50	U
4-Nitrophenol	44	%	33	%	8700	U	50	U
Dibenzofuran	360	U	360	U	1700	U	10	U
2,4-Dinitrotoluene	77	%	73	%	1700	U	10	U
2,6-Dinitrotoluene	360	U	360	U	1700	U	10	U
Diethylphthalate	360	U	360	U	1700	U	10	U
4-Chlorophenyl-phenylether	360	U	360	U	1700	U	10	U
Fluorene	360	U	360	U	1700	U	10	U
4-Nitroaniline	1800	U	1800	U	8700	U	50	U
4,6-Dinitro-2-methylphenol	1800	U	1800	U	8700	U	50	U
N-Nitrosodiphenylamine	360	U	360	U	1700	U	10	U
4-Bromophenyl-phenylether	360	U	360	U	1700	U	10	U
Hexachlorobenzene	360	U	360	U	1700	U	10	U
Pentachlorophenol	59	%	122	%	8700	U	50	U
Phenanthrene	360	U	360	U	1700	U	10	U
Anthracene	360	U	360	U	1700	U	10	U
di-n-Butyl Phthalate	360	U	95	J	1700	U	10	U
Fluoranthene	360	U	360	U	1700	U	10	U
Pyrene	66	%	68	%	1700	U	10	U
Butyl Benzyl Phthalate	360	U	360	U	1700	U	10	U
3,3'-Dichlorobenzidine	720	U	300	J	3500	U	20	U
Benzo(a)Anthracene	360	U	360	U	1700	U	10	U
bis(2-Ethylhexyl)Phthalate	360	U	360	U	1100	J	10	U
Chrysene	360	U	360	U	1700	U	10	U
di-n-Octyl Phthalate	360	U	360	U	1700	U	10	U
Benzo(b)Fluoranthene	360	U	360	U	1700	U	10	U
Benzo(k)Fluoranthene	360	U	360	U	1700	U	10	U
Benzo(a)Pyrene	360	U	360	U	1700	U	10	U
Indeno(1,2,3-cd)Pyrene	360	U	360	U	1700	U	10	U
Dibenz(a,h)Anthracene	360	U	360	U	1700	U	10	U
Benzo(g,h,i)Perylene	360	U	360	U	1700	U	10	U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

	#174 C5014	#174 C5010	#174 C5003	#174 C5001
RFW Batch ID:	8810-036-016	8810-036-017	8810-036-018	8810-036-019
Customer ID:	BH88A016	BH88A017	BH88A018	BH88A019
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

2-Fluorophenol:	77 %	80 %	66 %	73 %
Phenol-d5:	124 %	124 %	98 %	112 %
2,4,6-Br3-Phenol:	113 %	105 %	96 %	92 %
Nitrobenzene-d5:	54 %	55 %	47 %	51 %
2-Fluorobiphenyl:	70 %	62 %	66 %	71 %
p-Terphenyl-d14:	88 %	71 %	82 %	82 %

Analytes

Phenol	350 U	340 U	340 U	340 U
bis(2-Chloroethyl)Ether	350 U	340 U	340 U	340 U
2-Chlorophenol	350 U	340 U	340 U	340 U
1,3-Dichlorobenzene	350 U	340 U	340 U	340 U
1,4-Dichlorobenzene	350 U	340 U	340 U	340 U
Benzyl Alcohol	350 U	340 U	340 U	340 U
1,2-Dichlorobenzene	350 U	340 U	340 U	340 U
2-Methylphenol	350 U	340 U	340 U	340 U
bis(2-Chloroisopropyl)Ether	350 U	340 U	340 U	340 U
4-Methylphenol	350 U	340 U	340 U	340 U
N-Nitroso-di-n-propylamine	350 U	340 U	340 U	340 U
Hexachloroethane	350 U	340 U	340 U	340 U
Nitrobenzene	350 U	340 U	340 U	340 U
Isophorone	350 U	340 U	340 U	340 U
2-Nitrophenol	350 U	340 U	340 U	340 U
2,4-Dimethylphenol	350 U	340 U	340 U	340 U
Benzoic Acid	1800 U	1700 U	1700 U	1700 U
bis(2-Chloroethoxy)Methane	350 U	340 U	340 U	340 U
2,4-Dichlorophenol	350 U	340 U	340 U	340 U
1,2,4-Trichlorobenzene	350 U	340 U	340 U	340 U
Naphthalene	350 U	340 U	340 U	340 U
4-Chloroaniline	350 U	340 U	340 U	340 U
Hexachlororbutadiene	350 U	340 U	340 U	340 U
4-Chloro-3-methylphenol	350 U	340 U	340 U	340 U
2-Methylnaphthalene	350 U	340 U	340 U	340 U
Hexachlorocyclopentadiene	350 U	340 U	340 U	340 U
2,4,6-Trichlorophenol	350 U	340 U	340 U	340 U
2,4,5-Trichlorophenol	1800 U	1700 U	1700 U	1700 U
2-Chloronaphthalene	350 U	340 U	340 U	340 U
2-Nitroaniline	1800 U	1700 U	1700 U	1700 U
Dimethyl Phthalate	350 U	340 U	340 U	340 U
Acenaphthylene	350 U	340 U	340 U	340 U
3-Nitroaniline	1800 U	1700 U	1700 U	1700 U

Modifiedod)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-036 Client: ROCKWELL INTERNATIONAL - RF

Sample Information	#174 CS014	#174 CS010	#174 CS003	#174 CS001
RFW Batch ID:	8810-036-016	8810-036-017	8810-036-018	8810-036-019
Customer ID:	BH88A016	BH88A017	BH88A018	BH88A019
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Analytes

Acenaphthene	350	U	340	U	340	U	340	U
2,4-Dinitrophenol	1800	U	1700	U	1700	U	1700	U
4-Nitrophenol	1800	U	1700	U	1700	U	1700	U
Dibenzofuran	350	U	340	U	340	U	340	U
2,4-Dinitrotoluene	350	U	340	U	340	U	340	U
2,6-Dinitrotoluene	350	U	340	U	340	U	340	U
Diethylphthalate	350	U	340	U	340	U	340	U
4-Chlorophenyl-phenylether	350	U	340	U	340	U	340	U
Fluorene	350	U	340	U	340	U	340	U
4-Nitroaniline	1800	U	1700	U	1700	U	1700	U
4,6-Dinitro-2-methylphenol	1800	U	1700	U	1700	U	1700	U
N-Nitrosodiphenylamine	350	U	340	U	340	U	340	U
4-Bromophenyl-phenylether	350	U	340	U	340	U	340	U
Hexachlorobenzene	350	U	340	U	340	U	340	U
Pentachlorophenol	1800	U	1700	U	1700	U	1700	U
Phenanthrene	350	U	340	U	90	J	340	U
Anthracene	350	U	340	U	340	U	340	U
di-n-Butyl Phthalate	350	U	340	U	340	U	340	U
Fluoranthene	350	U	340	U	130	J	130	J
Pyrene	350	U	340	U	110	J	97	J
Butyl Benzyl Phthalate	350	U	340	U	340	U	340	U
3,3'-Dichlorobenzidine	700	U	670	U	680	U	690	U
Benzo(a)Anthracene	350	U	340	U	110	J	340	U
bis(2-Ethylhexyl)Phthalate	530		420		340	U	340	U
Chrysene	350	U	340	U	130	J	98	J
di-n-Octyl Phthalate	350	U	340	U	340	U	340	U
Benzo(b)Fluoranthene	350	U	340	U	340	U	340	U
Benzo(k)Fluoranthene	350	U	340	U	340	U	340	U
Benzo(a)Pyrene	350	U	340	U	340	U	340	U
Indeno(1,2,3-cd)Pyrene	350	U	340	U	340	U	340	U
Dibenz(a,h)Anthracene	350	U	340	U	340	U	340	U
Benzo(g,h,i)Perylene	350	U	340	U	340	U	340	U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROCKY FLATS

November 18, 1988

RFW#: 88-10-S036

Tentatively Identified Compounds,
BNA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/L
BLANK	11/04/88		NONE FOUND	
BH88A015	11/04/88		NONE FOUND	

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A002	11/04/88	1500-2500	UNRESOLVED HYDROCARBON COMPLEX	
BH88A003	11/04/88	1866	UNKNOWN	700
		1952	UNKNOWN	1240
		1975	UNKNOWN	2310
		2119	UNKNOWN	1420
		2125	UNKNOWN	890
		2133	UNKNOWN	890
		2322	UNKNOWN	1070
		2640	UNKNOWN	8340
		2682	UNKNOWN	1070
BH88A004	11/06/88	1100-2450	UNRESOLVED HYDROCARBON COMPLEX	
BH88A005	11/06/88	1500-3000	UNRESOLVED HYDROCARBON COMPLEX	

ROCKY FLATS

November 18, 1988

RFW#: 88-10-S036

Tentatively Identified Compounds,
BNA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A006	11/06/88	1408	UNKNOWN	360
		1646	UNKNOWN	145
		1921	UNKNOWN	830
		2051	UNKNOWN	1400
		2226	UNKNOWN	720
		2552	UNKNOWN	580
		2877	UNKNOWN	5300
		2929	UNKNOWN	2400
BH88A007	11/06/88	1890	UNKNOWN	900
		1906	UNKNOWN	1440
		1923	UNKNOWN	1080
		2011	UNKNOWN	1795
		2028	UNKNOWN	2690
		2042	UNKNOWN	1975
		2078	UNKNOWN	2330

ROCKY FLATS

November 18, 1988

RFW#: 88-10-S036

Tentatively Identified Compounds,
BNA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A008	11/06/88	1409	UNKNOWN	550
		1649	UNKNOWN	180
		1760	UNKNOWN	150
		1811	UNKNOWN	220
		1889	UNKNOWN	220
		1922	UNKNOWN	440
		1983	UNKNOWN	330
		2011	UNKNOWN	220
		2053	UNKNOWN	840
		2134	UNKNOWN	330
		2228	UNKNOWN	590
		2478	UNKNOWN	470
		2880	UNKNOWN	4500
		2932	UNKNOWN	660
		2972	UNKNOWN	430
BH88A009	11/06/88	1409	UNKNOWN	320
		1647	UNKNOWN	250
		1811	UNKNOWN	285
		1889	UNKNOWN	250
		1923	UNKNOWN	510
		1983	UNKNOWN	180
		2053	UNKNOWN	890
		2083	UNKNOWN	215
		2132	UNKNOWN	180
		2228	UNKNOWN	460
		2382	UNKNOWN	460
		2555	UNKNOWN	505
		2886	UNKNOWN	8400
		2935	UNKNOWN	2100

ROCKY FLATS

November 18, 1988

RFW#: 88-10-S036

Tentatively Identified Compounds,
BNA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A011	11/06/88	1409	UNKNOWN	290
		1647	UNKNOWN	180
		1811	UNKNOWN	180
		1889	UNKNOWN	150
		1922	UNKNOWN	620
		2045	UNKNOWN	880
		2052	UNKNOWN	1400
		2227	UNKNOWN	850
		2379	UNKNOWN	540
		2552	UNKNOWN	740
		2879	UNKNOWN	7500
		2928	UNKNOWN	1600
BH88A012	11/06/88	1500-2500	UNRESOLVED HYDROCARBON COMPLEX	
BH88A013	11/06/88	1500-2400	UNRESOLVED HYDROCARBON COMPLEX	
BH88A014	11/06/88	1500-2400	UNRESOLVED HYDROCARBON COMPLEX	
BH88A016	11/10/88	1408	UNKNOWN	1620
		1648	UNKNOWN	630
		1888	UNKNOWN	140
		1922	UNKNOWN	210
		2051	UNKNOWN	700
		2226	UNKNOWN	460
		2875	UNKNOWN	6000
		2932	UNKNOWN	6460

ROCKY FLATS

November 18, 1988

RFW#: 88-10-S036

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Tentatively Identified Compounds,
BNA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A017	11/10/88	1983	ALKANE	470
		1991	PNA	1100
		2052	UNKNOWN	720
		2227	UNKNOWN	1200
		2879	UNKNOWN	20000
BH88A018	11/10/88	1407	UNKNOWN	480
		1645	UNKNOWN	140
		1887	UNKNOWN	170
		1921	UNKNOWN	204
		1982	UNKNOWN	140
		2051	UNKNOWN	750
		2477	UNKNOWN	600
		2883	UNKNOWN	8700
		2937	UNKNOWN	2500
		2977	UNKNOWN	1060
BH88A019	11/10/88	1407	UNKNOWN	380
		1646	UNKNOWN	210
		1921	UNKNOWN	210
		2051	UNKNOWN	580
		2226	UNKNOWN	650
		2476	UNKNOWN	410
		2517	UNKNOWN	210
		2881	UNKNOWN	3640
		2935	UNKNOWN	1310

Reviewed and approved for
Robert Carney
Unit Leader

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

ORGANICS CASE NARRATIVE

Client: ROCKWELL INTERNATIONAL
RFW #: 8810S108
W.O. #: 2029-38-01-0000

FRACTION: VOA

1. This set of samples consisted of 1 water and 2 soil samples collected on 10/27/88.

2. The soil samples were analyzed on 12/03/88 in accordance with SW 846 protocols.

3. Due to GC/MS VOA instrument down time, samples BH88A048; BH88A049; and BH88A050 were not analyzed within the proper holding time. The samples were analyzed by 601/602 GC-ELCD and GC-PID methods. All of sample BH88A050 was used in GC analysis.

4. All tuning and calibration criteria were met for all samples.

5. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

6. Of the 6 surrogates analyzed, none were outside of QC limits.

The following data qualifiers are used in this report:

U - Indicates that the compound was analyzed for but not detected.
J - Indicates an estimated trace value.
B - Indicates the compound was found in the blank.

Date: 12/30/88

Approved by:

WESTON ANALYTICS
VOLATILE ANALYTICAL DATA PACKAGE FOR
ROCKWELL INTERNATIONAL - RF

DATE RECEIVED: 10/31/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A048	8810-108-001	10/27/88	NA	12/03/88
BH88A049	8810-108-002	10/27/88	NA	12/03/88
LAB QC:				
BLANK	8810-108-0001BL	NA	NA	NA

Robert F. Carney, FOR
Norman W. Flynn
Organic Section Manager
WESTON Analytical Laboratories

12/20/88
DATE

ROCKY FLATS

December 20, 1988

88-10-S108

Tentatively Identified Compounds,
VOA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
-001	12/03/88		NONE FOUND	
-002	12/03/88		NONE FOUND	

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/L
BLANK	12/03/88		NONE FOUND	

Reviewed and approved R. F. Carney
Robert Carney
Unit Leader

WESTON ANALYTICS
ORGANIC DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-108 Client: ROCKY FLATS

Sample Information

CS022, #182 CS023, #182

RFW Batch ID:	8810-108-0001BL	8810-108-001	8810-108-002
Customer ID:	BLANK	BH88A048	BH88A049
Matrix:	Water	Soil	Soil
Units:	UG/L	UG/KG	UG/KG
Dilution Factor:	1	1	1

Surrogate Recovery

Toluene-d8:	99 %	111 %	97 %
Bromofluorobenzene:	102 %	80 %	92 %
1,2-Dichloroethane-d4:	96 %	77 %	70 %

Analytes

Chloromethane	10 U	11 U	11 U
Bromomethane	10 U	11 U	11 U
Vinyl Chloride	10 U	11 U	11 U
Chloroethane	10 U	11 U	11 U
Methylene Chloride	2.0 J	8.0 B	7.0 B
Acetone	10 U	19	19
Carbon Disulfide	5.0 U	5.6 U	5.4 U
1,1-Dichloroethene	5.0 U	5.0 J	5.4 U
1,1-Dichloroethane	5.0 U	4.0 J	5.4 U
Trans-1,2-Dichloroethene	5.0 U	5.6 U	5.4 U
Chloroform	5.0 U	5.6 U	5.4 U
1,2-Dichloroethane	5.0 U	5.6 U	5.4 U
2-Butanone	10 U	11 U	11 U
1,1,1-Trichloroethane	5.0 U	220	5.4 U
Carbon Tetrachloride	5.0 U	5.6 U	5.4 U
Vinyl Acetate	10 U	11 U	11 U
Bromodichloromethane	5.0 U	5.6 U	5.4 U
1,2-Dichloropropane	5.0 U	5.6 U	5.4 U
Trans-1,3-Dichloropropene	5.0 U	5.6 U	5.4 U
Trichloroethene	5.0 U	5.6 U	5.4 U
Dibromochloromethane	5.0 U	5.6 U	5.4 U
1,1,2-Trichloroethane	5.0 U	5.6 U	5.4 U
Benzene	5.0 U	5.6 U	5.4 U
cis-1,3-Dichloropropene	5.0 U	5.6 U	5.4 U
2-Chloroethylvinylether	10 U	11 U	11 U
Bromoform	5.0 U	5.6 U	5.4 U
4-Methyl-2-pentanone	10 U	11 U	11 U
2-Hexanone	10 U	11 U	11 U
Tetrachloroethene	5.0 U	1.0 J	5.4 U
1,1,2,2-Tetrachloroethane	5.0 U	5.6 U	5.4 U
Toluene	5.0 U	7.0	5.4 U
Chlorobenzene	5.0 U	5.6 U	5.4 U
Ethylbenzene	5.0 U	7.0	5.4 U
Styrene	5.0 U	5.6 U	5.4 U
Total Xylenes	5.0 U	14	5.4 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-0001BL

Customer ID BLANK

GCL#

TENTATIVELY IDENTIFIED COMPOUNDS

Five (5) Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

VOLATILE COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION
Unknown hydrocarbon	25/03	9 ug/l
Unknown	27.90	51 ug/l
Unknown hydrocarbon	28.39	6 ug/l
Unknown hydrocarbon	29.39	10 ug/l
Unknown hydrocarbon	29.63	7 ug/l

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-0002BL

Customer ID BLANK

GCL#

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-0003BL

Customer ID BLANK

GCL#

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-0004BL

Customer ID BLANK

GCL#

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-001 Trip Blank

Customer ID BH88A32

GCL# 142966

TENTATIVELY IDENTIFIED COMPOUNDS

Ten (10) Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

VOLATILE COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION
Unknown hydrocarbon	21.95	21 ug/l
Unknown hydrocarbon	24.22	15 ug/l
Unknown hydrocarbon	25.06	83 ug/l
Unknown hydrocarbon	25.77	29 ug/l
Unknown	26.37	10 ug/l
Unknown	26.75	14 ug/l
Unknown hydrocarbon	26.94	12 ug/l
Unknown hydrocarbon	27.14	11 ug/l
Unknown	27.94	65 ug/l

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-002 CS031, #176

Customer ID BH88A33

GCL# 142967

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-003

Customer ID BH88A34 CS028, #176

GCL# 142968

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-004

Customer ID BH88A35 PS029, #176

GCL# 142969

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-005

Customer ID BH88A36 CS033, #176

GCL# 142970

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-006

Customer ID BH88A37 es018, #175

GCL# 142971

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-007

Customer ID BH88A38 CS019, #175

GCL# 142972

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-008

Customer ID BH88A39 CSOA1, #175

GCL# 142973

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-009

Customer ID BH88A40 not on list

GCL# 142974

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-010

Customer ID BH88A41 Field Blank

GCL# 142975

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

RFW# 8810-070-011

Customer ID BH88A42 es020, #175

GCL# 142976

TENTATIVELY IDENTIFIED COMPOUNDS

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

176 Unknowns

EBASCO SERVICES INCORPORATED

BY _____ DATE _____ SHEET ____ OF ____

DEPT. _____

	COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
.8	Unknown	6.57	5800	ug/kg	J	A
	Unknown	27.53	230	ug/kg	J	
	Unknown	27.88	170	ug/kg	J	
	Unknown	28.92	270	ug/kg	J	
	Unknown	32.13	380	ug/kg	J	
	Unknown Hydrocarbon	35.51	290	ug/kg	J	
	Unknown	36.64	770	ug/kg	J	
	Unknown Hydrocarbon	38.05	440	ug/kg	J	
	Unknown Hydrocarbon	41.52	400	ug/kg	J	
	Unknown	46.33	4000	ug/kg	J	
	Unknown	47.04	720	ug/kg	J	
CS029	Unknown	6.55	7800	ug/kg	J	A
	Unknown	32.12	390	ug/kg	J	
	Unknown Hydrocarbon	32.38	150	ug/kg	J	
	Unknown Hydrocarbon	33.43	180	ug/kg	J	
	Unknown Hydrocarbon	34.43	200	ug/kg	J	
	Unknown Hydrocarbon	35.49	280	ug/kg	J	
	Unknown	36.64	710	ug/kg	J	
	Unknown Hydrocarbon	38.03	530	ug/kg	J	
	Unknown Hydrocarbon	41.51	390	ug/kg	J	
	Unknown	42.04	140	ug/kg	J	
	Unknown	46.29	3400	ug/kg	J	
	Unknown	47.03	1400	ug/kg	J	
CS031	Unknown	6.52	6900	ug/kg	J	A
	Unknown	29.30	1100	ug/kg	J	
	Unknown	32.11	480	ug/kg	J	
	Unknown	36.62	700	ug/kg	J	
	Unknown	46.24	2400	ug/kg	J	
	Unknown	46.98	880	ug/kg	J	
CS033	Unknown	6.59	6900	ug/kg	J	A
	Unknown	27.89	150	ug/kg	J	
	Unknown	32.11	540	ug/kg	J	
	Unknown	36.63	730	ug/kg	J	
	Unknown Hydrocarbon	38.03	340	ug/kg	J	
	Unknown Hydrocarbon	41.50	330	ug/kg	J	
	Unknown	46.28	2200	ug/kg	J	
	Unknown	47.04	1100	ug/kg	J	

Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

581 2-88

#1 TO Unknowns

EBASCO SERVICES INCORPORATED

SHEET ___ OF ___ DEPT. NO. ___ OFS NO. ___ BY ___ DATE ___ CHKD. BY ___ DATE ___ CLIENT ___ PROJECT ___ SUBJECT ___

	COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
CS018	Unknown	6.63	11000	ug/kg	J	A
	Unknown	29.00	890	ug/kg	J	
	Unknown	32.15	670	ug/kg	J	
	Unknown	35.53	460	ug/kg	J	
	Unknown	36.67	860	ug/kg	J	
	Unknown	46.38	3100	ug/kg	J	
	Unknown	47.14	1300	ug/kg	J	
CS019	Unknown	6.58	9600	ug/kg	J	A
	Unknown Hydrocarbon	22.18	340	ug/kg	J	
	Unknown Hydrocarbon	22.93	280	ug/kg	J	
	Unknown Hydrocarbon	23.69	430	ug/kg	J	
	Unknown Hydrocarbon	23.77	410	ug/kg	J	
	Unknown	24.66	780	ug/kg	J	
	Unknown Hydrocarbon	25.13	350	ug/kg	J	
	Unknown Hydrocarbon	26.48	420	ug/kg	J	
	Unknown Hydrocarbon	27.77	370	ug/kg	J	
	Unknown Hydrocarbon	29.01	350	ug/kg	J	
	Unknown	30.20	390	ug/kg	J	
	Unknown	31.33	250	ug/kg	J	
	Unknown	32.13	620	ug/kg	J	
	Unknown	32.40	250	ug/kg	J	
	Unknown	33.45	280	ug/kg	J	
	Unknown	34.46	180	ug/kg	J	
	Unknown	35.53	290	ug/kg	J	
	Unknown	36.66	870	ug/kg	J	
	Unknown	46.32	1900	ug/kg	J	
	Unknown	47.08	730	ug/kg	J	
CS020	Unknown	6.48	5100	ug/kg	J	A
	Unknown	28.76	290	ug/kg	J	B
	Unknown	32.06	500	ug/kg	J	B
	Unknown	36.54	830	ug/kg	J	B
	Unknown	46.09	1900	ug/kg	J	
	Unknown	46.84	850	ug/kg	J	

581 2-88

EBASCO SERVICES INCORPORATED

BY _____ DATE _____ SHEET _____ OF _____

CHKD. BY _____ DATE _____ OFS NO. _____ DEPT. NO. _____

CLIENT _____

PROJECT _____

SUBJECT _____

#175

Unknowns (continued)

CSOal

Unknown	6.56	7600	ug/kg	J A
Unknown	24.65	300	ug/kg	J
Unknown	32.15	410	ug/kg	J
Unknown	32.77	310	ug/kg	J
Unknown	33.47	240	ug/kg	J
Unknown	33.66	410	ug/kg	J
Unknown	33.95	200	ug/kg	J
Unknown	34.48	510	ug/kg	J
Unknown	34.81	210	ug/kg	J
Phosphoric Acid Ester	35.37	260	ug/kg	J
Unknown	35.56	390	ug/kg	J
Phosphoric Acid Ester	35.70	420	ug/kg	J
Unknown	36.69	700	ug/kg	J
Unknown	37.64	540	ug/kg	J
Unknown	38.10	420	ug/kg	J
Unknown Hydrocarbon	41.56	960	ug/kg	J
Unknown	46.34	1400	ug/kg	J

Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

581 2-88

WESTON
MANAGERS DESIGNERS/CONSULTANTS
7720 LORRAINE AVENUE
SUITE 105
STOCKTON, CA 95210
PHONE. 209-957-3405

January 4, 1989

Kirk McKinley
Rockwell International

Dear Mr. McKinley:

Enclosed are radiochemistry data for samples collected in October and November, 1988 at Rocky Flats.

Please call me, if you have any questions.

Sincerely,

ROY F. WESTON, INC.

Peg Beaty

Peg Beaty
Senior Project Manager

PB:te

cc: Tom Greengard
Brent Lewis

182 176
176 175
174
170
177

Accu-Labs Research, Inc.
15 W. 48th Avenue Wheat Ridge, Colorado 80033 (303) 423-2766

December 28, 1988

Ms. Peg Beatty
Weston Analytics
7720 Lorraine Ave.
Suite 105
Stockton, CA 95210

Dear Ms. Beatty,

Enclosed are the analytical reports in the requested format as per Contract LL-0421 for the following ALR Nos.:

9299-28380-8
9299-28412-2
9299-28389-9
9612-28466-8
9612-28524-2

These reports cover the Radiochemistry portion only.

A floppy disk is being sent under seperate cover which contains all the data on the hard copies.

If you have any questions, please feel free to call.

Sincerely,

For Bud Summers
Radiochemistry
Supervisor

BS/dh

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Sample Information	#182 CS022	#182 CS023
RFW Batch ID:	2000-127-100	2000-128-100
Customer ID:	BH88A048	BH88A049
Laboratory ID:	9612-28524-2-1	9612-28524-2-2
Matrix:	Soil	Soil

Radio Chemistry

Gross Alpha.....	26 ± 13	pci/g	22 ± 13	pci/g
Gross Beta.....	25 ± 6	pci/g	29 ± 6	pci/g
Uranium 233, 234.....	1.3 ± 0.2	pci/g	0.56 ± 0.10	pci/g
Uranium 235.....				
Uranium 238.....	5.9 ± 0.3	pci/g	0.54 ± 0.10	pci/g
Strontium 89, 90.....				
Plutonium 239, 240.....	-0.02 ± 0.10	pci/g	-0.02 ± 0.10	pci/g
Americium 241.....	-0.03 ± 0.09	pci/g	-0.04 ± 0.09	pci/g
Cesium 137.....				
Tritium.....	0.13 ± 0.14	pci/ml	0.09 ± 0.14	pci/ml
% Moisture.....	8.1		6.5	

uncertainty

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Sample Information	#176 CS024		#176 CS025		#176 CS026	
RFW Batch ID:	2000-119-100		2000-120-100		2000-121-100	
Customer ID:	[redacted]8A024		[redacted]A025		[redacted]026	
Laboratory ID:	9612-28466-8-1		9612-28466-8-2		9612-28466-8-3	
Matrix:	Soil		Soil		Soil	
Radio Chemistry						
Gross Alpha.....	28 ± 13	pci/g	21 ± 12	pci/g	16 ± 11	pci/g
Gross Beta.....	29 ± 6	pci/g	22 ± 6	pci/g	14 ± 6	pci/g
Uranium 233, 234.....	1.3 ± 0.3	pci/g	0.66 ± 0.16	pci/g	0.67 ± 0.14	pci/g
Uranium 235.....						
Uranium 238.....	1.1 ± 0.3	pci/g	0.79 ± 0.16	pci/g	0.56 ± 0.12	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.43 ± 0.17	pci/g	0.20 ± 0.15	pci/g	0.19 ± 0.15	pci/g
Americium 241.....	0.39 ± 0.11	pci/g	0.17 ± 0.07	pci/g	0.28 ± 0.08	pci/g
Cesium 137.....						
Tritium.....	-0.05 ± 0.15	pci/ml	0.07 ± 0.16	pci/ml	-0.03 ± 0.15	pci/ml
% Moisture.....	7.3		5.1		4.0	

...le Information			FB		#176 CS027	
RFW Batch ID:	2000-122-100		2000-123-100		2000-124-100	
Customer ID:	BHAA8027+MS,MSD – ?		BH88A028		[redacted]8A029	
Laboratory ID:	9612-28466-8-4	Cardinal	9612-28466-8-5		9612-28466-8-6	
Matrix:	Soil	bore #	Water	Field Blank	Soil	
Radio Chemistry						
Gross Alpha.....	13 ± 11	pci/g	0 ± 1	pci/l	18 ± 12	pci/g
Gross Beta.....	13 ± 6	pci/g	0 ± 2	pci/l	18 ± 6	pci/g
Uranium 233, 234.....	0.68 ± 0.15	pci/g	0.0 ± 0.1	pci/l	0.51 ± 0.14	pci/g
Uranium 235.....						
Uranium 238.....	0.51 ± 0.12	pci/g	0.0 ± 0.1	pci/l	0.53 ± 0.13	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.19 ± 0.13	pci/g	0.0 ± 0.1	pci/l	1.0 ± 0.2	pci/g
Americium 241.....	0.32 ± 0.08	pci/g	0.0 ± 0.1	pci/l	0.34 ± 0.08	pci/g
Cesium 137.....						
Tritium.....	-0.05 ± 0.15	pci/ml	0.10 ± 0.16	pci/l	-0.01 ± 0.15	pci/ml
% Moisture.....	4.3				5.5	

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#176 CS032	#176 CS03D
RFW Batch ID:	2000-125-100	2000-126-100
Customer ID:	[redacted]A030	[redacted]A031
Laboratory ID:	9612-28466-8-7	9612-28466-8-8
Matrix:	Soil	Soil

Radio Chemistry

Gross Alpha.....	31 ± 14	pci/g	28 ± 13	pci/g
Gross Beta.....	15 ± 6	pci/g	20 ± 6	pci/g
Uranium 233, 234.....	0.66 ± 0.17	pci/g	0.80 ± 0.15	pci/g
Uranium 235.....				
Uranium 238.....	0.64 ± 0.16	pci/g	0.57 ± 0.12	pci/g
Strontium 89, 90.....				
Plutonium 239, 240.....	0.00 ± 0.12	pci/g	0.70 ± 0.16	pci/g
Americium 241.....	0.18 ± 0.07	pci/g	0.30 ± 0.08	pci/g
Cesium 137.....				
Tritium.....	0.18 ± 0.16	pci/ml	0.05 ± 0.15	pci/ml
% Moisture.....	5.9		3.8	

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Sample Information

	#174 CS015	#174 CS013	
RFW Batch ID:	2000-110-100	2000-111-100	2000-112-100
Customer ID:	BH88A011	BH88A012	BH88A013+MS+MSD
Laboratory ID:	9299-28388-9-1	9299-28388-9-2	9299-28388-9-3
Matrix:	Soil	Soil	Soil

Radio Chemistry

Gross Alpha.....	28 ± 10	pci/g	18 ± 9	pci/g	26 ± 10	pci/g
Gross Beta.....	25 ± 6	pci/g	26 ± 6	pci/g	39 ± 6	pci/g
Uranium 233, 234.....	0.83 ± 0.13	pci/g	0.83 ± 0.12	pci/g	0.63 ± 0.09	pci/g
Uranium 235.....						
Uranium 238.....	0.81 ± 0.13	pci/g	0.81 ± 0.11	pci/g	0.49 ± 0.08	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.05 ± 0.03	pci/g	0.01 ± 0.03	pci/g	0.02 ± 0.03	pci/g
Americium 241.....	0.00 ± 0.04	pci/g	0.03 ± 0.05	pci/g	0.00 ± 0.04	pci/g
Cesium 137.....						
Tritium.....	-0.01 ± 0.15	pci/ml	-0.08 ± 0.15	pci/ml	-0.05 ± 0.15	pci/ml
% Moisture.....	6.0		5.4		3.8	

Sample Information

	#174 CS011	F3	#174 CS014
RFW Batch ID:	2000-113-100	2000-114-100	2000-115-100
Customer ID:	BH88A014	BH88A015	BH88A016
Laboratory ID:	9299-28388-9-4	9299-28388-9-5	9299-28388-9-6
Matrix:	Soil	Water	Soil

Radio Chemistry

Gross Alpha.....	42 ± 12	pci/g	0 ± 3	pci/l	26 ± 10	pci/g
Gross Beta.....	36 ± 6	pci/g	5 ± 8	pci/l	19 ± 5	pci/g
Uranium 233, 234.....	0.87 ± 0.11	pci/g	0.0 ± 0.3	pci/l	0.72 ± 0.20	pci/g
Uranium 235.....						
Uranium 238.....	0.84 ± 0.11	pci/g	-0.1 ± 0.4	pci/l	0.72 ± 0.20	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.03 ± 0.03	pci/g	**		0.00 ± 0.02	pci/g
Americium 241.....	0.02 ± 0.05	pci/g	**		-0.01 ± 0.03	pci/g
Cesium 137.....						
Tritium.....	0.00 ± 0.15	pci/ml	30 ± 150	pci/l	-0.05 ± 0.15	pci/ml
% Moisture.....	3.4				3.1	

** Insufficient Sample.

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 2

Sample Information	#174 CS010	#174 CS003	#174 CS001
RFW Batch ID:	2000-116-100	2000-117-100	2000-118-100
Customer ID:	BH88A017	BH88A018	BH88A019
Laboratory ID:	9299-28388-9-7	9299-28388-9-8	9299-28388-9-9
Matrix:	Soil	Soil	Soil

Radio Chemistry

Gross Alpha.....	14 ± 8	pci/g	29 ± 10	pci/g	27 ± 10	pci/g
Gross Beta.....	22 ± 5	pci/g	22 ± 6	pci/g	22 ± 5	pci/g
Uranium 233, 234.....	0.48 ± 0.08	pci/g	0.70 ± 0.10	pci/g	0.65 ± 0.10	pci/g
Uranium 235.....						
Uranium 238.....	0.50 ± 0.08	pci/g	0.69 ± 0.10	pci/g	0.73 ± 0.11	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.00 ± 0.03	pci/g	0.02 ± 0.03	pci/g	0.01 ± 0.03	pci/g
Americium 241.....	-0.01 ± 0.03	pci/g	0.01 ± 0.03	pci/g	0.04 ± 0.05	pci/g
Cesium 137.....						
Tritium.....	0.08 ± 0.15	pci/ml	0.07 ± 0.15	pci/ml	0.00 ± 0.15	pci/ml
% Moisture.....	2.0		1.3		2.4	

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Sample Information	#174 CS005	#174 CS002	#174 CS004
RFW Batch ID:	2000-100-100	2000-101-100	2000-102-100
Customer ID:	BH88A002	BH88A003	BH88A004
Laboratory ID:	9299-28380-8-1	9299-28380-8-2	9299-28380-8-3
Matrix:	Soil	Soil	Soil

Radio Chemistry

Gross Alpha.....	11 ± 8	pci/g	18 ± 9	pci/g	15 ± 7	pci/g
Gross Beta.....	22 ± 6	pci/g	18 ± 6	pci/g	27 ± 6	pci/g
Uranium 233, 234.....	0.65 ± 0.11	pci/g	0.50 ± 0.10	pci/g	0.67 ± 0.13	pci/g
Uranium 235.....						
Uranium 238.....	0.55 ± 0.10	pci/g	0.64 ± 0.11	pci/g	0.65 ± 0.13	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.01 ± 0.03	pci/g	0.01 ± 0.02	pci/g	0.04 ± 0.03	pci/g
Americium 241.....	0.00 ± 0.03	pci/g	0.00 ± 0.03	pci/g	0.01 ± 0.03	pci/g
Cesium 137.....						
Tritium.....	0.22 ± 0.16	pci/ml	0.10 ± 0.16	pci/ml	-0.05 ± 0.15	pci/ml
% Moisture.....	7.4		3.8		4.7	

Sample Information	#174 CS008	#174 CS009	#174 CS006
RFW Batch ID:	2000-103-100	2000-104-100	2000-105-100
Customer ID:	BH88A005	BH88A006	BH88A007
Laboratory ID:	9299-28380-8-4	9299-28380-8-5	9299-28380-8-6
Matrix:	Soil	Soil	Soil

Radio Chemistry

Gross Alpha.....	16 ± 9	pci/g	12 ± 8	pci/g	20 ± 9	pci/g
Gross Beta.....	15 ± 5	pci/g	24 ± 6	pci/g	31 ± 6	pci/g
Uranium 233, 234.....	0.63 ± 0.09	pci/g	0.72 ± 0.11	pci/g	0.90 ± 0.12	pci/g
Uranium 235.....						
Uranium 238.....	0.65 ± 0.09	pci/g	0.84 ± 0.12	pci/g	0.77 ± 0.11	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.01 ± 0.03	pci/g	0.01 ± 0.03	pci/g	0.07 ± 0.05	pci/g
Americium 241.....	-0.01 ± 0.03	pci/g	0.00 ± 0.03	pci/g	-0.01 ± 0.02	pci/g
Cesium 137.....						
Tritium.....	0.01 ± 0.15	pci/ml	0.06 ± 0.15	pci/ml	0.10 ± 0.16	pci/ml
% Moisture.....	5.1		4.0		3.3	

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 2

Sample Information	#174 CS007	#174 CS012	#170? CS016
RFW Batch ID:	2000-106-100	2000-107-100	2000-108-100
Customer ID:	BH88A008	BH88A009	BH88A021
Laboratory ID:	9299-28380-8-7	9299-28380-8-8	9299-28412-2-1
Matrix:	Soil	Soil	Soil

Radio Chemistry

Gross Alpha.....	13 ± 8	pci/g	26 ± 10	pci/g	21 ± 9	pci/g
Gross Beta.....	24 ± 6	pci/g	29 ± 6	pci/g	15 ± 3	pci/g
Uranium 233, 234.....	0.59 ± 0.09	pci/g	0.80 ± 0.11	pci/g	0.58 ± 0.09	pci/g
Uranium 235.....						
Uranium 238.....	0.66 ± 0.09	pci/g	0.69 ± 0.10	pci/g	0.53 ± 0.09	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.01 ± 0.03	pci/g	0.01 ± 0.03	pci/g	0.03 ± 0.03	pci/g
Americium 241.....	-0.01 ± 0.03	pci/g	-0.01 ± 0.02	pci/g	0.03 ± 0.05	pci/g
Cesium 137.....						
Tritium.....	0.08 ± 0.16	pci/ml	0.05 ± 0.15	pci/ml	0.21 ± 0.16	pci/ml
% Moisture.....	4.0		5.1		3.1	

Sample Information	#170? CS017
RFW Batch ID:	2000-109-100
Customer ID:	BH88A022
Laboratory ID:	9299-28412-2-2
Matrix:	Soil

Radio Chemistry

Gross Alpha.....	15 ± 8	pci/g
Gross Beta.....	24 ± 5	pci/g
Uranium 233, 234.....	0.70 ± 0.11	pci/g
Uranium 235.....		
Uranium 238.....	0.70 ± 0.11	pci/g
Strontium 89, 90.....		
Plutonium 239, 240.....	0.05 ± 0.03	pci/g ✓
Americium 241.....	-0.01 ± 0.03	pci/g
Cesium 137.....		
Tritium.....	0.07 ± 0.15	pci/ml
% Moisture.....	4.5	

Accu-Labs Research, Inc.
'5 W. 48th Avenue Wheat Ridge, Colorado 80033 (303) 423-2766

January 6, 1989

Ms. Peg Beatty
Weston Analytics
7720 Lorraine Ave.
Suite 105
Stockton, CA 95210

Dear Ms. Beatty,

Enclosed are the analytical reports in the requested format as per Contract LL-0421 for the following ALR Nos.:

9612-28492-4
9612-28467-10

These reports cover the Radiochemistry portion only.

A floppy disk is being sent under seperate cover which contains all the data on the hard copies.

If you have any questions, please feel free to call.

Sincerely,

Bud Summers
Radiochemistry
Supervisor

BS/dh

[illegible] LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch number: Client: ROCKWELL (FIORY PLANT) Page: 1

	#177 CS034	#177 CS035	#177 CS036
RFW Batch ID:	2000-129-[illegible]	2000-1[illegible]-100	2000-1[illegible]-100
Customer ID:	3H33A044	3H33A045	3H33A046
Laboratory ID:	Pb12-25492-4-1	Pb12-25492-4-2	Pb12-25492-4-3
Matrix:	Soil	Soil	Soil

Gross Alpha.....	38 ± 15	pCi/g	45 ± 12	pCi/g	23 ± 12	pCi/g
Gross Beta.....	32 ± 7	pCi/g	43 ± 7	pCi/g	35 ± 7	pCi/g
Uranium 233, 234.....	1.0 ± 0.2	pCi/g	1.3 ± 0.2	pCi/g	0.86 ± 1.20	pCi/g
Uranium 235.....						
Uranium 238.....	1.1 ± 0.2	pCi/g	1.1 ± 0.2	pCi/g	0.70 ± 0.19	pCi/g
Strontium 89, 90.....						
Plutonium 239, 240.....	.03 ± 0.06	pCi/g	-0.01 ± 0.1[illegible]	pCi/g	-0.02 ± .11	pCi/g
Americium 241.....	-0.03 ± 0.13	pCi/g	0.02 ± 0.10	pCi/g	0.02 ± 0.13	pCi/g
Cesium 137.....						
Tritium.....	0.24 ± 0.15	pCi/ml	0.18 ± 0.14	pCi/ml	0.34 ± 0.1[illegible]	pCi/ml
% Moisture.....	10.6		10.8		5.0	

	#177 CS037
RFW Batch ID:	2000-1[illegible]-100
Customer ID:	3H33A047
Laboratory ID:	Pb12-25492-4-[illegible]
Matrix:	Soil

Gross Alpha.....	39 ± 15	pCi/g
Gross Beta.....	37 ± 7	pCi/g
Uranium 233, 234.....	1.3 ± 0.2	pCi/g
Uranium 235.....		
Uranium 238.....	1.0 ± 0.2	pCi/g
Strontium 89, 90.....		
Plutonium 239, 240.....	0.03 ± 0.12	pCi/g
Americium 241.....	-0.02 ± 0.10	pCi/g
Cesium 137.....		
Tritium.....	0.25 ± 0.15	pCi/ml
% Moisture.....	10.8	

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RADIOCHEMISTRY
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Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

	# 176 CS031	# 176 CS028	# 176 CS029
RFW Batch ID:	2000-133-100	2000-134-100	2000-133-[illegible]
Customer ID:	[redacted]032	[redacted]034	[redacted]035
Laboratory ID:	Pb12-28467-10-1	Pb12-28467-10-2	Pb12-28467-10-3
Matrix:	Soil	Soil	Soil

Gross Alpha.....	29 ± 10	pci/g	22 ± 12	pci/g	2[illegible] ± 12	pci/g
Gross Beta.....	32 ± 6	pci/g	30 ± 5	pci/g	2[illegible] ± 5	pci/g
Uranium 233, 234.....	0.74 ± 0.16	pci/g	[illegible].72 ± 0.18	pci/g	[illegible].46 ± 0.14	pci/g
Uranium 235.....						
Uranium 238.....	0.53 ± 0.13	pci/g	[illegible].3 ± 0.2	pci/g	0.57 ± [illegible].14	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.01 ± 0.12	pci/g	[illegible].34 ± 0.16	pci/g	[illegible].72 ± [illegible].17	pci/g
Americium 241.....	0.07 ± [illegible]	pci/g	[illegible].15 ± 0.08	pci/g	0.1[illegible] ± 0.07	pci/g
Cesium 137.....						
Tritium.....	0.09 ± [illegible]	pci/ml	[illegible].38 ± 0.16	pci/ml	[illegible].04 ± [illegible]	pci/ml
% Moisture.....	3.4		3.1		[illegible]	

	# 176 CS033	# 175 CS018	# 175 CS019
RFW Batch ID:	2000-136-100	2000-137-100	2000-138-100
Customer ID:	5H88A036	5H88A037	5H88A038
Laboratory ID:	Pb12-28467-10-4	Pb12-28467-10-5	Pb12-28467-10-6
Matrix:	Soil	Soil	Soil

Gross Alpha.....	35 ± 14	pci/g	-4 ± 15	pci/g	35 ± 1[illegible]	pci/g
Gross Beta.....	29 ± 6	pci/g	-1 ± 7	pci/g	48 ± 7	pci/g
Uranium 233, 234.....	0.97 ± 0.22	pci/g	0.68 ± 0.11	pci/g	0.74 ± [illegible]	pci/g
Uranium 235.....						
Uranium 238.....	0.95 ± 0.21	pci/g	0.71 ± 0.10	pci/g	0.87 ± 0.11	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.44 ± 0.15	pci/g	[illegible].02 ± 0.13	pci/g	[illegible].04 ± 0.12	pci/g
Americium 241.....	0.21 ± 0.08	pci/g	0.01 ± 0.04	pci/g	[illegible].01 ± 0.04	pci/g
Cesium 137.....						
Tritium.....	0.20 ± 0.15	pci/ml	0.30 ± 0.15	pci/ml	0.22 ± [illegible]	pci/ml
% Moisture.....	3.8		2.2		2.4	

ACCU LABS RESEARCH, INC.
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	#175 CS021		FB
RFW Batch ID:	2000-137-100	2000-140-100	2000-141-100
Customer ID:	BH88A039	BH88A040 + MS, MSD	BH88A041
Laboratory ID:	9612-28467-10-7	9612-28467-10-8	9612-28467-10-9
Matrix:	Soil	Soil	Water

Gross Alpha.....	50 ± 16	pci/g	37 ± 14	pci/g	0 ± 1	pci/l
Gross Beta.....	46 ± 7	pci/g	38 ± 7	pci/g	0 ± 2	pci/l
Uranium 233, 234.....	0.70 ± 0.17	pci/g	1.0 ± 0.2	pci/g	-0.1 ± 0.1	pci/l
Uranium 235.....						
Uranium 238.....	0.77 ± 0.17	pci/g	0.95 ± 0.22	pci/g	0.0 ± 0.1	pci/l
Strontium 89, 90.....						
Plutonium 239, 240.....	0.42 ± 0.19	pci/g	0.18 ± 0.20	pci/g	0.0 ± 0.1	pci/l
Americium 241.....	0.15 ± 0.08	pci/g	0.08 ± 0.07	pci/g	0.0 ± 0.1	pci/l
Cesium 137.....						
Tritium.....	0.12 ± 0.16	pci/ml	0.13 ± 0.16	pci/ml	170 ± 160	pci/l
% Moisture.....	5.0		8.0			

	#175 CS020
RFW Batch ID:	2000-142-100
Customer ID:	BH88A042
Laboratory ID:	9612-28467-10-10
Matrix:	Soil

Gross Alpha.....	35 ± 14	pci/g
Gross Beta.....	39 ± 7	pci/g
Uranium 233, 234.....	0.75 ± 0.18	pci/g
Uranium 235.....		
Uranium 238.....	0.30 ± 0.18	pci/g
Strontium 89, 90.....		
Plutonium 239, 240.....	0.06 ± 0.14	pci/g
Americium 241.....	0.06 ± 0.06	pci/g
Cesium 137.....		
Tritium.....	0.04 ± 0.16	pci/ml
% Moisture.....	6.0	

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WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Sample Information

Batch ID:	8810-036-001	8810-036-002	8810-036-003	8810-036-004
Customer ID:	BH88A001	BH88A002	BH88A003	BH88A004
Collection Date:	10/12/88	10/12/88	10/12/88	10/12/88

Surrogate Recovery

Toluene-d8:	99 %	112%	121%	101%
Bromofluorobenzene:	98 %	76 %	77 %	102%
1,2-Dichloroethane-d4:	93 %	96 %	96 %	101%

Analytes

Chloromethane	10 U	11 U	11 U	11 U
Bromomethane	10 U	11 U	11 U	11 U
Vinyl Chloride	10 U	11 U	11 U	11 U
Chloroethane	10 U	11 U	11 U	11 U
Methylene Chloride	7.0 B	12 B	7.0 B	20 B
Acetone	10 U	32	11 U	11 U
Carbon Disulfide	5.0 U	5.6 U	5.4 U	5.4 U
1,1-Dichloroethene	5.0 U	5.6 U	5.4 U	5.4 U
1,1-Dichloroethane	5.0 U	5.6 U	5.4 U	5.4 U
1,2-Dichloroethene (total)	NR	NR	NR	NR
Chloroform	5.0 U	5.6 U	5.4 U	5.4 U
1,2-Dichloroethane	5.0 U	5.6 U	5.4 U	5.4 U
2-Butanone	10 U	11 U	11 U	11 U
1,1,1-Trichloroethane	5.0 U	160	5.4 U	5.4 U
Carbon Tetrachloride	5.0 U	5.6 U	5.4 U	5.4 U
Vinyl Acetate	10 U	11 U	11 U	11 U
Bromodichloromethane	5.0 U	5.6 U	5.4 U	5.4 U
1,2-Dichloropropane	5.0 U	5.6 U	5.4 U	5.4 U
cis-1,3-Dichloropropene	5.0 U	5.6 U	5.4 U	5.4 U
Trichloroethene	5.0 U	5.6 U	5.4 U	5.4 U
Dibromochloromethane	5.0 U	5.6 U	5.4 U	5.4 U
1,1,2-Trichloroethane	5.0 U	5.6 U	5.4 U	5.4 U
Benzene	5.0 U	5.6 U	5.4 U	5.4 U
Trans-1,3-Dichloropropene	5.0 U	5.6 U	5.4 U	5.4 U
2-Chloroethylvinylether	10 U	11 U	11 U	11 U
Bromoform	5.0 U	5.6 U	5.4 U	5.4 U
4-Methyl-2-pentanone	10 U	11 U	11 U	11 U
2-Hexanone	10 U	11 U	11 U	11 U
Tetrachloroethene	5.0 U	4.0 J	2.0 J	94
1,1,2,2-Tetrachloroethane	5.0 U	5.6 U	5.4 U	5.4 U
Toluene	5.0 U	4.0 J	2.0 J	5.4 U
Chlorobenzene	5.0 U	5.6 U	5.4 U	5.4 U
Ethylbenzene	5.0 U	5.6 U	5.4 U	5.4 U
Styrene	5.0 U	5.6 U	5.4 U	5.4 U
Total Xylenes	5.0 U	3.0 J	5.4 U	5.4 U

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 2

Sample Information	#174	#174	#174	#174
Batch ID:	8810-036-005	8810-036-006	8810-036-007	8810-036-008
Customer ID:	BH88A005	BH88A006	BH88A007	BH88A008
Collection Date:	10/12/88	10/12/88	10/12/88	10/12/88

Surrogate Recovery

Toluene-d8:	115%	115%	112%	116%
Bromofluorobenzene:	81 %	81 %	80 %	79 %
1,2-Dichloroethane-d4:	94 %	96 %	93 %	93 %

Analytes

Chloromethane	11	U	11	U	11	U	11	U
Bromomethane	11	U	11	U	11	U	11	U
Vinyl Chloride	11	U	11	U	11	U	11	U
Chloroethane	11	U	11	U	11	U	11	U
Methylene Chloride	5.0	JB	7.0	B	26	B	22	B
Acetone	11	U	7.0	J	11	U	11	U
Carbon Disulfide	5.5	U	5.3	U	5.4	U	5.6	U
1,1-Dichloroethene	5.5	U	5.3	U	5.4	U	5.6	U
1,1-Dichloroethane	5.5	U	5.3	U	5.4	U	5.6	U
1,2-Dichloroethene (total)		NR		NR		NR		NR
Chloroform	5.5	U	5.3	U	5.4	U	5.6	U
1,2-Dichloroethane	5.5	U	5.3	U	5.4	U	5.6	U
2-Butanone	11	U	11	U	11	U	11	U
1,1,1-Trichloroethane	5.5	U	5.3	U	5.4	U	5.6	U
Carbon Tetrachloride	5.5	U	5.3	U	5.4	U	5.6	U
Vinyl Acetate	11	U	11	U	11	U	11	U
Bromodichloromethane	5.5	U	5.3	U	5.4	U	5.6	U
1,2-Dichloropropane	5.5	U	5.3	U	5.4	U	5.6	U
cis-1,3-Dichloropropene	5.5	U	5.3	U	5.4	U	5.6	U
Trichloroethene	5.5	U	5.3	U	5.4	U	5.6	U
Dibromochloromethane	5.5	U	5.3	U	5.4	U	5.6	U
1,1,2-Trichloroethane	5.5	U	5.3	U	5.4	U	5.6	U
Benzene	5.5	U	5.3	U	5.4	U	5.6	U
Trans-1,3-Dichloropropene	5.5	U	5.3	U	5.4	U	5.6	U
2-Chloroethylvinylether	11	U	11	U	11	U	11	U
Bromoform	5.5	U	5.3	U	5.4	U	5.6	U
4-Methyl-2-pentanone	11	U	11	U	11	U	11	U
2-Hexanone	11	U	11	U	11	U	11	U
Tetrachloroethene	5.5	U	5.3	U	5.4	U	5.6	U
1,1,2,2-Tetrachloroethane	5.5	U	5.3	U	5.4	U	5.6	U
Toluene	5.5	U	2.0	J	1.0	J	1.0	J
Chlorobenzene	5.5	U	5.3	U	5.4	U	5.6	U
Ethylbenzene	5.5	U	5.3	U	5.4	U	5.6	U
Styrene	5.5	U	5.3	U	5.4	U	5.6	U
Total Xylenes	5.5	U	1.0	J	5.4	U	5.6	U

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#174	TB	#174	#174 CS013
Batch ID:	8810-036-009	8810-036-010	8810-036-011	8810-036-012
Customer ID:	BH88A009	BH88A010	BH88A011	BH88A012
Collection Date:	10/12/88	10/13/88	10/13/88	10/13/88

Surrogate Recovery

Toluene-d8:	109%	100%	117%	121%
Bromofluorobenzene:	85 %	98 %	75 %	69 %
1,2-Dichloroethane-d4:	95 %	97 %	97 %	92 %

Analytes

Chloromethane	11	U	10	U	11	U	11	U
Bromomethane	11	U	10	U	11	U	11	U
Vinyl Chloride	11	U	10	U	11	U	11	U
Chloroethane	11	U	10	U	11	U	11	U
Methylene Chloride	32	B	8.0	B	31	B	36	B
Acetone	4.0	J	10	U	11	U	10	J
Carbon Disulfide	5.4	U	5.0	U	5.5	U	5.4	U
1,1-Dichloroethene	5.4	U	5.0	U	5.5	U	5.4	U
1,1-Dichloroethane	5.4	U	5.0	U	5.5	U	5.4	U
1,2-Dichloroethene (total)		NR		NR		NR		NR
Chloroform	5.4	U	5.0	U	5.5	U	5.4	U
1,2-Dichloroethane	5.4	U	5.0	U	5.5	U	5.4	U
2-Butanone	11	U	10	U	11	U	11	U
1,1,1-Trichloroethane	5.4	U	5.0	U	5.5	U	5.4	U
Carbon Tetrachloride	5.4	U	5.0	U	5.5	U	5.4	U
Vinyl Acetate	11	U	10	U	11	U	11	U
Bromodichloromethane	5.4	U	5.0	U	5.5	U	5.4	U
1,2-Dichloropropane	5.4	U	5.0	U	5.5	U	5.4	U
cis-1,3-Dichloropropene	5.4	U	5.0	U	5.5	U	5.4	U
Trichloroethene	5.4	U	5.0	U	5.5	U	5.4	U
Dibromochloromethane	5.4	U	5.0	U	5.5	U	5.4	U
1,1,2-Trichloroethane	5.4	U	5.0	U	5.5	U	5.4	U
Benzene	5.4	U	5.0	U	5.5	U	5.4	U
Trans-1,3-Dichloropropene	5.4	U	5.0	U	5.5	U	5.4	U
2-Chloroethylvinylether	11	U	10	U	11	U	11	U
Bromoform	5.4	U	5.0	U	5.5	U	5.4	U
4-Methyl-2-pentanone	11	U	10	U	11	U	11	U
2-Hexanone	11	U	10	U	11	U	11	U
Tetrachloroethene	5.4	U	5.0	U	5.5	U	5.4	U
1,1,2,2-Tetrachloroethane	5.4	U	5.0	U	5.5	U	5.4	U
Toluene	5.4	U	5.0	U	1.0	J	3.0	J
Chlorobenzene	5.4	U	5.0	U	5.5	U	5.4	U
Ethylbenzene	5.4	U	5.0	U	5.5	U	5.4	U
Styrene	5.4	U	5.0	U	5.5	U	5.4	U
Total Xylenes	5.4	U	5.0	U	5.5	U	5.4	U

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

#174
CS013

Batch ID:	8810-036-012 DUP	8810-036-013	8810-036-013 MS	8810-036-013 MSD
Customer ID:	BH88A012	BH88A013	BH88A013	BH88A013
Collection Date:	10/13/88	10/13/88	10/13/88	10/13/88

Surrogate Recovery

Toluene-d8:	143%	126%	138%	132%
Bromofluorobenzene:	77 %	81 %	74 %	84 %
1,2-Dichloroethane-d4:	89 %	102%	110%	119%

Analytes

Chloromethane	11 U	11 U	11 U	11 U
Bromomethane	11 U	11 U	11 U	11 U
Vinyl Chloride	11 U	11 U	11 U	11 U
Chloroethane	11 U	11 U	11 U	11 U
Methylene Chloride	17 B	15 B	15 B	16 B
Acetone	11 U	11 U	13	18
Carbon Disulfide	5.4 U	5.4 U	5.4 U	5.4 U
1,1-Dichloroethene	5.4 U	5.4 U	88 %	95 %
1,1-Dichloroethane	5.4 U	5.4 U	5.4 U	5.4 U
1,2-Dichloroethene (total)	NR	NR	NR	NR
Chloroform	5.4 U	5.4 U	5.4 U	5.4 U
1,2-Dichloroethane	5.4 U	5.4 U	5.4 U	5.4 U
2-Butanone	11 U	11 U	11 U	11 U
1,1,1-Trichloroethane	5.4 U	5.4 U	5.4 U	5.4 U
Carbon Tetrachloride	5.4 U	5.4 U	5.4 U	5.4 U
Vinyl Acetate	11 U	11 U	11 U	11 U
Bromodichloromethane	5.4 U	5.4 U	5.4 U	5.4 U
1,2-Dichloropropane	5.4 U	5.4 U	5.4 U	5.4 U
cis-1,3-Dichloropropene	5.4 U	5.4 U	5.4 U	5.4 U
Trichloroethene	5.4 U	5.4 U	72 %	73 %
Dibromochloromethane	5.4 U	5.4 U	5.4 U	5.4 U
1,1,2-Trichloroethane	5.4 U	5.4 U	5.4 U	5.4 U
Benzene	5.4 U	5.4 U	92 %	95 %
Trans-1,3-Dichloropropene	5.4 U	5.4 U	5.4 U	5.4 U
2-Chloroethylvinylether	11 U	11 U	11 U	11 U
Bromoform	5.4 U	5.4 U	5.4 U	5.4 U
4-Methyl-2-pentanone	11 U	11 U	11 U	11 U
2-Hexanone	11 U	11 U	11 U	11 U
Tetrachloroethene	5.4 U	5.4 U	5.4 U	5.4 U
1,1,2,2-Tetrachloroethane	5.4 U	5.4 U	5.4 U	5.4 U
Toluene	5.0 J	1.0 J	111 %	112 %
Chlorobenzene	5.4 U	5.4 U	84 %	90 %
Ethylbenzene	1.0 J	5.4 U	5.4 U	5.4 U
Styrene	5.4 U	5.4 U	5.4 U	5.4 U
Total Xylenes	5.4 U	5.4 U	5.4 U	5.4 U

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#174 CS011	CS~~0~~	FB	#174 CS014
Batch ID:	8810-036-014	8810-036-014 DUP	8810-036-015	8810-036-016
Customer ID:	BH88A014	BH88A014	BH88A015	BH88A016
Collection Date:	10/13/88	10/13/88	10/13/88	10/13/88

Surrogate Recovery

Toluene-d8:	137%	139%	99 %	114%
Bromofluorobenzene:	59 %	69 %	98 %	81 %
1,2-Dichloroethane-d4:	89 %	100%	99 %	95 %

Analytes

Chloromethane	11	U	11	U	10	U	11	U
Bromomethane	11	U	11	U	10	U	11	U
Vinyl Chloride	11	U	11	U	10	U	11	U
Chloroethane	11	U	11	U	10	U	11	U
Methylene Chloride	40	B	24	B	6.0	B	8.0	B
Acetone	7.0	J	11	U	10	U	11	U
Carbon Disulfide	5.3	U	5.4	U	5.0	U	5.3	U
1,1-Dichloroethene	5.3	U	5.4	U	5.0	U	5.3	U
1,1-Dichloroethane	5.3	U	5.4	U	5.0	U	5.3	U
1,2-Dichloroethene (total)	NR		NR		NR		NR	
Chloroform	5.3	U	5.4	U	3.0	J	5.3	U
1,2-Dichloroethane	5.3	U	5.4	U	5.0	U	5.3	U
2-Butanone	11	U	11	U	10	U	11	U
1,1,1-Trichloroethane	5.3	U	5.4	U	5.0	U	5.3	U
Carbon Tetrachloride	5.3	U	5.4	U	5.0	U	5.3	U
Vinyl Acetate	11	U	11	U	10	U	11	U
Bromodichloromethane	5.3	U	5.4	U	5.0	U	5.3	U
1,2-Dichloropropane	5.3	U	5.4	U	5.0	U	5.3	U
cis-1,3-Dichloropropene	5.3	U	5.4	U	5.0	U	5.3	U
Trichloroethene	5.3	U	5.4	U	5.0	U	5.3	U
Dibromochloromethane	5.3	U	5.4	U	5.0	U	5.3	U
1,1,2-Trichloroethane	5.3	U	5.4	U	5.0	U	5.3	U
Benzene	5.3	U	5.4	U	5.0	U	5.3	U
Trans-1,3-Dichloropropene	5.3	U	5.4	U	5.0	U	5.3	U
2-Chloroethylvinylether	11	U	11	U	10	U	11	U
Bromoform	5.3	U	5.4	U	5.0	U	5.3	U
4-Methyl-2-pentanone	11	U	11	U	10	U	11	U
2-Hexanone	11	U	11	U	10	U	11	U
Tetrachloroethene	5.3	U	5.4	U	5.0	U	5.3	U
1,1,2,2-Tetrachloroethane	5.3	U	5.4	U	5.0	U	5.3	U
Toluene	1.0	J	2.0	J	5.0	U	2.0	J
Chlorobenzene	5.3	U	5.4	U	5.0	U	5.3	U
Ethylbenzene	5.3	U	5.4	U	5.0	U	5.3	U
Styrene	5.3	U	5.4	U	5.0	U	5.3	U
Total Xylenes	5.3	U	5.4	U	5.0	U	2.0	J

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 6

Sample Information	#174 CS010	#174 CS001	TB	#170 CS016
Batch ID:	8810-036-017	8810-036-019	8810-051-001	8810-051-002
Customer ID:	BH88A017	BH88A019	BH88A020	BH88A021
Collection Date:	10/13/88	10/13/88	10/14/88	10/14/88

Surrogate Recovery

Toluene-d8:	116%	113%	99 %	117%
Bromofluorobenzene:	80 %	78 %	101%	80 %
1,2-Dichloroethane-d4:	103%	107%	97 %	93 %

Analytes

Chloromethane	10 U	10 U	10 U	11 U
Bromomethane	10 U	10 U	10 U	11 U
Vinyl Chloride	10 U	10 U	10 U	11 U
Chloroethane	10 U	10 U	10 U	11 U
Methylene Chloride	7.0 B	9.0 B	2.0 JB	4.0 JB
Acetone	10 U	5.0 J	10 U	11 U
Carbon Disulfide	5.1 U	5.2 U	5.0 U	5.3 U
1,1-Dichloroethene	5.1 U	5.2 U	5.0 U	5.3 U
1,1-Dichloroethane	5.1 U	5.2 U	5.0 U	5.3 U
1,2-Dichloroethene (total)	NR	NR	NR	NR
Chloroform	5.1 U	5.2 U	5.0 U	5.3 U
1,2-Dichloroethane	5.1 U	5.2 U	5.0 U	5.3 U
2-Butanone	10 U	10 U	10 U	11 U
1,1,1-Trichloroethane	5.1 U	5.2 U	5.0 U	5.3 U
Carbon Tetrachloride	5.1 U	5.2 U	5.0 U	5.3 U
Vinyl Acetate	10 U	10 U	10 U	11 U
Bromodichloromethane	5.1 U	5.2 U	5.0 U	5.3 U
1,2-Dichloropropane	5.1 U	5.2 U	5.0 U	5.3 U
cis-1,3-Dichloropropene	5.1 U	5.2 U	5.0 U	5.3 U
Trichloroethene	5.1 U	5.2 U	5.0 U	5.3 U
Dibromochloromethane	5.1 U	5.2 U	5.0 U	5.3 U
1,1,2-Trichloroethane	5.1 U	5.2 U	5.0 U	5.3 U
Benzene	5.1 U	5.2 U	5.0 U	5.3 U
Trans-1,3-Dichloropropene	5.1 U	5.2 U	5.0 U	5.3 U
2-Chloroethylvinylether	10 U	10 U	10 U	11 U
Bromoform	5.1 U	5.2 U	5.0 U	5.3 U
4-Methyl-2-pentanone	10 U	10 U	10 U	11 U
2-Hexanone	10 U	10 U	10 U	11 U
Tetrachloroethene	5.1 U	5.2 U	5.0 U	5.3 U
1,1,2,2-Tetrachloroethane	5.1 U	5.2 U	5.0 U	5.3 U
Toluene	1.0 J	2.0 J	5.0 U	5.3 U
Chlorobenzene	5.1 U	5.2 U	5.0 U	5.3 U
Ethylbenzene	5.1 U	5.2 U	5.0 U	5.3 U
Styrene	5.1 U	5.2 U	5.0 U	5.3 U
Total Xylenes	2.0 J	2.0 J	5.0 U	5.3 U

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	#170 CS017			TB
Batch ID:	8810-051-003	8810-051-003 MS	8810-051-003 MSD	8810-062-001
Customer ID:	BH88A022	BH88A022	BH88A022	BH88A023
Collection Date:	10/14/88	10/14/88	10/14/88	10/19/88

Surrogate Recovery

Toluene-d8:	114%	117%	115%	98 %
Bromofluorobenzene:	85 %	80 %	80 %	101%
1,2-Dichloroethane-d4:	95 %	97 %	94 %	97 %

Analytes

Chloromethane.....	11 U	11 U	11 U	10 U
Bromomethane.....	11 U	11 U	11 U	10 U
Vinyl Chloride.....	11 U	11 U	11 U	10 U
Chloroethane.....	11 U	11 U	11 U	10 U
Methylene Chloride.....	3.0 JB	18 B	18 B	3.0 JB
Acetone.....	12	4.0 J	4.0 J	10 U
Carbon Disulfide.....	5.3 U	11	12	5.0 U
1,1-Dichloroethene.....	5.3 U	85 %	90 %	5.0 U
1,1-Dichloroethane.....	5.3 U	5.3 U	5.3 U	5.0 U
1,2-Dichloroethene (total).....	NR	NR	NR	NR
Chloroform.....	5.3 U	5.3 U	5.3 U	5.0 U
1,2-Dichloroethane.....	5.3 U	5.3 U	5.3 U	5.0 U
2-Butanone.....	11 U	11 U	11 U	10 U
1,1,1-Trichloroethane.....	5.3 U	5.3 U	5.3 U	5.0 U
Carbon Tetrachloride.....	5.3 U	5.3 U	5.3 U	5.0 U
Vinyl Acetate.....	11 U	11 U	11 U	10 U
Bromodichloromethane.....	5.3 U	5.3 U	5.3 U	5.0 U
1,2-Dichloropropane.....	5.3 U	5.3 U	5.3 U	5.0 U
cis-1,3-Dichloropropene.....	5.3 U	5.3 U	5.3 U	5.0 U
Trichloroethene.....	5.3 U	81 %	87 %	5.0 U
Dibromochloromethane.....	5.3 U	5.3 U	5.3 U	5.0 U
1,1,2-Trichloroethane.....	5.3 U	5.3 U	5.3 U	5.0 U
Benzene.....	5.3 U	85 %	90 %	5.0 U
Trans-1,3-Dichloropropene.....	5.3 U	5.3 U	5.3 U	5.0 U
2-Chloroethylvinylether.....	11 U	11 U	11 U	10 U
Bromoform.....	5.3 U	5.3 U	5.3 U	5.0 U
4-Methyl-2-pentanone.....	11 U	11 U	11 U	10 U
2-Hexanone.....	11 U	11 U	11 U	10 U
Tetrachloroethene.....	5.3 U	5.3 U	5.3 U	5.0 U
1,1,2,2-Tetrachloroethane.....	5.3 U	5.3 U	5.3 U	5.0 U
Toluene.....	1.0 J	96 %	99 %	5.0 U
Chlorobenzene.....	5.3 U	83 %	87 %	5.0 U
Ethylbenzene.....	5.3 U	5.3 U	5.3 U	5.0 U
Styrene.....	5.3 U	5.3 U	5.3 U	5.0 U
Total Xylenes.....	5.3 U	2.0 J	5.3 U	5.0 U

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	#176 CS024	#176 CS025	#176 CS026	
Batch ID:	8810-062-002	8810-062-003	8810-062-004	8810-062-005
Customer ID:	BH88A024	BH88A025	BH88A026	BH88A027
Collection Date:	10/19/88	10/19/88	10/19/88	10/19/88

Surrogate Recovery

Toluene-d8:	109%	108%	111%	111%
Bromofluorobenzene:	92 %	82 %	78 %	82 %
1,2-Dichloroethane-d4:	96 %	100%	98 %	95 %

Analytes

Chloromethane	11	U	11	U	11	U	11	U
Bromomethane	11	U	11	U	11	U	11	U
Vinyl Chloride	11	U	11	U	11	U	11	U
Chloroethane	11	U	11	U	11	U	11	U
Methylene Chloride	25	B	20	B	18	B	13	B
Acetone	14		10	J	12		17	
Carbon Disulfide	5.6	U	5.3	U	5.4	U	5.3	U
1,1-Dichloroethene	5.6	U	5.3	U	5.4	U	5.3	U
1,1-Dichloroethane	5.6	U	5.3	U	5.4	U	5.3	U
1,2-Dichloroethene (total)	NR		NR		NR		NR	
Chloroform	1.0	J	1.0	J	1.0	J	5.3	U
1,2-Dichloroethane	5.6	U	5.3	U	5.4	U	5.3	U
2-Butanone	11	U	11	U	11	U	11	U
1,1,1-Trichloroethane	5.6	U	5.3	U	5.4	U	5.3	U
Carbon Tetrachloride	5.6	U	5.3	U	5.4	U	5.3	U
Vinyl Acetate	11	U	11	U	11	U	11	U
Bromodichloromethane	5.6	U	5.3	U	5.4	U	5.3	U
1,2-Dichloropropane	5.6	U	5.3	U	5.4	U	5.3	U
cis-1,3-Dichloropropene	5.6	U	5.3	U	5.4	U	5.3	U
Trichloroethene	5.6	U	5.3	U	5.4	U	5.3	U
Dibromochloromethane	5.6	U	5.3	U	5.4	U	5.3	U
1,1,2-Trichloroethane	5.6	U	5.3	U	5.4	U	5.3	U
Benzene	5.6	U	5.3	U	5.4	U	5.3	U
Trans-1,3-Dichloropropene	5.6	U	5.3	U	5.4	U	5.3	U
2-Chloroethylvinylether	11	U	11	U	11	U	11	U
Bromoform	5.6	U	5.3	U	5.4	U	5.3	U
4-Methyl-2-pentanone	11	U	11	U	11	U	11	U
2-Hexanone	11	U	11	U	11	U	11	U
Tetrachloroethene	5.6	U	5.3	U	5.4	U	5.3	U
1,1,2,2-Tetrachloroethane	5.6	U	5.3	U	5.4	U	5.3	U
Toluene	1.0	J	2.0	J	3.0	J	1.0	J
Chlorobenzene	5.6	U	5.3	U	5.4	U	5.3	U
Ethylbenzene	5.6	U	5.3	U	5.4	U	5.3	U
Styrene	5.6	U	5.3	U	5.4	U	5.3	U
Total Xylenes	5.6	U	2.0	J	3.0	J	5.3	U

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

			FB	#176 CS027
Batch ID:	8810-062-005 MS	8810-062-005 MSD	8810-062-006	8810-062-007
Customer ID:	BH88A027	BH88A027	BH88A028	BH88A029
Collection Date:	10/19/88	10/19/88	10/19/88	~~10/19/88~~

Surrogate Recovery

Toluene-d8:	109%	113%	99 %	111%
Bromofluorobenzene:	85 %	85 %	101%	79 %
1,2-Dichloroethane-d4:	94 %	94 %	94 %	101%

Analytes

Chloromethane	11	U	11	U	10	U	11	U
Bromomethane	11	U	11	U	10	U	11	U
Vinyl Chloride	11	U	11	U	10	U	11	U
Chloroethane	11	U	11	U	10	U	11	U
Methylene Chloride	16	B	15	B	4.0	JB	20	B
Acetone	24		24		4.0	J	11	J
Carbon Disulfide	5.3	U	5.3	U	5.0	U	5.5	U
1,1-Dichloroethene	94	%	96	%	5.0	U	5.5	U
1,1-Dichloroethane	5.3	U	5.3	U	5.0	U	5.5	U
1,2-Dichloroethene (total)		NR		NR		NR		NR
Chloroform	5.3	U	5.3	U	3.0	J	1.0	J
1,2-Dichloroethane	5.3	U	5.3	U	5.0	U	5.5	U
2-Butanone	11	U	11	U	10	U	11	U
1,1,1-Trichloroethane	5.3	U	5.3	U	5.0	U	5.5	U
Carbon Tetrachloride	5.3	U	5.3	U	5.0	U	5.5	U
Vinyl Acetate	11	U	11	U	10	U	11	U
Bromodichloromethane	5.3	U	5.3	U	5.0	U	5.5	U
1,2-Dichloropropane	5.3	U	5.3	U	5.0	U	5.5	U
cis-1,3-Dichloropropene	5.3	U	5.3	U	5.0	U	5.5	U
Trichloroethene	90	%	91	%	5.0	U	5.5	U
Dibromochloromethane	5.3	U	5.3	U	5.0	U	5.5	U
1,1,2-Trichloroethane	5.3	U	5.3	U	5.0	U	5.5	U
Benzene	98	%	101	%	5.0	U	5.5	U
Trans-1,3-Dichloropropene	5.3	U	5.3	U	5.0	U	5.5	U
2-Chloroethylvinylether	11	U	11	U	10	U	11	U
Bromoform	5.3	U	5.3	U	5.0	U	5.5	U
4-Methyl-2-pentanone	11	U	11	U	10	U	11	U
2-Hexanone	11	U	11	U	10	U	11	U
Tetrachloroethene	5.3	U	5.3	U	5.0	U	5.5	U
1,1,2,2-Tetrachloroethane	5.3	U	5.3	U	5.0	U	5.5	U
Toluene	111	%	117	%	5.0	U	2.0	J
Chlorobenzene	92	%	95	%	5.0	U	5.5	U
Ethylbenzene	5.3	U	5.3	U	5.0	U	5.5	U
Styrene	5.3	U	5.3	U	5.0	U	5.5	U
Total Xylenes	5.3	U	5.3	U	5.0	U	2.0	J

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#176 CS032	#176 CS030	TB	#177 CS034
Batch ID:	8810-062-008	8810-062-009	8810-093-001	8810-093-002
Customer ID:	BH88A030	BH88A031	BH88A043	BH88A044
Collection Date:	10/19/88	10/19/88	10/25/88	10/25/88

Surrogate Recovery

Toluene-d8:	115%	115%	99 %	113%
Bromofluorobenzene:	80 %	83 %	101%	86 %
1,2-Dichloroethane-d4:	100%	92 %	105%	103%

Analytes

Chloromethane	11	U	11	U	10	U	13	U
Bromomethane	11	U	11	U	10	U	13	U
Vinyl Chloride	11	U	11	U	10	U	13	U
Chloroethane	11	U	11	U	10	U	13	U
Methylene Chloride	14	B	20	B	5.0	B	39	B
Acetone	12		10	J	10	U	71	
Carbon Disulfide	5.5	U	5.4	U	5.0	U	6.3	U
1,1-Dichloroethene	5.5	U	5.4	U	5	U	6.3	U
1,1-Dichloroethane	5.5	U	5.4	U	5	U	6.3	U
1,2-Dichloroethene (total)	NR		NR		NR		NR	
Chloroform	1.0	J	1.0	J	5	U	6.3	U
1,2-Dichloroethane	5.5	U	5.4	U	5	U	6.3	U
2-Butanone	11	U	11	U	16		13	U
1,1,1-Trichloroethane	5.5	U	5.4	U	5	U	6.3	U
Carbon Tetrachloride	5.5	U	5.4	U	5	U	6.3	U
Vinyl Acetate	11	U	11	U	10	U	13	U
Bromodichloromethane	5.5	U	5.4	U	5	U	6.3	U
1,2-Dichloropropane	5.5	U	5.4	U	5	U	6.3	U
cis-1,3-Dichloropropene	5.5	U	5.4	U	5	U	6.3	U
Trichloroethene	5.5	U	5.4	U	5	U	6.3	U
Dibromochloromethane	5.5	U	5.4	U	5	U	6.3	U
1,1,2-Trichloroethane	5.5	U	5.4	U	5	U	6.3	U
Benzene	5.5	U	5.4	U	5	U	6.3	U
Trans-1,3-Dichloropropene	5.5	U	5.4	U	5	U	6.3	U
2-Chloroethylvinylether	11	U	11	U	10	U	13	U
Bromoform	5.5	U	5.4	U	5	U	6.3	U
4-Methyl-2-pentanone	11	U	11	U	10	U	13	U
2-Hexanone	11	U	11	U	10	U	13	U
Tetrachloroethene	5.5	U	5.4	U	5	U	4.0	J
1,1,2,2-Tetrachloroethane	5.5	U	5.4	U	5	U	6.3	U
Toluene	2.0	J	2.0	J	5	U	2.0	J
Chlorobenzene	5.5	U	5.4	U	5	U	6.3	U
Ethylbenzene	5.5	U	5.4	U	5	U	6.3	U
Styrene	5.5	U	5.4	U	5	U	6.3	U
Total Xylenes	1.0	J	5.4	U	5	U	3.0	J

WESTON ANALYTICS
VOLATILE
ORGANICS SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	#177 CS035	#177 CS036	#177 CS037	
Batch ID:	8810-093-003	8810-093-004	8810-093-005	8810-093-005 MS
Customer ID:	BH88A045	BH88A046	BH88A047	BH88A047
Collection Date:	10/25/88	10/25/88	10/25/88	10/25/88

Surrogate Recovery

Toluene-d8:	112%	113%	110%	109%
Bromofluorobenzene:	91 %	98 %	91 %	93 %
1,2-Dichloroethane-d4:	105%	106%	101%	103%

Analytes

Chloromethane.....	12 U	12 U	13 U	13 U
Bromomethane.....	12 U	12 U	13 U	13 U
Vinyl Chloride.....	12 U	12 U	13 U	13 U
Chloroethane.....	12 U	12 U	13 U	13 U
Methylene Chloride.....	38 B	35 B	14 B	15 B
Acetone.....	43	15	71	76
Carbon Disulfide.....	6.1 U	5.8 U	6.3 U	6.3 U
1,1-Dichloroethene.....	6.1 U	5.8 U	6.3 U	93 %
1,1-Dichloroethane.....	6.1 U	5.8 U	6.3 U	6.3 U
1,2-Dichloroethene (total).....	NR	NR	NR	NR
Chloroform.....	6.1 U	5.8 U	6.3 U	6.3 U
1,2-Dichloroethane.....	6.1 U	5.8 U	6.3 U	6.3 U
2-Butanone.....	12 U	12 U	15	17
1,1,1-Trichloroethane.....	6.1 U	5.8 U	6.3 U	6.3 U
Carbon Tetrachloride.....	6.1 U	5.8 U	6.3 U	6.3 U
Vinyl Acetate.....	12 U	12 U	13 U	13 U
Bromodichloromethane.....	6.1 U	5.8 U	6.3 U	6.3 U
1,2-Dichloropropane.....	6.1 U	5.8 U	6.3 U	6.3 U
cis-1,3-Dichloropropene.....	6.1 U	5.8 U	6.3 U	6.3 U
Trichloroethene.....	6.1 U	5.8 U	6.3 U	81 %
Dibromochloromethane.....	6.1 U	5.8 U	6.3 U	6.3 U
1,1,2-Trichloroethane.....	6.1 U	5.8 U	6.3 U	6.3 U
Benzene.....	6.1 U	5.8 U	6.3 U	89 %
Trans-1,3-Dichloropropene.....	6.1 U	5.8 U	6.3 U	6.3 U
2-Chloroethylvinylether.....	12 U	12 U	13 U	13 U
Bromoform.....	6.1 U	5.8 U	6.3 U	6.3 U
4-Methyl-2-pentanone.....	12 U	12 U	13 U	13 U
2-Hexanone.....	12 U	12 U	13 U	13 U
Tetrachloroethene.....	3.0 J	5.8 U	6.3 U	6.3 U
1,1,2,2-Tetrachloroethane.....	6.1 U	5.8 U	6.3 U	6.3 U
Toluene.....	1.0 J	2.0 J	1.0 J	93 %
Chlorobenzene.....	2.0 J	5.8 U	6.3 U	87 %
Ethylbenzene.....	2.0 J	5.8 U	6.3 U	6.3 U
Styrene.....	6.1 U	5.8 U	6.3 U	6.3 U
Total Xylenes.....	3.0 J	2.0 J	2.0 J	2.0 J

EBASCO SERVICES INCORPORATED

BY KAF DATE 5/16/90 SHEET 1 OF

CHKD. BY DATE OFS NO. DEPT. NO.

CLIENT EG&G - Rocky Flats

PROJECT OU-3 - Other Outside Closure Work Plan

SUBJECT Evaluation of Soils Radiochemistry Results.

Attached are the radiochemistry results for soil sampling that Weston performed on SWMU's 174, 175, 182, 176, 129 and 177. The values were compared with "Background Geologic Materials, Tolerance Interval Upper Limits or MOV," also attached, as a basis for comparison.

Radionuclide results are "statistically different from background" (i.e. contaminated) when the reported value minus the error term is greater than the upper limit of tolerance interval, as stated on VS MOE, 1990 (881 Hillside Area, Phase III RI/FS Work Plan). (Upper limits of Tolerance Intervals for Rocky Flats Alluvium were used).

Soil samples with radionuclide results that are significantly higher than background have been highlighted in blue.

KAF

581 2-88

TABLE 2-4 (cont.)

BACKGROUND GEOLOGIC MATERIALS
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

Analyte	Units	Rocky Flats Alluvium (70 Samples)	Colluvium (28 Samples)	Weathered Claystone (17 Samples)	Weathered Sandstone (4 Samples)
Other					
Sulfide	mg/l	13*	5*	5*	2*
Nitrate	mg/l	4.3*	4.274	2.0*	1.9*
pH	----	9.64 (6.06)	9.48 (6.96)	10.14 (7.04)	9.2* (8.0)**
Total Radionuclides					
Gross Alpha	pCi/l	37.108	51.710	52.302	37
Gross Beta	pCi/l	36.886	35.135	35.743	29
Uranium 233, 234	pCi/l	1.491	1.759	1.985	0.8
Uranium 235	pCi/l	0.087	0.169	0.258	0.1
Uranium 238	pCi/l	1.353	1.675	1.643	1.0
Strontium 89, 90	pCi/l	0.768	0.776	0.786	0.4
Plutonium 239, 240	pCi/l	0.017	0.023	0.020	0.01
Americium 241	pCi/l	0.018	NR	NR	NR
Cesium 137	pCi/l	0.082	0.113	ND	0.0
Tritium	pCi/l	0.410	0.299	0.322	0.39

ND - Not Detected
NR - Data Not Received
* - Maximum Detected Value
** - Minimum Detected Value
() - Tolerance Interval Lower Limit for Two-Sided Parameter

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	2000-127-100	2000-128-100
Customer ID:	9H88A048	9H88A049
Laboratory ID:	9612-28524-2-1	9612-28524-2-2
Matrix:	Soil	Soil

Radio Chemistry	SWMU 182 CS022		SWMU 182 CS023	
Gross Alpha.....	26 ± 13	pci/g	22 ± 13	pci/g
Gross Beta.....	25 ± 6	pci/g	29 ± 6	pci/g
Uranium 233, 234.....	1.3 ± 0.2	pci/g	0.56 ± 0.10	pci/g
Uranium 235.....				
Uranium 238.....	5.9 ± 0.3	pci/g	0.54 ± 0.10	pci/g
Strontium 89, 90.....				
Plutonium 239, 240.....	-0.02 ± 0.10	pci/g	-0.02 ± 0.10	pci/g
Americium 241.....	-0.03 ± 0.19	pci/g	-0.04 ± 0.09	pci/g
Cesium 137.....				
Tritium.....	0.13 ± 0.14	pci/ml	0.09 ± 0.14	pci/ml
% Moisture.....	8.1		6.5	

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	2000-119-100	2000-120-100	2000-121-100
Customer ID:	BH88A024	BH88A025	BH88A026
Laboratory ID:	9612-28466-8-1	9612-28466-8-2	9612-28466-8-3
Matrix:	Soil	Soil	Soil

Radio Chemistry	Summary CS024		Summary CS025		Summary CS026	
Gross Alpha.....	28 ± 13	pci/g	21 ± 12	pci/g	16 ± 11	pci/g
Gross Beta.....	29 ± 6	pci/g	22 ± 6	pci/g	14 ± 6	pci/g
Uranium 233, 234.....	1.3 ± 0.3	pci/g	0.66 ± 0.16	pci/g	0.87 ± 0.14	pci/g
Uranium 235.....						
Uranium 238.....	1.1 ± 0.3	pci/g	0.79 ± 0.16	pci/g	0.56 ± 0.12	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.43 ± 0.17	pci/g	0.20 ± 0.15	pci/g	0.19 ± 0.15	pci/g
Americium 241.....	0.39 ± 0.11	pci/g	0.17 ± 0.07	pci/g	0.29 ± 0.08	pci/g
Cesium 137.....						
Tritium.....	-0.05 ± 0.15	pci/ml	0.07 ± 0.16	pci/ml	-0.03 ± 0.15	pci/ml
% Moisture.....	7.3		5.1		4.0	

ple Information

RFW Batch ID:	2000-122-100 Matrix Spike/Dup	2000-123-100 Field Blank	2000-124-100
Customer ID:	BHAA5027-MS,MSD - ?	BH88A028	BH88A029
Laboratory ID:	9612-28466-8-4 Can't	9612-28466-8-5	9612-28466-8-6
Matrix:	Soil Can't	Water	Soil

Radio Chemistry	?				CS027	
Gross Alpha.....	13 ± 11	pci/g	0 ± 1	pci/l	18 ± 12	pci/g
Gross Beta.....	13 ± 6	pci/g	0 ± 2	pci/l	19 ± 6	pci/g
Uranium 233, 234.....	0.68 ± 0.15	pci/g	0.0 ± 0.1	pci/l	0.51 ± 0.14	pci/g
Uranium 235.....						
Uranium 238.....	0.51 ± 0.12	pci/g	0.0 ± 0.1	pci/l	0.53 ± 0.13	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.19 ± 0.13	pci/g	0.0 ± 0.1	pci/l	1.0 ± 0.2	pci/g
Americium 241.....	0.32 ± 0.08	pci/g	0.0 ± 0.1	pci/l	0.34 ± 0.08	pci/g
Cesium 137.....						
Tritium.....	-0.05 ± 0.15	pci/ml	0.10 ± 0.16	pci/l	-0.01 ± 0.15	pci/ml
% Moisture.....	4.3				5.5	

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 2

Sample Information

RFW Batch ID:	2000-125-100	2000-126-100
Customer ID:	BH88A030	BH88A031
Laboratory ID:	9612-28466-B-7	9612-28466-B-8
Matrix:	Soil	Soil

Radio Chemistry	Summary CS032		Summary CS030	
Gross Alpha.....	31 ± 14	pci/g	28 ± 13	pci/g
Gross Beta.....	15 ± 6	pci/g	20 ± 6	pci/g
Uranium 233, 234.....	0.66 ± 0.17	pci/g	0.80 ± 0.15	pci/g
Uranium 235.....				
Uranium 238.....	0.64 ± 0.16	pci/g	0.57 ± 0.12	pci/g
Strontium 89, 90.....				
Plutonium 239, 240.....	0.00 ± 0.12	pci/g	0.70 ± 0.16	pci/g
Americium 241.....	0.18 ± 0.07	pci/g	0.30 ± 0.08	pci/g
Cesium 137.....				
Tritium.....	0.19 ± 0.16	pci/ml	0.05 ± 0.15	pci/ml
% Moisture.....	5.9		3.8	

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

Semivols 176
175

Weston-Gulf Coast
Rockwell. 142966-142976
VOA. BNA GC/MS

CASE NARRATIVE

GENERAL

1. Weston-Gulf Coast uses the following GC/MS systems which can be identified on all raw data by either the Instrument ID or the quantitation file ID:

ID #	Instrument	Quant ID File
GCL#1	Hewlett Packard 5970 MSD	ID_IEP
GCL#2	Hewlett Packard 5996	ID_V2H
GCL#3	Hewlett Packard 5996	ID_CAP
GCL#4	Hewlett Packard 5970 MSD	ID_MGK

2. The Internal Standard and Surrogate peaks are labeled by name.

3. The quantitation of all detected HSL compounds was conducted using the response factors calculated from the continuing calibration standard.

VOA:

1. All surrogate recoveries in the volatile analyses were within QC limits.

2. All of the samples were analyzed as low level soils or waters and therefore normal detection limits apply.

3. Matrix spike analyses were conducted on another sample that was analyzed with this set.

BNA:

1. All surrogate recoveries in the semi-volatile analyses were within QC limits except for two surrogates on Method Blank 142975GB that were slightly low.

2. All of the samples were extracted and analyzed as low level soils or waters and therefore normal detection limits apply.

3. Matrix spike analyses were conducted on sample 142974. 142975. and 142976.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

The following is a list of flags that Gulf Coast Laboratories frequently uses on our analytical reports. All flags may not be applicable for the enclosed reports.

A - Indicates a condensation product

B - Indicates the compound was found in the blank as well as the sample.

C - Pesticide compound confirmed by GC/MS

d - Result is on a dry weight basis

D - Indicates the compound was identified in an analysis at a secondary dilution factor. If a sample is re-analyzed at a higher dilution, the "DL" suffix is appended to sample numbers.

e - Concentrations exceed calibration range of the instrument for that specific analysis.

E - Severe matrix interference

J - Indicates an estimated value which is below detection limit

P - Peaks present but do not appear to be PCBs

R - Spike recovery not within control limit

S - Indicates value determined by Method of Standard Addition

U - Indicates compound was analyzed for but not detected

W - Result is on an "as is basis" (wet weight)

X - Result by calculation.

BDL - Below Detection Limit

NA - Not Applicable

NR - Not Required

* - Duplicate not within control limits

+ - Correlation coefficient for MSA < 0.995

@ - Due to matrix interference, post analytical spike is out of control limits.

WESTON ANALYTICS
SEMIVOLATILE ANALYTICAL DATA PACKAGE FOR
RF

DATE RECEIVED: 10/26/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A33	8810-070-002	10/20/88	10/27/88	11/15/88
BH88A34	8810-070-003	10/20/88	10/26/88	11/16/88
BH88A35	8810-070-004	10/20/88	10/27/88	11/15/88
BH88A36	8810-070-005	10/20/88	10/27/88	11/15/88
BH88A37	8810-070-006	10/20/88	10/27/88	11/16/88
BH88A38	8810-070-007	10/20/88	10/27/88	11/16/88
BH88A39	8810-070-008	10/20/88	10/27/88	11/16/88
BH88A40	8810-070-009	10/20/88	10/27/88	11/16/88
BH88A40	8810-070-009 MS	10/20/88	10/27/88	11/16/88
BH88A40	8810-070-009 MSD	10/20/88	10/27/88	11/16/88
BH88A41	8810-070-010	10/20/88	10/28/88	11/16/88
BH88A41	8810-070-010 MS	10/20/88	10/28/88	11/16/88
BH88A41	8810-070-010 MSD	10/20/88	10/28/88	11/16/88
BH88A42	8810-070-011	10/21/88	10/28/88	11/17/88
BH88A42	8810-070-011 MS	10/21/88	10/28/88	11/17/88
BH88A42	8810-070-011 MSD	10/21/88	10/28/88	11/17/88
LAB QC:				
BLANK	8810-070-0001BL	NA	10/27/88	11/15/88
BLANK	8810-070-0002BL	NA	10/28/88	11/16/88
BLANK	8810-070-0003BL	NA	10/28/88	11/16/88

WESTON ANALYTICS
SEMIVOLATILE ANALYTICAL DATA PACKAGE FOR
RF

DATE RECEIVED: 10/26/88 RFW LOT #: 8810-070

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A33	002	S	142967	10/20/88	10/27/88	11/15/88
BH88A34	003	S	142968	10/20/88	10/26/88	11/16/88
BH88A35	004	S	142969	10/20/88	10/27/88	11/15/88
BH88A36	005	S	142970	10/20/88	10/27/88	11/15/88
BH88A37	006	S	142971	10/20/88	10/27/88	11/16/88
BH88A38	007	S	142972	10/20/88	10/27/88	11/16/88
BH88A39	008	S	142973	10/20/88	10/27/88	11/16/88
BH88A40	009	S	142974	10/20/88	10/27/88	11/16/88
BH88A40	009 MS	S	142974 M	10/20/88	10/27/88	11/16/88
BH88A40	009 MSD	S	142974 M	10/20/88	10/27/88	11/16/88
BH88A41	010	W	142975	10/20/88	10/28/88	11/16/88
BH88A41	010 MS	W	142975 M	10/20/88	10/28/88	11/16/88
BH88A41	010 MSD	W	142975 M	10/20/88	10/28/88	11/16/88
BH88A42	011	S	142976	10/21/88	10/28/88	11/17/88
`H88A42	011 MS	S	142976 M	10/21/88	10/28/88	11/17/88
H88A42	011 MSD	S	142976 M	10/21/88	10/28/88	11/17/88
LAB QC:						
BLANK	0001BL	S	BLANK	NA	10/27/88	11/15/88
BLANK	0002BL	W	BLANK	NA	10/28/88	11/16/88
BLANK	0003BL	S	BLANK	NA	10/28/88	11/16/88

List of Batch IDs starting with: 8810-070

RFW Batch ID	Customer ID	Laboratory ID
8810-070-0001BL	BLANK	BLANK
8810-070-0002BL	BLANK	BLANK
8810-070-0003BL	BLANK	BLANK
8810-070-002	BH88A33	142967
8810-070-003	BH88A34	142968
8810-070-004	BH88A35	142969
8810-070-005	BH88A36	142970
8810-070-006	BH88A37	142971
8810-070-007	BH88A38	142972
8810-070-008	BH88A39	142973
8810-070-009	BH88A40	142974
8810-070-009 MS	BH88A40	142974 MS
8810-070-009 MSD	BH88A40	142974 MSD
8810-070-010	BH88A41	142975
8810-070-010 MS	BH88A41	142975 MS
8810-070-010 MSD	BH88A41	142975 MSD
8810-070-011	BH88A42	142976
8810-070-011 MS	BH88A42	142976 MS
8810-070-011 MSD	BH88A42	142976 MSD

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

#176
ASO 31

RFW Batch ID:	8810-070-0001BL	8810-070-0002BL	8810-070-0003BL	8810-070-002
Customer ID:	BLANK	BLANK	BLANK	BH88A33
Matrix:	Soil	Water	Soil	Soil
Units:	UG/KG	UG/L	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

2-Fluorophenol:	36 %	28 %	46 %	55 %
Phenol-d5:	32 %	16 %	38 %	46 %
2,4,6-Br3-Phenol:	83 %	12 %	61 %	72 %
Nitrobenzene-d5:	23 %	24 %	26 %	36 %
2-Fluorobiphenyl:	36 %	34 %	47 %	52 %
p-Terphenyl-d14:	62 %	38 %	79 %	65 %

Sample Information

Phenol.....	330 U	10 U	330 U	340 U
bis(2-Chloroethyl)Ether.....	330 U	10 U	330 U	340 U
2-Chlorophenol.....	330 U	10 U	330 U	340 U
1,3-Dichlorobenzene.....	330 U	10 U	330 U	340 U
1,4-Dichlorobenzene.....	330 U	10 U	330 U	340 U
Benzyl Alcohol.....	330 U	10 U	330 U	340 U
1,2-Dichlorobenzene.....	330 U	10 U	330 U	340 U
2-Methylphenol.....	330 U	10 U	330 U	340 U
bis(2-Chloroisopropyl)Ether.....	330 U	10 U	330 U	340 U
4-Methylphenol.....	330 U	10 U	330 U	340 U
N-Nitroso-di-n-propylamine.....	330 U	10 U	330 U	340 U
Hexachloroethane.....	330 U	10 U	330 U	340 U
Nitrobenzene.....	330 U	10 U	330 U	340 U
Isophorone.....	330 U	10 U	330 U	340 U
2-Nitrophenol.....	330 U	10 U	330 U	340 U
2,4-Dimethylphenol.....	330 U	10 U	330 U	340 U
Benzoic Acid.....	1600 U	50 U	1600 U	1700 U
bis(2-Chloroethoxy)Methane.....	330 U	10 U	330 U	340 U
2,4-Dichlorophenol.....	330 U	10 U	330 U	340 U
1,2,4-Trichlorobenzene.....	330 U	10 U	330 U	340 U
Naphthalene.....	330 U	10 U	330 U	340 U
4-Chloroaniline.....	330 U	10 U	330 U	340 U
Hexachlororbutadiene.....	330 U	10 U	330 U	340 U
4-Chloro-3-methylphenol.....	330 U	10 U	330 U	340 U
2-Methylnaphthalene.....	330 U	10 U	330 U	340 U
Hexachlorocyclopentadiene.....	330 U	10 U	330 U	340 U
2,4,6-Trichlorophenol.....	330 U	10 U	330 U	340 U
2,4,5-Trichlorophenol.....	1600 U	50 U	1600 U	1700 U
2-Chloronaphthalene.....	330 U	10 U	330 U	340 U
2-Nitroaniline.....	1600 U	50 U	1600 U	1700 U
Dimethyl Phthalate.....	330 U	10 U	330 U	340 U
Acenaphthylene.....	330 U	10 U	330 U	340 U

(continued)

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

RFW Batch ID:	8810-070-0001BL	8810-070-0002BL	8810-070-0003BL	8810-070-002
Customer ID:	BLANK	BLANK	BLANK	BH88A33
Matrix:	Soil	Water	Soil	Soil
Units:	UG/KG	UG/L	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

3-Nitroaniline	1600 U	50 U	1600 U	1700 U
Acenaphthene	330 U	10 U	330 U	340 U
2,4-Dinitrophenol	1600 U	50 U	1600 U	1700 U
4-Nitrophenol	1600 U	50 U	1600 U	1700 U
Dibenzofuran	330 U	10 U	330 U	340 U
2,4-Dinitrotoluene	330 U	10 U	330 U	340 U
2,6-Dinitrotoluene	330 U	10 U	330 U	340 U
Diethylphthalate	330 U	10 U	330 U	340 U
4-Chlorophenyl-phenylether	330 U	10 U	330 U	340 U
Fluorene	330 U	10 U	330 U	340 U
4-Nitroaniline	1600 U	50 U	1600 U	1700 U
4,6-Dinitro-2-methylphenol	1600 U	50 U	1600 U	1700 U
N-Nitrosodiphenylamine	330 U	10 U	330 U	340 U
4-Bromophenyl-phenylether	330 U	10 U	330 U	340 U
Hexachlorobenzene	330 U	10 U	330 U	340 U
Pentachlorophenol	1600 U	50 U	1600 U	1700 U
Phenanthrene	330 U	10 U	330 U	340 U
Anthracene	330 U	10 U	330 U	340 U
di-n-Butyl Phthalate	330 U	10 U	330 U	340 U
Fluoranthene	330 U	10 U	330 U	340 U
Pyrene	330 U	10 U	330 U	340 U
Butyl Benzyl Phthalate	330 U	10 U	330 U	340 U
3,3'-Dichlorobenzidine	660 U	20 U	660 U	680 U
Benzo(a)Anthracene	330 U	10 U	330 U	340 U
bis(2-Ethylhexyl)Phthalate	72 J	1 J	190 J	130 JB
Chrysene	330 U	10 U	330 U	340 U
di-n-Octyl Phthalate	330 U	10 U	330 U	340 U
Benzo(b)Fluoranthene	330 U	10 U	330 U	340 U
Benzo(k)Fluoranthene	330 U	10 U	330 U	340 U
Benzo(a)Pyrene	330 U	10 U	330 U	340 U
Indeno(1,2,3-cd)Pyrene	330 U	10 U	330 U	340 U
Dibenz(a,h)Anthracene	330 U	10 U	330 U	340 U
Benzo(g,h,i)Perylene	330 U	10 U	330 U	340 U

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information	#176 CS028	#176 CS029	#176 CS023	#175 CS018
RFW Batch ID:	8810-070-003	8810-070-004	8810-070-005	8810-070-006
Customer ID:	BH88A34	BH88A35	BH88A36	BH88A37
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

2-Fluorophenol:	48 %	47 %	47 %	54 %
Phenol-d5:	46 %	39 %	38 %	47 %
2,4,6-Br3-Phenol:	89 %	69 %	73 %	70 %
Nitrobenzene-d5:	32 %	30 %	31 %	39 %
2-Fluorobiphenyl:	53 %	43 %	44 %	55 %
p-Terphenyl-d14:	66 %	54 %	52 %	69 %

Sample Information

Phenol	330 U	340 U	330 U	360 U
bis(2-Chloroethyl)Ether	330 U	340 U	330 U	360 U
2-Chlorophenol	330 U	340 U	330 U	360 U
1,3-Dichlorobenzene	330 U	340 U	330 U	360 U
1,4-Dichlorobenzene	330 U	340 U	330 U	360 U
Benzyl Alcohol	330 U	340 U	330 U	360 U
1,2-Dichlorobenzene	330 U	340 U	330 U	360 U
2-Methylphenol	330 U	340 U	330 U	360 U
bis(2-Chloroisopropyl)Ether	330 U	340 U	330 U	360 U
4-Methylphenol	330 U	340 U	330 U	360 U
N-Nitroso-di-n-propylamine	330 U	340 U	330 U	360 U
Hexachloroethane	330 U	340 U	330 U	360 U
Nitrobenzene	330 U	340 U	330 U	360 U
Isophorone	330 U	340 U	330 U	360 U
2-Nitrophenol	330 U	340 U	330 U	360 U
2,4-Dimethylphenol	330 U	340 U	330 U	360 U
Benzoic Acid	1700 U	1700 U	1600 U	1800 U
bis(2-Chloroethoxy)Methane	330 U	340 U	330 U	360 U
2,4-Dichlorophenol	330 U	340 U	330 U	360 U
1,2,4-Trichlorobenzene	330 U	340 U	330 U	360 U
Naphthalene	330 U	340 U	330 U	360 U
4-Chloroaniline	330 U	340 U	330 U	360 U
Hexachlororbutadiene	330 U	340 U	330 U	360 U
4-Chloro-3-methylphenol	330 U	340 U	330 U	360 U
2-Methylnaphthalene	330 U	340 U	330 U	360 U
Hexachlorocyclopentadiene	330 U	340 U	330 U	360 U
2,4,6-Trichlorophenol	330 U	340 U	330 U	360 U
2,4,5-Trichlorophenol	1700 U	1700 U	1600 U	1800 U
2-Chloronaphthalene	330 U	340 U	330 U	360 U
2-Nitroaniline	1700 U	1700 U	1600 U	1800 U
Dimethyl Phthalate	330 U	340 U	330 U	360 U
Acenaphthylene	330 U	340 U	330 U	360 U
3-Nitroaniline	1700 U	1700 U	1600 U	1800 U

(continued)

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

	#176 CS028	#176 CS029	#176 CS033	#175 CS018
RFW Batch ID:	8810-070-003	8810-070-004	8810-070-005	8810-070-006
Customer ID:	BH88A34	BH88A35	BH88A36	BH88A37
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

Acenaphthene	330	U	340	U	330	U	360	U
2,4-Dinitrophenol	1700	U	1700	U	1600	U	1800	U
4-Nitrophenol	1700	U	1700	U	1600	U	1800	U
Dibenzofuran	330	U	340	U	330	U	360	U
2,4-Dinitrotoluene	330	U	340	U	330	U	360	U
2,6-Dinitrotoluene	330	U	340	U	330	U	360	U
Diethylphthalate	330	U	340	U	330	U	360	U
4-Chlorophenyl-phenylether	330	U	340	U	330	U	360	U
Fluorene	330	U	340	U	330	U	360	U
4-Nitroaniline	1700	U	1700	U	1600	U	1800	U
4,6-Dinitro-2-methylphenol	1700	U	1700	U	1600	U	1800	U
N-Nitrosodiphenylamine	330	U	340	U	330	U	360	U
4-Bromophenyl-phenylether	330	U	340	U	330	U	360	U
Hexachlorobenzene	330	U	340	U	330	U	360	U
Pentachlorophenol	1700	U	1700	U	1600	U	1800	U
Phenanthrene	330	U	76	J	49	J	360	U
Anthracene	330	U	340	U	330	U	360	U
di-n-Butyl Phthalate	330	U	340	U	330	U	360	U
Fluoranthene	46	J	120	J	82	J	360	U
Pyrene	43	J	100	J	77	J	360	U
Butyl Benzyl Phthalate	330	U	340	U	330	U	360	U
3,3'-Dichlorobenzidine	670	U	690	U	660	U	720	U
Benzo(a)Anthracene	330	U	53	J	37	J	360	U
bis(2-Ethylhexyl)Phthalate	130	JB	110	JB	110	JB	180	JB
Chrysene	330	U	61	J	42	J	360	U
di-n-Octyl Phthalate	330	U	340	U	330	U	360	U
Benzo(b)Fluoranthene	330	U	51	J	28	J	360	U
Benzo(k)Fluoranthene	330	U	53	J	52	J	360	U
Benzo(a)Pyrene	330	U	57	J	40	J	360	U
Indeno(1,2,3-cd)Pyrene	330	U	340	U	330	U	360	U
Dibenz(a,h)Anthracene	330	U	340	U	330	U	360	U
Benzo(g,h,i)Perylene	330	U	340	U	330	U	360	U

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

	#175 C5019	#175 C5021		
RFW Batch ID:	8810-070-007	8810-070-008	8810-070-009	8810-070-009 MS
Customer ID:	BH88A38	BH88A39	BH88A40	BH88A40
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

2-Fluorophenol:	56 %	47 %	61 %	48 %
Phenol-d5:	45 %	38 %	51 %	38 %
2,4,6-Br3-Phenol:	73 %	72 %	95 %	71 %
Nitrobenzene-d5:	36 %	30 %	39 %	33 %
2-Fluorobiphenyl:	54 %	45 %	58 %	47 %
p-Terphenyl-d14:	61 %	61 %	79 %	59 %

Sample Information

Phenol	340 U	340 U	340 U	35 %
bis(2-Chloroethyl)Ether	340 U	340 U	340 U	340 U
2-Chlorophenol	340 U	340 U	340 U	37 %
1,3-Dichlorobenzene	340 U	340 U	340 U	340 U
1,4-Dichlorobenzene	340 U	340 U	340 U	35 %
Benzyl Alcohol	340 U	340 U	340 U	340 U
1,2-Dichlorobenzene	340 U	340 U	340 U	340 U
2-Methylphenol	340 U	340 U	340 U	340 U
bis(2-Chloroisopropyl)Ether	340 U	340 U	340 U	340 U
4-Methylphenol	340 U	340 U	340 U	340 U
N-Nitroso-di-n-propylamine	340 U	340 U	340 U	44 %
Hexachloroethane	340 U	340 U	340 U	340 U
Nitrobenzene	340 U	340 U	340 U	340 U
Isophorone	340 U	340 U	340 U	340 U
2-Nitrophenol	340 U	340 U	340 U	340 U
2,4-Dimethylphenol	340 U	340 U	340 U	340 U
Benzoic Acid	1700 U	1700 U	1700 U	1700 U
bis(2-Chloroethoxy)Methane	340 U	340 U	340 U	340 U
2,4-Dichlorophenol	340 U	340 U	340 U	340 U
1,2,4-Trichlorobenzene	340 U	340 U	340 U	39 %
Naphthalene	340 U	340 U	340 U	340 U
4-Chloroaniline	340 U	340 U	340 U	340 U
Hexachlororbutadiene	340 U	340 U	340 U	340 U
4-Chloro-3-methylphenol	340 U	340 U	340 U	38 %
2-Methylnaphthalene	340 U	340 U	340 U	340 U
Hexachlorocyclopentadiene	340 U	340 U	340 U	340 U
2,4,6-Trichlorophenol	340 U	340 U	340 U	340 U
2,4,5-Trichlorophenol	1700 U	1700 U	1700 U	1700 U
2-Chloronaphthalene	340 U	340 U	340 U	340 U
2-Nitroaniline	1700 U	1700 U	1700 U	1700 U
Dimethyl Phthalate	340 U	340 U	340 U	340 U
Acenaphthylene	340 U	340 U	340 U	340 U
3-Nitroaniline	1700 U	1700 U	1700 U	1700 U

(continued)

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

	#175 CS019	#175 CS021		
RFW Batch ID:	8810-070-007	8810-070-008	8810-070-009	8810-070-009 MS
Customer ID:	BH88A38	BH88A39	BH88A40	BH88A40
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

Acenaphthene	340	U	340	U	340	U	42	%
2,4-Dinitrophenol	1700	U	1700	U	1700	U	1700	U
4-Nitrophenol	1700	U	1700	U	1700	U	39	%
Dibenzofuran	340	U	340	U	340	U	340	U
2,4-Dinitrotoluene	340	U	340	U	340	U	38	%
2,6-Dinitrotoluene	340	U	340	U	340	U	340	U
Diethylphthalate	340	U	340	U	340	U	340	U
4-Chlorophenyl-phenylether	340	U	340	U	340	U	340	U
Fluorene	340	U	340	U	340	U	340	U
4-Nitroaniline	1700	U	1700	U	1700	U	1700	U
4,6-Dinitro-2-methylphenol	1700	U	1700	U	1700	U	1700	U
N-Nitrosodiphenylamine	340	U	340	U	340	U	340	U
4-Bromophenyl-phenylether	340	U	340	U	340	U	340	U
Hexachlorobenzene	340	U	340	U	340	U	340	U
Pentachlorophenol	1700	U	1700	U	1700	U	8	%
Phenanthrene	340	U	40	J	200	J	38	J
Anthracene	340	U	340	U	35	J	6	J
di-n-Butyl Phthalate	340	U	340	U	340	U	340	U
Fluoranthene	340	U	83	J	260	J	63	J
Pyrene	340	U	81	J	260	J	43	%
Butyl Benzyl Phthalate	340	U	340	U	340	U	340	U
3,3'-Dichlorobenzidine	670	U	680	U	690	U	690	U
Benzo(a)Anthracene	340	U	340	U	120	J	26	J
bis(2-Ethylhexyl)Phthalate	190	JB	370	B	360	B	260	JB
Chrysene	340	U	340	U	130	J	40	J
di-n-Octyl Phthalate	340	U	340	U	340	U	340	U
Benzo(b)Fluoranthene	340	U	340	U	130	J	30	J
Benzo(k)Fluoranthene	340	U	340	U	120	J	42	J
Benzo(a)Pyrene	340	U	340	U	140	J	39	J
Indeno(1,2,3-cd)Pyrene	340	U	340	U	340	U	340	U
Dibenz(a,h)Anthracene	340	U	340	U	340	U	340	U
Benzo(g,h,i)Perylene	340	U	340	U	340	U	340	U

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

RFW Batch ID:	8810-070-009 MSD	FB 8810-070-010	FB 8810-070-010 MS	FB 8810-070-010 MSD
Customer ID:	BH88A40	BH88A41	BH88A41	BH88A41
Matrix:	Soil	Water	Water	Water
Units:	UG/KG	UG/L	UG/L	UG/L
Dilution Factor:	1	1	1	1

Sample Information

2-Fluorophenol:	58 %	47 %	41 %	60 %
Phenol-d5:	48 %	28 %	30 %	41 %
2,4,6-Br3-Phenol:	80 %	63 %	53 %	71 %
Nitrobenzene-d5:	40 %	42 %	43 %	41 %
2-Fluorobiphenyl:	57 %	52 %	57 %	57 %
p-Terphenyl-d14:	73 %	63 %	72 %	72 %

Sample Information

Phenol	46 %	10 U	26 %	39 %
bis(2-Chloroethyl)Ether	340 U	10 U	10 U	10 U
2-Chlorophenol	47 %	10 U	31 %	48 %
1,3-Dichlorobenzene	340 U	10 U	10 U	10 U
1,4-Dichlorobenzene	45 %	10 U	36 %	35 %
Benzyl Alcohol	340 U	10 U	10 U	10 U
1,2-Dichlorobenzene	340 U	10 U	10 U	10 U
2-Methylphenol	340 U	10 U	10 U	10 U
bis(2-Chloroisopropyl)Ether	340 U	10 U	10 U	10 U
4-Methylphenol	340 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	58 %	10 U	46 %	52 %
Hexachloroethane	340 U	10 U	10 U	10 U
Nitrobenzene	340 U	10 U	10 U	10 U
Isophorone	340 U	10 U	10 U	10 U
2-Nitrophenol	340 U	10 U	10 U	10 U
2,4-Dimethylphenol	340 U	10 U	10 U	10 U
Benzoic Acid	1700 U	50 U	50 U	50 U
bis(2-Chloroethoxy)Methane	340 U	10 U	10 U	10 U
2,4-Dichlorophenol	340 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	50 %	10 U	39 %	41 %
Naphthalene	340 U	10 U	10 U	10 U
4-Chloroaniline	340 U	10 U	10 U	10 U
Hexachlororbutadiene	340 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	49 %	10 U	37 %	53 %
2-Methylnaphthalene	340 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	340 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	340 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	1700 U	50 U	50 U	50 U
2-Chloronaphthalene	340 U	10 U	10 U	10 U
2-Nitroaniline	1700 U	50 U	50 U	50 U
Dimethyl Phthalate	340 U	10 U	10 U	10 U
Acenaphthylene	340 U	10 U	10 U	10 U
3-Nitroaniline	1700 U	50 U	50 U	50 U

(continued)

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 | Client: ROCKY FLATS | Page: 8

Sample Information

RFW Batch ID:	8810-070-009 MSD	FB 8810-070-010	FB 8810-070-010 MS	FB 8810-070-010 MSD
Customer ID:	BH88A40	BH88A41	BH88A41	BH88A41
Matrix:	Soil	Water	Water	Water
Units:	UG/KG	UG/L	UG/L	UG/L
Dilution Factor:	1	1	1	1

Sample Information

Acenaphthene	53	%	10	U	55	%	56	%
2,4-Dinitrophenol	1700	U	50	U	50	U	50	U
4-Nitrophenol	51	%	50	U	21	%	35	%
Dibenzofuran	340	U	10	U	10	U	10	U
2,4-Dinitrotoluene	51	%	10	U	41	%	52	%
2,6-Dinitrotoluene	340	U	10	U	10	U	10	U
Diethylphthalate	340	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	340	U	10	U	10	U	10	U
Fluorene	340	U	10	U	10	U	10	U
4-Nitroaniline	1700	U	50	U	50	U	50	U
4,6-Dinitro-2-methylphenol	1700	U	50	U	50	U	50	U
N-Nitrosodiphenylamine	340	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	340	U	10	U	10	U	10	U
Hexachlorobenzene	340	U	10	U	10	U	10	U
Pentachlorophenol	12	%	50	U	37	%	56	%
Phenanthrene	50	J	10	U	10	U	10	U
Anthracene	8	J	10	U	10	U	10	U
di-n-Butyl Phthalate	340	U	10	U	10	U	10	U
Fluoranthene	97	J	10	U	10	U	10	U
Pyrene	58	%	10	U	67	%	65	%
Butyl Benzyl Phthalate	340	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	680	U	20	U	20	U	20	U
Benzo(a)Anthracene	41	J	10	U	10	U	10	U
bis(2-Ethylhexyl)Phthalate	380	B	4	JB	6	JB	6	JB
Chrysene	57	J	10	U	10	U	10	U
di-n-Octyl Phthalate	340	U	10	U	10	U	10	U
Benzo(b)Fluoranthene	65	J	10	U	10	U	10	U
Benzo(k)Fluoranthene	42	J	10	U	10	U	10	U
Benzo(a)Pyrene	56	J	10	U	10	U	10	U
Indeno(1,2,3-cd)Pyrene	340	U	10	U	10	U	10	U
Dibenz(a,h)Anthracene	340	U	10	U	10	U	10	U
Benzo(g,h,i)Perylene	340	U	10	U	10	U	10	U

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

#175
t5020

RFW Batch ID:	8810-070-011	8810-070-011 MS	8810-070-011 MSD
Customer ID:	BH88A42	BH88A42	BH88A42
Matrix:	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1

Sample Information

2-Fluorophenol:	42 %	46 %	36 %
Phenol-d5:	36 %	39 %	40 %
2,4,6-Br3-Phenol:	97 %	113 %	88 %
Nitrobenzene-d5:	30 %	35 %	30 %
2-Fluorobiphenyl:	47 %	49 %	58 %
p-Terphenyl-d14:	62 %	58 %	74 %

Sample Information

Phenol	350 U	34 %	35 %
bis(2-Chloroethyl)Ether	350 U	350 U	350 U
2-Chlorophenol	350 U	34 %	31 %
1,3-Dichlorobenzene	350 U	350 U	350 U
1,4-Dichlorobenzene	350 U	33 %	18 %
Benzyl Alcohol	350 U	350 U	350 U
1,2-Dichlorobenzene	350 U	350 U	350 U
2-Methylphenol	350 U	350 U	350 U
bis(2-Chloroisopropyl)Ether	350 U	350 U	350 U
4-Methylphenol	350 U	350 U	350 U
N-Nitroso-di-n-propylamine	350 U	44 %	42 %
Hexachloroethane	350 U	350 U	350 U
Nitrobenzene	350 U	350 U	350 U
Isophorone	350 U	350 U	350 U
2-Nitrophenol	350 U	350 U	350 U
2,4-Dimethylphenol	350 U	350 U	350 U
Benzoic Acid	1700 U	1700 U	1700 U
bis(2-Chloroethoxy)Methane	350 U	350 U	350 U
2,4-Dichlorophenol	350 U	350 U	350 U
1,2,4-Trichlorobenzene	350 U	39 %	34 %
Naphthalene	350 U	350 U	350 U
4-Chloroaniline	350 U	350 U	350 U
Hexachlorobutadiene	350 U	350 U	350 U
4-Chloro-3-methylphenol	350 U	39 %	51 %
2-Methylnaphthalene	350 U	350 U	350 U
Hexachlorocyclopentadiene	350 U	350 U	350 U
2,4,6-Trichlorophenol	350 U	350 U	350 U
2,4,5-Trichlorophenol	1700 U	1700 U	1700 U
2-Chloronaphthalene	350 U	350 U	350 U
2-Nitroaniline	1700 U	1700 U	1700 U
Dimethyl Phthalate	350 U	350 U	350 U
Acenaphthylene	350 U	350 U	350 U
3-Nitroaniline	1700 U	1700 U	1700 U

(continued)

WESTON ANALYTICS

GC/MS DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

Sample Information

#175
CS020

RFW Batch ID:	8810-070-011	8810-070-011 MS	8810-070-011 MSD
Customer ID:	BH88A42	BH88A42	BH88A42
Matrix:	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1

Sample Information

Acenaphthene	350	U	48	%	58	%
2,4-Dinitrophenol	1700	U	1700	U	1700	U
4-Nitrophenol	1700	U	34	%	45	%
Dibenzofuran	350	U	350	U	350	U
2,4-Dinitrotoluene	350	U	42	%	52	%
2,6-Dinitrotoluene	350	U	350	U	350	U
Diethylphthalate	350	U	350	U	350	U
4-Chlorophenyl-phenylether	350	U	350	U	350	U
Fluorene	350	U	350	U	350	U
4-Nitroaniline	1700	U	1700	U	1700	U
4,6-Dinitro-2-methylphenol	1700	U	1700	U	1700	U
N-Nitrosodiphenylamine	350	U	350	U	350	U
4-Bromophenyl-phenylether	350	U	350	U	350	U
Hexachlorobenzene	350	U	350	U	350	U
Pentachlorophenol	1700	U	28	%	42	%
Phenanthrene	350	U	350	U	350	U
Anthracene	350	U	350	U	350	U
di-n-Butyl Phthalate	350	U	350	U	350	U
Fluoranthene	350	U	350	U	350	U
Pyrene	350	U	58	%	72	%
Butyl Benzyl Phthalate	350	U	350	U	350	U
3,3'-Dichlorobenzidine	690	U	700	U	700	U
Benzo(a)Anthracene	350	U	350	U	350	U
bis(2-Ethylhexyl)Phthalate	120	JB	130	JB	150	JB
Chrysene	350	U	350	U	350	U
di-n-Octyl Phthalate	350	U	350	U	350	U
Benzo(b)Fluoranthene	350	U	350	U	350	U
Benzo(k)Fluoranthene	350	U	350	U	350	U
Benzo(a)Pyrene	350	U	350	U	350	U
Indeno(1,2,3-cd)Pyrene	350	U	350	U	350	U
Dibenz(a,h)Anthracene	350	U	350	U	350	U
Benzo(g,h,i)Perylene	350	U	350	U	350	U

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID:

RFW#: 8810-070-0001 Blank

GCL#: Blank 0001

TENTATIVELY IDENTIFIED COMPOUNDS

One (1) Semivolatile Compound greater than 10% of the nearest internal standard was tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION
Unknown	6.53	4700 ug/kg J A

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID:

RFW#: 8810-070-0002 Blank

GCL#: Blank 0002

TENTATIVELY IDENTIFIED COMPOUNDS

Three (3) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION		
Unknown	28.70	25	ug/l	J
Unknown	32.10	17	ug/l	J
Unknown	36.60	21	ug/l	J

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID:

RFW#: 8810-070-0003 Blank

GCL#: Blank 0003

TENTATIVELY IDENTIFIED COMPOUNDS

Four (4) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.51	5300	ug/kg	J	A
Unknown	28.79	290	ug/kg	J	
Unknown	32.08	710	ug/kg	J	
Unknown	36.58	950	ug/kg	J	

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A33

RFW#: 8810-070-002

GCL#: 142967 CS031 #176

TENTATIVELY IDENTIFIED COMPOUNDS

Six (6) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.52	6900	ug/kg	J	A
Unknown	29.30	1100	ug/kg	J	
Unknown	32.11	480	ug/kg	J	
Unknown	36.62	700	ug/kg	J	
Unknown	46.24	2400	ug/kg	J	
Unknown	46.98	880	ug/kg	J	

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WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A34

RFW#: 8810-070-003 CS028

GCL#: 142968 #176

TENTATIVELY IDENTIFIED COMPOUNDS

Eleven (11) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.57	5800	ug/kg	J	A
Unknown	27.53	230	ug/kg	J	
Unknown	27.88	170	ug/kg	J	
Unknown	28.92	270	ug/kg	J	
Unknown	32.13	380	ug/kg	J	
Unknown Hydrocarbon	35.51	290	ug/kg	J	
Unknown	36.64	770	ug/kg	J	
Unknown Hydrocarbon	38.05	440	ug/kg	J	
Unknown Hydrocarbon	41.52	400	ug/kg	J	
Unknown	46.33	4000	ug/kg	J	
Unknown	47.04	720	ug/kg	J	

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Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A35

RFW#: 8810-070-004

GCL#: 142969

CS029
#176

TENTATIVELY IDENTIFIED COMPOUNDS

Twelve (12) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.55	7800	ug/kg	J	A
Unknown	32.12	390	ug/kg	J	
Unknown Hydrocarbon	32.38	150	ug/kg	J	
Unknown Hydrocarbon	33.43	180	ug/kg	J	
Unknown Hydrocarbon	34.43	200	ug/kg	J	
Unknown Hydrocarbon	35.49	280	ug/kg	J	
Unknown	36.64	710	ug/kg	J	
Unknown Hydrocarbon	38.03	530	ug/kg	J	
Unknown Hydrocarbon	41.51	390	ug/kg	J	
Unknown	42.04	140	ug/kg	J	
Unknown	46.29	3400	ug/kg	J	
Unknown	47.03	1400	ug/kg	J	

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2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A36

RFW#: 8810-070-005

GCL#: 142970

CS033
#176

TENTATIVELY IDENTIFIED COMPOUNDS

Eight (8) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.59	6900	ug/kg	J	A
Unknown	27.89	150	ug/kg	J	
Unknown	32.11	540	ug/kg	J	
Unknown	36.63	730	ug/kg	J	
Unknown Hydrocarbon	38.03	340	ug/kg	J	
Unknown Hydrocarbon	41.50	330	ug/kg	J	
Unknown	46.28	2200	ug/kg	J	
Unknown	47.04	1100	ug/kg	J	

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2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A37

RFW#: 8810-070-006

GCL#: 142971

CS018
#175

TENTATIVELY IDENTIFIED COMPOUNDS

Seven (7) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.63	11000	ug/kg	J	A
Unknown	29.00	890	ug/kg	J	
Unknown	32.15	670	ug/kg	J	
Unknown	35.53	460	ug/kg	J	
Unknown	36.67	860	ug/kg	J	
Unknown	46.38	3100	ug/kg	J	
Unknown	47.14	1300	ug/kg	J	

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Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A38 CS019, #175

RFW#: 8810-070-007

GCL#: 142972

TENTATIVELY IDENTIFIED COMPOUNDS

Twenty (20) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.58	9600	ug/kg	J	A
Unknown Hydrocarbon	22.18	340	ug/kg	J	
Unknown Hydrocarbon	22.93	280	ug/kg	J	
Unknown Hydrocarbon	23.69	430	ug/kg	J	
Unknown Hydrocarbon	23.77	410	ug/kg	J	
Unknown	24.66	780	ug/kg	J	
Unknown Hydrocarbon	25.13	350	ug/kg	J	
Unknown Hydrocarbon	26.48	420	ug/kg	J	
Unknown Hydrocarbon	27.77	370	ug/kg	J	
Unknown Hydrocarbon	29.01	350	ug/kg	J	
Unknown	30.20	390	ug/kg	J	
Unknown	31.33	250	ug/kg	J	
Unknown	32.13	620	ug/kg	J	
Unknown	32.40	250	ug/kg	J	
Unknown	33.45	280	ug/kg	J	
Unknown	34.46	180	ug/kg	J	
Unknown	35.53	290	ug/kg	J	
Unknown	36.66	870	ug/kg	J	
Unknown	46.32	1900	ug/kg	J	
Unknown	47.08	730	ug/kg	J	

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DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A39 , CS021, #175

RFW#: 8810-070-008

GCL#: 142973

TENTATIVELY IDENTIFIED COMPOUNDS

Seventeen (17) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.56	7600	ug/kg	J	A
Unknown	24.65	300	ug/kg	J	
Unknown	32.15	410	ug/kg	J	
Unknown	32.77	310	ug/kg	J	
Unknown	33.47	240	ug/kg	J	
Unknown	33.66	410	ug/kg	J	
Unknown	33.95	200	ug/kg	J	
Unknown	34.48	510	ug/kg	J	
Unknown	34.81	210	ug/kg	J	
Phosphoric Acid Ester	35.37	260	ug/kg	J	
Unknown	35.56	390	ug/kg	J	
Phosphoric Acid Ester	35.70	420	ug/kg	J	
Unknown	36.69	700	ug/kg	J	
Unknown	37.64	540	ug/kg	J	
Unknown	38.10	420	ug/kg	J	
Unknown Hydrocarbon	41.56	960	ug/kg	J	
Unknown	46.34	1400	ug/kg	J	

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Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A40 not on list

RFW#: 8810-070-009

GCL#: 142974

TENTATIVELY IDENTIFIED COMPOUNDS

Nine (9) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.60	8100	ug/kg	J	A
Unknown	24.63	220	ug/kg	J	
Unknown	32.16	900	ug/kg	J	
Unknown	35.54	250	ug/kg	J	
Unknown	36.70	1400	ug/kg	J	
Unknown	38.08	470	ug/kg	J	
Unknown	41.56	450	ug/kg	J	
Unknown	46.35	1200	ug/kg	J	
Unknown	47.13	470	ug/kg	J	

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2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A41 Field Blank

RFW#: 8810-070-010

GCL#: 142975

TENTATIVELY IDENTIFIED COMPOUNDS

Three (3) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	28.70	39	ug/l	J	B
Unknown	32.08	27	ug/l	J	B
Unknown	36.60	35	ug/l	J	B

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2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA SUMMARY FOR: Rockwell/WO#2029-38-01

CLIENT ID: BH88A42, CS020, #175

RFW#: 8810-070-011

GCL#: 142976

TENTATIVELY IDENTIFIED COMPOUNDS

Six (6) Semivolatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any priority pollutants, surrogates or internal standards.

COMPOUND	RETENTION TIME	ESTIMATED CONCENTRATION			
Unknown	6.48	5100	ug/kg	J	A
Unknown	28.76	290	ug/kg	J	B
Unknown	32.06	500	ug/kg	J	B
Unknown	36.54	830	ug/kg	J	B
Unknown	46.09	1900	ug/kg	J	
Unknown	46.84	850	ug/kg	J	

WESTON ANALYTICS
VOLATILE ANALYTICAL DATA PACKAGE FOR
RF

DATE RECEIVED: 10/26/88 RFW LOT #: 8810-070

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A32 Trip Blank	001	W	142966	10/20/88	NA	11/07/88
BH88A33 CS031, #176	002	S	142967	10/20/88	NA	11/02/88
BH88A34 CS028, #176	003	S	142968	10/20/88	NA	11/02/88
BH88A35 CS029, #176	004	S	142969	10/20/88	NA	11/02/88
BH88A36 CS033, #176	005	S	142970	10/20/88	NA	11/02/88
BH88A37 CS018, #175	006	S	142971	10/20/88	NA	11/02/88
BH88A38 CS019, #175	007	S	142972	10/20/88	NA	11/02/88
BH88A39 CS031, #175	008	S	142973	10/20/88	NA	11/02/88
BH88A40 [illegible]	009	S	142974	10/20/88	NA	11/02/88
BH88A41 Field Blank	010	W	142975	10/20/88	NA	10/31/88
BH88A42 CS030, #175	011	S	142976	10/21/88	NA	11/02/88

LAB QC:

BLANK	0001BL	W		NA	NA	11/07/88
BLANK	0002BL	W		NA	NA	11/02/88
BLANK	0003BL	W		NA	NA	11/02/88
BLANK	0004BL	W		NA	NA	10/31/88

WESTON ANALYTICS
VOLATILE ANALYTICAL DATA PACKAGE FOR
RF

DATE RECEIVED: 10/26/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A32	8810-070-001	10/20/88	NA	11/07/88
BH88A33	8810-070-002	10/20/88	NA	11/02/88
BH88A34	8810-070-003	10/20/88	NA	11/02/88
BH88A35	8810-070-004	10/20/88	NA	11/02/88
BH88A36	8810-070-005	10/20/88	NA	11/02/88
BH88A37	8810-070-006	10/20/88	NA	11/02/88
BH88A38	8810-070-007	10/20/88	NA	11/02/88
BH88A39	8810-070-008	10/20/88	NA	11/02/88
BH88A40	8810-070-009	10/20/88	NA	11/02/88
BH88A41	8810-070-010	10/20/88	NA	10/31/88
BH88A42	8810-070-011	10/21/88	NA	11/02/88
LAB QC:				
BLANK	8810-070-0001BL	NA	NA	11/07/88
BLANK	8810-070-0002BL	NA	NA	11/02/88
BLANK	8810-070-0003BL	NA	NA	11/02/88
BLANK	8810-070-0004BL	NA	NA	10/31/88

List of Batch IDs starting with: 8810-070

RFW Batch ID	Customer ID	Laboratory ID
8810-070-0001BL	BLANK	
8810-070-0002BL	BLANK	
8810-070-0003BL	BLANK	
8810-070-0004BL	BLANK	
8810-070-001	BH88A32	142966
8810-070-002	BH88A33	142967
8810-070-003	BH88A34	142968
8810-070-004	BH88A35	142969
8810-070-005	BH88A36	142970
8810-070-006	BH88A37	142971
8810-070-007	BH88A38	142972
8810-070-008	BH88A39	142973
8810-070-009	BH88A40	142974
8810-070-010	BH88A41	142975
8810-070-011	BH88A42	142976

WESTON ANALYTICS

GC/MS DATA SUMMARY

Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

RFW Batch ID:	8810-070-0001BL	8810-070-0002BL	8810-070-0003BL	8810-070-0004BL
Customer ID:	BLANK	BLANK	BLANK	BLANK
Matrix:	Water	Water	Water	Water
Units:	UG/L	UG/L	UG/L	UG/L
Dilution Factor:	1	1	1	1

Sample Information

Toluene-d8:	97 %	97 %	97 %	97 %
Bromofluorobenzene:	100 %	106 %	100 %	98 %
1,2-Dichloroethane-d4:	101 %	94 %	100 %	80 %

Sample Information

Chloromethane	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Methylene Chloride	8	18	5.0 U	10
Acetone	18	10 U	10 U	19
Carbon Disulfide	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Trans-1,2-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone	26	10 U	10 U	5 J
1,1,1-Trichloroethane	6	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Acetate	10 U	10 U	10 U	10 U
Bromodichloromethane	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	5.0 U	5.0 U	5.0 U	5.0 U
Trans-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloroethylvinylether	10 U	10 U	10 U	10 U
Bromoform	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Tetrachloroethene	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	5.0 U	5.0 U	5.0 U	5.0 U
Total Xylenes	5.0 U	5.0 U	5.0 U	5.0 U

WESTON ANALYTICS

GC/MS DATA SUMMARY

Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information	Trip Blank	#176 CS031	#176 CS028	#176 CS029
RFW Batch ID:	8810-070-001	8810-070-002	8810-070-003	8810-070-004
Customer ID:	BH88A32	BH88A33	BH88A34	BH88A35
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Sample Information				
Toluene-d8:	99 %	102 %	102 %	81 %
Bromofluorobenzene:	98 %	99 %	91 %	77 %
1,2-Dichloroethane-d4:	100 %	91 %	94 %	106 %

Sample Information				
Chloromethane	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Methylene Chloride	23 B	5 B	6 B	14
Acetone	14 B	10 U	10 U	26
Carbon Disulfide	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Trans-1,2-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone	7 JB	10 U	10 U	10 U
1,1,1-Trichloroethane	13 B	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Acetate	10 U	10 U	10 U	10 U
Bromodichloromethane	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	5.0 U	5.0 U	5.0 U	5.0 U
Trans-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloroethylvinylether	10 U	10 U	10 U	10 U
Bromoform	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Tetrachloroethene	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	5.0 U	5.0 U	5.0 U	5.0 U
Total Xylenes	5.0 U	5.0 U	5.0 U	5.0 U

WESTON ANALYTICS

GC/MS DATA SUMMARY

Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information	#176 CS023	#175 CS018	#175 CS019	#175 CS021
RFW Batch ID:	8810-070-005	8810-070-006	8810-070-007	8810-070-008
Customer ID:	BH88A36	BH88A37	BH88A38	BH88A39
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

Toluene-d8:	99 %	99 %	98 %	104 %
Bromofluorobenzene:	87 %	93 %	101 %	88 %
1,2-Dichloroethane-d4:	92 %	96 %	96 %	101 %

Sample Information

Chloromethane	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Methylene Chloride	8 B	8 B	6 B	10
Acetone	20	10 U	10 U	20
Carbon Disulfide	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Trans-1,2-Dichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
Chloroform	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl Acetate	10 U	10 U	10 U	10 U
Bromodichloromethane	5.0 U	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	5.0 U	5.0 U	5.0 U	5.0 U
Trans-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	5.0 U	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloroethylvinylether	10 U	10 U	10 U	10 U
Bromoform	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Tetrachloroethene	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	5.0 U	5.0 U	5.0 U	5.0 U
Total Xylenes	5.0 U	5.0 U	5.0 U	5.0 U

WESTON ANALYTICS

GC/MS DATA SUMMARY

Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-070 | Client: ROCKY FLATS |

Sample Information

	rotor list	Field Blank	#145 CS020
RFW Batch ID:	8810-070-009	8810-070-010	8810-070-011
Customer ID:	BH88A40	BH88A41	BH88A42
Matrix:	Soil	Water	Soil
Units:	UG/KG	UG/L	UG/KG
Dilution Factor:	1	1	1

Sample Information

Toluene-d8:	101 %	98 %	99 %
Bromofluorobenzene:	93 %	99 %	99 %
1,2-Dichloroethane-d4:	101 %	110 %	101 %

Sample Information

Chloromethane	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U
Methylene Chloride	24	19 B	28
Acetone	34	22 B	23
Carbon Disulfide	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U
Trans-1,2-Dichloroethene	5.0 U	5.0 U	5.0 U
Chloroform	5.0 U	4 J	5.0 U
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U
2-Butanone	10 U	17 B	10 U
1,1,1-Trichloroethane	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	5.0 U	5.0 U	5.0 U
Vinyl Acetate	10 U	10 U	10 U
Bromodichloromethane	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	5.0 U	5.0 U	5.0 U
Trans-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U
Trichloroethene	5.0 U	5.0 U	5.0 U
Dibromochloromethane	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	5.0 U	5.0 U	5.0 U
Benzene	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U
2-Chloroethylvinylether	10 U	10 U	10 U
Bromoform	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U
Tetrachloroethene	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	5.0 U
Toluene	5.0 U	5.0 U	5.0 U
Chlorobenzene	5.0 U	5.0 U	5.0 U
Ethylbenzene	5.0 U	5.0 U	5.0 U
Styrene	5.0 U	5.0 U	5.0 U
Total Xylenes	5.0 U	5.0 U	5.0 U

Semivols

176

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

ORGANICS CASE NARRATIVE

Client: ROCKY FLATS
RFW #: 8810S062
W.O. #: 2029-38-01-0000

FRACTION: BNA

1. This set of samples consisted of 1 water and 7 soil samples collected on 10/19/88.

2. The samples were extracted on 10/26/88 and 12/01/88.

3. These samples were analyzed on 11/15/88; 11/17/88; 11/29/88; and 12/01/88 in accordance with SW 846 protocols.

4. All required holding times for these samples were met, with the exception of BH88A030 (8810S062-08) which was re-extracted on 12/01/88 due to poor surrogate recovery.

5. All tuning and calibration criteria were met for all samples.

6. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

7. Of the 90 surrogates analyzed, 5 were outside of QC limits.

8. Of the 22 matrix spike recoveries, none were outside of QC limits.

9. Of the 11 matrix spike RPD's, none were outside QC limits.

The following data qualifiers are used in this report:

U - Indicates that the compound was analyzed for but not detected.
J - Indicates an estimated trace value.
B - Indicates the compound was found in the blank.

Date: 12/8/88

Approved by: R. F. Carey

WESTON ANALYTICS
SEMIVOLATILE ANALYTICAL DATA PACKAGE FOR
ROCKY FLATS

DATE RECEIVED: 10/21/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A024	8810-062-002	10/19/88	10/26/88	11/17/88
BH88A025	8810-062-003	10/19/88	10/26/88	11/17/88
BH88A026	8810-062-004	10/19/88	10/26/88	11/17/88
BH88A027	8810-062-005	10/19/88	10/26/88	11/29/88
BH88A027	8810-062-005 MS	10/19/88	10/26/88	11/29/88
BH88A027	8810-062-005 MSD	10/19/88	10/26/88	11/29/88
BH88A028	8810-062-006	10/19/88	10/25/88	11/15/88
BH88A028	8810-062-006 DUP	10/19/88	10/25/88	11/15/88
BH88A029	8810-062-007	10/19/88	10/26/88	11/29/88
BH88A030	8810-062-008	10/19/88	12/01/88	12/01/88
BH88A031	8810-062-009	10/19/88	10/26/88	11/29/88
LAB QC:				
BLANK 10/25	8810-062-0001BL	NA	10/25/88	11/15/88
BLANK SPK 10/25	8810-062-0001BS	NA	10/25/88	11/15/88
BLK SPK DUP 10/25	8810-062-0001BSD	NA	10/25/88	11/15/88
BLANK 10/26	8810-062-0002BL	NA	10/26/88	11/16/88
BLANK 12/01	8810-062-0003BL	NA	12/01/88	12/02/88

R. F. Carney FOR
Norman W. Flynn
Organic Section Manager
WESTON Analytical Laboratories

12/8/88
DATE

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

RFW Batch ID:	8810-062-0001BL	8810-062-0001BS	8810-062-0001BSD	8810-062-0002BL
Customer ID:	BLANK 10/25	BLANK SPK 10/25	BLK SPK DUP 10/25	BLANK 10/26
Matrix:	Water	Water	Water	Soil
Units:	UG/L	% RECOVERY	% RECOVERY	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

2-Fluorophenol:	84 %	83 %	85 %	118 %
Phenol-d5:	99 %	126 %	130 %	142 %
2,4,6-Br3-Phenol:	80 %	85 %	88 %	82 %
Nitrobenzene-d5:	102 %	90 %	88 %	92 %
2-Fluorobiphenyl:	58 %	70 %	66 %	78 %
p-Terphenyl-d14:	71 %	78 %	76 %	89 %

Sample Information

Phenol.....	10 U	103 %	106 %	330 U
bis(2-Chloroethyl)Ether.....	10 U	10 U	10 U	330 U
2-Chlorophenol.....	10 U	113 %	112 %	330 U
1,3-Dichlorobenzene.....	10 U	10 U	10 U	330 U
1,4-Dichlorobenzene.....	10 U	72 %	69 %	330 U
Benzyl Alcohol.....	10 U	10 U	10 U	330 U
1,2-Dichlorobenzene.....	10 U	10 U	10 U	330 U
2-Methylphenol.....	10 U	10 U	10 U	330 U
bis(2-Chloroisopropyl)Ether.....	10 U	10 U	10 U	330 U
4-Methylphenol.....	10 U	10 U	10 U	330 U
N-Nitroso-di-n-propylamine.....	10 U	89 %	88 %	330 U
Hexachloroethane.....	10 U	10 U	10 U	330 U
Nitrobenzene.....	10 U	10 U	10 U	330 U
Isophorone.....	10 U	10 U	10 U	330 U
2-Nitrophenol.....	10 U	10 U	10 U	330 U
2,4-Dimethylphenol.....	10 U	10 U	10 U	330 U
Benzoic Acid.....	50 U	50 U	50 U	1600 U
bis(2-Chloroethoxy)Methane.....	10 U	10 U	10 U	330 U
2,4-Dichlorophenol.....	10 U	10 U	10 U	330 U
1,2,4-Trichlorobenzene.....	10 U	74 %	69 %	330 U
Naphthalene.....	10 U	10 U	10 U	330 U
4-Chloroaniline.....	10 U	10 U	10 U	330 U
Hexachlororbutadiene.....	10 U	10 U	10 U	330 U
4-Chloro-3-methylphenol.....	10 U	100 %	103 %	330 U
2-Methylnaphthalene.....	10 U	10 U	10 U	330 U
Hexachlorocyclopentadiene.....	10 U	10 U	10 U	330 U
2,4,6-Trichlorophenol.....	10 U	10 U	10 U	330 U
2,4,5-Trichlorophenol.....	50 U	50 U	50 U	1600 U
2-Chloronaphthalene.....	10 U	10 U	10 U	330 U
2-Nitroaniline.....	50 U	50 U	50 U	1600 U
Dimethyl Phthalate.....	10 U	10 U	10 U	330 U
Acenaphthylene.....	10 U	10 U	10 U	330 U

Modified)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

RFW Batch ID:	8810-062-0001BL	8810-062-0001BS	8810-062-0001BSD	8810-062-0002BL
Customer ID:	BLANK 10/25	BLANK SPK 10/25	BLK SPK DUP 10/25	BLANK 10/26
Matrix:	Water	Water	Water	Soil
Units:	UG/L	% RECOVERY	% RECOVERY	UG/KG
Dilution Factor:	1	1	1	1

Sample Information

3-Nitroaniline	50 U	50 U	50 U	1600 U
Acenaphthene	10 U	89 %	86 %	330 U
2,4-Dinitrophenol	50 U	50 U	50 U	1600 U
4-Nitrophenol	50 U	112 %	110 %	1600 U
Dibenzofuran	10 U	10 U	10 U	330 U
2,4-Dinitrotoluene	10 U	128 %	125 %	330 U
2,6-Dinitrotoluene	10 U	10 U	10 U	330 U
Diethylphthalate	10 U	10 U	10 U	330 U
4-Chlorophenyl-phenylether	10 U	10 U	10 U	330 U
Fluorene	10 U	10 U	10 U	330 U
4-Nitroaniline	50 U	50 U	50 U	1600 U
4,6-Dinitro-2-methylphenol	50 U	50 U	50 U	1600 U
N-Nitrosodiphenylamine	10 U	10 U	10 U	330 U
4-Bromophenyl-phenylether	10 U	10 U	10 U	330 U
Hexachlorobenzene	10 U	10 U	10 U	330 U
Pentachlorophenol	50 U	100 %	98 %	1600 U
Phenanthrene	10 U	10 U	10 U	330 U
Anthracene	10 U	10 U	10 U	330 U
di-n-Butyl Phthalate	2.0 J	4.0 JB	4.0 JB	110 J
Fluoranthene	10 U	10 U	10 U	330 U
Pyrene	10 U	97 %	94 %	330 U
Butyl Benzyl Phthalate	10 U	10 U	10 U	330 U
3,3'-Dichlorobenzidine	20 U	20 U	20 U	660 U
Benzo(a)Anthracene	10 U	10 U	10 U	330 U
bis(2-Ethylhexyl)Phthalate	10 U	10 U	10 U	330 U
Chrysene	10 U	10 U	10 U	330 U
di-n-Octyl Phthalate	10 U	10 U	10 U	330 U
Benzo(b)Fluoranthene	10 U	10 U	10 U	330 U
Benzo(k)Fluoranthene	10 U	10 U	10 U	330 U
Benzo(a)Pyrene	10 U	10 U	10 U	330 U
Indeno(1,2,3-cd)Pyrene	10 U	10 U	10 U	330 U
Dibenz(a,h)Anthracene	10 U	10 U	10 U	330 U
Benzo(g,h,i)Perylene	10 U	10 U	10 U	330 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

		# 176 CS024	#176 CS025	#176 CS026
RFW Batch ID:	8810-062-0003BL	8810-062-002	8810-062-003	8810-062-004
Customer ID:	BLANK 12/01	BH88A024	BH88A025	BH88A026
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	5	5	5

Sample Information

2-Fluorophenol:	49 %	65 %	59 %	58 %
Phenol-d5:	63 %	77 %	74 %	70 %
2,4,6-Br3-Phenol:	65 %	61 %	82 %	78 %
Nitrobenzene-d5:	52 %	53 %	45 %	42 %
2-Fluorobiphenyl:	43 %	56 %	57 %	57 %
p-Terphenyl-d14:	43 %	70 %	76 %	75 %

Sample Information

Phenol	330 U	1800 U	1800 U	1800 U
bis(2-Chloroethyl)Ether	330 U	1800 U	1800 U	1800 U
2-Chlorophenol	330 U	1800 U	1800 U	1800 U
1,3-Dichlorobenzene	330 U	1800 U	1800 U	1800 U
1,4-Dichlorobenzene	330 U	1800 U	1800 U	1800 U
Benzyl Alcohol	330 U	1800 U	1800 U	1800 U
1,2-Dichlorobenzene	330 U	1800 U	1800 U	1800 U
2-Methylphenol	330 U	1800 U	1800 U	1800 U
bis(2-Chloroisopropyl)Ether	330 U	1800 U	1800 U	1800 U
4-Methylphenol	330 U	1800 U	1800 U	1800 U
N-Nitroso-di-n-propylamine	330 U	1800 U	1800 U	1800 U
Hexachloroethane	330 U	1800 U	1800 U	1800 U
Nitrobenzene	330 U	1800 U	1800 U	1800 U
Isophorone	330 U	1800 U	1800 U	1800 U
2-Nitrophenol	330 U	1800 U	1800 U	1800 U
2,4-Dimethylphenol	330 U	1800 U	1800 U	1800 U
Benzoic Acid	1600 U	8900 U	8900 U	8800 U
bis(2-Chloroethoxy)Methane	330 U	1800 U	1800 U	1800 U
2,4-Dichlorophenol	330 U	1800 U	1800 U	1800 U
1,2,4-Trichlorobenzene	330 U	1800 U	1800 U	1800 U
Naphthalene	330 U	1800 U	1800 U	1800 U
4-Chloroaniline	330 U	1800 U	1800 U	1800 U
Hexachlororbutadiene	330 U	1800 U	1800 U	1800 U
4-Chloro-3-methylphenol	330 U	1800 U	1800 U	1800 U
2-Methylnaphthalene	330 U	1800 U	1800 U	1800 U
Hexachlorocyclopentadiene	330 U	1800 U	1800 U	1800 U
2,4,6-Trichlorophenol	330 U	1800 U	1800 U	1800 U
2,4,5-Trichlorophenol	1600 U	8900 U	8900 U	8800 U
2-Chloronaphthalene	330 U	1800 U	1800 U	1800 U
2-Nitroaniline	1600 U	8900 U	8900 U	8800 U
Dimethyl Phthalate	330 U	1800 U	1800 U	1800 U
Acenaphthylene	330 U	1800 U	1800 U	1800 U
3-Nitroaniline	1600 U	8900 U	8900 U	8800 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

		#176 CS024	#176 CS025	#176 CS026
RFW Batch ID:	8810-062-0003BL	8810-062-002	8810-062-003	8810-062-004
Customer ID:	BLANK 12/01	BH88A024	BH88A025	BH88A026
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	5	5	5

Sample Information

Acenaphthene	330	U	1800	U	1800	U	1800	U
2,4-Dinitrophenol	1600	U	8900	U	8900	U	8800	U
4-Nitrophenol	1600	U	8900	U	8900	U	8800	U
Dibenzofuran	330	U	1800	U	1800	U	1800	U
2,4-Dinitrotoluene	330	U	1800	U	1800	U	1800	U
2,6-Dinitrotoluene	330	U	1800	U	1800	U	1800	U
Diethylphthalate	330	U	1800	U	1800	U	1800	U
4-Chlorophenyl-phenylether	330	U	1800	U	1800	U	1800	U
Fluorene	330	U	1800	U	1800	U	1800	U
4-Nitroaniline	1600	U	8900	U	8900	U	8800	U
4,6-Dinitro-2-methylphenol	1600	U	8900	U	8900	U	8800	U
N-Nitrosodiphenylamine	330	U	1800	U	1800	U	1800	U
4-Bromophenyl-phenylether	330	U	1800	U	1800	U	1800	U
Hexachlorobenzene	330	U	1800	U	1800	U	1800	U
Pentachlorophenol	1600	U	8900	U	8900	U	8800	U
Phenanthrene	330	U	1800	U	1800	U	1800	U
Anthracene	330	U	1800	U	1800	U	1800	U
di-n-Butyl Phthalate	150	J	1800	U	1800	U	1800	U
Fluoranthene	330	U	1800	U	350	J	1800	U
Pyrene	330	U	1800	U	1800	U	1800	U
Butyl Benzyl Phthalate	330	U	1800	U	1800	U	1800	U
3,3'-Dichlorobenzidine	660	U	3500	U	3600	U	3500	U
Benzo(a)Anthracene	330	U	1800	U	1800	U	1800	U
bis(2-Ethylhexyl)Phthalate	410		1800	U	1800	U	1800	U
Chrysene	330	U	1800	U	210	J	1800	U
di-n-Octyl Phthalate	330	U	1800	U	1800	U	1800	U
Benzo(b)Fluoranthene	330	U	1800	U	1800	U	1800	U
Benzo(k)Fluoranthene	330	U	1800	U	1800	U	1800	U
Benzo(a)Pyrene	330	U	1800	U	1800	U	1800	U
Indeno(1,2,3-cd)Pyrene	330	U	1800	U	1800	U	1800	U
Dibenz(a,h)Anthracene	330	U	1800	U	1800	U	1800	U
Benzo(g,h,i)Perylene	330	U	1800	U	1800	U	1800	U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS

SEMIVOLATILE DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

	?			FB
RFW Batch ID:	8810-062-005	8810-062-005 MS	8810-062-005 MSD	8810-062-006
Customer ID:	BH88A027	BH88A027	BH88A027	BH88A028
Matrix:	Soil	Soil	Soil	Water
Units:	UG/KG	% RECOVERY	% RECOVERY	UG/L
Dilution Factor:	5	5	5	1

Sample Information

2-Fluorophenol:	48 %	63 %	63 %	88 %
Phenol-d5:	77 %	111 %	107 %	109 %
2,4,6-Br3-Phenol:	74 %	23 %	25 %	74 %
Nitrobenzene-d5:	46 %	57 %	53 %	95 %
2-Fluorobiphenyl:	62 %	57 %	54 %	64 %
p-Terphenyl-d14:	53 %	54 %	54 %	99 %

Sample Information

Phenol	1900 U	85 %	83 %	10 U
bis(2-Chloroethyl)Ether	1900 U	1900 U	1900 U	10 U
2-Chlorophenol	1900 U	67 %	68 %	10 U
1,3-Dichlorobenzene	1900 U	1900 U	1900 U	10 U
1,4-Dichlorobenzene	1900 U	49 %	52 %	10 U
Benzyl Alcohol	1900 U	1900 U	1900 U	10 U
1,2-Dichlorobenzene	1900 U	1900 U	1900 U	10 U
2-Methylphenol	1900 U	1900 U	1900 U	10 U
bis(2-Chloroisopropyl)Ether	1900 U	1900 U	1900 U	10 U
4-Methylphenol	1900 U	1900 U	1900 U	10 U
N-Nitroso-di-n-propylamine	1900 U	80 %	72 %	10 U
Hexachloroethane	1900 U	1900 U	1900 U	10 U
Nitrobenzene	1900 U	1900 U	1900 U	10 U
Isophorone	1900 U	1900 U	1900 U	10 U
2-Nitrophenol	1900 U	1900 U	1900 U	10 U
2,4-Dimethylphenol	1900 U	1900 U	1900 U	10 U
Benzoic Acid	9300 U	9300 U	9300 U	50 U
bis(2-Chloroethoxy)Methane	1900 U	1900 U	1900 U	10 U
2,4-Dichlorophenol	1900 U	1900 U	1900 U	10 U
1,2,4-Trichlorobenzene	1900 U	33 %	34 %	10 U
Naphthalene	1900 U	1900 U	1900 U	10 U
4-Chloroaniline	1900 U	1900 U	1900 U	10 U
Hexachlororbutadiene	1900 U	1900 U	1900 U	10 U
4-Chloro-3-methylphenol	1900 U	72 %	72 %	10 U
2-Methylnaphthalene	1900 U	1900 U	1900 U	10 U
Hexachlorocyclopentadiene	1900 U	1900 U	1900 U	10 U
2,4,6-Trichlorophenol	1900 U	1900 U	1900 U	10 U
2,4,5-Trichlorophenol	9300 U	9300 U	9300 U	50 U
2-Chloronaphthalene	1900 U	1900 U	1900 U	10 U
2-Nitroaniline	9300 U	9300 U	9300 U	50 U
Dimethyl Phthalate	1900 U	1900 U	1900 U	10 U
Acenaphthylene	1900 U	1900 U	1900 U	10 U
3-Nitroaniline	9300 U	9300 U	9300 U	50 U

Modifiers)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS

SEMIVOLATILE DATA SUMMARY

Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

FW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

RFW Batch ID:	8810-062-005	8810-062-005 MS	8810-062-005 MSD	8810-062-006
Customer ID:	BH88A027	BH88A027	BH88A027	BH88A028
Matrix:	Soil	Soil	Soil	Water
Units:	UG/KG	% RECOVERY	% RECOVERY	UG/L
Dilution Factor:	5	5	5	1

Sample Information

Acenaphthene	1900	U	70	%	67	%	10	U
2,4-Dinitrophenol	9300	U	9300	U	9300	U	50	U
4-Nitrophenol	9300	U	76	%	60	%	50	U
Dibenzofuran	1900	U	1900	U	1900	U	10	U
2,4-Dinitrotoluene	1900	U	75	%	70	%	10	U
2,6-Dinitrotoluene	1900	U	1900	U	1900	U	10	U
Diethylphthalate	1900	U	1900	U	1900	U	10	U
4-Chlorophenyl-phenylether	1900	U	1900	U	1900	U	10	U
Fluorene	1900	U	1900	U	1900	U	10	U
4-Nitroaniline	9300	U	9300	U	9300	U	50	U
4,6-Dinitro-2-methylphenol	9300	U	9300	U	9300	U	50	U
N-Nitrosodiphenylamine	1900	U	710	J	1900	U	10	U
4-Bromophenyl-phenylether	1900	U	1900	U	1900	U	10	U
Hexachlorobenzene	1900	U	1900	U	1900	U	10	U
Pentachlorophenol	9300	U	29	%	27	%	50	U
Phenanthrene	1900	U	1900	U	1900	U	10	U
Anthracene	1900	U	1900	U	1900	U	10	U
di-n-Butyl Phthalate	1900	U	220	JB	240	JB	10	U
Fluoranthene	1900	U	1900	U	1900	U	10	U
Pyrene	1900	U	78	%	79	%	10	U
Butyl Benzyl Phthalate	1900	U	1900	U	1900	U	10	U
3,3'-Dichlorobenzidine	3700	U	3700	U	3700	U	20	U
Benzo(a)Anthracene	1900	U	1900	U	1900	U	10	U
bis(2-Ethylhexyl)Phthalate	310	J	1900	U	1900	U	10	U
Chrysene	1900	U	1900	U	1900	U	10	U
di-n-Octyl Phthalate	1900	U	1900	U	1900	U	10	U
Benzo(b)Fluoranthene	1900	U	1900	U	1900	U	10	U
Benzo(k)Fluoranthene	1900	U	1900	U	1900	U	10	U
Benzo(a)Pyrene	1900	U	1900	U	1900	U	10	U
Indeno(1,2,3-cd)Pyrene	1900	U	1900	U	1900	U	10	U
Dibenz(a,h)Anthracene	1900	U	1900	U	1900	U	10	U
Benzo(g,h,i)Perylene	1900	U	1900	U	1900	U	10	U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

		#176 CS027	#176 CS032	#176 CS030
RFW Batch ID:	8810-062-006 DUP	8810-062-007	8810-062-008	8810-062-009
Customer ID:	BH88A028	BH88A029	BH88A030	BH88A031
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	5	1	5

Sample Information

2-Fluorophenol:	91 %	57 %	70 %	60 %
Phenol-d5:	110 %	91 %	100 %	98 %
2,4,6-Br3-Phenol:	73 %	16 %	126 %	19 %
Nitrobenzene-d5:	77 %	47 %	86 %	50 %
2-Fluorobiphenyl:	64 %	48 %	78 %	52 %
p-Terphenyl-d14:	90 %	43 %	94 %	44 %

Sample Information

Phenol	10 U	1700 U	350 U	1800 U
bis(2-Chloroethyl)Ether	10 U	1700 U	350 U	1800 U
2-Chlorophenol	10 U	1700 U	350 U	1800 U
1,3-Dichlorobenzene	10 U	1700 U	350 U	1800 U
1,4-Dichlorobenzene	10 U	1700 U	350 U	1800 U
Benzyl Alcohol	10 U	1700 U	350 U	1800 U
1,2-Dichlorobenzene	10 U	1700 U	350 U	1800 U
2-Methylphenol	10 U	1700 U	350 U	1800 U
bis(2-Chloroisopropyl)Ether	10 U	1700 U	350 U	1800 U
4-Methylphenol	10 U	1700 U	350 U	1800 U
N-Nitroso-di-n-propylamine	10 U	1700 U	350 U	1800 U
Hexachloroethane	10 U	1700 U	350 U	1800 U
Nitrobenzene	10 U	1700 U	350 U	1800 U
Isophorone	10 U	1700 U	350 U	1800 U
2-Nitrophenol	10 U	1700 U	350 U	1800 U
2,4-Dimethylphenol	10 U	1700 U	350 U	1800 U
Benzoic Acid	50 U	8700 U	1800 U	8900 U
bis(2-Chloroethoxy)Methane	10 U	1700 U	350 U	1800 U
2,4-Dichlorophenol	10 U	1700 U	350 U	1800 U
1,2,4-Trichlorobenzene	10 U	1700 U	350 U	1800 U
Naphthalene	10 U	1700 U	350 U	1800 U
4-Chloroaniline	10 U	1700 U	350 U	1800 U
Hexachlororbutadiene	10 U	1700 U	350 U	1800 U
4-Chloro-3-methylphenol	10 U	1700 U	350 U	1800 U
2-Methylnaphthalene	10 U	1700 U	350 U	1800 U
Hexachlorocyclopentadiene	10 U	1700 U	350 U	1800 U
2,4,6-Trichlorophenol	10 U	1700 U	350 U	1800 U
2,4,5-Trichlorophenol	50 U	8700 U	1800 U	8900 U
2-Chloronaphthalene	10 U	1700 U	350 U	1800 U
2-Nitroaniline	50 U	8700 U	1800 U	8900 U
Dimethyl Phthalate	10 U	1700 U	350 U	1800 U
Acenaphthylene	10 U	1700 U	350 U	1800 U
3-Nitroaniline	50 U	8700 U	1800 U	8900 U

Modifiers)U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
SEMIVOLATILE DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

		#170 CS027	#176 CS032	#176 CS030
RFW Batch ID:	8810-062-006 DUP	8810-062-007	8810-062-008	8810-062-009
Customer ID:	BH88A028	BH88A029	BH88A030	BH88A031
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	5	1	5

Sample Information

Acenaphthene	10	U	1700	U	350	U	1800	U
2,4-Dinitrophenol	50	U	8700	U	1800	U	8900	U
4-Nitrophenol	50	U	8700	U	160	J	8900	U
Dibenzofuran	10	U	1700	U	350	U	1800	U
2,4-Dinitrotoluene	10	U	1700	U	350	U	1800	U
2,6-Dinitrotoluene	10	U	1700	U	350	U	1800	U
Diethylphthalate	10	U	1700	U	350	U	1800	U
4-Chlorophenyl-phenylether	10	U	1700	U	350	U	1800	U
Fluorene	10	U	1700	U	350	U	1800	U
4-Nitroaniline	50	U	8700	U	1800	U	8900	U
4,6-Dinitro-2-methylphenol	50	U	8700	U	1800	U	8900	U
N-Nitrosodiphenylamine	10	U	1700	U	350	U	1800	U
4-Bromophenyl-phenylether	10	U	1700	U	350	U	1800	U
Hexachlorobenzene	10	U	1700	U	350	U	1800	U
Pentachlorophenol	50	U	8700	U	110	J	8900	U
Phenanthrene	10	U	1700	U	350	U	210	J
Anthracene	10	U	1700	U	41	J	1800	U
di-n-Butyl Phthalate	10	U	1700	U	350	U	450	JB
Fluoranthene	10	U	1700	U	58	J	290	J
Pyrene	10	U	1700	U	56	J	370	J
Butyl Benzyl Phthalate	10	U	1700	U	350	U	1800	U
3,3'-Dichlorobenzidine	20	U	3500	U	700	U	3500	U
Benzo(a)Anthracene	10	U	1700	U	350	U	1800	U
bis(2-Ethylhexyl)Phthalate	10	U	1700	U	600	B	1800	U
Chrysene	10	U	1700	U	350	U	1800	U
di-n-Octyl Phthalate	10	U	1700	U	350	U	1800	U
Benzo(b)Fluoranthene	10	U	1700	U	350	U	1800	U
Benzo(k)Fluoranthene	10	U	1700	U	350	U	1800	U
Benzo(a)Pyrene	10	U	1700	U	350	U	1800	U
Indeno(1,2,3-cd)Pyrene	10	U	1700	U	350	U	1800	U
Dibenz(a,h)Anthracene	10	U	1700	U	350	U	1800	U
Benzo(g,h,i)Perylene	10	U	1700	U	350	U	1800	U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROCKY FLATS

December 8, 1988

RFW#: 88-10-S062

Tentatively Identified Compounds,
BNA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/L
BLK QA88407	11/15/88	529	UNKNOWN	11
		566	UNKNOWN	7
BH88A028	11/15/88	527	UNKNOWN	9
		565	UNKNOWN	7
		2076	UNKNOWN	17
BH88A028 DUP	11/15/88	525	UNKNOWN	6
		563	UNKNOWN	5

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/Kg
BLK QA88412	11/16/88	526	UNKNOWN	200
		1862	UNKNOWN	700
BLK QA88438RE	12/02/88		NONE FOUND	
BH88A024	11/17/88	2525	UNKNOWN	3000
		2661	UNKNOWN	3200
BH88A025	11/17/88	1862	UNKNOWN	900
		2829	UNKNOWN	8000

ROCKY FLATS

December 8, 1988

RFW#: 88-10-S062

Tentatively Identified Compounds,
BNA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A026	11/17/88	2828	UNKNOWN	4400
		2877	UNKNOWN	2200
BH88A027	11/29/88	1939	UNKNOWN	1400
		2946	UNKNOWN	3500
BH88A029	11/29/88	1892	UNKNOWN	1700
		1944	UNKNOWN	2200
		2964	UNKNOWN	2800
BH88A030-RE	12/01/88	527	UNKNOWN	330
		578	UNKNOWN	2700
		1656	UNKNOWN	2000
		1949	UNKNOWN	2400
		2063	UNKNOWN	1500
		2241	UNKNOWN	1700
		2494	UNKNOWN	1300
		2911	UNKNOWN	20000
		2966	UNKNOWN	9000
BH88A031	11/29/88	1891	UNKNOWN	4900
		1944	UNKNOWN	1100
		2962	UNKNOWN	3300

Reviewed and approved R. F. Carney
Robert Carney
Unit Leader

metals 176

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

			#176 CS024	#176 CS025
RFW Batch ID:	8810-062-0001BL	8810-062-0002BL	8810-062-002	8810-062-003
Customer ID:	BLANK	BLANK	BH88A024	BH88A025
Matrix:	Soil	Water	Soil	Soil
Units:	MG/KG	MG/L	MG/KG	MG/KG

Sample Information

Silver (Ag), total	2.0 U	0.010 U	3.1	2.1 U
Aluminum (Al), total	40.0 U	0.200 U	11800	9820
Arsenic (As), total	2.0 U	0.010 U	6.9	2.1 U
Barium (Ba), total	40.0 U	0.200 U	107	75.7
Beryllium (Be), total	1.0 U	0.005 U	1.1	1.0 U
Calcium (Ca), total	200 U	5.0 U	13600	7580
Cadmium (Cd), total	1.0 U	0.005 U	5.4	2.3
Cobalt (Co), total	10.0 U	0.050 U	10.3 U	10.4 U
Chromium (Cr), total	2.0 U	0.010 U	21.1	12.9
Cesium (Cs), total				
Copper (Cu), total	5.0 U	0.025 U	13.1	17.4
Iron (Fe), total	20.0 U	0.100 U	11500	11400
Mercury (Hg), total	0.1 U	0.0002 U	0.1 U	0.1 U
Potassium (K), total	1000 U	5.0 U	2840	1800
Lithium (Li), total				
Magnesium (Mg), total	200 U	5.0 U	2150	1660
Manganese (Mn), total	3.0 U	0.015 U	363	235
Molybdenum(Mo), total				
Sodium (Na), total	200 U	5.0 U	460	340
Nickel (Ni), total	8.0 U	0.040 U	47.4	70.3
Lead (Pb), total	1.0 U	0.005 U	73.8	13.4
Antimony (Sb), total	12.0 U	0.060 U	12.9 U	12.4 U
Selenium (Se), total	1.0 U	0.005 U	1.1 U	1.0 U
Strontium (Sr), total	40.0 U	0.200 U	42.2	41.6 U
Thallium (Tl), total	2.0 U	0.010 U	2.2 U	2.1 U
Vanadium (V), total	10.0 U	0.050 U	32.9	29.1
Zinc (Zn), total	4.0 U	0.020 U	92.6	51.0

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

#176 CS026 | not on list

RFW Batch ID:	8810-062-004	8810-062-005	8810-062-005 DUP	8810-062-005 MS
Customer ID:	BH88A026	BH88A027	BH88A027	BH88A027
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	% RECOVERY

Sample Information

Silver	(Ag), total.....	2.1	U	2.2	U				
Aluminum	(Al), total.....	12500		13500					
Arsenic	(As), total.....	8.8		8.6		9.8		67	%
Barium	(Ba), total.....	82.9		75.5					
Beryllium	(Be), total.....	1.3		1.2					
Calcium	(Ca), total.....	3490		3010					
Cadmium	(Cd), total.....	4.5		3.5					
Cobalt	(Co), total.....	10.3	U	11.1	U				
Chromium	(Cr), total.....	15.6		14.8					
Cesium	(Cs), total.....								
Copper	(Cu), total.....	12.2		10.4					
Iron	(Fe), total.....	14100		15800					
Mercury	(Hg), total.....	0.1	U	0.1	U	0.1	U	80	%
Potassium	(K), total.....	2320		2170					
Lithium	(Li), total.....								
Magnesium	(Mg), total.....	1630		1570					
Manganese	(Mn), total.....	205		184					
Molybdenum	(Mo), total.....								
Sodium	(Na), total.....	206	U	430					
Nickel	(Ni), total.....	38.6		47.4					
Lead	(Pb), total.....	17.7		16.1		20.1		*	
Antimony	(Sb), total.....	12.8	U	13.5	U	13.2	U	0	%
Selenium	(Se), total.....	1.1	U	1.1	U	1.1	U	0	%
Strontium	(Sr), total.....	41.3	U	44.3	U				
Thallium	(Tl), total.....	2.1	U	2.3	U	2.2	U	94	%
Vanadium	(V), total.....	43.5		46.0					
Zinc	(Zn), total.....	35.1		31.9					

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

	Field Blank			#176 CS027
RFW Batch ID:	8810-062-006	8810-062-006 DUP	8810-062-006 MS	8810-062-007
Customer ID:	BH88A028	BH88A028	BH88A028	BH88A029
Matrix:	Water	Water	Water	Soil
Units:	MG/L	MG/L	% RECOVERY	MG/KG

Sample Information

Silver	(Ag), total.....	0.010	U	0.010	U	25	%	2.1	U
Aluminum	(Al), total.....	0.200	U	0.200	U	100	%	12100	
Arsenic	(As), total.....	0.010	U	0.010	U	93	%	6.6	
Barium	(Ba), total.....	0.200	U	0.200	U	100	%	92.0	
Beryllium	(Be), total.....	0.005	U	0.005	U	90	%	1.1	U
Calcium	(Ca), total.....	5.0	U	5.0	U	NA		3490	
Cadmium	(Cd), total.....	0.005	U	0.005	U	95	%	4.7	
Cobalt	(Co), total.....	0.050	U	0.050	U	96	%	10.6	U
Chromium	(Cr), total.....	0.010	U	0.010	U	94	%	12.9	
Cesium	(Cs), total.....								
Copper	(Cu), total.....	0.025	U	0.025	U	95	%	13.1	
Iron	(Fe), total.....	0.100	U	0.100	U	100	%	13200	
Mercury	(Hg), total.....	0.0002	U	NA		NA		0.1	U
Potassium	(K), total.....	5.0	U	5.0	U	NA		2280	
Lithium	(Li), total.....								
Magnesium	(Mg), total.....	5.0	U	5.0	U	NA		1710	
Manganese	(Mn), total.....	0.015	U	0.015	U	94	%	261	
Molybdenum	(Mo), total.....								
Sodium	(Na), total.....	5.0	U	5.0	U	NA		265	
Nickel	(Ni), total.....	0.040	U	0.040	U	90	%	48.5	
Lead	(Pb), total.....	0.005	U	0.005	U	100	%	24.3	
Antimony	(Sb), total.....	0.060	U	0.060	U	93	%	11.8	U
Selenium	(Se), total.....	0.005	U	0.005	U	84	%	1.0	U
Strontium	(Sr), total.....	0.200	U	0.200	U	100	%	42.3	U
Thallium	(Tl), total.....	0.010	U	0.010	U	156	%	2.3	
Vanadium	(V), total.....	0.050	U	0.050	U	95	%	34.5	
Zinc	(Zn), total.....	0.020	U	0.091		94	%	41.5	

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

	#176 CS032	#176 CS030	?	?
RFW Batch ID:	8810-062-008	8810-062-009	8810-062-LCS1	8810-062-LCS2
Customer ID:	BH88A030	BH88A031	LCS	LCS
Matrix:	Soil	Soil	Soil	Water
Units:	MG/KG	MG/KG	% RECOVERY	% RECOVERY

Sample Information

Silver	(Ag), total.....	2.1	U	2.2	U	110	%	102 %
Aluminum	(Al), total.....	13200		13900		90	%	95 %
Arsenic	(As), total.....	4.7		19.4		100	%	94 %
Barium	(Ba), total.....	120		43.0	U	90	%	92 %
Beryllium	(Be), total.....	1.1		1.1		90	%	99 %
Calcium	(Ca), total.....	4060		3900		90	%	98 %
Cadmium	(Cd), total.....	3.6		7.3		90	%	94 %
Cobalt	(Co), total.....	10.5	U	10.8	U	100	%	94 %
Chromium	(Cr), total.....	15.0		18.7		90	%	95 %
Cesium	(Cs), total.....							
Copper	(Cu), total.....	11.8		21.4		100	%	95 %
Iron	(Fe), total.....	13400		17500		90	%	97 %
Mercury	(Hg), total.....	0.1	U	0.1	U	91	%	82 %
Potassium	(K), total.....	2770		2340		90	%	91 %
Lithium	(Li), total.....							
Magnesium	(Mg), total.....	2310		1770		90	%	100 %
Manganese	(Mn), total.....	330		261		90	%	98 %
Molybdenum	(Mo), total.....							
Sodium	(Na), total.....	615		365		80	%	84 %
Nickel	(Ni), total.....	37.9		45.6		90	%	89 %
Lead	(Pb), total.....	15.9		33.0		110	%	99 %
Antimony	(Sb), total.....	11.9	U	12.8	U	112	%	111 %
Selenium	(Se), total.....	1.0	U	1.1	U	100	%	90 %
Strontium	(Sr), total.....	42.1	U	43.0	U	100	%	100 %
Thallium	(Tl), total.....	2.0	U	2.1	U	110	%	111 %
Vanadium	(V), total.....	30.6		32.5		90	%	101 %
Zinc	(Zn), total.....	41.5		58.1		90	%	94 %

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

ORGANICS CASE NARRATIVE

Client: ROCKWELL
RFW #: 8810S062
W.O. #: 2029-38-01-0000

FRACTION: VOA

1. This set of samples consisted of 7 soil and 2 water samples collected on 10/19/88.

2. These samples were analyzed on 10/29/88 and 10/31/88 in accordance with SW 846 protocols.

3. All required holding times for these samples were met.

4. All tuning and calibration criteria were met for all samples.

5. All blanks analyzed were below allowable limits of contamination as set forth in the EPA CLP SOW.

6. Of the 39 surrogates analyzed, none were outside of QC limits.

7. Of the 10 matrix spike recoveries, none were outside of QC limits.

8. Of the 5 matrix spike RPD's, none were outside QC limits.

The following data qualifiers are used in this report:

U - Indicates that the compound was analyzed for but not detected.
J - Indicates an estimated trace value.

Date: 11/18/88

Approved by:

WESTON ANALYTICS
VOLATILE ANALYTICAL DATA PACKAGE FOR
ROCKWELL INTERNATIONAL - RF

DATE RECEIVED: 10/21/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A023 Trip Blank	8810-062-001	10/19/88	NA	10/29/88
BH88A024 CS024, #176	8810-062-002	10/19/88	NA	10/31/88
BH88A025 CS025, #176	8810-062-003	10/19/88	NA	10/31/88
BH88A026 CS026, #176	8810-062-004	10/19/88	NA	10/31/88
BH88A027 not on list	8810-062-005	10/19/88	NA	10/31/88
BH88A027	8810-062-005 MS	10/19/88	NA	10/31/88
BH88A027	8810-062-005 MSD	10/19/88	NA	10/31/88
BH88A028 Field Blank	8810-062-006	10/19/88	NA	10/31/88
BH88A029 CS027, #176	8810-062-007	10/19/88	NA	10/31/88
BH88A030 CS032, #176	8810-062-008	10/19/88	NA	10/31/88
BH88A031 CS030, #176	8810-062-009	10/19/88	NA	10/29/88

LAB QC:

BLANK 10/29	8810-062-0001BL	NA	NA	10/29/88
BLANK 10/31	8810-062-0002BL	NA	NA	10/31/88

R. F. Carney 11/17/88
DATE

WESTON Analytical Laboratories

WESTON ANALYTICS
VOLATILE DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

			Trip Blank	#76 CS024
RFW Batch ID:	8810-062-0001BL	8810-062-0002BL	8810-062-001	8810-062-002
Customer ID:	BLANK 10/29	BLANK 10/31	BH88A023	BH88A024
Matrix:	Water	Water	Water	Soil
Units:	UG/L	UG/L	UG/L	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	99 %	101 %	98 %	109 %
Bromofluorobenzene:	98 %	98 %	101 %	92 %
1,2-Dichloroethane-d4:	95 %	96 %	97 %	96 %

Analytes

Chloromethane	10 U	10 U	10 U	11 U
Bromomethane	10 U	10 U	10 U	11 U
Vinyl Chloride	10 U	10 U	10 U	11 U
Chloroethane	10 U	10 U	10 U	11 U
Methylene Chloride	4.0 J	6.0	3.0 JB	25 B
Acetone	10 U	10 U	10 U	14
Carbon Disulfide	5.0 U	5.0 U	5.0 U	5.6 U
1,1-Dichloroethene	5.0 U	5.0 U	5.0 U	5.6 U
1,1-Dichloroethane	5.0 U	5.0 U	5.0 U	5.6 U
Trans-1,2-Dichloroethene	5.0 U	5.0 U	5.0 U	5.6 U
Chloroform	5.0 U	5.0 U	5.0 U	1.0 J
1,2-Dichloroethane	5.0 U	5.0 U	5.0 U	5.6 U
2-Butanone	10 U	10 U	10 U	11 U
1,1,1-Trichloroethane	5.0 U	5.0 U	5.0 U	5.6 U
Carbon Tetrachloride	5.0 U	5.0 U	5.0 U	5.6 U
Vinyl Acetate	10 U	10 U	10 U	11 U
Bromodichloromethane	5.0 U	5.0 U	5.0 U	5.6 U
1,2-Dichloropropane	5.0 U	5.0 U	5.0 U	5.6 U
Trans-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.6 U
Trichloroethene	5.0 U	5.0 U	5.0 U	5.6 U
Dibromochloromethane	5.0 U	5.0 U	5.0 U	5.6 U
1,1,2-Trichloroethane	5.0 U	5.0 U	5.0 U	5.6 U
Benzene	5.0 U	5.0 U	5.0 U	5.6 U
cis-1,3-Dichloropropene	5.0 U	5.0 U	5.0 U	5.6 U
2-Chloroethylvinylether	10 U	10 U	10 U	11 U
Bromoform	5.0 U	5.0 U	5.0 U	5.6 U
4-Methyl-2-pentanone	10 U	10 U	10 U	11 U
2-Hexanone	10 U	10 U	10 U	11 U
Tetrachloroethene	5.0 U	5.0 U	5.0 U	5.6 U
1,1,2,2-Tetrachloroethane	5.0 U	5.0 U	5.0 U	5.6 U
Toluene	5.0 U	5.0 U	5.0 U	1.0 J
Chlorobenzene	5.0 U	5.0 U	5.0 U	5.6 U
Ethylbenzene	5.0 U	5.0 U	5.0 U	5.6 U
Styrene	5.0 U	5.0 U	5.0 U	5.6 U
Total Xylenes	5.0 U	5.0 U	5.0 U	5.6 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
VOLATILE DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

	#176 CS025	#176 CS026	not on list	?
RFW Batch ID:	8810-062-003	8810-062-004	8810-062-005	8810-062-005 MS
Customer ID:	BH88A025	BH88A026	BH88A027	BH88A027
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	108 %	111 %	111 %	109 %
Bromofluorobenzene:	82 %	78 %	82 %	85 %
1,2-Dichloroethane-d4:	100 %	98 %	95 %	94 %

Analytes

Chloromethane	11 U	11 U	11 U	11 U
Bromomethane	11 U	11 U	11 U	11 U
Vinyl Chloride	11 U	11 U	11 U	11 U
Chloroethane	11 U	11 U	11 U	11 U
Methylene Chloride	20 B	18 B	13 B	16 B
Acetone	10 J	12	17	24
Carbon Disulfide	5.3 U	5.4 U	5.3 U	5.3 U
1,1-Dichloroethene	5.3 U	5.4 U	5.3 U	94 %
1,1-Dichloroethane	5.3 U	5.4 U	5.3 U	5.3 U
Trans-1,2-Dichloroethene	5.3 U	5.4 U	5.3 U	5.3 U
Chloroform	1.0 J	1.0 J	5.3 U	5.3 U
1,2-Dichloroethane	5.3 U	5.4 U	5.3 U	5.3 U
2-Butanone	11 U	11 U	11 U	11 U
1,1,1-Trichloroethane	5.3 U	5.4 U	5.3 U	5.3 U
Carbon Tetrachloride	5.3 U	5.4 U	5.3 U	5.3 U
Vinyl Acetate	11 U	11 U	11 U	11 U
Bromodichloromethane	5.3 U	5.4 U	5.3 U	5.3 U
1,2-Dichloropropane	5.3 U	5.4 U	5.3 U	5.3 U
Trans-1,3-Dichloropropene	5.3 U	5.4 U	5.3 U	5.3 U
Trichloroethene	5.3 U	5.4 U	5.3 U	90 %
Dibromochloromethane	5.3 U	5.4 U	5.3 U	5.3 U
1,1,2-Trichloroethane	5.3 U	5.4 U	5.3 U	5.3 U
Benzene	5.3 U	5.4 U	5.3 U	98 %
cis-1,3-Dichloropropene	5.3 U	5.4 U	5.3 U	5.3 U
2-Chloroethylvinylether	11 U	11 U	11 U	11 U
Bromoform	5.3 U	5.4 U	5.3 U	5.3 U
4-Methyl-2-pentanone	11 U	11 U	11 U	11 U
2-Hexanone	11 U	11 U	11 U	11 U
Tetrachloroethene	5.3 U	5.4 U	5.3 U	5.3 U
1,1,2,2-Tetrachloroethane	5.3 U	5.4 U	5.3 U	5.3 U
Toluene	2.0 J	3.0 J	1.0 J	111 %
Chlorobenzene	5.3 U	5.4 U	5.3 U	92 %
Ethylbenzene	5.3 U	5.4 U	5.3 U	5.3 U
Styrene	5.3 U	5.4 U	5.3 U	5.3 U
Total Xylenes	2.0 J	3.0 J	5.3 U	5.3 U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
VOLATILE DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKWELL INTERNATIONAL - RF

Sample Information

	not on list	Field Blank	#176 CS027	#176 CS032
RFW Batch ID:	8810-062-005 MSD	8810-062-006	8810-062-007	8810-062-008
Customer ID:	BH88A027	BH88A028	BH88A029	BH88A030
Matrix:	Soil	Water	Soil	Soil
Units:	UG/KG	UG/L	UG/KG	UG/KG
Dilution Factor:	1	1	1	1

Surrogate Recovery

Toluene-d8:	113 %	99 %	111 %	115 %
Bromofluorobenzene:	85 %	101 %	79 %	80 %
1,2-Dichloroethane-d4:	94 %	94 %	101 %	100 %

Analytes

Chloromethane	11 U	10 U	11 U	11 U
Bromomethane	11 U	10 U	11 U	11 U
Vinyl Chloride	11 U	10 U	11 U	11 U
Chloroethane	11 U	10 U	11 U	11 U
Methylene Chloride	15 B	4.0 JB	20 B	14 B
Acetone	24	4.0 J	11 J	12
Carbon Disulfide	5.3 U	5.0 U	5.5 U	5.5 U
1,1-Dichloroethene	96 %	5.0 U	5.5 U	5.5 U
1,1-Dichloroethane	5.3 U	5.0 U	5.5 U	5.5 U
Trans-1,2-Dichloroethene	5.3 U	5.0 U	5.5 U	5.5 U
Chloroform	5.3 U	3.0 J	1.0 J	1.0 J
1,2-Dichloroethane	5.3 U	5.0 U	5.5 U	5.5 U
2-Butanone	11 U	10 U	11 U	11 U
1,1,1-Trichloroethane	5.3 U	5.0 U	5.5 U	5.5 U
Carbon Tetrachloride	5.3 U	5.0 U	5.5 U	5.5 U
Vinyl Acetate	11 U	10 U	11 U	11 U
Bromodichloromethane	5.3 U	5.0 U	5.5 U	5.5 U
1,2-Dichloropropane	5.3 U	5.0 U	5.5 U	5.5 U
Trans-1,3-Dichloropropene	5.3 U	5.0 U	5.5 U	5.5 U
Trichloroethene	91 %	5.0 U	5.5 U	5.5 U
Dibromochloromethane	5.3 U	5.0 U	5.5 U	5.5 U
1,1,2-Trichloroethane	5.3 U	5.0 U	5.5 U	5.5 U
Benzene	101 %	5.0 U	5.5 U	5.5 U
cis-1,3-Dichloropropene	5.3 U	5.0 U	5.5 U	5.5 U
2-Chloroethylvinylether	11 U	10 U	11 U	11 U
Bromoform	5.3 U	5.0 U	5.5 U	5.5 U
4-Methyl-2-pentanone	11 U	10 U	11 U	11 U
2-Hexanone	11 U	10 U	11 U	11 U
Tetrachloroethene	5.3 U	5.0 U	5.5 U	5.5 U
1,1,2,2-Tetrachloroethane	5.3 U	5.0 U	5.5 U	5.5 U
Toluene	117 %	5.0 U	2.0 J	2.0 J
Chlorobenzene	95 %	5.0 U	5.5 U	5.5 U
Ethylbenzene	5.3 U	5.0 U	5.5 U	5.5 U
Styrene	5.3 U	5.0 U	5.5 U	5.5 U
Total Xylenes	5.3 U	5.0 U	2.0 J	1.0 J

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
VOLATILE DATA SUMMARY
Volatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: 8810-062 Client: ROCKWELL INTERNATIONAL - RF

Sample Information #176 CS030

RFW Batch ID:	8810-062-009
Customer ID:	BH88A031
Matrix:	Soil
Units:	UG/KG
Dilution Factor:	1

Surrogate Recovery

Toluene-d8:	115 %
Bromofluorobenzene:	83 %
1,2-Dichloroethane-d4:	92 %

Analytes

Chloromethane	11	U
Bromomethane	11	U
Vinyl Chloride	11	U
Chloroethane	11	U
Methylene Chloride	20	B
Acetone	10	J
Carbon Disulfide	5.4	U
1,1-Dichloroethene	5.4	U
1,1-Dichloroethane	5.4	U
Trans-1,2-Dichloroethene	5.4	U
Chloroform	1.0	J
1,2-Dichloroethane	5.4	U
2-Butanone	11	U
1,1,1-Trichloroethane	5.4	U
Carbon Tetrachloride	5.4	U
Vinyl Acetate	11	U
Bromodichloromethane	5.4	U
1,2-Dichloropropane	5.4	U
Trans-1,3-Dichloropropene	5.4	U
Trichloroethene	5.4	U
Dibromochloromethane	5.4	U
1,1,2-Trichloroethane	5.4	U
Benzene	5.4	U
cis-1,3-Dichloropropene	5.4	U
2-Chloroethylvinylether	11	U
Bromoform	5.4	U
4-Methyl-2-pentanone	11	U
2-Hexanone	11	U
Tetrachloroethene	5.4	U
1,1,2,2-Tetrachloroethane	5.4	U
Toluene	2.0	J
Chlorobenzene	5.4	U
Ethylbenzene	5.4	U
Styrene	5.4	U
Total Xylenes	5.4	U

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

ROCKY FLATS

November 17, 1988

RFW#: 88-10-S061

Tentatively Identified Compounds,
VOA Fraction

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/L
BLANK	10/29/88		NONE FOUND	
BLANK	10/31/88		NONE FOUND	
BH88A023	10/29/88		NONE FOUND	
BH88A028	10/31/88		NONE FOUND	

RFW#	Date Analyzed	Scan No.	Identity	Estimated Conc.,ug/kg
BH88A024	10/31/88		NONE FOUND	
BH88A025	10/31/88		NONE FOUND	
BH88A026	10/31/88		NONE FOUND	
BH88A027	10/31/88		NONE FOUND	
BH88A029	10/31/88		NONE FOUND	
BH88A030	10/31/88		NONE FOUND	
BH88A031	10/29/88		NONE FOUND	

Reviewed and approved R. F. Carney
Robert Carney
Unit Leader

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

176

Metals

INORGANICS CASE NARRATIVE

Client: ROCKWELL
RFW #: 8810S062
W.O. #: 2029-38-01-0000

1. All required holding times were met.

2. All method blanks were analyzed below detection limits.

3. All LCS (blank spike) recoveries were within control limits.

4. Matrix spike recoveries for Arsenic, Antimony and Selenium were outside of the 75%-125% control windows established by the USEPA-CLP. This may be due to matrix interferences present in the sample matrix.

5. The following data qualifiers are used in the enclosed report:

   U - Indicates that the sample was analyzed for but not detected.

   * - Indicates that the original sample result was greater than 4 x the spike amount added. The USEPA-CLP has determined that spike sample calculations where this occurs have been proven to be unreliable.

6. Methodology unless otherwise indicated follows the USEPA-CLP SOW-787 for metals analysis; Methods for Chemical Analysis of Water and Wastes for conventional water analyses; and SW-846 for nonmetallic soil parameters.

Date: 12/8/88

Approved: [signature]

WESTON

WESTON ANALYTICS
METALS ANALYTICAL DATA PACKAGE FOR
ROCKWELL INTERNATIONAL - RF

DATE RECEIVED: 10/21/88

CLIENT ID	RFW BATCH NUMBER	COLLECTION	EXTR./PREP.	ANALYSIS
BH88A024	8810-062-002	10/19/88	NA	NA
BH88A025	8810-062-003	10/19/88	NA	NA
BH88A026	8810-062-004	10/19/88	NA	NA
BH88A027	8810-062-005	10/19/88	NA	NA
BH88A027	8810-062-005 DUP	10/19/88	NA	NA
BH88A027	8810-062-005 MS	10/19/88	NA	NA
BH88A029	8810-062-007	10/19/88	NA	NA
BH88A030	8810-062-008	10/19/88	NA	NA
BH88A031	8810-062-009	10/19/88	NA	NA
LCS	8810-062-LCS	NA	NA	NA
LAB QC:				
BLANK	8810-062-0001BL	NA	NA	NA

Geo E. O'Shea 12/8/88
DATE

WESTON Analytical Laboratories

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

		#176 CS024	#176 CS025	#176 CS026
RFW Batch ID:	8810-062-0001BL	8810-062-002	8810-062-003	8810-062-004
Customer ID:	BLANK	BH88A024	BH88A025	BH88A026
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Metals

Silver	(Ag), total.....	2.0	U	3.1		2.1	U	2.1	U
Aluminum	(Al), total.....	40.0	U	11800		9820		12500	
Arsenic	(As), total.....	2.0	U	6.9		2.1	U	8.8	
Barium	(Ba), total.....	40.0	U	107		75.7		82.9	
Beryllium	(Be), total.....	1.0	U	1.1		1.0	U	1.3	
Calcium	(Ca), total.....	200	U	13600		7580		3490	
Cadmium	(Cd), total.....	1.0	U	5.4		2.3		4.5	
Cobalt	(Co), total.....	10.0	U	10.3	U	10.4	U	10.3	U
Chromium	(Cr), total.....	2.0	U	21.1		12.9		15.6	
Cesium	(Cs), total.....								
Copper	(Cu), total.....	5.0	U	13.1		17.4		12.2	
Iron	(Fe), total.....	20.0	U	11500		11400		14100	
Mercury	(Hg), total.....	0.1	U	0.1	U	0.1	U	0.1	U
Potassium	(K), total.....	1000	U	2840		1800		2320	
Lithium	(Li), total.....								
Magnesium	(Mg), total.....	200	U	2150		1660		1630	
Manganese	(Mn), total.....	3.0	U	363		235		205	
Molybdenum	(Mo), total.....								
Sodium	(Na), total.....	200	U	460		340		206	U
Nickel	(Ni), total.....	8.0	U	47.4		70.3		38.6	
Lead	(Pb), total.....	1.0	U	73.8		13.4		17.7	
Antimony	(Sb), total.....	12.0	U	12.9	U	12.4	U	12.8	U
Selenium	(Se), total.....	1.0	U	1.1	U	1.0	U	1.1	U
Strontium	(Sr), total.....	40.0	U	42.2		41.6	U	41.3	U
Thallium	(Tl), total.....	2.0	U	2.2	U	2.1	U	2.1	U
Vanadium	(V), total.....	10.0	U	32.9		29.1		43.5	
Zinc	(Zn), total.....	4.0	U	92.6		51.0		35.1	

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information

				# 176 CS027
RFW Batch ID:	8810-062-005	8810-062-005 DUP	8810-062-005 MS	8810-062-007
Customer ID:	BH88A027	BH88A027	BH88A027	BH88A029
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	% RECOVERY	MG/KG

Metals

Silver (Ag), total	2.2 U			2.1 U
Aluminum (Al), total	13500			12100
Arsenic (As), total	8.6	9.8	67 %	6.6
Barium (Ba), total	75.5			92.0
Beryllium (Be), total	1.2			1.1 U
Calcium (Ca), total	3010			3490
Cadmium (Cd), total	3.5			4.7
Cobalt (Co), total	11.1 U			10.6 U
Chromium (Cr), total	14.8			12.9
Cesium (Cs), total				
Copper (Cu), total	10.4			13.1
Iron (Fe), total	15800			13200
Mercury (Hg), total	0.1 U	0.1 U	80 %	0.1 U
Potassium (K), total	2170			2280
Lithium (Li), total				
Magnesium (Mg), total	1570			1710
Manganese (Mn), total	184			261
Molybdenum(Mo), total				
Sodium (Na), total	430			265
Nickel (Ni), total	47.4			48.5
Lead (Pb), total	16.1	20.1	*	24.3
Antimony (Sb), total	13.5 U	13.2 U	0 %	11.8 U
Selenium (Se), total	1.1 U	1.1 U	0 %	1.0 U
Strontium (Sr), total	44.3 U			42.3 U
Thallium (Tl), total	2.3 U	2.2 U	94 %	2.3
Vanadium (V), total	46.0			34.5
Zinc (Zn), total	31.9			41.5

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-062 Client: ROCKY FLATS

Sample Information			
	#176 CS032	#176 CS030	
RFW Batch ID:	8810-062-008	8810-062-009	8810-062-LCS
Customer ID:	BH88A030	BH88A031	LCS
Matrix:	Soil	Soil	Soil
Units:	MG/KG	MG/KG	% RECOVERY

Metals

Silver	(Ag), total	2.1	U	2.2	U	110	%
Aluminum	(Al), total	13200		13900		90	%
Arsenic	(As), total	4.7		19.4		100	%
Barium	(Ba), total	120		43.0	U	90	%
Beryllium	(Be), total	1.1		1.1		90	%
Calcium	(Ca), total	4060		3900		90	%
Cadmium	(Cd), total	3.6		7.3		90	%
Cobalt	(Co), total	10.5	U	10.8	U	100	%
Chromium	(Cr), total	15.0		18.7		90	%
Cesium	(Cs), total						
Copper	(Cu), total	11.8		21.4		100	%
Iron	(Fe), total	13400		17500		90	%
Mercury	(Hg), total	0.1	U	0.1	U	91	%
Potassium	(K), total	2770		2340		90	%
Lithium	(Li), total						
Magnesium	(Mg), total	2310		1770		90	%
Manganese	(Mn), total	330		261		90	%
Molybdenum	(Mo), total						
Sodium	(Na), total	615		365		80	%
Nickel	(Ni), total	37.9		45.6		90	%
Lead	(Pb), total	15.9		33.0		110	%
Antimony	(Sb), total	11.9	U	12.8	U	112	%
Selenium	(Se), total	1.0	U	1.1	U	100	%
Strontium	(Sr), total	42.1	U	43.0	U	100	%
Thallium	(Tl), total	2.0	U	2.1	U	110	%
Vanadium	(V), total	30.6		32.5		90	%
Zinc	(Zn), total	41.5		58.1		90	%

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON

Metals. 176 175

WESTON ANALYTICS
INORGANIC LABORATORY CHRONICLE

CLIENT: ROCKWELL
RFW # : 88-10-S070

	Date
Receipt/Refrigeration	10/22/88
ICP Metals Preparation	12/06/88
AA Metals Preparation	10/31/88
Hg Preparation	11/11/88
CN Distillation	NA

Metals Analysis:

Ag	12/18/88	Cr	12/18/88	Pb	12/20/88
Al	12/14/88	Cu	12/16/88	Sb	12/20/88
As	12/20/88	Fe	12/16/88	Se	12/20/88
Be	12/16/88	K	12/19/88	Tl	12/20/88
Ba	12/14/88	Mg	12/18/88	V	12/16/88
Ca	12/18/88	Mn	12/16/88	Zn	12/14/88
Cd	12/20/88	Na	12/19/88	Hg	11/11/88
Co	12/18/88	Ni	12/19/88	B	NA
Mo	NA	Si	NA	Sr	12/14/88

Anions Analysis:

Cl		Br	
F		S04	
NO3		O-PO4	
NO2			

ROY F. WESTON, INC.
STOCKTON ANALYTICAL LABORATORY

INORGANICS CASE NARRATIVE

Client: ROCKWELL
RFW #: 8810S070
W.O. #: 2029-38-01-0000

1. All required holding times were met.

2. All method blanks were analyzed below detection limits except Zinc, no corrective action was taken.

3. All LCS (blank spike) recoveries were within control limits.

4. Matrix spike recoveries for Silver, Arsenic, Manganese, Antimony, Selenium and Zinc were outside of the 75%-125% control windows established by the USEPA-CLP. This may be due to matrix interferences present in the sample matrix.

5. The following data qualifiers are used in the enclosed report:

   U - Indicates that the sample was analyzed for but not detected.

   * - Indicates that the original sample result was greater than 4 x the spike amount added. The USEPA-CLP has determined that spike sample calculations where this occurs have been proven to be unreliable.

6. Methodology unless otherwise indicated follows the USEPA-CLP SOW-787 for metals analysis; Methods for Chemical Analysis of Water and Wastes for conventional water analyses; and SW-846 for nonmetallic soil parameters.

7. Sodium, Potassium, Calcium and Magnesium were not included in the matrix spike solution.

Date: 12/27/88

Approved: [illegible]

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

W Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

			#176 CS021	#176 CS02B
RFW Batch ID:	8810-070-0001BL	8810-070-0002BL	8810-070-002	8810-070-003
Customer ID:	BLANK 1	BLANK 2	BH88A033	BH88A034
Matrix:	Soil	Water	Soil	Soil
Units:	MG/KG	MG/L	MG/KG	MG/KG

Sample Information

Silver (Ag), total.....	1.0 U	0.010 U	2.1 U	2.1 U
Aluminum (Al), total.....	200 U	0.20 U	8730	7960
Arsenic (As), total.....	2.0 U	0.010 U	3.2	2.0 U
Barium (Ba), total.....	20.0 U	0.20 U	87.1	84.3
Beryllium (Be), total.....	0.50 U	0.0050 U	1.1	1.1
Calcium (Ca), total.....	500 U	5.0 U	2120	3550
Cadmium (Cd), total.....	0.50 U	0.0050 U	4.1	5.5
Cobalt (Co), total.....	5.0 U	0.050 U	10.6 U	10.4 U
Chromium (Cr), total.....	1.0 U	0.010 U	14.0	12.1
Cesium (Cs), total.....				
Copper (Cu), total.....	2.5 U	0.025 U	16.2	18.9
Iron (Fe), total.....	100 U	0.10 U	10900	10800
Mercury (Hg), total.....		0.00020 U	2.9	0.11 U
Potassium (K), total.....	500 U		1590	1880
Lithium (Li), total.....				
Magnesuim (Mg), total.....	500 U	5.0 U	2410	2550
Manganese (Mn), total.....	15.0 U	0.015 U	180	184
olybdenum(Mo), total.....				
odium (Na), total.....	500 U	5.0 U	1060 U	1040 U
Nickel (Ni), total.....	4.0 U	0.040 U	8.5 U	8.4 U
Lead (Pb), total.....	1.0 U	0.0050 U	11.0	17.1
Antimony (Sb), total.....	12.0 U	0.060 U	12.9 U	12.3 U
Selenium (Se), total.....	1.0 U	0.0050 U	1.1 U	1.0 U
Strontium (Sr), total.....	10.0 U	0.10 U	29.6	20.9 U
Thallium (Tl), total.....	2.0 U	0.010 U	2.2 U	2.0 U
Vanadium (V), total.....	5.0 U	0.050 U	23.9	23.7
Zinc (Zn), total.....	3.9	0.020 U	35.2	45.9

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information	#176 CS029	#176 CS033	#175 CS018	#175 CS019
RFW Batch ID:	8810-070-004	8810-070-005	8810-070-006	8810-070-007
Customer ID:	BH88A035	BH88A036	BH88A037	BH88A038
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Sample Information

Silver (Ag), total.....	2.1 U	2.1 U	2.1 U	2.1 U
Aluminum (Al), total.....	10100	10200	6570	7040
Arsenic (As), total.....	0.53	5.3	2.0	3.1 U
Barium (Ba), total.....	80.4	96.9	66.0	64.0
Beryllium (Be), total.....	1.2	1.2	1.1 U	1.0 U
Calcium (Ca), total.....	2920	3990	11400	8630
Cadmium (Cd), total.....	4.2	8.8	2.3	3.1
Cobalt (Co), total.....	10.4 U	10.5 U	10.6 U	10.3 U
Chromium (Cr), total.....	10.0	8.6	6.6	15.7
Cesium (Cs), total.....				
Copper (Cu), total.....	17.1	18.0	14.2	23.3
Iron (Fe), total.....	13500	12900	9520	11500
Mercury (Hg), total.....	0.11 U	2.3	0.98	2.1
Potassium (K), total.....	1940	2120	1530	1730
Lithium (Li), total.....				
Magnesuim (Mg), total.....	2290	2180	2310	2450
Manganese (Mn), total.....	217	265	139	208
Molybdenum(Mo), total.....				
Sodium (Na), total.....	1040 U	1050 U	1060 U	1030 U
Nickel (Ni), total.....	20.2	8.4 U	8.5 U	8.2 U
Lead (Pb), total.....	1.6	27.6	12.6	26.1
Antimony (Sb), total.....	1.2 U	12.7 U	12.1 U	18.4 U
Selenium (Se), total.....	0.10 U	1.1 U	1.0 U	1.5 U
Strontium (Sr), total.....	20.8 U	21.0 U	21.4	20.6 U
Thallium (Tl), total.....	0.20 U	2.1 U	2.0 U	3.1 U
Vanadium (V), total.....	30.6	29.6	19.0	20.6
Zinc (Zn), total.....	48.3	43.6	29.5	58.0

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

#175
CS021

not on list

RFW Batch ID:	8810-070-008	8810-070-009	8810-070-009 DUP	8810-070-009 MS
Customer ID:	BH88A039	BH88A040	BH88A040	BH88A040
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	% RECOVERY

Sample Information

Silver	(Ag),	total.....	2.2	U	2.1	U	2.1	U	0 %
Aluminum	(Al),	total.....	7770		7350		7170		0 * %
Arsenic	(As),	total.....	2.1	U	3.7		2.1	U	48.0 %
Barium	(Ba),	total.....	67.2		66.2		68.7		92.3 %
Beryllium	(Be),	total.....	1.1	U	1.0	U	1.1	U	103 %
Calcium	(Ca),	total.....	7200		7540		7690		0 %
Cadmium	(Cd),	total.....	3.6		3.7		3.2		93.1 %
Cobalt	(Co),	total.....	10.9	U	10.5	U	10.7	U	102 %
Chromium	(Cr),	total.....	9.8		9.1		14.7		92.6 %
Cesium	(Cs),	total.....							
Copper	(Cu),	total.....	21.8		24.5		23.9		99.4 %
Iron	(Fe),	total.....	10800		11500		11000		0 * %
Mercury	(Hg),	total.....	2.3		12.2		1.8		0 * %
Potassium	(K),	total.....	1660		1740		1690		
Lithium	(Li),	total.....							
Magnesuim	(Mg),	total.....	2400		2510		2390		0 %
Manganese	(Mn),	total.....	158		166		156		69.3 %
Molybdenum	(Mo),	total.....							
Sodium	(Na),	total.....	1090	U	1050	U	1070	U	
Nickel	(Ni),	total.....	8.7	U	8.4	U	14.3		97.3 %
Lead	(Pb),	total.....	28.4		39.9		34.0		0 * %
Antimony	(Sb),	total.....	12.7	U	12.6	U	12.4	U	12.5 %
Selenium	(Se),	total.....	1.0	U	1.0	U	1.0	U	0 %
Strontium	(Sr),	total.....	21.8	U	21.0	U	21.4	U	925 %
Thallium	(Tl),	total.....	2.1	U	2.1	U	2.1	U	90.4 %
Vanadium	(V),	total.....	20.9		19.3		21.6		89.0 %
Zinc	(Zn),	total.....	80.2		83.4		81.4		73.4 %

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

	Field Blank	#175 ESC30		
RFW Batch ID:	8810-070-010	8810-070-011	8810-070-LCS1	8810-070-LCS2
Customer ID:	BH88A041	BH88A042	LCS1	LCS2
Matrix:	Water	Soil	Soil	Soil
Units:	MG/L	MG/KG	% RECOVERY	% RECOVERY

Sample Information

Silver	(Ag), total.....	0.010	U	2.2	U	92.1	%	89.8 %
Aluminum	(Al), total.....	0.20	U	8250		90.1	%	93.8 %
Arsenic	(As), total.....	0.010	U	2.2		97.0	%	
Barium	(Ba), total.....	0.20	U	78.7		89.8	%	94.5 %
Beryllium	(Be), total.....	0.0050	U	1.3		95.4	%	98.6 %
Calcium	(Ca), total.....	5.0	U	11400		110	%	110 %
Cadmium	(Cd), total.....	0.0050	U	3.8		87.9	%	89.8 %
Cobalt	(Co), total.....	0.050	U	11.0	U	93.0	%	97.6 %
Chromium	(Cr), total.....	0.010	U	8.4		90.8	%	93.8 %
Cesium	(Cs), total.....							
Copper	(Cu), total.....	0.025	U	19.0		89.8	%	94.0 %
Iron	(Fe), total.....	0.10	U	12900		86.2	%	89.2 %
Mercury	(Hg), total.....	0.0010		0.16		114	%	85.1 %
Potassium	(K), total.....	5.0	U	1960		82.0	%	85.0 %
Lithium	(Li), total.....							
Magnesuim	(Mg), total.....	5.0	U	2570		109	%	112 %
Manganese	(Mn), total.....	0.015	U	152		87.6	%	92.0 %
Molybdenum	(Mo), total.....							
Sodium	(Na), total.....	5.0	U	1100	U	90.0	%	92.0 %
Nickel	(Ni), total.....	0.040	U	10.4		86.8	%	90.1 %
Lead	(Pb), total.....	0.0050	U	14.5		101	%	
Antimony	(Sb), total.....	0.060	U	12.7	U	115	%	
Selenium	(Se), total.....	0.0050	U	1.0	U	88.6	%	
Strontium	(Sr), total.....	0.10	U	27.9		87.6	%	90.9 %
Thallium	(Tl), total.....	0.010	U	2.1	U	98.4	%	
Vanadium	(V), total.....	0.050	U	23.2		87.3	%	91.3 %
Zinc	(Zn), total.....	0.020	U	40.0		80.0	%	82.6 %

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: 8810-070 Client: ROCKY FLATS

Sample Information

	?	?
RFW Batch ID:	8810-070-LCS3	8810-070-LCS4
Customer ID:	LCS3	LCS4
Matrix:	Water	Water
Units:	% RECOVERY	% RECOVERY

Sample Information

Silver (Ag), total.....	102 %	100 %
Aluminum (Al), total.....	93.2 %	95.5 %
Arsenic (As), total.....	80.8 %	110 %
Barium (Ba), total.....	90.0 %	85.8 %
Beryllium (Be), total.....	82.3 %	85.0 %
Calcium (Ca), total.....	99.0 %	99.0 %
Cadmium (Cd), total.....	102 %	106 %
Cobalt (Co), total.....	101 %	102 %
Chromium (Cr), total.....	88.5 %	86.6 %
Cesium (Cs), total.....		
Copper (Cu), total.....	96.0 %	94.6 %
Iron (Fe), total.....	96.9 %	97.2 %
Mercury (Hg), total.....		
Potassium (K), total.....	92.0 %	95.0 %
Lithium (Li), total.....		
Magnesuim (Mg), total.....	92.0 %	90.0 %
Manganese (Mn), total.....	100 %	103 %
Molybdenum(Mo), total.....		
Sodium (Na), total.....	94.0 %	92.0 %
Nickel (Ni), total.....	97.9 %	99.3 %
Lead (Pb), total.....	115 %	118 %
Antimony (Sb), total.....	118 %	96.0 %
Selenium (Se), total.....	109 %	114 %
Strontium (Sr), total.....	98.1 %	97.2 %
Thallium (Tl), total.....	112 %	115 %
Vanadium (V), total.....	99.6 %	101 %
Zinc (Zn), total.....	99.2 %	99.4 %

Modifiers: U=Analyzed, not detected. J=Present below detection limit. B=Present in blank. NS=Not spiked. %=Percent recovery

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Sample Information	#174 CS005			#174 CS002
RFW Batch ID:	8810-036-002	8810-036-002 DUP	8810-036-002 MS	8810-036-003
Customer ID:	BH88A002	BH88A002	BH88A002	BH88A003
Collection Date:	10/12/88	10/12/88	10/12/88	10/12/88
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	% RECOVERY	MG/KG
Metals				
Aluminum (Al), total.....	7080	6820	*	8640
Antimony (Sb), total.....	13.4 U	NR	NR	12.6 U
Arsenic (As), total.....	3.3	NR	NR	3.7
Barium (Ba), total.....	80.6	79.4	101 %	82.2
Beryllium (Be), total.....	14.3	9.7	80 %	1.1 U
Cadmium (Cd), total.....	2.4	1.6	104 %	2.2
Calcium (Ca), total.....	1590	1610	*	2130
Cesium (Cs), total.....	NR	NR	NR	NR
Chromium (Cr), total.....	13.0	12.7	92 %	10.0
Cobalt (Co), total.....	10.9 U	11.3 U	93 %	10.5 U
Copper (Cu), total.....	10.3	10.7	112 %	8.1
Iron (Fe), total.....	7730	8080	*	10900
Lead (Pb), total.....	16.4	NR	NR	18.7
Lithium (Li), total.....	NR	NR	NR	NR
Magnesium (Mg), total.....	1470	1430	*	1480
Manganese (Mn), total.....	241	244	*	178
Mercury (Hg), total.....	0.1 U	0.1 U	86 %	0.1 U
Molybdenum(Mo), total.....	NR	NR	NR	NR
Nickel (Ni), total.....	10.4	10.5	86 %	8.4 U
Potassium (K), total.....	1700	1630	*	1510
Selenium (Se), total.....	1.1 U	NR	NR	1.1 U
Silver (Ag), total.....	2.2 U	2.3 U	55 %	2.1 U
Sodium (Na), total.....	688	226 U	NS	831
Strontium (Sr), total.....	43.8 U	45.1 U	100 %	42.0 U
Thallium (Tl), total.....	2.2 U	NR	NR	2.1 U
Tin (Sn), total.....	NR	NR	NR	NR
Vanadium (V), total.....	2120	2140	*	41.2
Zinc (Zn), total.....	43.1	43.3	95 %	33.2

174
170
176
175

177
182
129

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

			#174 CS004	#174 CS008
RFW Batch ID:	8810-036-003 DUP	8810-036-003 MS	8810-036-004	8810-036-005
Customer ID:	BH88A003	BH88A003	BH88A004	BH88A005
Collection Date:	10/12/88	10/12/88	10/12/88	10/12/88
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	% RECOVERY	MG/KG	MG/KG

Metals

Aluminum	(Al), total.....		NR		NR	6170		7900	
Antimony	(Sb), total.....	13.3	U	0	%	12.4	U	12.6	U
Arsenic	(As), total.....	4.1		65	%	2.9		2.1	U
Barium	(Ba), total.....		NR		NR	66.7		81.5	
Beryllium	(Be), total.....		NR		NR	1.1	U	1.1	U
Cadmium	(Cd), total.....		NR		NR	1.3		1.5	
Calcium	(Ca), total.....		NR		NR	1380		1670	
Cesium	(Cs), total.....		NR		NR		NR		NR
Chromium	(Cr), total.....		NR		NR	6.5		7.8	
Cobalt	(Co), total.....		NR		NR	10.8	U	10.6	U
Copper	(Cu), total.....		NR		NR	9.8		10.9	
Iron	(Fe), total.....		NR		NR	7530		10600	
Lead	(Pb), total.....	20.2		•		19.0		20.5	
Lithium	(Li), total.....		NR		NR		NR		NR
Magnesium	(Mg), total.....		NR		NR	1570		1590	
Manganese	(Mn), total.....		NR		NR	154		228	
Mercury	(Hg), total.....		NR		NR	0.1	U	0.1	U
Molybdenum	(Mo), total.....		NR		NR		NR		NR
Nickel	(Ni), total.....		NR		NR	8.6	U	8.5	U
Potassium	(K), total.....		NR		NR	1550		1710	
Selenium	(Se), total.....	1.1	U	83	%	1.0	U	1.1	U
Silver	(Ag), total.....		NR		NR	2.2	U	2.1	U
Sodium	(Na), total.....		NR		NR	592		480	
Strontium	(Sr), total.....		NR		NR	43.0	U	42.5	U
Thallium	(Tl), total.....	2.2	U	106	%	2.1	U	2.1	U
Tin	(Sn), total.....		NR		NR		NR		NR
Vanadium	(V), total.....		NR		NR	20.6		25.3	
Zinc	(Zn), total.....		NR		NR	52.0		35.9	

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#174 CS009	#174 CS006	#174 CS007	#174 CS012
RFW Batch ID:	8810-036-006	8810-036-007	8810-036-008	8810-036-009
Customer ID:	BH88A006	BH88A007	BH88A008	BH88A009
Collection Date:	10/12/88	10/12/88	10/12/88	10/12/88
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Metals

Aluminum	(Al), total.....	10200		5180		8350		8220	
Antimony	(Sb), total.....	12.5	U	12.4	U	12.9	U	12.9	U
Arsenic	(As), total.....	3.8		2.5		3.6		3.4	
Barium	(Ba), total.....	93.1		60.0		75.3		73.8	
Beryllium	(Be), total.....	13.1		1.1	U	1.1	U	1.0	U
Cadmium	(Cd), total.....	1.3		1.6		3.5		27.2	
Calcium	(Ca), total.....	2160		1540		1800		1990	
Cesium	(Cs), total.....		NR		NR		NR		NR
Chromium	(Cr), total.....	9.8		4.1		7.4		10.0	
Cobalt	(Co), total.....	10.7	U	10.8	U	11.2	U	10.5	U
Copper	(Cu), total.....	8.4		8.2		9.0		13.8	
Iron	(Fe), total.....	12700		8360		10300		10700	
Lead	(Pb), total.....	16.6		28.6		24.8		22.3	
Lithium	(Li), total.....		NR		NR		NR		NR
Magnesium	(Mg), total.....	1610		1300		1620		1710	
Manganese	(Mn), total.....	232		193		201		211	
Mercury	(Hg), total.....	0.1	U	0.1	U	0.1	U	0.1	U
Molybdenum	(Mo), total.....		NR		NR		NR		NR
Nickel	(Ni), total.....	8.5	U	8.6	U	8.9	U	8.4	U
Potassium	(K), total.....	1850		1330		1700		1590	
Selenium	(Se), total.....	1.0	U	1.0	U	1.1	U	1.1	U
Silver	(Ag), total.....	2.1	U	2.2	U	2.2	U	2.1	U
Sodium	(Na), total.....	468		478		559		539	
Strontium	(Sr), total.....	42.7	U	43.0	U	44.7	U	41.8	U
Thallium	(Tl), total.....	2.1	U	2.1	U	2.1	U	2.2	U
Tin	(Sn), total.....		NR		NR		NR		NR
Vanadium	(V), total.....	2590		16.8		24.4		27.4	
Zinc	(Zn), total.....	28.0		42.8		37.5		38.1	

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#174 CS015	#174 CS013		#174 CS011
RFW Batch ID:	8810-036-011	8810-036-012	8810-036-013	8810-036-014
Customer ID:	BH88A011	BH88A012	BH88A013	BH88A014
Collection Date:	10/13/88	10/13/88	10/13/88	10/13/88
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG
Metals				
Aluminum (Al), total.....	11200	7840	8290	5460
Antimony (Sb), total.....	13.0 U	13.0 U	12.4 U	12.3 U
Arsenic (As), total.....	3.3	3.4	2.7	3.3
Barium (Ba), total.....	87.4	77.1	73.2	61.5
Beryllium (Be), total.....	1.1 U	1.3	1.1 U	1.0 U
Cadmium (Cd), total.....	3.0	1.3	1.5	1.0 U
Calcium (Ca), total.....	2160	1530	1610	1840
Cesium (Cs), total.....	NR	NR	NR	NR
Chromium (Cr), total.....	11.7	8.0	7.6	6.0
Cobalt (Co), total.....	11.0 U	10.6 U	10.8 U	10.2 U
Copper (Cu), total.....	12.8	11.5	12.1	12.7
Iron (Fe), total.....	14800	9420	11600	8680
Lead (Pb), total.....	21.0	20.2	16.2	26.4
Lithium (Li), total.....	NR	NR	NR	NR
Magnesium (Mg), total.....	2000	1540	1650	1640
Manganese (Mn), total.....	216	211	229	187
Mercury (Hg), total.....	0.1 U	0.1 U	0.1 U	0.1 U
Molybdenum(Mo), total.....	NR	NR	NR	NR
Nickel (Ni), total.....	9.8	8.5 U	8.7 U	8.2 U
Potassium (K), total.....	1980	1670	1630	1530
Selenium (Se), total.....	1.1 U	1.1 U	1.0 U	1.0 U
Silver (Ag), total.....	2.2 U	2.1 U	5.3	4.2
Sodium (Na), total.....	252	299	417	321
Strontium (Sr), total.....	43.8 U	42.6 U	43.3 U	40.8 U
Thallium (Tl), total.....	2.2 U	2.2 U	2.1 U	2.0 U
Tin (Sn), total.....	NR	NR	NR	NR
Vanadium (V), total.....	29.1	140	41.0	14.5
Zinc (Zn), total.....	38.8	38.3	37.1	71.1

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

			#174 CS014		#174 CS010		#174 CS003	
RFW Batch ID:	8810-036-015		8810-036-016		8810-036-017		8810-036-018	
Customer ID:	BH88A015		BH88A016		BH88A017		BH88A018	
Collection Date:	10/13/88		10/13/88		10/13/88		10/13/88	
Matrix:	Water		Soil		Soil		Soil	
Units:	MG/L		MG/KG		MG/KG		MG/KG	
Metals								
Aluminum (Al), total.....	0.200	U	8280		9740		6930	
Antimony (Sb), total.....	0.060	U	12.8	U	12.1	U	12.0	U
Arsenic (As), total.....	0.010	U	4.0		4.4		2.3	
Barium (Ba), total.....	0.200	U	75.4		84.4		67.1	
Beryllium (Be), total.....	0.005	U	1.0	U	1.0	U	1.0	U
Cadmium (Cd), total.....	0.005	U	2.3		3.6		3.3	
Calcium (Ca), total.....	5.0	U	1890		2030		1210	
Cesium (Cs), total.....		NR		NR		NR		NR
Chromium (Cr), total.....	0.010	U	9.0		5.0		2.5	
Cobalt (Co), total.....	0.050	U	10.0	U	10.2	U	10.2	U
Copper (Cu), total.....	0.025	U	8.2		5.1	U	5.3	
Iron (Fe), total.....	0.100	U	11000		12300		9420	
Lead (Pb), total.....	0.005	U	18.5		19.4		25.4	
Lithium (Li), total.....		NR		NR		NR		NR
Magnesium (Mg), total.....	5.0	U	1580		1640		1440	
Manganese (Mn), total.....	0.015	U	191		180		154	
Mercury (Hg), total.....	0.0002	U	0.1	U	0.1	U	0.1	U
Molybdenum(Mo), total.....		NR		NR		NR		NR
Nickel (Ni), total.....	0.040	U	8.0	U	9.9		8.2	U
Potassium (K), total.....	5.0	U	1650		1740		1610	
Selenium (Se), total.....	0.005	U	1.1	U	1.0	U	1.0	U
Silver (Ag), total.....	0.010	U	2.0	U	2.0	U	2.0	U
Sodium (Na), total.....	5.0	U	400		379		917	
Strontium (Sr), total.....	0.200	U	39.9	U	41.0	U	40.8	U
Thallium (Tl), total.....	0.010	U	2.1	U	2.0	U	2.0	U
Tin (Sn), total.....		NR		NR		NR		NR
Vanadium (V), total.....	0.050	U	24.1		27.9		19.6	
Zinc (Zn), total.....	0.020	U	28.5		35.7		35.1	

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	#174 CS001	#170 CS016		
RFW Batch ID:	8810-036-019	8810-051-002	8810-051-002 DUP	8810-051-002 MS
Customer ID:	BH88A019	BH88A021	BH88A021	BH88A021
Collection Date:	10/13/88	10/14/88	10/14/88	10/14/88
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Metals

Aluminum	(Al), total.....	7900		10200		10800		*	
Antimony	(Sb), total.....	12.2	U	12.0		12.7		8.6	%
Arsenic	(As), total.....	3.4		4.9		4.9		65	%
Barium	(Ba), total.....	77.0		83.2		76.4		98	%
Beryllium	(Be), total.....	1.0	U	1.0	U	1.0	U	101	%
Cadmium	(Cd), total.....	2.9		2.9		2.2		86	%
Calcium	(Ca), total.....	1910		2370		2310		NS	
Cesium	(Cs), total.....		NR	NA		NA			NR
Chromium	(Cr), total.....	4.0		11.9		11.9		97	%
Cobalt	(Co), total.....	10.4	U	10.3		10.1		88	%
Copper	(Cu), total.....	5.2	U	11.6		11.1		99	%
Iron	(Fe), total.....	10300		13300		13800		NS	
Lead	(Pb), total.....	23.9		20.4		19.3		*	
Lithium	(Li), total.....		NR	NA		NA			NR
Magnesium	(Mg), total.....	1430		1630		1820		NS	
Manganese	(Mn), total.....	209		200		194		92	%
Mercury	(Hg), total.....	0.1	U	0.1	U	0.1	U	12	%
Molybdenum	(Mo), total.....		NR	NA		NA			NR
Nickel	(Ni), total.....	8.3	U	37.3		33.1		152	%
Potassium	(K), total.....	1510		1630		1550		NS	
Selenium	(Se), total.....	1.0	U	1.0	U	1.1	U	100	%
Silver	(Ag), total.....	2.1	U	2.0		2.0	U	0	%
Sodium	(Na), total.....	255		405		1370		NS	
Strontium	(Sr), total.....	41.6	U	41.2		40.4	U	101	%
Thallium	(Tl), total.....	2.0	U	2.0	U	2.1	U	99	%
Tin	(Sn), total.....		NR		NR		NR		NR
Vanadium	(V), total.....	21.4		31.9		30.5		89	%
Zinc	(Zn), total.....	36.2		110		108		91	%

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#170? CS017	#176 CS024	#176 CS025	#176 CS026
RFW Batch ID:	8810-051-003	8810-062-002	8810-062-003	8810-062-004
Customer ID:	BH88A022	~~BH88~~A024	~~BH88~~A025	BH88A026
Collection Date:	10/14/88	10/19/88	10/19/88	10/19/88
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Metals

Aluminum	(Al),	total.....	11900		11800		9820		12500	
Antimony	(Sb),	total.....	12.5	U	12.9	U	12.4	U	12.8	U
Arsenic	(As),	total.....	2.9		6.9		2.1	U	8.8	
Barium	(Ba),	total.....	101		107		75.7		82.9	
Beryllium	(Be),	total.....	1.1	U	1.1		1.0	U	1.3	
Cadmium	(Cd),	total.....	2.9		5.4		2.3		4.5	
Calcium	(Ca),	total.....	5860		13600		7580		3490	
Cesium	(Cs),	total.....		NR		NR		NR		NR
Chromium	(Cr),	total.....	13.3		21.1		12.9		15.6	
Cobalt	(Co),	total.....	10.5	U	10.3	U	10.4	U	10.3	U
Copper	(Cu),	total.....	23.4		13.1		17.4		12.2	
Iron	(Fe),	total.....	20800		11500		11400		14100	
Lead	(Pb),	total.....	16.8		73.8		13.4		17.7	
Lithium	(Li),	total.....		NR		NR		NR		NR
Magnesium	(Mg),	total.....	4700		2150		1660		1630	
Manganese	(Mn),	total.....	469		363		235		205	
Mercury	(Hg),	total.....	0.1	U	0.1	U	0.1	U	0.1	U
Molybdenum	(Mo),	total.....		NR		NR		NR		NR
Nickel	(Ni),	total.....	43.3		47.4		70.3		38.6	
Potassium	(K),	total.....	2920		2840		1800		2320	
Selenium	(Se),	total.....	1.0	U	1.1	U	1.0	U	1.1	U
Silver	(Ag),	total.....	2.1	U	3.1		2.1	U	2.1	U
Sodium	(Na),	total.....	1320		460		340		206	U
Strontium	(Sr),	total.....	42.0	U	42.2		41.6	U	41.3	U
Thallium	(Tl),	total.....	2.1	U	2.2	U	2.1	U	2.1	U
Tin	(Sn),	total.....		NR		NR		NR		NR
Vanadium	(V),	total.....	40.4		32.9		29.1		43.5	
Zinc	(Zn),	total.....	72.5		92.6		51.0		35.1	

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-062-005	8810-062-005 DUP	8810-062-005 MS	8810-062-006 FB
Customer ID:	BH88A027	BH88A027	BH88A027	BH88A028
Collection Date:	10/19/88	10/19/88	10/19/88	10/19/88
Matrix:	Soil	Soil	Soil	Water
Units:	MG/KG	MG/KG	% RECOVERY	MG/L

Metals

Aluminum (Al), total.....	13500	NR	NR	0.200 U
Antimony (Sb), total.....	13.5 U	13.2 U	0 %	0.060 U
Arsenic (As), total.....	8.6	9.8	67 %	0.010 U
Barium (Ba), total.....	75.5	NR	NR	0.200 U
Beryllium (Be), total.....	1.2	NR	NR	0.005 U
Cadmium (Cd), total.....	3.5	NR	NR	0.005 U
Calcium (Ca), total.....	3010	NR	NR	5.0 U
Cesium (Cs), total.....	NR	NR	NR	NR
Chromium (Cr), total.....	14.8	NR	NR	0.010 U
Cobalt (Co), total.....	11.1 U	NR	NR	0.050 U
Copper (Cu), total.....	10.4	NR	NR	0.025 U
Iron (Fe), total.....	15800	NR	NR	0.100 U
Lead (Pb), total.....	16.1	20.1	*	0.005 U
Lithium (Li), total.....	NR	NR	NR	NR
Magnesium (Mg), total.....	1570	NR	NR	5.0 U
Manganese (Mn), total.....	184	NR	NR	0.015 U
Mercury (Hg), total.....	0.1 U	0.1 U	80 %	0.0002 U
Molybdenum(Mo), total.....	NR	NR	NR	NR
Nickel (Ni), total.....	47.4	NR	NR	0.040 U
Potassium (K), total.....	2170	NR	NR	5.0 U
Selenium (Se), total.....	1.1 U	1.1 U	0 %	0.005 U
Silver (Ag), total.....	2.2 U	NR	NR	0.010 U
Sodium (Na), total.....	430	NR	NR	5.0 U
Strontium (Sr), total.....	44.3 U	NR	NR	0.200 U
Thallium (Tl), total.....	2.3 U	2.2 U	94 %	0.010 U
Tin (Sn), total.....	NR	NR	NR	NR
Vanadium (V), total.....	46.0	NR	NR	0.050 U
Zinc (Zn), total.....	31.9	NR	NR	0.020 U

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 9

Sample Information

			#176 CS027	#176 CS032
RFW Batch ID:	8810-062-006 DUP	8810-062-006 MS	8810-062-007	8810-062-008
Customer ID:	BH88A028	BH88A028	BH88A029	BH88A030
Collection Date:	10/19/88	10/19/88	10/19/88	10/19/88
Matrix:	Water	Water	Soil	Soil
Units:	MG/L	% RECOVERY	MG/KG	MG/KG

Metals

Aluminum	(Al),	total.....	0.200	U	100	%	12100		13200		
Antimony	(Sb),	total.....	0.060	U	93	%	11.8	U	11.9	U	
Arsenic	(As),	total.....	0.010	U	93	%	6.6		4.7		
Barium	(Ba),	total.....	0.200	U	100	%	92.0		120		
Beryllium	(Be),	total.....	0.005	U	90	%	1.1	U	1.1		
Cadmium	(Cd),	total.....	0.005	U	95	%	4.7		3.6		
Calcium	(Ca),	total.....	5.0	U	NA		3490		4060		
Cesium	(Cs),	total.....		NR		NR		NR			NR
Chromium	(Cr),	total.....	0.010	U	94	%	12.9		15.0		
Cobalt	(Co),	total.....	0.050	U	96	%	10.6	U	10.5	U	
Copper	(Cu),	total.....	0.025	U	95	%	13.1		11.8		
Iron	(Fe),	total.....	0.100	U	100	%	13200		13400		
Lead	(Pb),	total.....	0.005	U	100	%	24.3		15.9		
Lithium	(Li),	total.....		NR		NR		NR			NR
Magnesium	(Mg),	total.....	5.0	U	NA		1710		2310		
Manganese	(Mn),	total.....	0.015	U	94	%	261		330		
Mercury	(Hg),	total.....	NA		NA		0.1	U	0.1	U	
Molybdenum	(Mo),	total.....		NR		NR		NR			NR
Nickel	(Ni),	total.....	0.040	U	90	%	48.5		37.9		
Potassium	(K),	total.....	5.0	U	NA		2280		2770		
Selenium	(Se),	total.....	0.005	U	84	%	1.0	U	1.0	U	
Silver	(Ag),	total.....	0.010	U	25	%	2.1	U	2.1	U	
Sodium	(Na),	total.....	5.0	U	NA		265		615		
Strontium	(Sr),	total.....	0.200	U	100	%	42.3	U	42.1	U	
Thallium	(Tl),	total.....	0.010	U	156	%	2.3		2.0	U	
Tin	(Sn),	total.....		NR		NR		NR			NR
Vanadium	(V),	total.....	0.050	U	95	%	34.5		30.6		
Zinc	(Zn),	total.....	0.091		94	%	41.5		41.5		

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information				
	#176 CS030	#176 CS031	#176 CS028	#176 CS029
RFW Batch ID:	8810-062-009	8810-070-002	8810-070-003	8810-070-004
Customer ID:	BH88A031	BH88A033	BH88A034	BH88A035
Collection Date:	10/19/88	/ /	/ /	/ /
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG

Metals

Aluminum	(Al), total.....	13900		8730		7960		10100	
Antimony	(Sb), total.....	12.8	U	12.9	U	12.3	U	1.2	U
Arsenic	(As), total.....	19.4		3.2		2.0	U	0.53	
Barium	(Ba), total.....	43.0	U	87.1		84.3		80.4	
Beryllium	(Be), total.....	1.1		1.1		1.1		1.2	
Cadmium	(Cd), total.....	7.3		4.1		5.5		4.2	
Calcium	(Ca), total.....	3900		2120		3550		2920	
Cesium	(Cs), total.....		NR		NR		NR		NR
Chromium	(Cr), total.....	18.7		14.0		12.1		10.0	
Cobalt	(Co), total.....	10.8	U	10.6	U	10.4	U	10.4	U
Copper	(Cu), total.....	21.4		16.2		18.9		17.1	
Iron	(Fe), total.....	17500		10900		10800		13500	
Lead	(Pb), total.....	33.0		11.0		17.1		1.6	
Lithium	(Li), total.....		NR		NR		NR		NR
Magnesium	(Mg), total.....	1770		2410		2550		2290	
Manganese	(Mn), total.....	261		180		184		217	
Mercury	(Hg), total.....	0.1	U	2.9		0.11	U	0.11	U
Molybdenum	(Mo), total.....		NR		NR		NR		NR
Nickel	(Ni), total.....	45.6		8.5	U	8.4	U	20.2	
Potassium	(K), total.....	2340		1590		1880		1940	
Selenium	(Se), total.....	1.1	U	1.1	U	1.0	U	0.10	U
Silver	(Ag), total.....	2.2	U	2.1	U	2.1	U	2.1	U
Sodium	(Na), total.....	365		1060	U	1040	U	1040	U
Strontium	(Sr), total.....	43.0	U	29.6		20.9	U	20.8	U
Thallium	(Tl), total.....	2.1	U	2.2	U	2.0	U	0.20	U
Tin	(Sn), total.....		NR		NR		NR		NR
Vanadium	(V), total.....	32.5		23.9		23.7		30.6	
Zinc	(Zn), total.....	58.1		35.2		45.9		48.3	

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#176 CS033	#175 CS018	#175 CS019	#175 CS021
RFW Batch ID:	8810-070-005	8810-070-006	8810-070-007	8810-070-008
Customer ID:	BH88A036	BH88A037	BH88A038	BH88A039
Collection Date:	/ /	/ /	/ /	/ /
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG
Metals				
Aluminum (Al), total.....	10200	6570	7040	7770
Antimony (Sb), total.....	12.7 U	12.1 U	18.4 U	12.7 U
Arsenic (As), total.....	5.3	2.0	3.1 U	2.1 U
Barium (Ba), total.....	96.9	66.0	64.0	67.2
Beryllium (Be), total.....	1.2	1.1 U	1.0 U	1.1 U
Cadmium (Cd), total.....	8.8	2.3	3.1	3.6
Calcium (Ca), total.....	3990	11400	8630	7200
Cesium (Cs), total.....	NR	NR	NR	NR
Chromium (Cr), total.....	8.6	6.6	15.7	9.8
Cobalt (Co), total.....	10.5 U	10.6 U	10.3 U	10.9 U
Copper (Cu), total.....	18.0	14.2	23.3	21.8
Iron (Fe), total.....	12900	9520	11500	10800
Lead (Pb), total.....	27.6	12.6	26.1	28.4
Lithium (Li), total.....	NR	NR	NR	NR
Magnesium (Mg), total.....	2180	2310	2450	2400
Manganese (Mn), total.....	265	139	208	158
Mercury (Hg), total.....	2.3	0.98	2.1	2.3
Molybdenum(Mo), total.....	NR	NR	NR	NR
Nickel (Ni), total.....	8.4 U	8.5 U	8.2 U	8.7 U
Potassium (K), total.....	2120	1530	1730	1660
Selenium (Se), total.....	1.1 U	1.0 U	1.5 U	1.0 U
Silver (Ag), total.....	2.1 U	2.1 U	2.1 U	2.2 U
Sodium (Na), total.....	1050 U	1060 U	1030 U	1090 U
Strontium (Sr), total.....	21.0 U	21.4	20.6 U	21.8 U
Thallium (Tl), total.....	2.1 U	2.0 U	3.1 U	2.1 U
Tin (Sn), total.....	NR	NR	NR	NR
Vanadium (V), total.....	29.6	19.0	20.6	20.9
Zinc (Zn), total.....	43.6	29.5	58.0	80.2

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-070-009	8810-070-009 MS	8810-070-009 DUP	FB 8810-070-010
Customer ID:	BH88A040	BH88A040	BH88A040	BH88A041
Collection Date:	/ /	/ /	/ /	/ /
Matrix:	Soil	Soil	Soil	Water
Units:	MG/KG	% RECOVERY	MG/KG	MG/L

Metals

Aluminum (Al), total.....	7350	0 * %	7170	0.20 U
Antimony (Sb), total.....	12.6 U	12.5 %	12.4 U	0.060 U
Arsenic (As), total.....	3.7	48.0 %	2.1 U	0.010 U
Barium (Ba), total.....	66.2	92.3 %	68.7	0.20 U
Beryllium (Be), total.....	1.0 U	103 %	1.1 U	0.0050 U
Cadmium (Cd), total.....	3.7	93.1 %	3.2	0.0050 U
Calcium (Ca), total.....	7540	0 %	7690	5.0 U
Cesium (Cs), total.....	NR	NR	NR	NR
Chromium (Cr), total.....	9.1	92.6 %	14.7	0.010 U
Cobalt (Co), total.....	10.5 U	102 %	10.7 U	0.050 U
Copper (Cu), total.....	24.5	99.4 %	23.9	0.025 U
Iron (Fe), total.....	11500	0 * %	11000	0.10 U
Lead (Pb), total.....	39.9	0 * %	34.0	0.0050 U
Lithium (Li), total.....	NR	NR	NR	NR
Magnesium (Mg), total.....	2510	0 %	2390	5.0 U
Manganese (Mn), total.....	166	69.3 %	156	0.015 U
Mercury (Hg), total.....	12.2	0 * %	1.8	0.0010
Molybdenum(Mo), total.....	NR	NR	NR	NR
Nickel (Ni), total.....	8.4 U	97.3 %	14.3	0.040 U
Potassium (K), total.....	1740	NR	1690	5.0 U
Selenium (Se), total.....	1.0 U	0 %	1.0 U	0.0050 U
Silver (Ag), total.....	2.1 U	0 %	2.1 U	0.010 U
Sodium (Na), total.....	1050 U	NR	1070 U	5.0 U
Strontium (Sr), total.....	21.0 U	925 %	21.4 U	0.10 U
Thallium (Tl), total.....	2.1 U	90.4 %	2.1 U	0.010 U
Tin (Sn), total.....	NR	NR	NR	NR
Vanadium (V), total.....	19.3	89.0 %	21.6	0.050 U
Zinc (Zn), total.....	83.4	73.4 %	81.4	0.020 U

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#175 CS020	#177 CS034	CS0	
RFW Batch ID:	8810-070-011	8810-093-002	8810-093-002 MS	8810-093-002 DUP
Customer ID:	BH88A042	BH88A044	BH88A044	BH88A044
Collection Date:	/ /	10/25/88	10/25/88	10/25/88
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	% RECOVERY	MG/KG
Metals				
Aluminum (Al), total.....	8250	14600	2200 * %	11700
Antimony (Sb), total.....	12.7 U	14.3 U	0.96 %	14.6 U
Arsenic (As), total.....	2.2	3.3	258 %	3.2
Barium (Ba), total.....	78.7	159	110 %	192
Beryllium (Be), total.....	1.3	1.2 U	99.5 %	1.3
Cadmium (Cd), total.....	3.8	3.2	78.2 %	2.6
Calcium (Ca), total.....	11400	43700	525 * %	63800
Cesium (Cs), total.....	NR	NR	NR	NR
Chromium (Cr), total.....	8.4	10.0	74.9 %	7.2
Cobalt (Co), total.....	11.0 U	12.3 U	92.9 %	12.3 U
Copper (Cu), total.....	19.0	14.4	87.2 %	11.9
Iron (Fe), total.....	12900	12800	2700 * %	11500
Lead (Pb), total.....	14.5	37.4	847 * %	37.5
Lithium (Li), total.....	NR	NR	NR	NR
Magnesium (Mg), total.....	2570	3670	1.7 %	3670
Manganese (Mn), total.....	152	194	30.0 %	203
Mercury (Hg), total.....	0.16	0.59	0 %	0.77
Molybdenum(Mo), total.....	NR	NR	NR	NR
Nickel (Ni), total.....	10.4	9.8 U	109 %	9.8 U
Potassium (K), total.....	1960	1500	NR	1230 U
Selenium (Se), total.....	1.0 U	1.2 U	94.0 %	1.2 U
Silver (Ag), total.....	2.2 U	2.5 U	0 %	2.5 U
Sodium (Na), total.....	1100 U	1230 U	NR	1230 U
Strontium (Sr), total.....	27.9	128	93.8 %	159
Thallium (Tl), total.....	2.1 U	2.4 U	153 %	2.4 U
Tin (Sn), total.....	NR	NR	NR	NR
Vanadium (V), total.....	23.2	28.2	82.8 %	26.5
Zinc (Zn), total.....	40.0	42.0	66.1 %	52.6

WESTON ANALYTICS
METALS - TOTAL
INORGANICS DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#177 CS035	#177 CS036	#177 CS037	#182 CS022
RFW Batch ID:	8810-093-003	8810-093-004	8810-093-005	8810-108-001
Customer ID:	BH88A045	BH88A046	BH88A047	BH88A048
Collection Date:	10/25/88	10/25/88	12/25/88	/ /
Matrix:	Soil	Soil	Soil	Soil
Units:	MG/KG	MG/KG	MG/KG	MG/KG
Metals				
Aluminum (Al), total.....	9520	8250	13300	14100
Antimony (Sb), total.....	14.1 U	13.7 U	15.0 U	12.6 U
Arsenic (As), total.....	3.6	3.5	3.4	2.1 U
Barium (Ba), total.....	147	57.4	193	72.9
Beryllium (Be), total.....	1.2 U	1.1 U	1.4	1.4
Cadmium (Cd), total.....	1.5	2.4	2.9	5.4
Calcium (Ca), total.....	11700	9150	92600	7760
Cesium (Cs), total.....	NR	NR	NR	NR
Chromium (Cr), total.....	9.9	7.2	10.1	9.6
Cobalt (Co), total.....	11.9 U	11.4 U	12.3 U	10.8 U
Copper (Cu), total.....	19.2	41.6	13.2	21.1
Iron (Fe), total.....	14700	22300	14900	17600
Lead (Pb), total.....	50.0	43.9	62.4	2.6
Lithium (Li), total.....	NR	NR	NR	NR
Magnesium (Mg), total.....	2480	6330	4240	3970
Manganese (Mn), total.....	199	530	262	276
Mercury (Hg), total.....	0.27	0.22	0.28	0.38
Molybdenum(Mo), total.....	NR	NR	NR	NR
Nickel (Ni), total.....	9.5 U	9.1 U	9.8 U	22.3
Potassium (K), total.....	1190 U	2810	1270	2330
Selenium (Se), total.....	1.2 U	1.1 U	1.2 U	1.0 U
Silver (Ag), total.....	2.4 U	2.3 U	2.5 U	2.2 U
Sodium (Na), total.....	1190 U	1140 U	1230 U	1080 U
Strontium (Sr), total.....	78.5	23.0	179	21.6 U
Thallium (Tl), total.....	2.4 U	2.3 U	2.5 U	2.1 U
Tin (Sn), total.....	NR	NR	NR	NR
Vanadium (V), total.....	24.9	31.3	34.0	38.5
Zinc (Zn), total.....	54.6	68.4	37.1	72.8

174 177
176 192
170 129
175

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Sample Information				
	SWM [illegible] CSOC5	SWM [illegible] CSOO2	[illegible]	[illegible]
RFW Batch ID:	8810-036-002	8810-036-003	8810-036-004	8810-036-005
Customer ID:	BH88A002	BH88A003	BH88A004	BH88A005
Collection Date:	10/12/88	10/12/88	10/12/88	10/12/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	101%	102%	41 %	97 %
Phenol-d5:	128%	131%	52 %	136%
2,4,6-Br3-Phenol:	117%	116%	92 %	161%
Nitrobenzene-d5:	66 %	64 %	36 %	75 %
2-Fluorobiphenyl:	67 %	71 %	38 %	87 %
p-Terphenyl-d14:	60 %	99 %	61 %	89 %

Analytes

Phenol	1800 U	1800 U	320 J	360 U
bis(2-Chloroethyl)Ether	1800 U	1800 U	720 U	360 U
2-Chlorophenol	1800 U	1800 U	720 U	360 U
1,3-Dichlorobenzene	1800 U	1800 U	720 U	360 U
1,4-Dichlorobenzene	1800 U	1800 U	720 U	360 U
Benzyl Alcohol	1800 U	1800 U	720 U	360 U
1,2-Dichlorobenzene	1800 U	1800 U	720 U	360 U
2-Methylphenol	1800 U	1800 U	720 U	360 U
bis(2-Chloroisopropyl)Ether	1800 U	1800 U	720 U	360 U
4-Methylphenol	1800 U	1800 U	720 U	360 U
N-Nitroso-di-n-propylamine	1800 U	1800 U	720 U	360 U
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	1800 U	1800 U	720 U	360 U
Nitrobenzene	1800 U	1800 U	720 U	360 U
Isophorone	1800 U	1800 U	720 U	360 U
2-Nitrophenol	1800 U	1800 U	720 U	360 U
2,4-Dimethylphenol	1800 U	1800 U	720 U	360 U
Benzoic Acid	9300 U	8900 U	400 J	1800 U
bis(2-Chloroethoxy)Methane	1800 U	1800 U	720 U	360 U
2,4-Dichlorophenol	1800 U	1800 U	720 U	360 U
1,2,4-Trichlorobenzene	1800 U	1800 U	720 U	360 U
Naphthalene	1800 U	1800 U	720 U	360 U
4-Chloroaniline	1800 U	1800 U	720 U	360 U
Hexachlororbutadiene	1800 U	1800 U	720 U	360 U
4-Chloro-3-methylphenol	1800 U	1800 U	740	360 U
2-Methylnaphthalene	1800 U	1800 U	720 U	360 U
Hexachlorocyclopentadiene	1800 U	1800 U	720 U	360 U
2,4,6-Trichlorophenol	1800 U	1800 U	720 U	360 U
2,4,5-Trichlorophenol	9300 U	8900 U	3600 U	1800 U
2-Chloronaphthalene	1800 U	1800 U	720 U	360 U
2-Nitroaniline	9300 U	8900 U	3600 U	1800 U
Dimethyl Phthalate	1800 U	1800 U	720 U	360 U
Acenaphthylene	1800 U	1800 U	720 U	360 U
3-Nitroaniline	9300 U	8900 U	3600 U	1800 U
Acenaphthene	1800 U	1800 U	720 U	360 U
2,4-Dinitrophenol	9300 U	8900 U	3600 U	1800 U
4-Nitrophenol	9300 U	8900 U	3600 U	1800 U
Dibenzofuran	1800 U	1800 U	720 U	360 U
2,4-Dinitrotoluene	1800 U	1800 U	720 U	360 U
2,6-Dinitrotoluene	1800 U	1800 U	720 U	360 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 2

Sample Information	#174 CS005	#174 CS002	#174 CS004	#174 CS003
RFW Batch ID:	8810-036-002	8810-036-003	8810-036-004	8810-036-005
Customer ID:	BH88A002	BH88A003	BH88A004	BH88A005
Collection Date:	10/12/88	10/12/88	10/12/88	10/12/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Analytes								
Diethylphthalate.....	1800	U	1800	U	720	U	360	U
4-Chlorophenyl-phenylether.....	1800	U	1800	U	720	U	360	U
Fluorene.....	1800	U	1800	U	720	U	360	U
4-Nitroaniline.....	9300	U	8900	U	3600	U	1800	U
4,6-Dinitro-2-methylphenol.....	9300	U	8900	U	3600	U	1800	U
N-Nitrosodiphenylamine.....	1800	U	1800	U	720	U	360	U
4-Bromophenyl-phenylether.....	1800	U	1800	U	720	U	360	U
Hexachlorobenzene.....	1800	U	1800	U	720	U	360	U
Pentachlorophenol.....	9300	U	8900	U	3600	U	1800	U
Phenanthrene.....	1800	U	1800	U	720	U	360	U
Anthracene.....	1800	U	1800	U	180	J	360	U
di-n-Butyl Phthalate.....	1800	U	1800	U	720	U	360	U
Fluoranthene.....	1800	U	1800	U	720	U	1900	
Pyrene.....	1800	U	1800	U	720	U	360	U
Butyl Benzyl Phthalate.....	1800	U	1800	U	720	U	360	U
3,3'-Dichlorobenzidine.....	3700	U	3500	U	1400	U	720	U
Benzo(a)Anthracene.....	1800	U	1800	U	720	U	360	U
bis(2-Ethylhexyl)Phthalate.....	1700	J	1400	J	1700		430	
Chrysene.....	1800	U	1800	U	720	U	360	U
di-n-Octyl Phthalate.....	1800	U	1800	U	720	U	360	U
Benzo(b)Fluoranthene.....	1800	U	1800	U	720	U	360	U
Benzo(k)Fluoranthene.....	1800	U	1800	U	720	U	360	U
Benzo(a)Pyrene.....	1800	U	1800	U	720	U	360	U
Indeno(1,2,3-cd)Pyrene.....	1800	U	1800	U	720	U	360	U
Dibenz(a,h)Anthracene.....	1800	U	1800	U	720	U	360	U
Benzo(g,h,i)Perylene.....	1800	U	1800	U	720	U	360	U
Benzidine.....	NR		NR		NR		NR	

Aniline.....	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information				
	CS009	CS006	CS007	CS010
RFW Batch ID:	8810-036-006	8810-036-007	8810-036-008	8810-036-009
Customer ID:	BH88A006	BH88A007	BH88A008	BH88A009
Collection Date:	10/12/88	10/12/88	10/12/88	10/12/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	75 %	95 %	55 %	86 %
Phenol-d5:	112%	123%	85 %	127%
2,4,6-Br3-Phenol:	156%	151%	103%	155%
Nitrobenzene-d5:	59 %	75 %	42 %	66 %
2-Fluorobiphenyl:	79 %	79 %	56 %	81 %
p-Terphenyl-d14:	90 %	88 %	65 %	100%

Analytes

Phenol	360	U	1800	U	370	U	360	U
bis(2-Chloroethyl)Ether	360	U	1800	U	370	U	360	U
2-Chlorophenol	360	U	1800	U	370	U	360	U
1,3-Dichlorobenzene	360	U	1800	U	370	U	360	U
1,4-Dichlorobenzene	360	U	1800	U	370	U	360	U
Benzyl Alcohol	360	U	1800	U	370	U	360	U
1,2-Dichlorobenzene	360	U	1800	U	370	U	360	U
2-Methylphenol	360	U	1800	U	370	U	360	U
bis(2-Chloroisopropyl)Ether	360	U	1800	U	370	U	360	U
4-Methylphenol	360	U	1800	U	370	U	360	U
N-Nitroso-di-n-propylamine	360	U	1800	U	370	U	360	U
N-Nitroso-di-methylamine		NR		NR		NR		NR
Hexachloroethane	360	U	1800	U	370	U	360	U
Nitrobenzene	360	U	1800	U	370	U	360	U
Isophorone	360	U	1800	U	370	U	360	U
2-Nitrophenol	360	U	1800	U	370	U	360	U
2,4-Dimethylphenol	360	U	1800	U	370	U	360	U
Benzoic Acid	1800	U	9000	U	1800	U	1800	U
bis(2-Chloroethoxy)Methane	360	U	1800	U	370	U	360	U
2,4-Dichlorophenol	360	U	1800	U	370	U	360	U
1,2,4-Trichlorobenzene	360	U	1800	U	370	U	360	U
Naphthalene	360	U	1800	U	370	U	360	U
4-Chloroaniline	360	U	1800	U	370	U	360	U
Hexachlororbutadiene	360	U	1800	U	370	U	360	U
4-Chloro-3-methylphenol	360	U	1800	U	370	U	360	U
2-Methylnaphthalene	360	U	1800	U	370	U	360	U
Hexachlorocyclopentadiene	360	U	1800	U	370	U	360	U
2,4,6-Trichlorophenol	360	U	1800	U	370	U	360	U
2,4,5-Trichlorophenol	1800	U	9000	U	1800	U	1800	U
2-Chloronaphthalene	360	U	1800	U	370	U	360	U
2-Nitroaniline	1800	U	9000	U	1800	U	1800	U
Dimethyl Phthalate	360	U	1800	U	370	U	360	U
Acenaphthylene	360	U	1800	U	370	U	360	U
3-Nitroaniline	1800	U	9000	U	1800	U	1800	U
Acenaphthene	360	U	1800	U	370	U	360	U
2,4-Dinitrophenol	1800	U	9000	U	1800	U	1800	U
4-Nitrophenol	1800	U	9000	U	1800	U	1800	U
Dibenzofuran	360	U	1800	U	370	U	360	U
2,4-Dinitrotoluene	360	U	1800	U	370	U	360	U
2,6-Dinitrotoluene	360	U	1800	U	370	U	360	U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#174 CS009	#174 CS006	#174 CS007	#174 CS012
RFW Batch ID:	8810-036-006	8810-036-007	8810-036-008	8810-036-009
Customer ID:	BH88A006	BH88A007	BH88A008	BH88A009
Collection Date:	10/12/88	10/12/88	10/12/88	10/12/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Analytes								
Diethylphthalate.....	360	U	1800	U	370	U	360	U
4-Chlorophenyl-phenylether.....	360	U	1800	U	370	U	360	U
Fluorene.....	360	U	1800	U	370	U	360	U
4-Nitroaniline.....	1800	U	9000	U	1800	U	1800	U
4,6-Dinitro-2-methylphenol.....	1800	U	9000	U	1800	U	1800	U
N-Nitrosodiphenylamine.....	360	U	1800	U	370	U	360	U
4-Bromophenyl-phenylether.....	360	U	1800	U	370	U	360	U
Hexachlorobenzene.....	360	U	1800	U	370	U	360	U
Pentachlorophenol.....	1800	U	9000	U	1800	U	1800	U
Phenanthrene.....	360	U	1800	U	76	J	360	U
Anthracene.....	360	U	1800	U	370	U	360	U
di-n-Butyl Phthalate.....	360	U	1800	U	370	U	360	U
Fluoranthene.....	360	U	1800	U	130	J	360	U
Pyrene.....	360	U	1800	U	86	J	360	U
Butyl Benzyl Phthalate.....	360	U	1800	U	370	U	360	U
3,3'-Dichlorobenzidine.....	720	U	3600	U	730	U	710	U
Benzo(a)Anthracene.....	360	U	1800	U	370	U	360	U
bis(2-Ethylhexyl)Phthalate.....	630		1700	J	430		410	
Chrysene.....	360	U	1800	U	370	U	360	U
di-n-Octyl Phthalate.....	360	U	1800	U	370	U	360	U
Benzo(b)Fluoranthene.....	360	U	1800	U	370	U	360	U
Benzo(k)Fluoranthene.....	360	U	1800	U	370	U	360	U
Benzo(a)Pyrene.....	360	U	1800	U	370	U	360	U
Indeno(1,2,3-cd)Pyrene.....	360	U	1800	U	370	U	360	U
Dibenz(a,h)Anthracene.....	360	U	1800	U	370	U	360	U
Benzo(g,h,i)Perylene.....	360	U	1800	U	370	U	360	U
Benzidine.....	NR		NR		NR		NR	

Aniline.....	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	Summ 174 CSO 15	Summ 174 CSO 13		
RFW Batch ID:	8810-036-011	8810-036-012	8810-036-013	8810-036-013 MS
Customer ID:	BH88A011	BH88A012	BH88A013	BH88A013
Collection Date:	10/13/88	10/13/88	10/13/88	10/13/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	74 %	90 %	96 %	66 %
Phenol-d5:	110%	127%	140%	97 %
2,4,6-Br3-Phenol:	128%	160%	150%	60 %
Nitrobenzene-d5:	56 %	76 %	71 %	52 %
2-Fluorobiphenyl:	68 %	72 %	70 %	53 %
p-Terphenyl-d14:	86 %	108%	114%	86 %

Analytes

Phenol	370 U	360 U	92 J	71 %
bis(2-Chloroethyl)Ether	370 U	360 U	360 U	360 U
2-Chlorophenol	370 U	360 U	360 U	70 %
1,3-Dichlorobenzene	370 U	360 U	360 U	360 U
1,4-Dichlorobenzene	370 U	360 U	360 U	45 %
Benzyl Alcohol	370 U	360 U	360 U	360 U
1,2-Dichlorobenzene	370 U	360 U	360 U	360 U
2-Methylphenol	370 U	360 U	360 U	360 U
bis(2-Chloroisopropyl)Ether	370 U	360 U	360 U	360 U
4-Methylphenol	370 U	360 U	360 U	360 U
N-Nitroso-di-n-propylamine	370 U	360 U	360 U	63 %
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	370 U	360 U	360 U	360 U
Nitrobenzene	370 U	360 U	360 U	360 U
Isophorone	370 U	360 U	360 U	360 U
2-Nitrophenol	370 U	360 U	360 U	360 U
2,4-Dimethylphenol	370 U	360 U	360 U	360 U
Benzoic Acid	1800 U	1800 U	1800 U	1800 U
bis(2-Chloroethoxy)Methane	370 U	360 U	360 U	360 U
2,4-Dichlorophenol	370 U	360 U	360 U	360 U
1,2,4-Trichlorobenzene	370 U	360 U	360 U	56 %
Naphthalene	370 U	360 U	360 U	360 U
4-Chloroaniline	370 U	360 U	360 U	360 U
Hexachlororbutadiene	370 U	360 U	360 U	360 U
4-Chloro-3-methylphenol	370 U	720	960	94 %
2-Methylnaphthalene	370 U	360 U	360 U	360 U
Hexachlorocyclopentadiene	370 U	360 U	360 U	360 U
2,4,6-Trichlorophenol	370 U	360 U	360 U	360 U
2,4,5-Trichlorophenol	1800 U	1800 U	1800 U	1800 U
2-Chloronaphthalene	370 U	360 U	360 U	360 U
2-Nitroaniline	1800 U	1800 U	1800 U	1800 U
Dimethyl Phthalate	370 U	360 U	81 J	360 U
Acenaphthylene	370 U	360 U	360 U	360 U
3-Nitroaniline	1800 U	1800 U	1800 U	1800 U
Acenaphthene	370 U	360 U	360 U	63 %
2,4-Dinitrophenol	1800 U	1800 U	1800 U	1800 U
4-Nitrophenol	1800 U	1800 U	1800 U	44 %
Dibenzofuran	370 U	360 U	360 U	360 U
2,4-Dinitrotoluene	370 U	360 U	360 U	77 %
2,6-Dinitrotoluene	370 U	360 U	360 U	360 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 6

Sample Information				
	#171 CS015	#171 CS013		
RFW Batch ID:	8810-036-011	8810-036-012	8810-036-013	8810-036-013 MS
Customer ID:	BH88A011	BH88A012	BH88A013	BH88A013
Collection Date:	10/13/88	10/13/88	10/13/88	10/13/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Analytes				
Diethylphthalate	370 U	360 U	360 U	360 U
4-Chlorophenyl-phenylether	370 U	360 U	360 U	360 U
Fluorene	370 U	360 U	360 U	360 U
4-Nitroaniline	1800 U	1800 U	1800 U	1800 U
4,6-Dinitro-2-methylphenol	1800 U	1800 U	1800 U	1800 U
N-Nitrosodiphenylamine	370 U	360 U	360 U	360 U
4-Bromophenyl-phenylether	370 U	360 U	360 U	360 U
Hexachlorobenzene	370 U	360 U	360 U	360 U
Pentachlorophenol	1800 U	1800 U	1800 U	59 %
Phenanthrene	370 U	360 U	360 U	360 U
Anthracene	370 U	360 U	360 U	360 U
di-n-Butyl Phthalate	370 U	360 U	140 J	360 U
Fluoranthene	370 U	360 U	360 U	360 U
Pyrene	370 U	360 U	360 U	66 %
Butyl Benzyl Phthalate	370 U	360 U	360 U	360 U
3,3'-Dichlorobenzidine	730 U	720 U	720 U	720 U
Benzo(a)Anthracene	370 U	360 U	360 U	360 U
bis(2-Ethylhexyl)Phthalate	380	590	360 U	360 U
Chrysene	370 U	360 U	360 U	360 U
di-n-Octyl Phthalate	370 U	360 U	360 U	360 U
Benzo(b)Fluoranthene	370 U	360 U	360 U	360 U
Benzo(k)Fluoranthene	370 U	360 U	360 U	360 U
Benzo(a)Pyrene	370 U	360 U	360 U	360 U
Indeno(1,2,3-cd)Pyrene	370 U	360 U	360 U	360 U
Dibenz(a,h)Anthracene	370 U	360 U	360 U	360 U
Benzo(g,h,i)Perylene	370 U	360 U	360 U	360 U
Benzidine	NR	NR	NR	NR
Aniline	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-036-013 MSD	8810-036-014	8810-036-015	8810-036-016
Customer ID:	BH88A013	BH88A014	BH88A015	BH88A016
Collection Date:	10/13/88	10/13/88	10/13/88	10/13/88
Matrix:	Soil	Soil	Water	Soil
Units:	UG/KG	UG/KG	UG/L	UG/KG

Surrogate Recovery

2-Fluorophenol:	72 %	63 %	49 %	77 %
Phenol-d5:	104%	99 %	76 %	124%
2,4,6-Br3-Phenol:	109%	118%	45 %	113%
Nitrobenzene-d5:	57 %	65 %	50 %	54 %
2-Fluorobiphenyl:	54 %	75 %	42 %	70 %
p-Terphenyl-d14:	84 %	82 %	83 %	88 %

Analytes

Phenol.....	76 %	1700 U	10 U	350 U
bis(2-Chloroethyl)Ether.....	360 U	1700 U	10 U	350 U
2-Chlorophenol.....	74 %	1700 U	10 U	350 U
1,3-Dichlorobenzene.....	360 U	1700 U	10 U	350 U
1,4-Dichlorobenzene.....	47 %	1700 U	10 U	350 U
Benzyl Alcohol.....	360 U	1700 U	10 U	350 U
1,2-Dichlorobenzene.....	360 U	1700 U	10 U	350 U
2-Methylphenol.....	360 U	1700 U	10 U	350 U
bis(2-Chloroisopropyl)Ether....	360 U	1700 U	10 U	350 U
4-Methylphenol.....	360 U	1700 U	10 U	350 U
N-Nitroso-di-n-propylamine.....	66 %	1700 U	10 U	350 U
N-Nitroso-di-methylamine.....	NR	NR	NR	NR
Hexachloroethane.....	360 U	1700 U	10 U	350 U
Nitrobenzene.....	360 U	1700 U	10 U	350 U
Isophorone.....	360 U	1700 U	10 U	350 U
2-Nitrophenol.....	360 U	1700 U	10 U	350 U
2,4-Dimethylphenol.....	360 U	1700 U	10 U	350 U
Benzoic Acid.....	1800 U	8700 U	50 U	1800 U
bis(2-Chloroethoxy)Methane.....	360 U	1700 U	10 U	350 U
2,4-Dichlorophenol.....	360 U	1700 U	10 U	350 U
1,2,4-Trichlorobenzene.....	59 %	1700 U	10 U	350 U
Naphthalene.....	360 U	1700 U	10 U	350 U
4-Chloroaniline.....	360 U	1700 U	10 U	350 U
Hexachlororbutadiene.....	360 U	1700 U	10 U	350 U
4-Chloro-3-methylphenol.....	99 %	1700 U	10 U	350 U
2-Methylnaphthalene.....	360 U	1700 U	10 U	350 U
Hexachlorocyclopentadiene.....	360 U	1700 U	10 U	350 U
2,4,6-Trichlorophenol.....	360 U	1700 U	10 U	350 U
2,4,5-Trichlorophenol.....	1800 U	8700 U	50 U	1800 U
2-Chloronaphthalene.....	360 U	1700 U	10 U	350 U
2-Nitroaniline.....	1800 U	8700 U	50 U	1800 U
Dimethyl Phthalate.....	360 U	1700 U	10 U	350 U
Acenaphthylene.....	360 U	1700 U	10 U	350 U
3-Nitroaniline.....	1800 U	8700 U	50 U	1800 U
Acenaphthene.....	66 %	1700 U	10 U	350 U
2,4-Dinitrophenol.....	1800 U	8700 U	50 U	1800 U
4-Nitrophenol.....	33 %	8700 U	50 U	1800 U
Dibenzofuran.....	360 U	1700 U	10 U	350 U
2,4-Dinitrotoluene.....	73 %	1700 U	10 U	350 U
2,6-Dinitrotoluene.....	360 U	1700 U	10 U	350 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information				
		#174 CSC11		#174 CSC14
RFW Batch ID:	8810-036-013 MSD	8810-036-014	8810-036-015	8810-036-016
Customer ID:	BH88A013	BH88A014	BH88A015	BH88A016
Collection Date:	10/13/88	10/13/88	10/13/88	10/13/88
Matrix:	Soil	Soil	Water	Soil
Units:	UG/KG	UG/KG	UG/L	UG/KG
Analytes				
Diethylphthalate.....	360 U	1700 U	10 U	350 U
4-Chlorophenyl-phenylether.....	360 U	1700 U	10 U	350 U
Fluorene.....	360 U	1700 U	10 U	350 U
4-Nitroaniline.....	1800 U	8700 U	50 U	1800 U
4,6-Dinitro-2-methylphenol.....	1800 U	8700 U	50 U	1800 U
N-Nitrosodiphenylamine.....	360 U	1700 U	10 U	350 U
4-Bromophenyl-phenylether.....	360 U	1700 U	10 U	350 U
Hexachlorobenzene.....	360 U	1700 U	10 U	350 U
Pentachlorophenol.....	122 %	8700 U	50 U	1800 U
Phenanthrene.....	360 U	1700 U	10 U	350 U
Anthracene.....	360 U	1700 U	10 U	350 U
di-n-Butyl Phthalate.....	95 J	1700 U	10 U	350 U
Fluoranthene.....	360 U	1700 U	10 U	350 U
Pyrene.....	68 %	1700 U	10 U	350 U
Butyl Benzyl Phthalate.....	360 U	1700 U	10 U	350 U
3,3'-Dichlorobenzidine.....	300 J	3500 U	20 U	700 U
Benzo(a)Anthracene.....	360 U	1700 U	10 U	350 U
bis(2-Ethylhexyl)Phthalate.....	360 U	1100 J	10 U	530
Chrysene.....	360 U	1700 U	10 U	350 U
di-n-Octyl Phthalate.....	360 U	1700 U	10 U	350 U
Benzo(b)Fluoranthene.....	360 U	1700 U	10 U	350 U
Benzo(k)Fluoranthene.....	360 U	1700 U	10 U	350 U
Benzo(a)Pyrene.....	360 U	1700 U	10 U	350 U
Indeno(1,2,3-cd)Pyrene.....	360 U	1700 U	10 U	350 U
Dibenz(a,h)Anthracene.....	360 U	1700 U	10 U	350 U
Benzo(g,h,i)Perylene.....	360 U	1700 U	10 U	350 U
Benzidine.....	NR	NR	NR	NR
Aniline.....	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	CSC 15	CSC 3	CSC 1	
RFW Batch ID:	8810-036-017	8810-036-018	8810-036-019	8810-051-002
Customer ID:	BH88A017	BH88A018	BH88A019	BH88A021
Collection Date:	10/13/88	10/13/88	10/13/88	10/14/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	80 %	66 %	73 %	77 %
Phenol-d5:	124%	98 %	112%	101%
2,4,6-Br3-Phenol:	105%	96 %	92 %	72 %
Nitrobenzene-d5:	55 %	47 %	51 %	59 %
2-Fluorobiphenyl:	62 %	66 %	71 %	53 %
p-Terphenyl-d14:	71 %	82 %	82 %	51 %

Analytes

Phenol	340 U	340 U	340 U	350 U
bis(2-Chloroethyl)Ether	340 U	340 U	340 U	350 U
2-Chlorophenol	340 U	340 U	340 U	350 U
1,3-Dichlorobenzene	340 U	340 U	340 U	350 U
1,4-Dichlorobenzene	340 U	340 U	340 U	350 U
Benzyl Alcohol	340 U	340 U	340 U	350 U
1,2-Dichlorobenzene	340 U	340 U	340 U	350 U
2-Methylphenol	340 U	340 U	340 U	350 U
bis(2-Chloroisopropyl)Ether	340 U	340 U	340 U	350 U
4-Methylphenol	340 U	340 U	340 U	350 U
N-Nitroso-di-n-propylamine	340 U	340 U	340 U	350 U
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	340 U	340 U	340 U	350 U
Nitrobenzene	340 U	340 U	340 U	350 U
Isophorone	340 U	340 U	340 U	350 U
2-Nitrophenol	340 U	340 U	340 U	350 U
2,4-Dimethylphenol	340 U	340 U	340 U	350 U
Benzoic Acid	1700 U	1700 U	1700 U	1800 U
bis(2-Chloroethoxy)Methane	340 U	340 U	340 U	350 U
2,4-Dichlorophenol	340 U	340 U	340 U	350 U
1,2,4-Trichlorobenzene	340 U	340 U	340 U	350 U
Naphthalene	340 U	340 U	340 U	350 U
4-Chloroaniline	340 U	340 U	340 U	350 U
Hexachlororbutadiene	340 U	340 U	340 U	350 U
4-Chloro-3-methylphenol	340 U	340 U	340 U	350 U
2-Methylnaphthalene	340 U	340 U	340 U	350 U
Hexachlorocyclopentadiene	340 U	340 U	340 U	350 U
2,4,6-Trichlorophenol	340 U	340 U	340 U	350 U
2,4,5-Trichlorophenol	1700 U	1700 U	1700 U	1800 U
2-Chloronaphthalene	340 U	340 U	340 U	350 U
2-Nitroaniline	1700 U	1700 U	1700 U	1800 U
Dimethyl Phthalate	340 U	340 U	340 U	350 U
Acenaphthylene	340 U	340 U	340 U	350 U
3-Nitroaniline	1700 U	1700 U	1700 U	1800 U
Acenaphthene	340 U	340 U	340 U	350 U
2,4-Dinitrophenol	1700 U	1700 U	1700 U	1800 U
4-Nitrophenol	1700 U	1700 U	1700 U	1800 U
Dibenzofuran	340 U	340 U	340 U	350 U
2,4-Dinitrotoluene	340 U	340 U	340 U	350 U
2,6-Dinitrotoluene	340 U	340 U	340 U	350 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#174 CS010	#174 CS003	#174 CS001	#170 CS016
RFW Batch ID:	8810-036-017	8810-036-018	8810-036-019	8810-051-002
Customer ID:	BH88A017	BH88A018	BH88A019	BH88A021
Collection Date:	10/13/88	10/13/88	10/13/88	10/14/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Analytes				
Diethylphthalate.....	340 U	340 U	340 U	350 U
4-Chlorophenyl-phenylether.....	340 U	340 U	340 U	350 U
Fluorene.....	340 U	340 U	340 U	350 U
4-Nitroaniline.....	1700 U	1700 U	1700 U	1800 U
4,6-Dinitro-2-methylphenol.....	1700 U	1700 U	1700 U	1800 U
N-Nitrosodiphenylamine.....	340 U	340 U	340 U	350 U
4-Bromophenyl-phenylether.....	340 U	340 U	340 U	350 U
Hexachlorobenzene.....	340 U	340 U	340 U	350 U
Pentachlorophenol.....	1700 U	1700 U	1700 U	1800 U
Phenanthrene.....	340 U	90 J	340 U	350 U
Anthracene.....	340 U	340 U	340 U	350 U
di-n-Butyl Phthalate.....	340 U	340 U	340 U	590 B
Fluoranthene.....	340 U	130 J	130 J	110 J
Pyrene.....	340 U	110 J	97 J	350 U
Butyl Benzyl Phthalate.....	340 U	340 U	340 U	350 U
3,3'-Dichlorobenzidine.....	670 U	680 U	690 U	700 U
Benzo(a)Anthracene.....	340 U	110 J	340 U	350 U
bis(2-Ethylhexyl)Phthalate.....	428	340 U	340 U	96 J
Chrysene.....	340 U	130 J	98 J	350 U
di-n-Octyl Phthalate.....	340 U	340 U	340 U	350 U
Benzo(b)Fluoranthene.....	340 U	340 U	340 U	350 U
Benzo(k)Fluoranthene.....	340 U	340 U	340 U	350 U
Benzo(a)Pyrene.....	340 U	340 U	340 U	350 U
Indeno(1,2,3-cd)Pyrene.....	340 U	340 U	340 U	350 U
Dibenz(a,h)Anthracene.....	340 U	340 U	340 U	350 U
Benzo(g,h,i)Perylene.....	340 U	340 U	340 U	350 U
Benzidine.....	NR	NR	NR	NR
Aniline.....	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-051-003	8810-062-002	8810-062-003	8810-062-004
Customer ID:	BH88A022	~~BH88A024~~	~~BH88A025~~	BH88A026
Collection Date:	10/14/88	10/19/88	10/19/88	10/19/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	63 %	65 %	59 %	58 %
Phenol-d5:	75 %	77 %	74 %	70 %
2,4,6-Br3-Phenol:	97 %	61 %	82 %	78 %
Nitrobenzene-d5:	46 %	53 %	45 %	42 %
2-Fluorobiphenyl:	53 %	56 %	57 %	57 %
p-Terphenyl-d14:	90 %	70 %	76 %	75 %

Analytes

Phenol	1800 U	1800 U	1800 U	1800 U
bis(2-Chloroethyl)Ether	1800 U	1800 U	1800 U	1800 U
2-Chlorophenol	1800 U	1800 U	1800 U	1800 U
1,3-Dichlorobenzene	1800 U	1800 U	1800 U	1800 U
1,4-Dichlorobenzene	1800 U	1800 U	1800 U	1800 U
Benzyl Alcohol	1800 U	1800 U	1800 U	1800 U
1,2-Dichlorobenzene	1800 U	1800 U	1800 U	1800 U
2-Methylphenol	1800 U	1800 U	1800 U	1800 U
bis(2-Chloroisopropyl)Ether	1800 U	1800 U	1800 U	1800 U
4-Methylphenol	1800 U	1800 U	1800 U	1800 U
N-Nitroso-di-n-propylamine	1800 U	1800 U	1800 U	1800 U
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	1800 U	1800 U	1800 U	1800 U
Nitrobenzene	1800 U	1800 U	1800 U	1800 U
Isophorone	1800 U	1800 U	1800 U	1800 U
2-Nitrophenol	1800 U	1800 U	1800 U	1800 U
2,4-Dimethylphenol	1800 U	1800 U	1800 U	1800 U
Benzoic Acid	8800 U	8900 U	8900 U	8800 U
bis(2-Chloroethoxy)Methane	1800 U	1800 U	1800 U	1800 U
2,4-Dichlorophenol	1800 U	1800 U	1800 U	1800 U
1,2,4-Trichlorobenzene	1800 U	1800 U	1800 U	1800 U
Naphthalene	1800 U	1800 U	1800 U	1800 U
4-Chloroaniline	1800 U	1800 U	1800 U	1800 U
Hexachlorobutadiene	1800 U	1800 U	1800 U	1800 U
4-Chloro-3-methylphenol	1800 U	1800 U	1800 U	1800 U
2-Methylnaphthalene	1800 U	1800 U	1800 U	1800 U
Hexachlorocyclopentadiene	1800 U	1800 U	1800 U	1800 U
2,4,6-Trichlorophenol	1800 U	1800 U	1800 U	1800 U
2,4,5-Trichlorophenol	8800 U	8900 U	8900 U	8800 U
2-Chloronaphthalene	1800 U	1800 U	1800 U	1800 U
2-Nitroaniline	8800 U	8900 U	8900 U	8800 U
Dimethyl Phthalate	1800 U	1800 U	1800 U	1800 U
Acenaphthylene	1800 U	1800 U	1800 U	1800 U
3-Nitroaniline	8800 U	8900 U	8900 U	8800 U
Acenaphthene	1800 U	1800 U	1800 U	1800 U
2,4-Dinitrophenol	8800 U	8900 U	8900 U	8800 U
4-Nitrophenol	8800 U	8900 U	8900 U	8800 U
Dibenzofuran	1800 U	1800 U	1800 U	1800 U
2,4-Dinitrotoluene	1800 U	1800 U	1800 U	1800 U
2,6-Dinitrotoluene	1800 U	1800 U	1800 U	1800 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	#170 C5017	#176 C5024	#176 C5025	#176 C5026
RFW Batch ID:	8810-051-003	8810-062-002	8810-062-003	8810-062-004
Customer ID:	BH88A022	BH88A024	BH88A025	BH88A026
Collection Date:	10/14/88	10/19/88	10/19/88	10/19/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Analytes								
Diethylphthalate	1800	U	1800	U	1800	U	1800	U
4-Chlorophenyl-phenylether	1800	U	1800	U	1800	U	1800	U
Fluorene	1800	U	1800	U	1800	U	1800	U
4-Nitroaniline	8800	U	8900	U	8900	U	8800	U
4,6-Dinitro-2-methylphenol	8800	U	8900	U	8900	U	8800	U
N-Nitrosodiphenylamine	490	J	1800	U	1800	U	1800	U
4-Bromophenyl-phenylether	1800	U	1800	U	1800	U	1800	U
Hexachlorobenzene	1800	U	1800	U	1800	U	1800	U
Pentachlorophenol	8800	U	8900	U	8900	U	8800	U
Phenanthrene	1800	U	1800	U	1800	U	1800	U
Anthracene	1800	U	1800	U	1800	U	1800	U
di-n-Butyl Phthalate	810	JB	1800	U	1800	U	1800	U
Fluoranthene	1800	U	1800	U	350	J	1800	U
Pyrene	1800	U	1800	U	1800	U	1800	U
Butyl Benzyl Phthalate	1800	U	1800	U	1800	U	1800	U
3,3'-Dichlorobenzidine	3500	U	3500	U	3600	U	3500	U
Benzo(a)Anthracene	1800	U	1800	U	1800	U	1800	U
bis(2-Ethylhexyl)Phthalate	1800	U	1800	U	1800	U	1800	U
Chrysene	1800	U	1800	U	210	J	1800	U
di-n-Octyl Phthalate	1800	U	1800	U	1800	U	1800	U
Benzo(b)Fluoranthene	1800	U	1800	U	1800	U	1800	U
Benzo(k)Fluoranthene	1800	U	1800	U	1800	U	1800	U
Benzo(a)Pyrene	1800	U	1800	U	1800	U	1800	U
Indeno(1,2,3-cd)Pyrene	1800	U	1800	U	1800	U	1800	U
Dibenz(a,h)Anthracene	1800	U	1800	U	1800	U	1800	U
Benzo(g,h,i)Perylene	1800	U	1800	U	1800	U	1800	U
Benzidine	NR		NR		NR		NR	

Aniline	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

				FB
RFW Batch ID:	8810-062-005	8810-062-005 MS	8810-062-005 MSD	8810-062-006 DUP
Customer ID:	BH88A027	BH88A027	BH88A027	BH88A028
Collection Date:	10/19/88	10/19/88	10/19/88	10/19/88
Matrix:	Soil	Soil	Soil	Water
Units:	UG/KG	% RECOVERY	% RECOVERY	UG/L

Surrogate Recovery

2-Fluorophenol:	48 %	63 %	63 %	91 %
Phenol-d5:	77 %	111%	107%	110%
2,4,6-Br3-Phenol:	74 %	23 %	25 %	73 %
Nitrobenzene-d5:	46 %	57 %	53 %	77 %
2-Fluorobiphenyl:	62 %	57 %	54 %	64 %
p-Terphenyl-d14:	53 %	54 %	54 %	90 %

Analytes

Phenol	1900 U	85 %	83 %	10 U
bis(2-Chloroethyl)Ether	1900 U	1900 U	1900 U	10 U
2-Chlorophenol	1900 U	67 %	68 %	10 U
1,3-Dichlorobenzene	1900 U	1900 U	1900 U	10 U
1,4-Dichlorobenzene	1900 U	49 %	52 %	10 U
Benzyl Alcohol	1900 U	1900 U	1900 U	10 U
1,2-Dichlorobenzene	1900 U	1900 U	1900 U	10 U
2-Methylphenol	1900 U	1900 U	1900 U	10 U
bis(2-Chloroisopropyl)Ether	1900 U	1900 U	1900 U	10 U
4-Methylphenol	1900 U	1900 U	1900 U	10 U
N-Nitroso-di-n-propylamine	1900 U	80 %	72 %	10 U
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	1900 U	1900 U	1900 U	10 U
Nitrobenzene	1900 U	1900 U	1900 U	10 U
Isophorone	1900 U	1900 U	1900 U	10 U
2-Nitrophenol	1900 U	1900 U	1900 U	10 U
2,4-Dimethylphenol	1900 U	1900 U	1900 U	10 U
Benzoic Acid	9300 U	9300 U	9300 U	50 U
bis(2-Chloroethoxy)Methane	1900 U	1900 U	1900 U	10 U
2,4-Dichlorophenol	1900 U	1900 U	1900 U	10 U
1,2,4-Trichlorobenzene	1900 U	33 %	34 %	10 U
Naphthalene	1900 U	1900 U	1900 U	10 U
4-Chloroaniline	1900 U	1900 U	1900 U	10 U
Hexachlororbutadiene	1900 U	1900 U	1900 U	10 U
4-Chloro-3-methylphenol	1900 U	72 %	72 %	10 U
2-Methylnaphthalene	1900 U	1900 U	1900 U	10 U
Hexachlorocyclopentadiene	1900 U	1900 U	1900 U	10 U
2,4,6-Trichlorophenol	1900 U	1900 U	1900 U	10 U
2,4,5-Trichlorophenol	9300 U	9300 U	9300 U	50 U
2-Chloronaphthalene	1900 U	1900 U	1900 U	10 U
2-Nitroaniline	9300 U	9300 U	9300 U	50 U
Dimethyl Phthalate	1900 U	1900 U	1900 U	10 U
Acenaphthylene	1900 U	1900 U	1900 U	10 U
3-Nitroaniline	9300 U	9300 U	9300 U	50 U
Acenaphthene	1900 U	70 %	67 %	10 U
2,4-Dinitrophenol	9300 U	9300 U	9300 U	50 U
4-Nitrophenol	9300 U	76 %	60 %	50 U
Dibenzofuran	1900 U	1900 U	1900 U	10 U
2,4-Dinitrotoluene	1900 U	75 %	70 %	10 U
2,6-Dinitrotoluene	1900 U	1900 U	1900 U	10 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-062-005	8810-062-005 MS	8810-062-005 MSD	8810-062-006 DUP
Customer ID:	BH88A027	BH88A027	BH88A027	BH88A028
Collection Date:	10/19/88	10/19/88	10/19/88	10/19/88
Matrix:	Soil	Soil	Soil	Water
Units:	UG/KG	% RECOVERY	% RECOVERY	UG/L

Analytes

Diethylphthalate.....	1900	U	1900	U	1900	U	10	U
4-Chlorophenyl-phenylether.....	1900	U	1900	U	1900	U	10	U
Fluorene.....	1900	U	1900	U	1900	U	10	U
4-Nitroaniline.....	9300	U	9300	U	9300	U	50	U
4,6-Dinitro-2-methylphenol.....	9300	U	9300	U	9300	U	50	U
N-Nitrosodiphenylamine.....	1900	U	710	J	1900	U	10	U
4-Bromophenyl-phenylether.....	1900	U	1900	U	1900	U	10	U
Hexachlorobenzene.....	1900	U	1900	U	1900	U	10	U
Pentachlorophenol.....	9300	U	29	%	27	%	50	U
Phenanthrene.....	1900	U	1900	U	1900	U	10	U
Anthracene.....	1900	U	1900	U	1900	U	10	U
di-n-Butyl Phthalate.....	1900	U	220	JB	240	JB	10	U
Fluoranthene.....	1900	U	1900	U	1900	U	10	U
Pyrene.....	1900	U	78	%	79	%	10	U
Butyl Benzyl Phthalate.....	1900	U	1900	U	1900	U	10	U
3,3'-Dichlorobenzidine.....	3700	U	3700	U	3700	U	20	U
Benzo(a)Anthracene.....	1900	U	1900	U	1900	U	10	U
bis(2-Ethylhexyl)Phthalate.....	310	J	1900	U	1900	U	10	U
Chrysene.....	1900	U	1900	U	1900	U	10	U
di-n-Octyl Phthalate.....	1900	U	1900	U	1900	U	10	U
Benzo(b)Fluoranthene.....	1900	U	1900	U	1900	U	10	U
Benzo(k)Fluoranthene.....	1900	U	1900	U	1900	U	10	U
Benzo(a)Pyrene.....	1900	U	1900	U	1900	U	10	U
Indeno(1,2,3-cd)Pyrene.....	1900	U	1900	U	1900	U	10	U
Dibenz(a,h)Anthracene.....	1900	U	1900	U	1900	U	10	U
Benzo(g,h,i)Perylene.....	1900	U	1900	U	1900	U	10	U
Benzidine.....		NR		NR		NR		NR
Aniline.....		NR		NR		NR		NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	FB	[illegible]	[illegible]	[illegible]
RFW Batch ID:	8810-062-006	8810-062-007	8810-062-008	8810-062-009
Customer ID:	BH88A028	BH88A029	BH88A030	BH88A031
Collection Date:	10/19/88	10/19/88	10/19/88	10/19/88
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	88 %	57 %	70 %	60 %
Phenol-d5:	109%	91 %	100%	98 %
2,4,6-Br3-Phenol:	74 %	16 %	126%	19 %
Nitrobenzene-d5:	95 %	47 %	86 %	50 %
2-Fluorobiphenyl:	64 %	48 %	78 %	52 %
p-Terphenyl-d14:	99 %	43 %	94 %	44 %

Analytes

Phenol	10 U	1700 U	350 U	1800 U
bis(2-Chloroethyl)Ether	10 U	1700 U	350 U	1800 U
2-Chlorophenol	10 U	1700 U	350 U	1800 U
1,3-Dichlorobenzene	10 U	1700 U	350 U	1800 U
1,4-Dichlorobenzene	10 U	1700 U	350 U	1800 U
Benzyl Alcohol	10 U	1700 U	350 U	1800 U
1,2-Dichlorobenzene	10 U	1700 U	350 U	1800 U
2-Methylphenol	10 U	1700 U	350 U	1800 U
bis(2-Chloroisopropyl)Ether	10 U	1700 U	350 U	1800 U
4-Methylphenol	10 U	1700 U	350 U	1800 U
N-Nitroso-di-n-propylamine	10 U	1700 U	350 U	1800 U
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	10 U	1700 U	350 U	1800 U
Nitrobenzene	10 U	1700 U	350 U	1800 U
Isophorone	10 U	1700 U	350 U	1800 U
2-Nitrophenol	10 U	1700 U	350 U	1800 U
2,4-Dimethylphenol	10 U	1700 U	350 U	1800 U
Benzoic Acid	50 U	8700 U	1800 U	8900 U
bis(2-Chloroethoxy)Methane	10 U	1700 U	350 U	1800 U
2,4-Dichlorophenol	10 U	1700 U	350 U	1800 U
1,2,4-Trichlorobenzene	10 U	1700 U	350 U	1800 U
Naphthalene	10 U	1700 U	350 U	1800 U
4-Chloroaniline	10 U	1700 U	350 U	1800 U
Hexachlororbutadiene	10 U	1700 U	350 U	1800 U
4-Chloro-3-methylphenol	10 U	1700 U	350 U	1800 U
2-Methylnaphthalene	10 U	1700 U	350 U	1800 U
Hexachlorocyclopentadiene	10 U	1700 U	350 U	1800 U
2,4,6-Trichlorophenol	10 U	1700 U	350 U	1800 U
2,4,5-Trichlorophenol	50 U	8700 U	1800 U	8900 U
2-Chloronaphthalene	10 U	1700 U	350 U	1800 U
2-Nitroaniline	50 U	8700 U	1800 U	8900 U
Dimethyl Phthalate	10 U	1700 U	350 U	1800 U
Acenaphthylene	10 U	1700 U	350 U	1800 U
3-Nitroaniline	50 U	8700 U	1800 U	8900 U
Acenaphthene	10 U	1700 U	350 U	1800 U
2,4-Dinitrophenol	50 U	8700 U	1800 U	8900 U
4-Nitrophenol	50 U	8700 U	160 J	8900 U
Dibenzofuran	10 U	1700 U	350 U	1800 U
2,4-Dinitrotoluene	10 U	1700 U	350 U	1800 U
2,6-Dinitrotoluene	10 U	1700 U	350 U	1800 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	FB	#176 CS027	#176 CS032	#176 CS033
RFW Batch ID:	8810-062-006	8810-062-007	8810-062-008	8810-062-009
Customer ID:	BH88A028	~~BH88A029~~	~~BH88A030~~	~~BH88A031~~
Collection Date:	10/19/88	10/19/88	10/19/88	10/19/88
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG
Analytes				
Diethylphthalate.....	10 U	1700 U	350 U	1800 U
4-Chlorophenyl-phenylether.....	10 U	1700 U	350 U	1800 U
Fluorene.....	10 U	1700 U	350 U	1800 U
4-Nitroaniline.....	50 U	8700 U	1800 U	8900 U
4,6-Dinitro-2-methylphenol.....	50 U	8700 U	1800 U	8900 U
N-Nitrosodiphenylamine.....	10 U	1700 U	350 U	1800 U
4-Bromophenyl-phenylether.....	10 U	1700 U	350 U	1800 U
Hexachlorobenzene.....	10 U	1700 U	350 U	1800 U
Pentachlorophenol.....	50 U	8700 U	110 J	8900 U
Phenanthrene.....	10 U	1700 U	350 U	210 J
Anthracene.....	10 U	1700 U	41 J	1800 U
di-n-Butyl Phthalate.....	10 U	1700 U	350 U	450 JB
Fluoranthene.....	10 U	1700 U	58 J	290 J
Pyrene.....	10 U	1700 U	56 J	370 J
Butyl Benzyl Phthalate.....	10 U	1700 U	350 U	1800 U
3,3'-Dichlorobenzidine.....	20 U	3500 U	700 U	3500 U
Benzo(a)Anthracene.....	10 U	1700 U	350 U	1800 U
bis(2-Ethylhexyl)Phthalate.....	10 U	1700 U	600 B	1800 U
Chrysene.....	10 U	1700 U	350 U	1800 U
di-n-Octyl Phthalate.....	10 U	1700 U	350 U	1800 U
Benzo(b)Fluoranthene.....	10 U	1700 U	350 U	1800 U
Benzo(k)Fluoranthene.....	10 U	1700 U	350 U	1800 U
Benzo(a)Pyrene.....	10 U	1700 U	350 U	1800 U
Indeno(1,2,3-cd)Pyrene.....	10 U	1700 U	350 U	1800 U
Dibenz(a,h)Anthracene.....	10 U	1700 U	350 U	1800 U
Benzo(g,h,i)Perylene.....	10 U	1700 U	350 U	1800 U
Benzidine.....	NR	NR	NR	NR
Aniline.....	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information				
RFW Batch ID:	8810-070-002	8810-070-003	8810-070-004	8810-070-005
Customer ID:	BH88A033	BH88A034	BH88A035	BH88A036
Collection Date:	10/20/88	10/20/88	10/20/88	10/20/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	55 %	48 %	47 %	47 %
Phenol-d5:	46 %	46 %	39 %	38 %
2,4,6-Br3-Phenol:	72 %	89 %	69 %	73 %
Nitrobenzene-d5:	36 %	32 %	30 %	31 %
2-Fluorobiphenyl:	52 %	53 %	43 %	44 %
p-Terphenyl-d14:	65 %	66 %	54 %	52 %

Analytes

Phenol	340	U	330	U	340	U	330	U
bis(2-Chloroethyl)Ether	340	U	330	U	340	U	330	U
2-Chlorophenol	340	U	330	U	340	U	330	U
1,3-Dichlorobenzene	340	U	330	U	340	U	330	U
1,4-Dichlorobenzene	340	U	330	U	340	U	330	U
Benzyl Alcohol	340	U	330	U	340	U	330	U
1,2-Dichlorobenzene	340	U	330	U	340	U	330	U
2-Methylphenol	340	U	330	U	340	U	330	U
bis(2-Chloroisopropyl)Ether	340	U	330	U	340	U	330	U
4-Methylphenol	340	U	330	U	340	U	330	U
N-Nitroso-di-n-propylamine	340	U	330	U	340	U	330	U
N-Nitroso-di-methylamine		NR		NR		NR		NR
Hexachloroethane	340	U	330	U	340	U	330	U
Nitrobenzene	340	U	330	U	340	U	330	U
Isophorone	340	U	330	U	340	U	330	U
2-Nitrophenol	340	U	330	U	340	U	330	U
2,4-Dimethylphenol	340	U	330	U	340	U	330	U
Benzoic Acid	1700	U	1700	U	1700	U	1600	U
bis(2-Chloroethoxy)Methane	340	U	330	U	340	U	330	U
2,4-Dichlorophenol	340	U	330	U	340	U	330	U
1,2,4-Trichlorobenzene	340	U	330	U	340	U	330	U
Naphthalene	340	U	330	U	340	U	330	U
4-Chloroaniline	340	U	330	U	340	U	330	U
Hexachlororbutadiene	340	U	330	U	340	U	330	U
4-Chloro-3-methylphenol	340	U	330	U	340	U	330	U
2-Methylnaphthalene	340	U	330	U	340	U	330	U
Hexachlorocyclopentadiene	340	U	330	U	340	U	330	U
2,4,6-Trichlorophenol	340	U	330	U	340	U	330	U
2,4,5-Trichlorophenol	1700	U	1700	U	1700	U	1600	U
2-Chloronaphthalene	340	U	330	U	340	U	330	U
2-Nitroaniline	1700	U	1700	U	1700	U	1600	U
Dimethyl Phthalate	340	U	330	U	340	U	330	U
Acenaphthylene	340	U	330	U	340	U	330	U
3-Nitroaniline	1700	U	1700	U	1700	U	1600	U
Acenaphthene	340	U	330	U	340	U	330	U
2,4-Dinitrophenol	1700	U	1700	U	1700	U	1600	U
4-Nitrophenol	1700	U	1700	U	1700	U	1600	U
Dibenzofuran	340	U	330	U	340	U	330	U
2,4-Dinitrotoluene	340	U	330	U	340	U	330	U
2,6-Dinitrotoluene	340	U	330	U	340	U	330	U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	# 176 CS031	# 176 CS028	# 176 CS029	# 176 CS033
RFW Batch ID:	8810-070-002	8810-070-003	8810-070-004	8810-070-005
Customer ID:	~~BH88A033~~	BH88A034	~~BH88A035~~	BH88A036
Collection Date:	10/20/88	10/20/88	10/20/88	10/20/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Analytes				
Diethylphthalate.....	340 U	330 U	340 U	330 U
4-Chlorophenyl-phenylether.....	340 U	330 U	340 U	330 U
Fluorene.....	340 U	330 U	340 U	330 U
4-Nitroaniline.....	1700 U	1700 U	1700 U	1600 U
4,6-Dinitro-2-methylphenol.....	1700 U	1700 U	1700 U	1600 U
N-Nitrosodiphenylamine.....	340 U	330 U	340 U	330 U
4-Bromophenyl-phenylether.....	340 U	330 U	340 U	330 U
Hexachlorobenzene.....	340 U	330 U	340 U	330 U
Pentachlorophenol.....	1700 U	1700 U	1700 U	1600 U
Phenanthrene.....	340 U	330 U	76 J	49 J
Anthracene.....	340 U	330 U	340 U	330 U
di-n-Butyl Phthalate.....	340 U	330 U	340 U	330 U
Fluoranthene.....	340 U	46 J	120 J	82 J
Pyrene.....	340 U	43 J	100 J	77 J
Butyl Benzyl Phthalate.....	340 U	330 U	340 U	330 U
3,3'-Dichlorobenzidine.....	680 U	670 U	690 U	660 U
Benzo(a)Anthracene.....	340 U	330 U	53 J	37 J
bis(2-Ethylhexyl)Phthalate.....	130 JB	130 JB	110 JB	110 JB
Chrysene.....	340 U	330 U	61 J	42 J
di-n-Octyl Phthalate.....	340 U	330 U	340 U	330 U
Benzo(b)Fluoranthene.....	340 U	330 U	51 J	28 J
Benzo(k)Fluoranthene.....	340 U	330 U	53 J	52 J
Benzo(a)Pyrene.....	340 U	330 U	57 J	40 J
Indeno(1,2,3-cd)Pyrene.....	340 U	330 U	340 U	330 U
Dibenz(a,h)Anthracene.....	340 U	330 U	340 U	330 U
Benzo(g,h,i)Perylene.....	340 U	330 U	340 U	330 U
Benzidine.....	NR	NR	NR	NR
Aniline.....	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-070-006	8810-070-007	8810-070-008	8810-070-009
Customer ID:	BH88A037	BH88A038	BH88A039	BH88A040
Collection Date:	10/20/88	10/20/88	10/20/88	10/20/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	54 %	56 %	47 %	61 %
Phenol-d5:	47 %	45 %	38 %	51 %
2,4,6-Br3-Phenol:	70 %	73 %	72 %	95 %
Nitrobenzene-d5:	39 %	36 %	30 %	39 %
2-Fluorobiphenyl:	55 %	54 %	45 %	58 %
p-Terphenyl-d14:	69 %	61 %	61 %	79 %

Analytes

Phenol	360 U	340 U	340 U	340 U
bis(2-Chloroethyl)Ether	360 U	340 U	340 U	340 U
2-Chlorophenol	360 U	340 U	340 U	340 U
1,3-Dichlorobenzene	360 U	340 U	340 U	340 U
1,4-Dichlorobenzene	360 U	340 U	340 U	340 U
Benzyl Alcohol	360 U	340 U	340 U	340 U
1,2-Dichlorobenzene	360 U	340 U	340 U	340 U
2-Methylphenol	360 U	340 U	340 U	340 U
bis(2-Chloroisopropyl)Ether	360 U	340 U	340 U	340 U
4-Methylphenol	360 U	340 U	340 U	340 U
N-Nitroso-di-n-propylamine	360 U	340 U	340 U	340 U
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	360 U	340 U	340 U	340 U
Nitrobenzene	360 U	340 U	340 U	340 U
Isophorone	360 U	340 U	340 U	340 U
2-Nitrophenol	360 U	340 U	340 U	340 U
2,4-Dimethylphenol	360 U	340 U	340 U	340 U
Benzoic Acid	1800 U	1700 U	1700 U	1700 U
bis(2-Chloroethoxy)Methane	360 U	340 U	340 U	340 U
2,4-Dichlorophenol	360 U	340 U	340 U	340 U
1,2,4-Trichlorobenzene	360 U	340 U	340 U	340 U
Naphthalene	360 U	340 U	340 U	340 U
4-Chloroaniline	360 U	340 U	340 U	340 U
Hexachlororbutadiene	360 U	340 U	340 U	340 U
4-Chloro-3-methylphenol	360 U	340 U	340 U	340 U
2-Methylnaphthalene	360 U	340 U	340 U	340 U
Hexachlorocyclopentadiene	360 U	340 U	340 U	340 U
2,4,6-Trichlorophenol	360 U	340 U	340 U	340 U
2,4,5-Trichlorophenol	1800 U	1700 U	1700 U	1700 U
2-Chloronaphthalene	360 U	340 U	340 U	340 U
2-Nitroaniline	1800 U	1700 U	1700 U	1700 U
Dimethyl Phthalate	360 U	340 U	340 U	340 U
Acenaphthylene	360 U	340 U	340 U	340 U
3-Nitroaniline	1800 U	1700 U	1700 U	1700 U
Acenaphthene	360 U	340 U	340 U	340 U
2,4-Dinitrophenol	1800 U	1700 U	1700 U	1700 U
4-Nitrophenol	1800 U	1700 U	1700 U	1700 U
Dibenzofuran	360 U	340 U	340 U	340 U
2,4-Dinitrotoluene	360 U	340 U	340 U	340 U
2,6-Dinitrotoluene	360 U	340 U	340 U	340 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	# 175 CS018	# 175 CS019	# 175 CS021	—
RFW Batch ID:	8810-070-006	8810-070-007	8810-070-008	8810-070-009
Customer ID:	BH88A037	BH88A038	BH88A039	BH88A040
Collection Date:	10/20/88	10/20/88	10/20/88	10/20/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Analytes				
Diethylphthalate	360 U	340 U	340 U	340 U
4-Chlorophenyl-phenylether	360 U	340 U	340 U	340 U
Fluorene	360 U	340 U	340 U	340 U
4-Nitroaniline	1800 U	1700 U	1700 U	1700 U
4,6-Dinitro-2-methylphenol	1800 U	1700 U	1700 U	1700 U
N-Nitrosodiphenylamine	360 U	340 U	340 U	340 U
4-Bromophenyl-phenylether	360 U	340 U	340 U	340 U
Hexachlorobenzene	360 U	340 U	340 U	340 U
Pentachlorophenol	1800 U	1700 U	1700 U	1700 U
Phenanthrene	360 U	340 U	40 J	200 J
Anthracene	360 U	340 U	340 U	35 J
di-n-Butyl Phthalate	360 U	340 U	340 U	340 U
Fluoranthene	360 U	340 U	83 J	260 J
Pyrene	360 U	340 U	81 J	260 J
Butyl Benzyl Phthalate	360 U	340 U	340 U	340 U
3,3'-Dichlorobenzidine	720 U	670 U	680 U	690 U
Benzo(a)Anthracene	360 U	340 U	340 U	120 J
bis(2-Ethylhexyl)Phthalate	180 JB	190 JB	370 B	360 B
Chrysene	360 U	340 U	340 U	130 J
di-n-Octyl Phthalate	360 U	340 U	340 U	340 U
Benzo(b)Fluoranthene	360 U	340 U	340 U	130 J
Benzo(k)Fluoranthene	360 U	340 U	340 U	120 J
Benzo(a)Pyrene	360 U	340 U	340 U	140 J
Indeno(1,2,3-cd)Pyrene	360 U	340 U	340 U	340 U
Dibenz(a,h)Anthracene	360 U	340 U	340 U	340 U
Benzo(g,h,i)Perylene	360 U	340 U	340 U	340 U
Benzidine	NR	NR	NR	NR
Aniline	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-070-009 MS	8810-070-009 MSD	8810-070-010	8810-070-010 MS
Customer ID:	BH88A040	BH88A040	BH88A041	BH88A041
Collection Date:	10/20/88	10/20/88	10/20/88	10/20/88
Matrix:	Soil	Soil	Water	Water
Units:	UG/KG	UG/KG	UG/L	UG/L

Surrogate Recovery

2-Fluorophenol:	48 %	58 %	47 %	41 %
Phenol-d5:	38 %	48 %	28 %	30 %
2,4,6-Br3-Phenol:	71 %	80 %	63 %	53 %
Nitrobenzene-d5:	33 %	40 %	42 %	43 %
2-Fluorobiphenyl:	47 %	57 %	52 %	57 %
p-Terphenyl-d14:	59 %	73 %	63 %	72 %

Analytes

Phenol	35 %	46 %	10 U	26 %
bis(2-Chloroethyl)Ether	340 U	340 U	10 U	10 U
2-Chlorophenol	37 %	47 %	10 U	31 %
1,3-Dichlorobenzene	340 U	340 U	10 U	10 U
1,4-Dichlorobenzene	35 %	45 %	10 U	36 %
Benzyl Alcohol	340 U	340 U	10 U	10 U
1,2-Dichlorobenzene	340 U	340 U	10 U	10 U
2-Methylphenol	340 U	340 U	10 U	10 U
bis(2-Chloroisopropyl)Ether	340 U	340 U	10 U	10 U
4-Methylphenol	340 U	340 U	10 U	10 U
N-Nitroso-di-n-propylamine	44 %	58 %	10 U	46 %
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	340 U	340 U	10 U	10 U
Nitrobenzene	340 U	340 U	10 U	10 U
Isophorone	340 U	340 U	10 U	10 U
2-Nitrophenol	340 U	340 U	10 U	10 U
2,4-Dimethylphenol	340 U	340 U	10 U	10 U
Benzoic Acid	1700 U	1700 U	50 U	50 U
bis(2-Chloroethoxy)Methane	340 U	340 U	10 U	10 U
2,4-Dichlorophenol	340 U	340 U	10 U	10 U
1,2,4-Trichlorobenzene	39 %	50 %	10 U	39 %
Naphthalene	340 U	340 U	10 U	10 U
4-Chloroaniline	340 U	340 U	10 U	10 U
Hexachlororbutadiene	340 U	340 U	10 U	10 U
4-Chloro-3-methylphenol	38 %	49 %	10 U	37 %
2-Methylnaphthalene	340 U	340 U	10 U	10 U
Hexachlorocyclopentadiene	340 U	340 U	10 U	10 U
2,4,6-Trichlorophenol	340 U	340 U	10 U	10 U
2,4,5-Trichlorophenol	1700 U	1700 U	50 U	50 U
2-Chloronaphthalene	340 U	340 U	10 U	10 U
2-Nitroaniline	1700 U	1700 U	50 U	50 U
Dimethyl Phthalate	340 U	340 U	10 U	10 U
Acenaphthylene	340 U	340 U	10 U	10 U
3-Nitroaniline	1700 U	1700 U	50 U	50 U
Acenaphthene	42 %	53 %	10 U	55 %
2,4-Dinitrophenol	1700 U	1700 U	50 U	50 U
4-Nitrophenol	39 %	51 %	50 U	21 %
Dibenzofuran	340 U	340 U	10 U	10 U
2,4-Dinitrotoluene	38 %	51 %	10 U	41 %
2,6-Dinitrotoluene	340 U	340 U	10 U	10 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

RFW Batch ID:	8810-070-009 MS	8810-070-009 MSD	8810-070-010 FB	8810-070-010 MS FB
Customer ID:	BH88A040	BH88A040	BH88A041	BH88A041
Collection Date:	10/20/88	10/20/88	10/20/88	10/20/88
Matrix:	Soil	Soil	Water	Water
Units:	UG/KG	UG/KG	UG/L	UG/L

Analytes

Diethylphthalate	340	U	340	U	10	U	10	U
4-Chlorophenyl-phenylether	340	U	340	U	10	U	10	U
Fluorene	340	U	340	U	10	U	10	U
4-Nitroaniline	1700	U	1700	U	50	U	50	U
4,6-Dinitro-2-methylphenol	1700	U	1700	U	50	U	50	U
N-Nitrosodiphenylamine	340	U	340	U	10	U	10	U
4-Bromophenyl-phenylether	340	U	340	U	10	U	10	U
Hexachlorobenzene	340	U	340	U	10	U	10	U
Pentachlorophenol	8	%	12	%	50	U	37	%
Phenanthrene	38	J	50	J	10	U	10	U
Anthracene	6	J	8	J	10	U	10	U
di-n-Butyl Phthalate	340	U	340	U	10	U	10	U
Fluoranthene	63	J	97	J	10	U	10	U
Pyrene	43	%	58	%	10	U	67	%
Butyl Benzyl Phthalate	340	U	340	U	10	U	10	U
3,3'-Dichlorobenzidine	690	U	680	U	20	U	20	U
Benzo(a)Anthracene	26	J	41	J	10	U	10	U
bis(2-Ethylhexyl)Phthalate	260	JB	380	B	4	JB	6	JB
Chrysene	40	J	57	J	10	U	10	U
di-n-Octyl Phthalate	340	U	340	U	10	U	10	U
Benzo(b)Fluoranthene	30	J	65	J	10	U	10	U
Benzo(k)Fluoranthene	42	J	42	J	10	U	10	U
Benzo(a)Pyrene	39	J	56	J	10	U	10	U
Indeno(1,2,3-cd)Pyrene	340	U	340	U	10	U	10	U
Dibenz(a,h)Anthracene	340	U	340	U	10	U	10	U
Benzo(g,h,i)Perylene	340	U	340	U	10	U	10	U
Benzidine	NR		NR		NR		NR	

Aniline	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	FB	Sum 75 CS020	Matrix/Spike	MS/Duplicate
RFW Batch ID:	8810-070-010 MSD	8810-070-011	8810-070-011 MS	8810-070-011 MSD
Customer ID:	BH88A041	BH88A042	BH88A042	BH88A042
Collection Date:	10/20/88	10/21/88	10/21/88	10/21/88
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	60 %	42 %	46 %	36 %
Phenol-d5:	41 %	36 %	39 %	40 %
2,4,6-Br3-Phenol:	71 %	97 %	113%	88 %
Nitrobenzene-d5:	41 %	30 %	35 %	30 %
2-Fluorobiphenyl:	57 %	47 %	49 %	58 %
p-Terphenyl-d14:	72 %	62 %	58 %	74 %

Analytes

Phenol.....	39 %	350 U	34 %	35 %
bis(2-Chloroethyl)Ether.....	10 U	350 U	350 U	350 U
2-Chlorophenol.....	48 %	350 U	34 %	31 %
1,3-Dichlorobenzene.....	10 U	350 U	350 U	350 U
1,4-Dichlorobenzene.....	35 %	350 U	33 %	18 %
Benzyl Alcohol.....	10 U	350 U	350 U	350 U
1,2-Dichlorobenzene.....	10 U	350 U	350 U	350 U
2-Methylphenol.....	10 U	350 U	350 U	350 U
bis(2-Chloroisopropyl)Ether....	10 U	350 U	350 U	350 U
4-Methylphenol.....	10 U	350 U	350 U	350 U
N-Nitroso-di-n-propylamine.....	52 %	350 U	44 %	42 %
N-Nitroso-di-methylamine.....	NR	NR	NR	NR
Hexachloroethane.....	10 U	350 U	350 U	350 U
Nitrobenzene.....	10 U	350 U	350 U	350 U
Isophorone.....	10 U	350 U	350 U	350 U
2-Nitrophenol.....	10 U	350 U	350 U	350 U
2,4-Dimethylphenol.....	10 U	350 U	350 U	350 U
Benzoic Acid.....	50 U	1700 U	1700 U	1700 U
bis(2-Chloroethoxy)Methane.....	10 U	350 U	350 U	350 U
2,4-Dichlorophenol.....	10 U	350 U	350 U	350 U
1,2,4-Trichlorobenzene.....	41 %	350 U	39 %	34 %
Naphthalene.....	10 U	350 U	350 U	350 U
4-Chloroaniline.....	10 U	350 U	350 U	350 U
Hexachlororbutadiene.....	10 U	350 U	350 U	350 U
4-Chloro-3-methylphenol.....	53 %	350 U	39 %	51 %
2-Methylnaphthalene.....	10 U	350 U	350 U	350 U
Hexachlorocyclopentadiene.....	10 U	350 U	350 U	350 U
2,4,6-Trichlorophenol.....	10 U	350 U	350 U	350 U
2,4,5-Trichlorophenol.....	50 U	1700 U	1700 U	1700 U
2-Chloronaphthalene.....	10 U	350 U	350 U	350 U
2-Nitroaniline.....	50 U	1700 U	1700 U	1700 U
Dimethyl Phthalate.....	10 U	350 U	350 U	350 U
Acenaphthylene.....	10 U	350 U	350 U	350 U
3-Nitroaniline.....	50 U	1700 U	1700 U	1700 U
Acenaphthene.....	56 %	350 U	48 %	58 %
2,4-Dinitrophenol.....	50 U	1700 U	1700 U	1700 U
4-Nitrophenol.....	35 %	1700 U	34 %	45 %
Dibenzofuran.....	10 U	350 U	350 U	350 U
2,4-Dinitrotoluene.....	52 %	350 U	42 %	52 %
2,6-Dinitrotoluene.....	10 U	350 U	350 U	350 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	FB	#175 CS20		
RFW Batch ID:	8810-070-010 MSD	8810-070-011	8810-070-011 MS	8810-070-011 MSD
Customer ID:	BH88A041	BH88A042	BH88A042	BH88A042
Collection Date:	10/20/88	10/21/88	10/21/88	10/21/88
Matrix:	Water	Soil	Soil	Soil
Units:	UG/L	UG/KG	UG/KG	UG/KG

Analytes

Diethylphthalate.....	10	U	350	U	350	U	350	U
4-Chlorophenyl-phenylether.....	10	U	350	U	350	U	350	U
Fluorene.....	10	U	350	U	350	U	350	U
4-Nitroaniline.....	50	U	1700	U	1700	U	1700	U
4,6-Dinitro-2-methylphenol.....	50	U	1700	U	1700	U	1700	U
N-Nitrosodiphenylamine.....	10	U	350	U	350	U	350	U
4-Bromophenyl-phenylether.....	10	U	350	U	350	U	350	U
Hexachlorobenzene.....	10	U	350	U	350	U	350	U
Pentachlorophenol.....	56	%	1700	U	28	%	42	%
Phenanthrene.....	10	U	350	U	350	U	350	U
Anthracene.....	10	U	350	U	350	U	350	U
di-n-Butyl Phthalate.....	10	U	350	U	350	U	350	U
Fluoranthene.....	10	U	350	U	350	U	350	U
Pyrene.....	65	%	350	U	58	%	72	%
Butyl Benzyl Phthalate.....	10	U	350	U	350	U	350	U
3,3'-Dichlorobenzidine.....	20	U	690	U	700	U	700	U
Benzo(a)Anthracene.....	10	U	350	U	350	U	350	U
bis(2-Ethylhexyl)Phthalate.....	6	JB	120	JB	130	JB	150	JB
Chrysene.....	10	U	350	U	350	U	350	U
di-n-Octyl Phthalate.....	10	U	350	U	350	U	350	U
Benzo(b)Fluoranthene.....	10	U	350	U	350	U	350	U
Benzo(k)Fluoranthene.....	10	U	350	U	350	U	350	U
Benzo(a)Pyrene.....	10	U	350	U	350	U	350	U
Indeno(1,2,3-cd)Pyrene.....	10	U	350	U	350	U	350	U
Dibenz(a,h)Anthracene.....	10	U	350	U	350	U	350	U
Benzo(g,h,i)Perylene.....	10	U	350	U	350	U	350	U
Benzidine.....		NR		NR		NR		NR
Aniline.....		NR		NR		NR		NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	Summary CS034	Summary CS035		
RFW Batch ID:	8810-093-002	8810-093-003	8810-093-003 MS	8810-093-003 MSD
Customer ID:	BH88A044	BH88A045	BH88A045	BH88A045
Collection Date:	10/25/88	10/25/88	10/25/88	10/25/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	% RECOVERY	% RECOVERY

Surrogate Recovery

2-Fluorophenol:	108%	116%	93 %	98 %
Phenol-d5:	105%	118%	120%	119%
2,4,6-Br3-Phenol:	88 %	86 %	102%	89 %
Nitrobenzene-d5:	85 %	91 %	77 %	81 %
2-Fluorobiphenyl:	101%	105%	96 %	99 %
p-Terphenyl-d14:	128%	126%	113%	113%

Analytes

Phenol	2100 U	2000 U	93 %	92 %
bis(2-Chloroethyl)Ether	2100 U	2000 U	2000 U	2000 U
2-Chlorophenol	2100 U	2000 U	99 %	102 %
1,3-Dichlorobenzene	2100 U	2000 U	2000 U	2000 U
1,4-Dichlorobenzene	2100 U	2000 U	71 %	80 %
Benzyl Alcohol	2100 U	2000 U	2000 U	2000 U
1,2-Dichlorobenzene	2100 U	2000 U	2000 U	2000 U
2-Methylphenol	2100 U	2000 U	2000 U	2000 U
bis(2-Chloroisopropyl)Ether	2100 U	2000 U	2000 U	2000 U
4-Methylphenol	2100 U	2000 U	2000 U	2000 U
N-Nitroso-di-n-propylamine	2100 U	2000 U	79 %	74 %
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	2100 U	2000 U	2000 U	2000 U
Nitrobenzene	2100 U	2000 U	2000 U	2000 U
Isophorone	2100 U	2000 U	2000 U	2000 U
2-Nitrophenol	2100 U	2000 U	2000 U	2000 U
2,4-Dimethylphenol	2100 U	2000 U	2000 U	2000 U
Benzoic Acid	10000 U	10000 U	10000 U	10000 U
bis(2-Chloroethoxy)Methane	2100 U	2000 U	2000 U	2000 U
2,4-Dichlorophenol	2100 U	2000 U	2000 U	2000 U
1,2,4-Trichlorobenzene	2100 U	2000 U	89 %	92 %
Naphthalene	2100 U	2000 U	2000 U	2000 U
4-Chloroaniline	2100 U	2000 U	2000 U	2000 U
Hexachlorobutadiene	2100 U	2000 U	2000 U	2000 U
4-Chloro-3-methylphenol	2100 U	2000 U	87 %	79 %
2-Methylnaphthalene	2100 U	2000 U	2000 U	2000 U
Hexachlorocyclopentadiene	2100 U	2000 U	2000 U	2000 U
2,4,6-Trichlorophenol	2100 U	2000 U	2000 U	2000 U
2,4,5-Trichlorophenol	10000 U	10000 U	10000 U	10000 U
2-Chloronaphthalene	2100 U	2000 U	2000 U	2000 U
2-Nitroaniline	10000 U	10000 U	10000 U	10000 U
Dimethyl Phthalate	2100 U	2000 U	2000 U	2000 U
Acenaphthylene	2100 U	2000 U	2000 U	2000 U
3-Nitroaniline	10000 U	10000 U	10000 U	10000 U
Acenaphthene	2100 U	2000 U	99 %	98 %
2,4-Dinitrophenol	10000 U	10000 U	10000 U	10000 U
4-Nitrophenol	10000 U	10000 U	71 %	26 %
Dibenzofuran	2100 U	2000 U	2000 U	2000 U
2,4-Dinitrotoluene	2100 U	2000 U	123 %	116 %
2,6-Dinitrotoluene	2100 U	2000 U	2000 U	2000 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 26

Sample Information	#177 25034	#177 25035		
RFW Batch ID:	8810-093-002	8810-093-003	8810-093-003 MS	8810-093-003 MSD
Customer ID:	BH88A044	BH88A045	BH88A045	BH88A045
Collection Date:	10/25/88	10/25/88	10/25/88	10/25/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	% RECOVERY	% RECOVERY
Analytes				
Diethylphthalate.....	2100 U	2000 U	2000 U	2000 U
4-Chlorophenyl-phenylether.....	2100 U	2000 U	2000 U	2000 U
Fluorene.....	2100 U	2000 U	2000 U	2000 U
4-Nitroaniline.....	10000 U	10000 U	10000 U	10000 U
4,6-Dinitro-2-methylphenol.....	10000 U	10000 U	10000 U	10000 U
N-Nitrosodiphenylamine.....	2100 U	2000 U	2000 U	2000 U
4-Bromophenyl-phenylether.....	2100 U	2000 U	2000 U	2000 U
Hexachlorobenzene.....	2100 U	2000 U	2000 U	2000 U
Pentachlorophenol.....	10000 U	10000 U	50 %	49 %
Phenanthrene.....	2100 U	770 J	2000 U	2000 U
Anthracene.....	2100 U	250 J	2000 U	2000 U
di-n-Butyl Phthalate.....	2100 U	2000 U	2000 U	2000 U
Fluoranthene.....	2100 U	930 J	2000 U	2000 U
Pyrene.....	240 J	1100 J	95 %	91 %
Butyl Benzyl Phthalate.....	2100 U	2000 U	2000 U	2000 U
3,3'-Dichlorobenzidine.....	4100 U	4000 U	4000 U	4000 U
Benzo(a)Anthracene.....	2100 U	2000 U	2000 U	2000 U
bis(2-Ethylhexyl)Phthalate.....	2000 JB	1200 JB	1300 JB	1400 JB
Chrysene.....	2100 U	550 J	2000 U	2000 U
di-n-Octyl Phthalate.....	2100 U	2000 U	2000 U	2000 U
Benzo(b)Fluoranthene.....	2100 U	290 J	2000 U	2000 U
Benzo(k)Fluoranthene.....	2100 U	400 J	2000 U	2000 U
Benzo(a)Pyrene.....	2100 U	470 J	2000 U	2000 U
Indeno(1,2,3-cd)Pyrene.....	2100 U	270 J	2000 U	2000 U
Dibenz(a,h)Anthracene.....	2100 U	2000 U	2000 U	2000 U
Benzo(g,h,i)Perylene.....	2100 U	340 J	2000 U	2000 U
Benzidine.....	NR	NR	NR	NR
Aniline.....	NR	NR	NR	NR

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information

	SWMU 77 CSO 36	SWMU 77 CSO 37	182 CSO 22	
RFW Batch ID:	8810-093-004	8810-093-005	8810-108-001	8810-108-002
Customer ID:	BH88A046	BH88A047	BH88A048	BH88A049
Collection Date:	10/25/88	10/25/88	10/27/88	10/27/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG

Surrogate Recovery

2-Fluorophenol:	96 %	93 %	0 %	76 %
Phenol-d5:	98 %	95 %	0 %	108%
2,4,6-Br3-Phenol:	85 %	89 %	0 %	92 %
Nitrobenzene-d5:	69 %	72 %	0 %	60 %
2-Fluorobiphenyl:	91 %	93 %	0 %	75 %
p-Terphenyl-d14:	134%	120%	0 %	100%

Analytes

Phenol	1900 U	2100 U	37000 U	1800 U
bis(2-Chloroethyl)Ether	1900 U	2100 U	37000 U	1800 U
2-Chlorophenol	1900 U	2100 U	37000 U	1800 U
1,3-Dichlorobenzene	1900 U	2100 U	37000 U	1800 U
1,4-Dichlorobenzene	1900 U	2100 U	37000 U	1800 U
Benzyl Alcohol	1900 U	2100 U	37000 U	1800 U
1,2-Dichlorobenzene	1900 U	2100 U	37000 U	1800 U
2-Methylphenol	1900 U	2100 U	37000 U	1800 U
bis(2-Chloroisopropyl)Ether	1900 U	2100 U	37000 U	1800 U
4-Methylphenol	1900 U	2100 U	37000 U	1800 U
N-Nitroso-di-n-propylamine	1900 U	2100 U	37000 U	1800 U
N-Nitroso-di-methylamine	NR	NR	NR	NR
Hexachloroethane	1900 U	2100 U	37000 U	1800 U
Nitrobenzene	1900 U	2100 U	37000 U	1800 U
Isophorone	1900 U	2100 U	37000 U	1800 U
2-Nitrophenol	1900 U	2100 U	37000 U	1800 U
2,4-Dimethylphenol	1900 U	2100 U	37000 U	1800 U
Benzoic Acid	9500 U	10000 U	180000 U	9000 U
bis(2-Chloroethoxy)Methane	1900 U	2100 U	37000 U	1800 U
2,4-Dichlorophenol	1900 U	2100 U	37000 U	1800 U
1,2,4-Trichlorobenzene	1900 U	2100 U	37000 U	1800 U
Naphthalene	1900 U	2100 U	44000	1800 U
4-Chloroaniline	1900 U	2100 U	37000 U	1800 U
Hexachlororbutadiene	1900 U	2100 U	37000 U	1800 U
4-Chloro-3-methylphenol	1900 U	2100 U	37000 U	1800 U
2-Methylnaphthalene	1900 U	2100 U	13000 J	1800 U
Hexachlorocyclopentadiene	1900 U	2100 U	37000 U	1800 U
2,4,6-Trichlorophenol	1900 U	2100 U	37000 U	1800 U
2,4,5-Trichlorophenol	9500 U	10000 U	180000 U	9000 U
2-Chloronaphthalene	1900 U	2100 U	37000 U	1800 U
2-Nitroaniline	9500 U	10000 U	180000 U	9000 U
Dimethyl Phthalate	1900 U	2100 U	37000 U	1800 U
Acenaphthylene	1900 U	2100 U	37000 U	1800 U
3-Nitroaniline	9500 U	10000 U	180000 U	9000 U
Acenaphthene	1900 U	2100 U	27000 J	1800 U
2,4-Dinitrophenol	9500 U	10000 U	180000 U	9000 U
4-Nitrophenol	9500 U	10000 U	180000 U	9000 U
Dibenzofuran	1900 U	2100 U	14000 J	1800 U
2,4-Dinitrotoluene	1900 U	2100 U	37000 U	1800 U
2,6-Dinitrotoluene	1900 U	2100 U	37000 U	1800 U

WESTON ANALYTICS
GC/MS DATA SUMMARY
Semivolatile HAZARDOUS SUBSTANCE LIST COMPOUNDS

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS)

Sample Information	SWMU 177 CS036	#177 CS037	#182 CS022	#182 CS023
RFW Batch ID:	8810-093-004	8810-093-005	8810-108-001	8810-108-002
Customer ID:	BH88A046	BH88A047	BH88A048	BH88A049
Collection Date:	10/25/88	10/25/88	10/27/88	10/27/88
Matrix:	Soil	Soil	Soil	Soil
Units:	UG/KG	UG/KG	UG/KG	UG/KG
Analytes				
Diethylphthalate	1900 U	2100 U	37000 U	1800 U
4-Chlorophenyl-phenylether	1900 U	2100 U	37000 U	1800 U
Fluorene	1900 U	2100 U	23000 J	1800 U
4-Nitroaniline	9500 U	10000 U	180000 U	9000 U
4,6-Dinitro-2-methylphenol	9500 U	10000 U	180000 U	9000 U
N-Nitrosodiphenylamine	1900 U	880 J	37000 U	1800 U
4-Bromophenyl-phenylether	1900 U	2100 U	37000 U	1800 U
Hexachlorobenzene	1900 U	2100 U	37000 U	1800 U
Pentachlorophenol	9500 U	10000 U	180000 U	9000 U
Phenanthrene	1900 U	500 J	95000	380 J
Anthracene	1900 U	2100 U	28000 J	1800 U
di-n-Butyl Phthalate	1900 U	1300 J	37000 U	1800 U
Fluoranthene	1900 U	780 J	77000	410 J
Pyrene	1900 U	880 J	62000	320 J
Butyl Benzyl Phthalate	1900 U	510 J	37000 U	1800 U
3,3'-Dichlorobenzidine	3800 U	4100 U	73000 U	3600 U
Benzo(a)Anthracene	1900 U	2100 U	25000 J	1800 U
bis(2-Ethylhexyl)Phthalate	2100 B	1400 JB	12000 J	630 J
Chrysene	1900 U	550 J	37000 U	1800 U
di-n-Octyl Phthalate	1900 U	290 J	37000 U	1800 U
Benzo(b)Fluoranthene	1900 U	350 J	26000 J	1800 U
Benzo(k)Fluoranthene	1900 U	320 J	27000 J	180 J
Benzo(a)Pyrene	1900 U	230 J	34000 J	220 J
Indeno(1,2,3-cd)Pyrene	1900 U	2100 U	28000 J	1800 U
Dibenz(a,h)Anthracene	1900 U	2100 U	14000 J	1800 U
Benzo(g,h,i)Perylene	1900 U	2100 U	32000 J	1800 U
Benzidine	NR	NR	NR	NR
Aniline	NR	NR	NR	NR

Accu-Labs Research, Inc.

11485 W. 48th Avenue Wheat Ridge, Colorado 80033 (303) 423-2766

November 17, 1988

Mr. Norm Flynn
Weston Analytics
7720 Lorraine Ave.
Suite 105
Stockton, CA 95210

Dear Mr. Flynn,

Enclosed is the analytical report in the requested format as per Contract LL-0421 for ALR No. 9612-28467-10. This report covers the Inorganic portion only.

A floppy disk is also enclosed containing all the data on the hard copies.

If you have any questions, please feel free to call.

Sincerely,

Steven Callio
Soils and RCRA
Supervisor

for Mary Fabisiak
Water Laboratory
Supervisor

SC/MF/dh

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175
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ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Field Parameters						
	SWMU 176 CS031		SWMU 176 CS028		SWMU [illegible] CS029	
RFW Batch ID:	1100-127-100		1100-128-100		1100-129-100	
Customer ID:	BH88A033		BH88A034		BH88A035	
ALR No.:	9612-28467-10-1		9612-28467-10-2		9612-28467-10-3	
Matrix:	Soil		Soil		Soil	

Field Parameters

CO3= as CaCO3.....						
HCO3- as CaCO3.....						
Chloride.....						
Sulfate.....						
pH.....	7.1	phunit	7.8	phunit	7.8	phunit
Total Organic Carbon.....	7200	mg/kg	18,000	mg/kg	11,000	mg/kg
Fluoride.....						
Nitrate-Nitrite-Nitrogen.....	2.1	mg/kg	6.0	mg/kg	4.6	mg/kg
Sulfide.....						
[illegible]nide, Total.....						
Hexavalent Chromium (Cr+6).....						
Total Dissolved Solids.....						
Total Suspended Solids.....						
Ignitability (Degrees).....						

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

Field Parameters

RFW Batch ID:	1100-130-100		1100-131-100		1100-132-100	
Customer ID:	BH88A036		BH88A037		BH88A038	
ALR No.:	9612-28467-10-4		9612-28467-10-5		9612-28467-10-6	
Matrix:	Soil		Soil		Soil	
Field Parameters						
CO3= as CaCO3						
HCO3- as CaCO3						
Chloride						
Sulfate						
pH	7.5	phunit	7.6	phunit	7.8	phunit
Total Organic Carbon	11,000	mg/kg	9500	mg/kg	6200	mg/kg
Fluoride						
Nitrate-Nitrite-Nitrogen	20	mg/kg	2.2	mg/kg	2.2	mg/kg
Sulfide						
Cyanide, Total						
Hexavalent Chromium (Cr+6)						
Total Dissolved Solids						
Total Suspended Solids						
Ignitability (Degrees)						

Field Parameters

RFW Batch ID:	1100-133-100		1100-134-100		1100-135-100	
Customer ID:	BH88A039		BH88A040 + MS,MSD		BH88A041	
ALR No.:	9612-28467-10-7		9612-28467-10-8		9612-28467-10-9	
Matrix:	Soil		Soil		Water	
Field Parameters						
CO3= as CaCO3						
HCO3- as CaCO3						
Chloride						
Sulfate						
pH	7.9	phunit	7.8	phunit	1.3	phunit
Total Organic Carbon	8400	mg/kg	12,000	mg/kg	1	mg/l
Fluoride						
Nitrate-Nitrite-Nitrogen	5.6	mg/kg	5.2	mg/kg	<0.2	mg/l
Sulfide						
Cyanide, Total						
Hexavalent Chromium (Cr+6)						
Total Dissolved Solids						
Total Suspended Solids						
Ignitability (Degrees)						

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 3

Field Parameters

RFW Batch ID: 1100-136-100
Customer ID: BH88A042
ALR No.: 9612-28467-10-10
Matrix: Soil

Field Parameters

CO3= as CaCO3.....		
HCO3- as CaCO3.....		
Chloride.....		
Sulfate.....		
pH.....	8.1	phunit
Total Organic Carbon.....	11,000	mg/kg
Fluoride.....		
Nitrate-Nitrite-Nitrogen.....	7.5	mg/kg
Sulfide.....		
Cyanide, Total.....		
Hexavalent Chromium (Cr+6).....		
Total Dissolved Solids.....		
Total Suspended Solids.....		
Ignitability (Degrees).....		

Note: pH sample for BH88A041 (ALR 9612-28467-10-9) was perserved for nutrients.

Accu-Labs Research, Inc.
5 W. 48th Avenue Wheat Ridge, Colorado 80033 (303) 423-2766

November 17, 1988

Mr. Norm Flynn
Weston Analytics
7720 Lorraine Ave.
Suite 105
Stockton, CA 95210

Dear Mr. Flynn,

Enclosed is the analytical report in the requested format as per Contract LL-0421 for ALR No. 9612-28466-8. This report covers the Inorganic portion only.

A floppy disk is also enclosed containing all the data on the hard copies.

If you have any questions, please feel free to call.

Sincerely,

Steven Callio
Soils and RCRA
Supervisor

for Mary Fabisiak
Water Laboratory
Supervisor

SC/MF/dh

11-88

11/17/88

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Field Parameters						
	Sample 176 CS024		Sample 176 CS025		Sample 176 CS026	
RFW Batch ID:	1100-119-100		1100-120-100		1100-121-100	
Customer ID:	BH88A024		BH88A025		BH88A026	
ALR No.:	9612-28466-8-1		9612-28466-8-2		9612-28466-8-3	
Matrix:	Soil		Soil		Soil	
Field Parameters						
CO3= as CaCO3.....						
HCO3- as CaCO3.....						
Chloride.....						
Sulfate.....						
pH.....	7.8	phunit	7.9	phunit	7.3	phunit
Total Organic Carbon.....	24,000	mg/kg	27,000	mg/kg	17,000	mg/kg
Fluoride.....						
Nitrate-Nitrite-Nitrogen.....	25	mg/kg	4.5	mg/kg	4.9	mg/kg
Sulfide.....						
Cyanide, Total.....						
Hexavalent Chromium (Cr+6).....						
Total Dissolved Solids.....						
Total Suspended Solids.....						
Ignitability (Degrees).....						

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS)

Field Parameters

RFW Batch ID:	1100-122-100	1100-123-100	1100-124-100
Customer ID:	BH88A027 + MS,MSD	BH88A028	BH88A029
ALR No.:	9612-28466-8-4	9612-28466-8-5	9612-28466-8-6
Matrix:	Soil	Water	Soil

Field Parameters

CO3= as CaCO3						
HCO3- as CaCO3						
Chloride						
Sulfate						
pH	7.0	phunit	7.1	phunit	6.9	phunit
Total Organic Carbon	26,000	mg/kg	2	mg/l	19,000	mg/kg
Fluoride						
Nitrate-Nitrite-Nitrogen	5.0	mg/kg	<0.2	mg/l	5.2	mg/kg
Sulfide						
Cyanide, Total						
Hexavalent Chromium (Cr+6)						
Total Dissolved Solids						
Total Suspended Solids						
Ignitability (Degrees)						

Field Parameters

RFW Batch ID:	1100-125-100	1100-126-100
Customer ID:	BH88A030	BH88A031
ALR No.:	9612-28466-8-7	9612-28466-8-8
Matrix:	Soil	Soil

Field Parameters

CO3= as CaCO3				
HCO3- as CaCO3				
Chloride				
Sulfate				
pH	7.1	phunit	7.2	phunit
Total Organic Carbon	22,000	mg/kg	25,000	mg/kg
Fluoride				
Nitrate-Nitrite-Nitrogen	48	mg/kg	15	mg/kg
Sulfide				
Cyanide, Total				
Hexavalent Chromium (Cr+6)				
Total Dissolved Solids				
Total Suspended Solids				
Ignitability (Degrees)				

Accu-Labs Research, Inc.
35 W. 48th Avenue Wheat Ridge, Colorado 80033 (303) 423-2766

November 17, 1988

Mr. Norm Flynn
Weston Analytics
7720 Lorraine Ave.
Suite 105
Stockton, CA 95210

Dear Mr. Flynn,

Enclosed is the analytical report in the requested format as per Contract LL-0421 for ALR No. 9299-28412-2. This report covers the Inorganic portion only.

A floppy disk is also enclosed containing all the data on the hard copies.

If you have any questions, please feel free to call.

Sincerely,

Steven Callio
Soils and RCRA
Supervisor

for Mary Fabisiak
Water Laboratory
Supervisor

SC/MF/dh

11/17/88

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Field Parameters

	Sum 130 CS016		Sum 130 CS017	
RFW Batch ID:	1100-109-100		1100-110-100	
Customer ID:	BH88A021		BH88A022	
ALR No.:	9299-28412-2-1		9299-28412-2-2	
Matrix:	Soil		Soil	

Field Parameters

CO3= as CaCO3.....				
HCO3- as CaCO3.....				
Chloride.....				
Sulfate.....				
pH.....	6.5	phunit	6.9	phunit
Total Organic Carbon.....	22,000	mg/kg	22,000	mg/kg
Fluoride.....				
Nitrate-Nitrite-Nitrogen.....	1.9	mg/kg	4.6	mg/kg
Sulfide.....				
Cyanide, Total.....				
avalent Chromium (Cr+6).....				
Total Dissolved Solids.....				
Total Suspended Solids.....				
Ignitability (Degrees).....				

Accu-Labs Research, Inc.
5 W. 48th Avenue Wheat Ridge, Colorado 80033 (303) 423-2766

November 17, 1988

Mr. Norm Flynn
Weston Analytics
7720 Lorraine Ave.
Suite 105
Stockton, CA 95210

Dear Mr. Flynn,

Enclosed is the analytical report in the requested format as per Contract LL-0421 for ALR No. 9299-28388-9. This report covers the Inorganic portion only.

A floppy disk is also enclosed containing all the data on the hard copies.

If you have any questions, please feel free to call.

Sincerely,

Steven Callio
Soils and RCRA
Supervisor

for Mary Fabisiak
Water Laboratory
Supervisor

SC/MF/dh

'17/88

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Field Parameters

	SWMU C5015		SWMU C5013			
RFW Batch ID:	1100-100-100		1100-101-100		1100-102-100	
Customer ID:	BH88A011		BH88A012		BH88A013+MS+MSD	
ALR No.:	9299-28388-9-1		9299-28388-9-2		9299-28388-9-3	
Matrix:	Soil		Soil		Soil	

Field Parameters

CO3= as CaCO3.....						
HCO3- as CaCO3.....						
Chloride.....						
Sulfate.....						
pH.....	6.4	phunit	5.8	phunit	5.7	phunit
Total Organic Carbon.....	23,000	mg/kg	37,000	mg/kg	46,000	mg/kg
Fluoride.....						
Nitrate-Nitrite-Nitrogen.....	1.2	mg/kg	<1.1	mg/kg	<1.1	mg/kg
Sulfide.....						
Cyanide, Total.....						
Hexavalent Chromium (Cr+6).....						
Total Dissolved Solids.....						
Total Suspended Solids.....						
Ignitability (Degrees).....						

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 2

Field Parameters						
RFW Batch ID:	1100-103-100		1100-104-100		1100-105-100	
Customer ID:	BH88A014		BH88A015		BH88A016	
ALR No.:	9299-28388-9-4		9299-28388-9-5		9299-28388-9-6	
Matrix:	Soil		Water		Soil	
Field Parameters						
CO3= as CaCO3						
HCO3- as CaCO3						
Chloride						
Sulfate						
pH	6.6	phunit	NA	phunit	6.4	phunit
Total Organic Carbon	33,000	mg/kg	NA/NP	mg/kg	9600	mg/kg
Fluoride						
Nitrate-Nitrite-Nitrogen	<1.1	mg/kg	NA/NP	mg/kg	2.1	mg/kg
Sulfide						
Cyanide, Total						
Hexavalent Chromium (Cr+6)						
Total Dissolved Solids						
Total Suspended Solids						
Ignitability (Degrees)						

Field Parameters						
RFW Batch ID:	1100-106-100		1100-107-100		1100-108-100	
Customer ID:	BH88A017		BH88A018		BH88A019	
ALR No.:	9299-28388-9-7		9299-28388-9-8		9299-28388-9-9	
Matrix:	Soil		Soil		Soil	
Field Parameters						
CO3= as CaCO3						
HCO3- as CaCO3						
Chloride						
Sulfate						
pH	6.1	phunit	6.0	phunit	6.5	phunit
Total Organic Carbon	27,000	mg/kg	17,000	mg/kg	21,000	mg/kg
Fluoride						
Nitrate-Nitrite-Nitrogen	<1.1	mg/kg	<1.1	mg/kg	1.1	mg/kg
Sulfide						
Cyanide, Total						
Hexavalent Chromium (Cr+6)						
Total Dissolved Solids						
Total Suspended Solids						
Ignitability (Degrees)						

Note: NA/NP = Not Analyzed/Not Preserved.

Accu-Labs Research, Inc.
4036 W. 48th Avenue Wheat Ridge, Colorado 80033 (303) 423-2766

November 17, 1988

Mr. Norm Flynn
Weston Analytics
7720 Lorraine Ave.
Suite 105
Stockton, CA 95210

Dear Mr. Flynn,

Enclosed is the analytical report in the requested format as per Contract LL-0421 for ALR No. 9299-28380-8. This report covers the Inorganic portion only.

A floppy disk is also enclosed containing all the data on the hard copies.

If you have any questions, please feel free to call.

Sincerely,

Steven Callio
Soils and RCRA
Supervisor

for Mary Fabisiak
Water Laboratory
Supervisor

SC/MF/dh

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

Field Parameters						
		Summary CS005		Summary CS002		Summary CS004
RFW Batch ID:		1100-111-100		1100-112-100		1100-113-100
Customer ID:		BH88A002		BH88A003		BH88A004
ALR No.:		9299-28380-8-1		9299-28380-8-2		9299-28380-8-3
Matrix:		Soil		Soil		Soil
Field Parameters						
CO3= as CaCO3.....						
HCO3- as CaCO3.....						
Chloride.....						
Sulfate.....						
pH.....	5.4	phunit	6.4	phunit	5.4	phunit
Total Organic Carbon.....	33,000	mg/kg	36,000	mg/kg	56,000	mg/kg
Fluoride.....						
Nitrate-Nitrite-Nitrogen.....	2.4	mg/kg	<1.1	mg/kg	<1.1	mg/kg
Sulfide.....						
anide, Total.....						
xavalent Chromium (Cr+6).....						
Total Dissolved Solids.....						
Total Suspended Solids.....						
Ignitability (Degrees).....						

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS)

Field Parameters						
		CS008		CS009		CS010
RFW Batch ID:		1100-114-100		1100-115-100		1100-116-100
Customer ID:		BH88A005		BH88A006		BH88A007
ALR No.:		9299-28380-8-4		9299-28380-8-5		9299-28380-8-6
Matrix:		Soil		Soil		Soil
Field Parameters						
CO3= as CaCO3						
HCO3- as CaCO3						
Chloride						
Sulfate						
pH	6.2	phunit	6.3	phunit	6.1	phunit
Total Organic Carbon	17,000	mg/kg	21,000	mg/kg	21,000	mg/kg
Fluoride						
Nitrate-Nitrite-Nitrogen	2.3	mg/kg	2.2	mg/kg	2.0	mg/kg
Sulfide						
Cyanide, Total						
Hexavalent Chromium (Cr+6)						
Total Dissolved Solids						
Total Suspended Solids						
Ignitability (Degrees)						

Field Parameters				
		CS007		CS008
RFW Batch ID:		1100-117-100		1100-118-100
Customer ID:		BH88A008		BH88A009
ALR No.:		9299-28380-8-7		9299-28380-8-8
Matrix:		Soil		Soil
Field Parameters				
CO3= as CaCO3				
HCO3- as CaCO3				
Chloride				
Sulfate				
pH	6.2	phunit	6.2	phunit
Total Organic Carbon	14,000	mg/kg	18,000	mg/kg
Fluoride				
Nitrate-Nitrite-Nitrogen	2.1	mg/kg	1.6	mg/kg
Sulfide				
Cyanide, Total				
Hexavalent Chromium (Cr+6)				
Total Dissolved Solids				
Total Suspended Solids				
Ignitability (Degrees)				

Accu-Labs Research, Inc.
5 W. 48th Avenue Wheat Ridge, Colorado 80033 (303) 423-2766

RECEIVED
DEC 8 1988

December 5, 1988

JAN - 3 1989

Mr. Norm Flynn
Weston Analytics
7720 Lorraine Ave.
Suite 105
Stockton, CA 95210

Dear Mr. Flynn,

Enclosed is the analytical report in the requested format as per Contract LL-0421 for ALR No. 9612-28524-2. This report covers the Inorganic portion only.

A floppy disk is being sent under seperate cover which contains all the data on the hard copies.

If you have any questions, please feel free to call.

Sincerely,

Steven Callio
Soils and RCRA
Supervisor

Mary Fabisiak
Water Laboratory
Supervisor

SC/MF/dh

ACCU LABS RESEARCH, INC.
INORGANIC
DATA SUMMARY REPORT

RFW Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 2

Sample Information			
	swmu177 CS037	swmu 182 CS022	swmu 182 CS023
RFW Batch ID:	1100-140-100	1100-141-100	1100-142-100
Customer ID:	BH88A047	BH88A048	BH88A049
ALR No.:	9612-28492-4-4	9612-28524-2-1	9612-28524-2-2
Matrix:	Soil	Soil	Soil

Inorganics

CO3= as CaCO3.....						
HCO3- as CaCO3.....						
Chloride.....						
Sulfate.....						
pH.....	8.0	phunit	8.4	phunit	8.6	phunit
Total Organic Carbon.....	20,000	mg/kg	9600	mg/kg	790	mg/kg
Fluoride.....						
Nitrate-Nitrite-Nitrogen.....	<1.1	mg/kg	<1.1	mg/kg	<1.1	mg/kg
Sulfide.....						
Cyanide, Total.....						
Hexavalent Chromium (Cr+6).....						
Total Dissolved Solids.....						
Total Suspended Solids.....						
Ignitability (Degrees).....						

Accu-Labs Research, Inc.
5 W. 48th Avenue Wheat Ridge, Colorado 80033 (303) 423-2766

January 6, 1989

Ms. Peg Beatty
Weston Analytics
7720 Lorraine Ave.
Suite 105
Stockton, CA 95210

Dear Ms. Beatty,

Enclosed are the analytical reports in the requested format as per Contract LL-0421 for the following ALR Nos.:

9612-28492-4
9612-28467-10

These reports cover the Radiochemistry portion only.

A floppy disk is being sent under seperate cover which contains all the data on the hard copies.

If you have any questions, please feel free to call.

Sincerely,

Bud Summers
Radiochemistry
Supervisor

BS/dh

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

	[illegible]		[illegible]		[illegible]	
	[illegible]		[illegible]		[illegible]	
RFW Batch ID:	2000-129-1[illegible]		2000-1[illegible]-100		2000-1[illegible]-100	
Customer ID:	BH8BA044		BH8BA045		BH8BA046	
Laboratory ID:	9612-28492-4-1		9612-28492-4-2		9612-28492-4-3	
Matrix:	Soil		Soil		Soil	
Gross Alpha.....	38 ± 15	pci/g	45 ± 12	pci/g	23 ± 12	pci/g
Gross Beta.....	32 ± 7	pci/g	43 ± 7	pci/g	35 ± 7	pci/g
Uranium 233, 234.....	1.0 ± 0.2	pci/g	1.3 ± 0.3	pci/g	0.80 ± 0.20	pci/g
Uranium 235.....						
Uranium 238.....	1.1 ± 0.3	pci/g	1.1 ± 0.2	pci/g	0.70 ± 0.19	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	[illegible] ± [illegible]	pci/g	-0.01 ± [illegible]	pci/g	-0.02 ± [illegible]	pci/g
Americium 241.....	-0.03 ± [illegible]	pci/g	[illegible] ± [illegible]	pci/g	[illegible] ± [illegible]	pci/g
Cesium 137.....						
Tritium.....	0.24 ± 0.15	pci/ml	0.18 ± 0.14	pci/ml	0.04 ± 0.[illegible]	pci/ml
% Moisture.....	13.6		10.[illegible]		[illegible]	

	[illegible]	
	[illegible]	
RFW Batch ID:	2000-132-100	
Customer ID:	BH8BA047	
Laboratory ID:	9612-28492-4-4	
Matrix:	Soil	
Gross Alpha.....	39 ± 15	pci/g
Gross Beta.....	37 ± 7	pci/g
Uranium 233, 234.....	1.3 ± [illegible]	pci/g
Uranium 235.....		
Uranium 238.....	1.[illegible] ± 0.3	pci/g
Strontium 89, 90.....		
Plutonium 239, 240.....	0.03 ± 0.12	pci/g
Americium 241.....	-0.02 ± 0.10	pci/g
Cesium 137.....		
Tritium.....	0.25 ± 0.15	pci/ml
% Moisture.....	10.8	

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS) Page: 1

	SWMU 176	SWMU 176	SWMU 176
RFW Batch ID:	2000-133-100	2000-134-100	2000-135-100
Customer ID:	BHBBA033	BHBBA034	BHBBA035
Laboratory ID:	9612-28467-10-1	9612-28467-10-2	9612-28467-10-3
Matrix:	Soil	Soil	Soil

	CS031		CS028		CS029	
Gross Alpha.....	29 ± 13	pci/g	22 ± 12	pci/g	26 ± 12	pci/g
Gross Beta.....	32 ± 6	pci/g	30 ± 6	pci/g	24 ± 6	pci/g
Uranium 233, 234.....	0.74 ± 0.16	pci/g	0.92 ± 0.18	pci/g	0.46 ± 0.14	pci/g
Uranium 235.....						
Uranium 238.....	0.53 ± 0.13	pci/g	1.0 ± 0.2	pci/g	0.57 ± 0.14	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.01 ± 0.12	pci/g	0.34 ± 0.16	pci/g	0.32 ± 0.17	pci/g
Americium 241.....	0.07 ± 0.12	pci/g	0.15 ± 0.08	pci/g	0.20 ± 0.07	pci/g
Cesium 137.....						
Tritium.....	0.09 ± 0.16	pci/ml	0.08 ± 0.16	pci/ml	0.04 ± 0.16	pci/ml
% Moisture.....	3.4		3.1		6.0	

	SWMU 176	SWMU 175	SWMU 175
RFW Batch ID:	2000-136-100	2000-137-100	2000-138-100
Customer ID:	BHBBA036	BHBBA037	BHBBA038
Laboratory ID:	9612-28467-10-4	9612-28467-10-5	9612-28467-10-6
Matrix:	Soil	Soil	Soil

	CS033		CS018		CS019	
Gross Alpha.....	35 ± 14	pci/g	40 ± 15	pci/g	58 ± 17	pci/g
Gross Beta.....	29 ± 6	pci/g	41 ± 7	pci/g	45 ± 7	pci/g
Uranium 233, 234.....	0.97 ± 0.22	pci/g	0.68 ± 0.11	pci/g	0.74 ± 0.11	pci/g
Uranium 235.....						
Uranium 238.....	0.93 ± 0.21	pci/g	0.71 ± 0.10	pci/g	0.87 ± 0.11	pci/g
Strontium 89, 90.....						
Plutonium 239, 240.....	0.44 ± 0.15	pci/g	0.02 ± 0.13	pci/g	0.04 ± 0.12	pci/g
Americium 241.....	0.21 ± 0.08	pci/g	0.01 ± 0.04	pci/g	0.01 ± 0.04	pci/g
Cesium 137.....						
Tritium.....	0.20 ± 0.16	pci/ml	0.30 ± 0.16	pci/ml	0.22 ± 0.16	pci/ml
% Moisture.....	0.8		0.5		3.4	

ACCU LABS RESEARCH, INC.
RADIOCHEMISTRY
DATA SUMMARY REPORT

Batch Number: Client: ROCKWELL (ROCKY FLATS)

Swmu 175

RFW Batch ID:	2000-139-100	2000-140-100	2000-141-100
Customer ID:	BH88A039	BH88A040 + MS, MSD	BH88A041
Laboratory ID:	9612-28467-10-7	9612-28467-10-8	9612-28467-10-9
Matrix:	Soil	Soil	Water

CS021

Gross Alpha.....	50 ± 16	pci/g	37 ± 14	pci/g	0 ± 1	pci/l
Gross Beta.....	46 ± 7	pci/g	28 ± 7	pci/g	9 ± 2	pci/l
Uranium 233, 234.....	0.70 ± 0.17	pci/g	1.0 ± 0.2	pci/g	-0.1 ± 0.1	pci/l
Uranium 235.....						
Uranium 238.....	0.77 ± 0.17	pci/g	0.95 ± 0.22	pci/g	0.0 ± 0.1	pci/l
Strontium 89, 90.....						
Plutonium 239, 240.....	0.42 ± 0.19	pci/g	0.18 ± 0.20	pci/g	0.0 ± 0.1	pci/l
Americium 241.....	0.15 ± 0.08	pci/g	0.08 ± 0.07	pci/g	0.0 ± 0.1	pci/l
Cesium 137.....						
Tritium.....	0.12 ± 0.16	pci/ml	0.13 ± 0.16	pci/ml	[illegible]	pci/l
% Moisture.....	5.0		5.0			

never mind!

Swmu 175

RFW Batch ID:	2000-142-100
Customer ID:	BH88A042
Laboratory ID:	9612-28467-10-10
Matrix:	Soil

CS020

Gross Alpha.....	35 ± 14	pci/g
Gross Beta.....	39 ± 7	pci/g
Uranium 233, 234.....	0.75 ± 0.18	pci/g
Uranium 235.....		
Uranium 238.....	0.30 ± 0.18	pci/g
Strontium 89, 90.....		
Plutonium 239, 240.....	0.05 ± 0.14	pci/g
Americium 241.....	0.06 ± 0.06	pci/g
Cesium 137.....		
Tritium.....	0.04 ± 0.15	pci/ml
% Moisture.....	5.0	

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

Weston-Gulf Coast
Rockwell. 142966-142976
VOA. BNA GC/MS

CASE NARRATIVE

GENERAL

1. Weston-Gulf Coast uses the following GC/MS systems which can be identified on all raw data by either the Instrument ID or the quantitation file ID:

ID #	Instrument	Quant ID File
GCL#1	Hewlett Packard 5970 MSD	ID_IEP
GCL#2	Hewlett Packard 5996	ID_V2H
GCL#3	Hewlett Packard 5996	ID_CAP
GCL#4	Hewlett Packard 5970 MSD	ID_MGK

2. The Internal Standard and Surrogate peaks are labeled by name.

3. The quantitation of all detected HSL compounds was conducted using the response factors calculated from the continuing calibration standard.

VOA:

182

1. All surrogate recoveries in 176 s were within QC limits.
175

2. All of the samples were analy 170 .s or waters and therefore normal detection li
174

3. Matrix spike analyses were cond 129 another sample that was analyzed with this set.

BNA:

1. All surrogate recoveries in the semi-volatile analyses were within QC limits except for two surrogates on Method Blank 142975GB that were slightly low.

2. All of the samples were extracted and analyzed as low level soils or waters and therefore normal detection limits apply.

3. Matrix spike analyses were conducted on sample 142974. 142975, and 142976.

EBASCO SERVICES INCORPORATED

BY _____ DATE _____ SHEET ____ OF ____

CHKD. BY _____ DATE _____ OFS NO. _____ DEPT. NO. _____

CLIENT Table 3-2 Analytical results of grab samples collected from the 750 and 904

PROJECT Pondcrete Storage areas

SUBJECT ENVIRONMENTAL MGMT. MONITORING RESULTS

which is which → 750 Pad Culvert and Puddle Samples

Sample Date	Nitrate mg/l	Gross Alpha pCi/g	Gross Beta pCi/g
9/07/88	1.55	20±22	21±27
9/12/88	5.38 ✓	7±18	42±28
9/13/88	5.49 ✓	7±11	10±24
9/13/88	4.82 ✓	13±16	21±25
9/14/88	3.75	5±16	14±26
9/21/88	1.56	20±15	34±25
9/28/88	1.51	55±28	17±32
10/05/88	1.52	19±25	24±33
10/06/88	9.51 ✓	16±13	25±25
10/12/88	1.93	5±8	8±14
10/19/88	1.18	11±13	25±14
10/26/88	1.23	14±12	16±16
11/02/88	1.28	14±13	14±18
11/09/88	2.68	5±12	2±14
11/10/88	4.53 ✓	18±19	11±22
11/15/88	1.06	9±12	3±17
11/16/88	0.99	11±24	5±21
11/30/88	1.09	13±14	-2±12
culvert → at least from here ✓ 12/07/88	1.13	28 ± 14	14 ± 18
12/14/88	1.26	8 ± 9	15 ± 13
12/21/88	2.10	11 ± 15	3 ± 18
01/04/89	1.54	2 ± 9	5 ± 13
01/11/89	1.40	6 ± 10	9 ± 14

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✓ Value exceeds Plant Control Guides for analyte

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PROJECT Analytical results of grab samples collected from the

SUBJECT 750 and 904 ponderete storage areas (continued)

750 PAD CULVERT

Sample Date	Nitrate mg/l	Gross Alpha pCi/l	Gross Beta pCi/l
01/18/89	1.47	23 ± 13	9 ± 13
01/25/89	1.39	49 ± 20	17 ± 14
02/08/89		source frozen, no sample	
2/15/89	1.66	9 ± 12	19 ± 14
2/22/89	5.90	8 ± 10	16 ± 15
3/01/89	3.57	13 ± 12	41 ± 17
3/08/89	5.41	-2 ± 8	1 ± 16
3/15/89	2.65	5 ± 10	16 ± 16
3/22/89	2.79	4 ± 10	5 ± 15
03/29/89	2.24	17 ± 14	11 ± 16
04/05/89	2.05	7 ± 10	18 ± 16
04/12/89	2.44	5 ± 9	2 ± 16
04/19/89	2.39	-2 ± 12	2 ± 14
04/26/89	2.17	5 ± 12	13 ± 22
05/03/89	1.29	9 ± 12	11 ± 23
05/10/89	2.37	6 ± 11	27 ± 22
05/17/89	2.48	12 ± 12	7 ± 15
05/24/89	2.38	6 ± 9	32 ± 20
05/31/89	2.25	7 ± 11	26 ± 22
06/07/89	1.23	16 ± 12	-2 ± 16
06/15/89	2.75	9 ± 14	19 ± 21
06/21/89	2.44	4 ± 11	-6 ± 14
06/28/89	1.90	9 ± 12	-6 ± 18
07/05/89	1.60	10 ± 13	14 ± 19
07/12/89	1.53	11 ± 13	25 ± 18
07/19/89	1.46	11 ± 10	21 ± 19
07/26/89	1.35	8 ± 12	6 ± 16
08/02/89	1.85	26 ± 15	15 ± 17
08/09/89	1.75	6 ± 10	1 ± 15
08/16/89	1.87	11 ± 13	14 ± 16
08/23/89	2.29	23 ± 14	19 ± 21
08/30/89	1.41	13 ± 14	-8 ± 17
09/06/89	1.28	5 ± 12	11 ± 19
09/13/89	3.06	7 ± 10	10 ± 20
09/20/89	2.25	14 ± 14	2 ± 17
09/27/89	1.63	3 ± 10	8 ± 18
10/04/89	1.64	7 ± 11	1 ± 17
10-11-89	1.54	11±11	11±18
10-18-89	1.59	-2±8	15±19
11-01-89	2.18	0±5	24±20
11-07-89	1.69	8±11	27±20

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BY _____ DATE _____ SHEET _____ OF _____

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PROJECT _____

SUBJECT _____

750 PAD CULVERT

Sample Date	Nitrate mg/l	Gross Alpha pCi/l	Gross Beta pCi/l
11/15/89	1.35	11 ± 14	10 ± 18
11/22/89	1.04	7 ± 9	6 ± 17
11/29/89	2.25	10 ± 13	17 ± 14
12/06/89	1.03	6 ± 10	12 ± 19
02/14/90	<0.02	11±15	33±22
02/21/90	4.12	-2±8	12±19
02/28/90	3.72	20±16	6±17
03/14/90	3.65	13±21	35±33
3/21/89	6.13	2 ± 7	5 ± 14

750 PAD ~~PUDDLE~~ RUNOFF

Sample Date	Nitrate mg/l	Gross Alpha pCi/l	Gross Beta pCi/l
12/08/88	3.97	27 ± 13	45 ± 16
01/06/89	2.83	5 ± 8	15 ± 14
01/26/89	4.69	17 ± 11	35 ± 16
2/24/89	87.4	40 ± 18	95 ± 22
3/08/89	39.2	2 ± 10	38 ± 18
04/11/89	2.88	-2 ± 6	1 ± 14
04/11/89	2.76	11 ± 10	14 ± 16
05/01/89	3.47	7 ± 11	25 ± 22
05/09/89	3.54	19 ± 15	49 ± 22
05/14/89	2.63	28 ± 17	3 ± 8
05/16/89	4.08	6 ± 11	13 ± 18
05/26/89	2.54	24 ± 15	11 ± 15
05/30/89	3.81	14 ± 13	31 ± 20
05/31/89	1.79	-1 ± 8	11 ± 18
06/05/89	28.7	15 ± 15	39 ± 21
06/22/89	2.12	24 ± 16	37? 33 ± 16
07/12/89	6.34	2 ± 10	19 ± 18
07/31/89	3.84	4 ± 8	27 ± 16
08/07/89	3.76	6 ± 10	13 ± 15
08/08/89	3.77	39 ± 16	26 ± 17
09/08/89	5.32	4 ± 11	49 ± 23
09/11/89	8.25	22 ± 19	11 ± 19
09/12/89	3.73	-5 ± 7	5 ± 18
09/13/89	0.05	6 ± 10	33 ± 21

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EBASCO SERVICES INCORPORATED

BY _____ DATE _____ SHEET _____ OF _____

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CLIENT _____

PROJECT _____

SUBJECT _____

750 PAD ~~[illegible]~~ RUNOFF

Sample Date	Nitrate mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Cyanide mg/l	Cadmium ug/l
09/21/89	4.92	1 ± 7	14 ± 18	<0.0025	5.6
10/16/89	4.74	2 ± 9	11 ± 18	0.012	4.6
10/17/89	5.28	5 ± 11	14 ± 17	0.018	3.8
11/1/89	4.60	4 ± 9	18 ± 20	<2.5	2.2
11/29/89	4.75	6 ± 9	20 ± 13	<0.003	4.0
12/07/89	7.50	7 ± 11	21 ± 19	<0.003	***

Sample Date	NITRATE MG/l	GROSS ALPHA pCi/l	GROSS BETA pCi/l	CYANIDE mg/l	CADMIUM mg/l
02/16/90	1.18	-13.±49	$(1.1\pm0.1)\times10^3$	<0.003	0.1632

1100 ± 100

904 PAD ~~[illegible]~~ RUNOFF

Sample Date	Nitrate mg/l	Gross Alpha pCi/g	Gross Beta pCi/g
9/12/88	14.6	10±19	60±33
9/14/88	72.6	47±20	110±40
9/15/88	--	16±12	51±30
9/15/88	--	40±18	50±27
10/06/88	44.3	10±15	77±30
11/10/88	18.8	14±13	51±27
11/15/88	7.61	27±17	16±19
12/08/88	2.77	17 ± 10	41 ± 15
12/16/88	1.20	10 ± 11	36 ± 21
01/06/89	2.25	-1 ± 7	21 ± 14

Sample Date	Nitrate mg/l	Gross Alpha pCi/l ?	Gross Beta pCi/l ?
pCi/g? report 01/26/89	16.5	13 ± 10	39 ± 16
2/24/89	27.9	16 ± 14	31 ± 17
3/08/89	46.4	2 ± 10	49 ± 19
3/21/89	16.7	53 ± 18	63 ± 21

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04/11/89	9.6	5 ± 9	22 ± 16
04/11/89	10.5	11 ± 11	27 ± 17
05/01/89	5.02	5 ± 12	44 ± 25

SUBJECT 904 PAD RUNOFF

Sample Date	Nitrate mg/l	Gross Alpha pCi/l	Gross Beta pCi/l
05/09/89	6.89	21 ± 17	69 ± 23
05/14/89	3.89	23 ± 15	12 ± 13
05/16/89	2.22	11 ± 12	8 ± 17
05/26/89	2.48	7 ± 10	21 ± 16
05/30/89	6.41	16 ± 14	43 ± 22
05/31/89	1.93	13 ± 13	36 ± 22
06/05/89	32.1	15 ± 14	57 ± 24
06/22/89	24.7	20 ± 15	100±30
07/01/89	7.68	18 ± 16	40 ± 21
08/01/89	26.1	11 ± 11	43 ± 18
08/07/89	13.0	27 ± 13	49 ± 19
08/08/89	9.74	20 ± 12	20 ± 17
~~09/21/89~~	~~25.1~~	~~14±13~~	~~55±22~~

Sample Date	Nitrate mg/l	Gross Alpha pCi/l	Gross Beta pCi/l	Cyanide mg/l	Cadmium ug/l
9/21/89*	25.1	14 ± 13	55 ± 22	<0.0025	9.2
10/16/89	5.80	10 ± 11	23 ± 19	<0.005	4.6
10/17/89	7.73	0 ± 9	27 ± 19	0.029	9.6
11/1/89	7.90	7 ± 10	9 ± 17	<2.5	6.7
11/29/89**	13.6	5 ± 9	26 ± 13	<0.004	10.2
12/07/89**	10.4	9 ± 10	25 ± 19	<0.003	***
09/08/89	6.83	41 ± 19	72 ± 25		
09/11/89	15.4	4 ± 11	44 ± 21		
09/12/89	8.84	4 ± 11	16 ± 20		
09/13/89	23.4	3 ± 9	53 ± 23		

TABLE

904 PAD RUNOFF

Sample Date	NITRATE MG/l	GROSS ALPHA pCi/l	GROSS BETA pCi/l	CYANIDE mg/l	CADMIUM mg/l
02/16/90	4.02	84±8	120±10 ~~(1.2±0.1)x10²~~	<0.003	0.0142

* previously reported but without cyanide and cadmium results
** verbal data
*** data to be reported in next months letter

TABLE 3

SUMMARY OF SOIL CHEMICAL DATA AT AND NEAR 904 PONDCRETE STORAGE AREA

SAMPLE DATE	SAMPLE DESIGNATION 1)	Am-241 (pCi/gm)	Pu-239 (pCi/gm)	Pu (Total) (pCi/gm)	U (Total)	U-234 (pCi/gm)	U-238 (pCi/gm)	NO3-N (ppm)
April 7, 1987	87-903NW	-- 2)	0.03	--	--	--	--	--
	87-903NE	--	1.8	--	--	--	--	--
	87-903SW	--	0.12	--	--	--	--	--
	87-903SE	--	4.2	--	--	--	--	--
Aug./Sept. 1987	W-903-1	--	9.15+/-0.88	--	--	--	--	--
	W-903-1	--	8.09+/-0.66	--	--	--	--	--
	W-903-2	--	Data Not Valid	--	--	--	--	--
	W-903-2	--	18.82+/-1.75	--	--	--	--	--
	W-903-3	--	13.95+/-1.22	--	--	--	--	--
	W-903-3	--	16.93+/-1.51	--	--	--	--	--
	W-903-4	--	67.16+/-8.08	--	--	--	--	--
	W-903-4	--	66.62+/-5.38	--	--	--	--	--
May 26, 1988	1	--	0.24+/-0.0028	--	--	0.95+/-0.10	0.98+/-0.10	14
	2	--	2.28+/-0.22	--	--	1.12+/-0.12	1.08+/-0.12	850
	3	--	--	--	--	--	--	7
	4	--	--	--	--	--	--	14
	5	--	0.23+/0.022	--	--	0.72+/-0.08	0.67+/-0.07	8
	6	--	0.26+/-0.026	--	--	1.11+/-0.18	1.01+/-0.11	140
October 24, 1988	1	0.14+/-0.01 3)	--	3.7+/-0.2	2.3	--	--	--
	2	1.49+/-0.08	--	2.8+/-0.2	1.9	--	--	--
	3	23.9+/-1.03	--	0.3+/-0.1	2.4	--	--	--
	4	3.63+/-0.15	--	0.2+/-0.1	2.7	--	--	--
	5	0.23+/-0.01	--	16+/-1	3.7	--	--	--
	6	0.35+/-0.02	--	34+/-1	3.1	--	--	--
	7	--	--	4.0+/-0.2	3.4	--	--	--
	8	--	--	3.3+/-0.1	4.0	--	--	--
	Reagent Blank	0.23+/-0.03	--	--	--	--	--	--

1) Estimated Sample Locations Shown on Figure

2) -- No Analyses For Indicated Variable

3) Counting Error (+/-) at 95% Confience Interval Shown When Reported By Laboratory

1990 Groundwater Quality Data
Present Landfill- Surficial Materials

Well Id	Analyte Group	Analyte	Background Exceedance Value	Sample Date	Detection Limit	Concentration	Unit	Lab Qualifier
0786	Volatile Organics	METHYLENE CHLORIDE	5	11/06/90	5	5	UG/L	U
		STYRENE	5	05/01/90	5	5	UG/L	U
		STYRENE	5	11/06/90	5	5	UG/L	U
		TETRACHLOROETHENE	5	05/01/90	5	5	UG/L	U
		TETRACHLOROETHENE	5	11/06/90	5	5	UG/L	U
		TOLUENE	5	11/06/90	5	5	UG/L	U
		TOTAL XYLENES	5	05/01/90	5	5	UG/L	U
		TOTAL XYLENES	5	11/06/90	5	5	UG/L	U
		TRICHLOROETHENE	5	05/01/90	5	5	UG/L	U
		TRICHLOROETHENE	5	11/06/90	5	5	UG/L	U
		VINYL ACETATE	10	05/01/90	10	10	UG/L	U
		VINYL ACETATE	10	11/06/90	10	10	UG/L	U
		VINYL CHLORIDE	10	11/06/90	10	10	UG/L	U
		cis-1,3-DICHLOROPROPENE	5	11/06/90	5	5	UG/L	U
		trans-1,3-DICHLOROPROPENE	5	05/01/90	5	5	UG/L	U
		trans-1,3-DICHLOROPROPENE	5	11/06/90	5	5	UG/L	U
1086	Inorganics	CARBONATE	5	01/26/90		5	MG/L	U
		CARBONATE	5	04/27/90	10	10	MG/L	U
		CARBONATE, HYDROGEN	249.35	01/26/90		41	MG/L	
		CARBONATE, HYDROGEN	249.35	04/27/90	10	21	MG/L	
		CARBONATE, HYDROGEN	249.35	09/24/90	1.0	22	MG/L	
		CHLORIDE (North)	10.67	01/26/90		5	MG/L	
		CHLORIDE (North)	10.67	04/27/90	5	5	MG/L	U
		CHLORIDE (North)	10.67	09/24/90		5.4	MG/L	
		CYANIDE	0.01	01/26/90	10	10.0	UG/L	U
		CYANIDE	0.01	04/27/90	20	20	UG/L	U
		FLUORIDE	0.1	01/26/90		0.5	MG/L	U
		FLUORIDE	0.1	04/27/90		0.39	MG/L	
		FLUORIDE	0.1	09/24/90		0.2	MG/L	
		NITRATE/NITRITE	3.43	01/26/90		4.3	MG/L	
		NITRATE/NITRITE	3.43	04/27/90		1.5	MG/L	
		NITRATE/NITRITE	3.43	09/24/90		3.6	MG/L	
		NITRATE/NITRITE	3.43	11/15/90		3.3	MG/L	
		NITRATE/NITRITE	3.43	11/15/90		4.2	MG/L	
		NITRATE/NITRITE	3.43	11/15/90		0.02	MG/L	U
		NITRATE/NITRITE	3.43	11/15/90		0.02	MG/L	U
		NITRATE/NITRITE	3.43	11/16/90		4.1	MG/L	
		NITRITE		04/27/90		0.02	MG/L	U
		NITRITE		09/24/90		0.02	MG/L	U
		PH	8.22	01/26/90		6.6	PHUNIT	
		PHOSPHATE		04/27/90		0.091	MG/L	
		PHOSPHATE		09/24/90		0.03	MG/L	
		SILICA, DISSOLVED		09/24/90		11	MG/L	
		SULFATE	67.08	01/26/90		16	MG/L	
		SULFATE	67.08	04/27/90	10	32.4	MG/L	
		SULFATE	67.08	09/24/90	2.0	28	MG/L	

1990 Groundwater Quality Data
Present Landfill- Surficial Materials

Well Id	Analyte Group	Analyte	Background Exceedance Value	Sample Date	Detection Limit	Concentration	Unit	Lab Qualifier
1086	Inorganics	TOTAL DISSOLVED SOLIDS	388.76	01/26/90		130	MG/L	
		TOTAL DISSOLVED SOLIDS	388.76	04/27/90	10	90	MG/L	
		TOTAL DISSOLVED SOLIDS	388.76	09/24/90	10.0	130	MG/L	
		TOTAL SUSPENDED SOLIDS	5	04/27/90	5	320	MG/L	
		TOTAL SUSPENDED SOLIDS	4.0	09/24/90	4.0	34	MG/L	
1086	Total Metals	CYANIDE	0.01	09/24/90	10	1.50	UG/L	U
1086	Dissolved Metals	ALUMINUM	0.327	01/26/90	200	84.0	UG/L	U
		ALUMINUM	0.327	04/27/90	22.1	22.1	UG/L	U
		ALUMINUM	0.327	09/24/90	200	10.00	UG/L	U
		ANTIMONY	0.5	01/26/90	60	35.7	UG/L	U
		ANTIMONY	0.5	04/27/90	17.6	17.6	UG/L	U
		ANTIMONY	0.5	09/24/90	60	10.10	UG/L	B
		ARSENIC	0.01	01/26/90	10	2.0	UG/L	U
		ARSENIC	0.01	04/27/90	2.1	1.6	UG/L	U
		ARSENIC	0.01	04/27/90	2.1	2.1	UG/L	U
		ARSENIC	0.01	09/24/90	10	1.00	UG/L	U
		BARIUM	0.2	01/26/90	200	48.2	UG/L	
		BARIUM	0.2	04/27/90	5.4	27.1	UG/L	
		BARIUM	0.2	09/24/90	200	38.70	UG/L	B
		BERYLLIUM	0.005	01/26/90	5	1.0	UG/L	U
		BERYLLIUM	0.005	04/27/90	2.6	2.6	UG/L	U
		BERYLLIUM	0.005	09/24/90	5	1.00	UG/L	U
		CADMIUM	0.011	01/26/90	5	3.0	UG/L	U
		CADMIUM	0.011	04/27/90	3.6	3.6	UG/L	U
		CADMIUM	0.011	09/24/90	5	2.00	UG/L	U
		CALCIUM	62.59	01/26/90	5000	15500	UG/L	
		CALCIUM	62.59	04/27/90	28.8	11400	UG/L	
		CALCIUM	62.59	09/24/90	5000	13900.00	UG/L	
		CESIUM	2.5	01/26/90	1000	2500	UG/L	U
		CESIUM	2.5	04/27/90	1000	1000	UG/L	U
		CESIUM	2.5	09/24/90	1000	92.00	UG/L	U
		CHROMIUM	0.02	01/26/90	10	2.0	UG/L	U
		CHROMIUM	0.02	04/27/90	4.9	4.9	UG/L	U
		CHROMIUM	0.02	09/24/90	10	5.00	UG/L	U
		COBALT	0.05	01/26/90	50	4.0	UG/L	U
		COBALT	0.05	04/27/90	4.4	4.4	UG/L	U
		COBALT	0.05	09/24/90	50	3.00	UG/L	U
		COPPER	0.048	01/26/90	25	5.7	UG/L	
		COPPER	0.048	04/27/90	2.5	13.1	UG/L	
		COPPER	0.048	04/27/90	2.5	13.1	UG/L	U
		COPPER	0.048	09/24/90	25	2.00	UG/L	U
		IRON	0.944	01/26/90	100	44.0	UG/L	U
		IRON	0.944	04/27/90	16.7	56.3	UG/L	
		IRON	0.944	04/27/90	16.7	56.3	UG/L	U
		IRON	0.944	09/24/90	100	14.20	UG/L	B
		LEAD	0.040	01/26/90	5	3.0	UG/L	U

1990 Groundwater Quality Data
Present Landfill- Surficial Materials

Well Id	Analyte Group	Analyte	Background Exceedance Value	Sample Date	Detection Limit	Concentration	Unit	Lab Qualifier
1086	Dissolved Metals	LEAD	0.040	04/27/90	1.6	1.6	UG/L	U
		LEAD	0.040	09/24/90	3	1.00	UG/L	U
		LITHIUM	1.79	01/26/90	100	100	UG/L	U
		LITHIUM	1.79	04/27/90	49.9	2.5	UG/L	
		LITHIUM	1.79	04/27/90	49.9	49.9	UG/L	U
		LITHIUM	1.79	09/24/90	100	1.00	UG/L	U
		MAGNESIUM	16.09	01/26/90	5000	3330	UG/L	
		MAGNESIUM	16.09	04/27/90	19.4	2420	UG/L	
		MAGNESIUM	16.09	09/24/90	5000	2990.00	UG/L	B
		MANGANESE	0.213	01/26/90	15	12.0	UG/L	
		MANGANESE	0.213	04/27/90	1	4.8	UG/L	
		MANGANESE	0.213	09/24/90	15	15.00	UG/L	
		MERCURY	0.0008	01/26/90		0.2	UG/L	U
		MERCURY	0.0008	04/27/90		0.2	UG/L	U
		MERCURY	0.0008	09/24/90	0	0.20	UG/L	U
		MOLYBDENUM	0.5	01/26/90	200	100	UG/L	U
		MOLYBDENUM	0.5	04/27/90	17.4	17.4	UG/L	U
		MOLYBDENUM	0.5	09/24/90	200	3.70	UG/L	B
		NICKEL	0.043	01/26/90	40	7.0	UG/L	U
		NICKEL	0.043	04/27/90	5.5	5.5	UG/L	U
		NICKEL	0.043	09/24/90	40	4.50	UG/L	B
		POTASSIUM	11.3	01/26/90	5000	1240	UG/L	U
		POTASSIUM	11.3	04/27/90	49.9	231	UG/L	
		POTASSIUM	11.3	09/24/90	5000	370.00	UG/L	B
		SELENIUM	0.221	01/26/90	5	2.0	UG/L	U
		SELENIUM	0.221	04/27/90	1.5	1.2	UG/L	U
		SELENIUM	0.221	04/27/90	1.5	1.5	UG/L	U
		SELENIUM	0.221	09/24/90	5	1.00	UG/L	U
		SILICON	100	04/27/90	100	7070	UG/L	
		SILVER	0.004	01/26/90	10	3.5	UG/L	U
		SILVER	0.004	04/27/90	4.4	4.4	UG/L	U
		SILVER	0.004	09/24/90	10	3.00	UG/L	U
		SODIUM	46.74	01/26/90	5000	10700	UG/L	
		SODIUM	46.74	04/27/90	30.4	8460	UG/L	
		SODIUM	46.74	09/24/90	5000	9410.00	UG/L	
		STRONTIUM	7.12	01/26/90	200	100	UG/L	U
		STRONTIUM	7.12	04/27/90		64.7	UG/L	
		STRONTIUM	7.12	09/24/90	200	76.90	UG/L	B
		THALLIUM	1	01/26/90	10	4.0	UG/L	U
		THALLIUM	1	04/27/90	1.1	1.1	UG/L	U
		THALLIUM	1	09/24/90	10	2.00	UG/L	U
		TIN	1	01/26/90	200	100	UG/L	U
		TIN	1	04/27/90	23.2	23.2	UG/L	U
		TIN	1	09/24/90	200	26.30	UG/L	B
		VANADIUM	0.05	01/26/90	50	9.0	UG/L	U
		VANADIUM	0.05	04/27/90	2.3	2.3	UG/L	U

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Well Id	Analyte Group	Analyte	Background Exceedance Value	Sample Date	Detection Limit	Concentration	Unit	Lab Qualifier
1086	Dissolved Metals	VANADIUM	0.05	09/24/90	50	2.00	UG/L	U
		ZINC	0.141	01/26/90	20	77.1	UG/L	
		ZINC	0.141	04/27/90	9	9	UG/L	U
		ZINC	0.141	04/27/90	9	9.0	UG/L	U
		ZINC	0.141	09/24/90	20	11.10	UG/L	B
1086	Diss. Radionuclides	AMERICIUM-241	0.0167	01/26/90		0.013	PCI/L	
		CESIUM-137	0.506	01/26/90		0.28	PCI/L	
		GROSS ALPHA - PARTICULATE	55.07	01/26/90		1.2	PCI/L	
		GROSS BETA - PARTICULATE	59.63	01/26/90	2.8	-0.2	PCI/L	
		PLUTONIUM-239,240	0.015	01/26/90		0.011	PCI/L	
		STRONTIUM-90		01/26/90		0.13	PCI/L	
		TRITIUM	359.07	01/26/90	240	120	PCI/L	
		URANIUM-233,234	0.1+/-.1	01/26/90		0.06	PCI/L	
		URANIUM-235	2.09	01/26/90		0.06	PCI/L	
		URANIUM-238	25.57	01/26/90		0.06	PCI/L	
1086	Volatile Organics	1,1,1-TRICHLOROETHANE	5	04/27/90	5	5	UG/L	U
		1,1,1-TRICHLOROETHANE	5	09/24/90	5	5	UG/L	U
		1,1,1-TRICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1,1-TRICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1,1-TRICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1,1-TRICHLOROETHANE	5	11/16/90	5	5	UG/L	U
		1,1,2,2-TETRACHLOROETHANE	5	04/27/90	5	5	UG/L	U
		1,1,2,2-TETRACHLOROETHANE	5	09/24/90	5	5	UG/L	U
		1,1,2,2-TETRACHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1,2,2-TETRACHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1,2,2-TETRACHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1,2,2-TETRACHLOROETHANE	5	11/16/90	5	5	UG/L	U
		1,1,2-TRICHLOROETHANE	5	04/27/90	5	5	UG/L	U
		1,1,2-TRICHLOROETHANE	5	09/24/90	5	5	UG/L	U
		1,1,2-TRICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1,2-TRICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1,2-TRICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1,2-TRICHLOROETHANE	5	11/16/90	5	5	UG/L	U
		1,1-DICHLOROETHANE	5	04/27/90	5	5	UG/L	U
		1,1-DICHLOROETHANE	5	09/24/90	5	5	UG/L	U
		1,1-DICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1-DICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1-DICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,1-DICHLOROETHANE	5	11/16/90	5	5	UG/L	U
		1,1-DICHLOROETHENE	5	04/27/90	5	5	UG/L	U
		1,1-DICHLOROETHENE	5	09/24/90	5	5	UG/L	U
		1,1-DICHLOROETHENE	5	11/15/90	5	5	UG/L	U
		1,1-DICHLOROETHENE	5	11/15/90	5	5	UG/L	U
		1,1-DICHLOROETHENE	5	11/15/90	5	5	UG/L	U
		1,1-DICHLOROETHENE	5	11/16/90	5	5	UG/L	U
		1,2-DICHLOROETHANE	5	04/27/90	5	5	UG/L	U

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Well Id	Analyte Group	Analyte	Background Exceedance Value	Sample Date	Detection Limit	Concentration	Unit	Lab Qualifier
1086	Volatile Organics	1,2-DICHLOROETHANE	5	09/24/90	5	5	UG/L	U
		1,2-DICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,2-DICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,2-DICHLOROETHANE	5	11/15/90	5	5	UG/L	U
		1,2-DICHLOROETHANE	5	11/16/90	5	5	UG/L	U
		1,2-DICHLOROETHENE (Total)	5	04/27/90	5	5	UG/L	U
		1,2-DICHLOROETHENE (Total)	5	11/15/90	5	5	UG/L	U
		1,2-DICHLOROETHENE (Total)	5	11/15/90	5	5	UG/L	U
		1,2-DICHLOROETHENE (Total)	5	11/15/90	5	5	UG/L	U
		1,2-DICHLOROETHENE (Total)	5	11/16/90	5	5	UG/L	U
		1,2-DICHLOROETHYLENE	5	04/27/90	5	5	UG/L	U
		1,2-DICHLOROETHYLENE	5	09/24/90	5	5	UG/L	U
		1,2-DICHLOROPROPANE	5	04/27/90	5	5	UG/L	U
		1,2-DICHLOROPROPANE	5	09/24/90	5	5	UG/L	U
		1,2-DICHLOROPROPANE	5	11/15/90	5	5	UG/L	U
		1,2-DICHLOROPROPANE	5	11/15/90	5	5	UG/L	U
		1,2-DICHLOROPROPANE	5	11/15/90	5	5	UG/L	U
		1,2-DICHLOROPROPANE	5	11/16/90	5	5	UG/L	U
		2-BUTANONE	10	04/27/90	10	10	UG/L	U
		2-BUTANONE	10	09/24/90	10	10	UG/L	U
		2-BUTANONE	10	11/15/90	10	10	UG/L	U
		2-BUTANONE	10	11/15/90	10	10	UG/L	U
		2-BUTANONE	10	11/15/90	10	10	UG/L	U
		2-BUTANONE	10	11/16/90	10	10	UG/L	U
		2-HEXANONE	10	04/27/90	10	10	UG/L	U
		2-HEXANONE	10	09/24/90	10	10	UG/L	U
		2-HEXANONE	10	11/15/90	10	10	UG/L	U
		2-HEXANONE	10	11/15/90	10	10	UG/L	U
		2-HEXANONE	10	11/15/90	10	10	UG/L	U
		2-HEXANONE	10	11/16/90	10	10	UG/L	U
		4-METHYL-2-PENTANONE	10	04/27/90	10	10	UG/L	U
		4-METHYL-2-PENTANONE	10	09/24/90	10	10	UG/L	U
		4-METHYL-2-PENTANONE	10	11/15/90	10	10	UG/L	U
		4-METHYL-2-PENTANONE	10	11/15/90	10	10	UG/L	U
		4-METHYL-2-PENTANONE	10	11/15/90	10	10	UG/L	U
		4-METHYL-2-PENTANONE	10	11/16/90	10	10	UG/L	U
		ACETONE	10	04/27/90	10	10	UG/L	U
		ACETONE	10	09/24/90	10	10	UG/L	U
		ACETONE	10	11/15/90	10	10	UG/L	U
		ACETONE	10	11/15/90	10	42	UG/L	
		ACETONE	10	11/15/90	10	11	UG/L	
		ACETONE	10	11/16/90	10	10	UG/L	U
		BENZENE	5	04/27/90	5	5	UG/L	U
		BENZENE	5	09/24/90	5	5	UG/L	U
		BENZENE	5	11/15/90	5	5	UG/L	U
		BENZENE	5	11/15/90	5	5	UG/L	U

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Well Id	Analyte Group	Analyte	Background Exceedance Value	Sample Date	Detection Limit	Concentration	Unit	Lab Qualifier
1086	Volatile Organics	BENZENE	5	11/15/90	5	5	UG/L	U
		BENZENE	5	11/16/90	5	5	UG/L	U
		BROMODICHLOROMETHANE	5	04/27/90	5	5	UG/L	U
		BROMODICHLOROMETHANE	5	09/24/90	5	5	UG/L	U
		BROMODICHLOROMETHANE	5	11/15/90	5	5	UG/L	U
		BROMODICHLOROMETHANE	5	11/15/90	5	5	UG/L	U
		BROMODICHLOROMETHANE	5	11/15/90	5	5	UG/L	U
		BROMODICHLOROMETHANE	5	11/16/90	5	5	UG/L	U
		BROMOFORM	5	04/27/90	5	5	UG/L	U
		BROMOFORM	5	09/24/90	5	5	UG/L	U
		BROMOFORM	5	11/15/90	5	5	UG/L	U
		BROMOFORM	5	11/15/90	5	5	UG/L	U
		BROMOFORM	5	11/15/90	5	5	UG/L	U
		BROMOFORM	5	11/16/90	5	5	UG/L	U
		BROMOMETHANE	10	04/27/90	10	10	UG/L	U
		BROMOMETHANE	10	09/24/90	10	10	UG/L	U
		BROMOMETHANE	10	11/15/90	10	10	UG/L	U
		BROMOMETHANE	10	11/15/90	10	10	UG/L	U
		BROMOMETHANE	10	11/15/90	10	10	UG/L	U
		BROMOMETHANE	10	11/16/90	10	10	UG/L	U
		CARBON DISULFIDE	5	04/27/90	5	5	UG/L	U
		CARBON DISULFIDE	5	09/24/90	5	5	UG/L	U
		CARBON DISULFIDE	5	11/15/90	5	5	UG/L	U
		CARBON DISULFIDE	5	11/15/90	5	5	UG/L	U
		CARBON DISULFIDE	5	11/15/90	5	5	UG/L	U
		CARBON DISULFIDE	5	11/16/90	5	5	UG/L	U
		CARBON TETRACHLORIDE	5	04/27/90	5	5	UG/L	U
		CARBON TETRACHLORIDE	5	09/24/90	5	5	UG/L	U
		CARBON TETRACHLORIDE	5	11/15/90	5	5	UG/L	U
		CARBON TETRACHLORIDE	5	11/15/90	5	5	UG/L	U
		CARBON TETRACHLORIDE	5	11/15/90	5	5	UG/L	U
		CARBON TETRACHLORIDE	5	11/16/90	5	5	UG/L	U
		CHLOROBENZENE	5	04/27/90	5	5	UG/L	U
		CHLOROBENZENE	5	09/24/90	5	5	UG/L	U
		CHLOROBENZENE	5	11/15/90	5	5	UG/L	U
		CHLOROBENZENE	5	11/15/90	5	5	UG/L	U
		CHLOROBENZENE	5	11/15/90	5	5	UG/L	U
		CHLOROBENZENE	5	11/16/90	5	5	UG/L	U
		CHLOROETHANE	10	04/27/90	10	10	UG/L	U
		CHLOROETHANE	10	09/24/90	10	10	UG/L	U
		CHLOROETHANE	10	11/15/90	10	10	UG/L	U
		CHLOROETHANE	10	11/15/90	10	10	UG/L	U
		CHLOROETHANE	10	11/15/90	10	10	UG/L	U
		CHLOROETHANE	10	11/16/90	10	10	UG/L	U
		CHLOROFORM	5	04/27/90	5	5	UG/L	U
		CHLOROFORM	5	09/24/90	5	5	UG/L	U

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Well Id	Analyte Group	Analyte	Background Exceedance Value	Sample Date	Detection Limit	Concentration	Unit	Lab Qualifier
1086	Volatile Organics	CHLOROFORM	5	11/15/90	5	5	UG/L	U
		CHLOROFORM	5	11/15/90	5	5	UG/L	U
		CHLOROFORM	5	11/15/90	5	5	UG/L	U
		CHLOROFORM	5	11/16/90	5	5	UG/L	U
		CHLOROMETHANE	10	04/27/90	10	10	UG/L	U
		CHLOROMETHANE	10	09/24/90	10	10	UG/L	U
		CHLOROMETHANE	10	11/15/90	10	10	UG/L	U
		CHLOROMETHANE	10	11/15/90	10	10	UG/L	U
		CHLOROMETHANE	10	11/15/90	10	10	UG/L	U
		CHLOROMETHANE	10	11/16/90	10	10	UG/L	U
		DIBROMOCHLOROMETHANE	5	04/27/90	5	5	UG/L	U
		DIBROMOCHLOROMETHANE	5	09/24/90	5	5	UG/L	U
		DIBROMOCHLOROMETHANE	5	11/15/90	5	5	UG/L	U
		DIBROMOCHLOROMETHANE	5	11/15/90	5	5	UG/L	U
		DIBROMOCHLOROMETHANE	5	11/15/90	5	5	UG/L	U
		DIBROMOCHLOROMETHANE	5	11/16/90	5	5	UG/L	U
		ETHYLBENZENE	5	04/27/90	5	5	UG/L	U
		ETHYLBENZENE	5	09/24/90	5	5	UG/L	U
		ETHYLBENZENE	5	11/15/90	5	5	UG/L	U
		ETHYLBENZENE	5	11/15/90	5	5	UG/L	U
		ETHYLBENZENE	5	11/15/90	5	5	UG/L	U
		ETHYLBENZENE	5	11/16/90	5	5	UG/L	U
		METHYLENE CHLORIDE	5	04/27/90	5	22	UG/L	
		METHYLENE CHLORIDE	5	09/24/90	5	1	UG/L	J
		METHYLENE CHLORIDE	5	11/15/90	5	5	UG/L	U
		METHYLENE CHLORIDE	5	11/15/90	5	5	UG/L	U
		METHYLENE CHLORIDE	5	11/15/90	5	5	UG/L	U
		METHYLENE CHLORIDE	5	11/16/90	5	5	UG/L	U
		STYRENE	5	04/27/90	5	5	UG/L	U
		STYRENE	5	09/24/90	5	5	UG/L	U
		STYRENE	5	11/15/90	5	5	UG/L	U
		STYRENE	5	11/15/90	5	5	UG/L	U
		STYRENE	5	11/15/90	5	5	UG/L	U
		STYRENE	5	11/16/90	5	5	UG/L	U
		TETRACHLOROETHENE	5	04/27/90	5	5	UG/L	U
		TETRACHLOROETHENE	5	09/24/90	5	1	UG/L	J
		TETRACHLOROETHENE	5	11/15/90	5	5	UG/L	U
		TETRACHLOROETHENE	5	11/15/90	5	5	UG/L	U
		TETRACHLOROETHENE	5	11/15/90	5	5	UG/L	U
		TETRACHLOROETHENE	5	11/16/90	5	5	UG/L	U
		TOLUENE	5	04/27/90	5	5	UG/L	U
		TOLUENE	5	09/24/90	5	5	UG/L	U
		TOLUENE	5	11/15/90	5	5	UG/L	U
		TOLUENE	5	11/15/90	5	5	UG/L	U
		TOLUENE	5	11/15/90	5	5	UG/L	U
		TOLUENE	5	11/16/90	5	5	UG/L	U

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Well Id	Analyte Group	Analyte	Background Exceedance Value	Sample Date	Detection Limit	Concentration	Unit	Lab Qualifier
1086	Volatile Organics	*TOTAL XYLENES	5	04/27/90	5	5	UG/L	U
		TOTAL XYLENES	5	09/24/90	5	5	UG/L	U
		TRICHLOROETHENE	5	04/27/90	5	5	UG/L	U
		TRICHLOROETHENE	5	09/24/90	5	5	UG/L	U
		TRICHLOROETHENE	5	11/15/90	5	5	UG/L	U
		TRICHLOROETHENE	5	11/15/90	5	5	UG/L	U
		TRICHLOROETHENE	5	11/15/90	5	5	UG/L	U
		TRICHLOROETHENE	5	11/16/90	5	5	UG/L	U
		VINYL ACETATE	10	04/27/90	10	10	UG/L	U
		VINYL ACETATE	10	09/24/90	10	10	UG/L	U
		VINYL ACETATE	10	11/15/90	10	10	UG/L	U
		VINYL ACETATE	10	11/15/90	10	10	UG/L	U
		VINYL ACETATE	10	11/15/90	10	10	UG/L	U
		VINYL ACETATE	10	11/16/90	10	10	UG/L	U
		VINYL CHLORIDE	10	04/27/90	10	10	UG/L	U
		VINYL CHLORIDE	10	09/24/90	10	10	UG/L	U
		VINYL CHLORIDE	10	11/15/90	10	10	UG/L	U
		VINYL CHLORIDE	10	11/15/90	10	10	UG/L	U
		VINYL CHLORIDE	10	11/15/90	10	10	UG/L	U
		VINYL CHLORIDE	10	11/16/90	10	10	UG/L	U
		XYLENES (TOTAL)	5	04/27/90	5	5	UG/L	U
		XYLENES (TOTAL)	5	11/15/90	5	5	UG/L	U
		XYLENES (TOTAL)	5	11/15/90	5	5	UG/L	U
		XYLENES (TOTAL)	5	11/15/90	5	5	UG/L	U
		XYLENES (TOTAL)	5	11/16/90	5	5	UG/L	U
		cis-1,3-DICHLOROPROPENE	5	04/27/90	5	5	UG/L	U
		cis-1,3-DICHLOROPROPENE	5	09/24/90	5	5	UG/L	U
		cis-1,3-DICHLOROPROPENE	5	11/15/90	5	5	UG/L	U
		cis-1,3-DICHLOROPROPENE	5	11/15/90	5	5	UG/L	U
		cis-1,3-DICHLOROPROPENE	5	11/15/90	5	5	UG/L	U
		cis-1,3-DICHLOROPROPENE	5	11/16/90	5	5	UG/L	U
		trans-1,3-DICHLOROPROPENE	5	04/27/90	5	5	UG/L	U
		trans-1,3-DICHLOROPROPENE	5	09/24/90	5	5	UG/L	U
		trans-1,3-DICHLOROPROPENE	5	11/15/90	5	5	UG/L	U
		trans-1,3-DICHLOROPROPENE	5	11/15/90	5	5	UG/L	U
		trans-1,3-DICHLOROPROPENE	5	11/15/90	5	5	UG/L	U
		trans-1,3-DICHLOROPROPENE	5	11/16/90	5	5	UG/L	U
4087	Volatile Organics	1,1,1-TRICHLOROETHANE	5	06/05/90	5	5	UG/L	U
		1,1,1-TRICHLOROETHANE	5	08/16/90	5	5	UG/L	
		1,1,1-TRICHLOROETHANE	5	08/16/90	5	5	UG/L	U
		1,1,2,2-TETRACHLOROETHANE	5	06/05/90	5	5	UG/L	U
		1,1,2,2-TETRACHLOROETHANE	5	08/16/90	5	5	UG/L	
		1,1,2,2-TETRACHLOROETHANE	5	08/16/90	5	5	UG/L	U
		1,1,2-TRICHLOROETHANE	5	06/05/90	5	5	UG/L	U
		1,1,2-TRICHLOROETHANE	5	08/16/90	5	5	UG/L	
		1,1,2-TRICHLOROETHANE	5	08/16/90	5	5	UG/L	U

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
0187	1-87-02-11-88	AMERICIUM-241	0.03	PCI/L			N	11-FEB-88
0187	G01870689001	BARIUM	.264	MG/L	V	200	A	06-JUN-89
0187	G01870889002	BARIUM	.244	MG/L	V	200	A	17-AUG-89
0187	G-0187-0502-02-13	BARIUM	246	UG/L		200		02-MAY-90
0187	GW00093IT	BARIUM	281	UG/L		200		26-JUL-90
0187	G01870889002	BICARBONATE	600	MG/L	V			17-AUG-89
0187	G01870290001	BICARBONATE	630	MG/L				06-FEB-90
0187	G-0187-0502-02-13	BICARBONATE AS CACO3	544	MG/L		2		02-MAY-90
0187	GW00093IT	BICARBONATE AS CACO3	600	MG/L		1		26-JUL-90
0187	GW00506IT	BICARBONATE AS CACO3	420	MG/L		1		16-OCT-90
0187	G01870689001	CALCIUM	162.00	MG/L	V	5000	A	06-JUN-89
0187	G01870889002	CALCIUM	144.00	MG/L	V	5000	A	17-AUG-89
0187	G-0187-0502-02-13	CALCIUM	136000	UG/L		5000		02-MAY-90
0187	GW00093IT	CALCIUM	150000	UG/L		5000		26-JUL-90
0187	G01870689001	IRON	5.82	MG/L	V	100	A	06-JUN-89
0187	G01870889002	IRON	2.19	MG/L	V	100	A	17-AUG-89
0187	G-0187-0502-02-13	IRON	1440	UG/L		100		02-MAY-90
0187	GW00093IT	IRON	1060	UG/L		100		26-JUL-90
0187	G01870689001	MAGNESIUM	40.10	MG/L	V	5000	A	06-JUN-89
0187	G01870889002	MAGNESIUM	36.40	MG/L	V	5000	A	17-AUG-89
0187	G-0187-0502-02-13	MAGNESIUM	36900	UG/L		5000		02-MAY-90
0187	GW00093IT	MAGNESIUM	41000	UG/L		5000		26-JUL-90
0187	G01870689001	MANGANESE	3.33	MG/L	V	15.0	A	06-JUN-89
0187	G01870889002	MANGANESE	1.73	MG/L	V	15.0	A	17-AUG-89
0187	G-0187-0502-02-13	MANGANESE	941	UG/L		15		02-MAY-90
0187	GW00093IT	MANGANESE	1190	UG/L		15		26-JUL-90
0187	G-0187-0502-02-13	NICKEL	370	UG/L		40		02-MAY-90
0187	GW00093IT	NICKEL	229	UG/L		40		26-JUL-90
0187	GW00093IT	SELENIUM	5.6	UG/L		5		26-JUL-90
0187	G01870689001	SODIUM	101.00	MG/L	V	5000	A	06-JUN-89
0187	G01870889002	SODIUM	91.30	MG/L	V	5000	A	17-AUG-89
0187	G-0187-0502-02-13	SODIUM	116000	UG/L		5000		02-MAY-90
0187	GW00093IT	SODIUM	117000	UG/L		5000		26-JUL-90
0187	G-0187-0502-02-13	STRONTIUM	923	UG/L		100		02-MAY-90
0187	GW00093IT	STRONTIUM	993	UG/L		200		26-JUL-90
0187	G01870889002	SULFATE	120	MG/L	V			17-AUG-89
0187	G01870290001	SULFATE	96	MG/L				06-FEB-90
0187	G-0187-0502-02-13	SULFATE	113	MG/L		25		02-MAY-90
0187	GW00093IT	SULFATE	110	MG/L		0.2		26-JUL-90
0187	GW00506IT	SULFATE	100	MG/L		40		16-OCT-90
0187	1-87-02-11-88	URANIUM-233,-234	8.4	PCI/L			N	11-FEB-88
0187	G10870689001	URANIUM-233,-234	12	PCI/L				08-JUN-89
0187	GW00093IT	URANIUM-233,-234	14.74	PCI/L		.6		26-JUL-90
0187	GW00506IT	URANIUM-233,-234	9.697	PCI/L		.6		16-OCT-90
0187	G-0187-0502-02-13	ZINC	260	UG/L		20		02-MAY-90
0187	GW00093IT	ZINC	126	UG/L		20		26-JUL-90
0460	4-60-09-07-88	AMERICIUM-241	0.02	PCI/L				07-SEP-88
0460	4-60-09-07-88	AMERICIUM-241	0.02	PCI/L			N	07-SEP-88
0460	4-60-12-06-88	AMERICIUM-241	0.08	PCI/L				06-DEC-88
0460	4-60-12-06-88	AMERICIUM-241	0.08	PCI/L			N	06-DEC-88

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
0460	GW00474IT	AMERICIUM-241	.02125	PCI/L		.01		01-NOV-90
0460	G046009860	AMERICIUM-241	0.02	PCI/L			N	
0460	4-60-06-25-87	BICARBONATE	288	MG/L		1.0		25-JUN-87
0460	4-60-09-18-87	BICARBONATE	297	MG/L		1.0		18-SEP-87
0460	4-60-01-05-88	BICARBONATE	287	MG/L				05-JAN-88
0460	4-60-12-02-88	BICARBONATE	259	MG/L	A			02-DEC-88
0460	4-60-02-28-89	BICARBONATE	284	MG/L	A			28-FEB-89
0460	4-60-09-01-89	BICARBONATE	257	MG/L		.		01-SEP-89
0460	G-0460-0511-02-09	BICARBONATE AS CACO3	258	MG/L		2		11-MAY-90
0460	GW00062IT	BICARBONATE AS CACO3	290	MG/L		1.0		20-AUG-90
0460	GW00474IT	BICARBONATE AS CACO3	300	MG/L		1.0		01-NOV-90
0460	GW01205IT	BICARBONATE AS CACO3	330	MG/L		1.0		24-APR-91
0460	GW01394IT	BICARBONATE AS CACO3	310	MG/L		1.0		10-JUN-91
0460	4-60-06-25-87	CALCIUM	128.4591	MG/L		0.750	N	25-JUN-87
0460	4-60D-09-18-87	CALCIUM	94.0216	MG/L			N	18-SEP-87
0460	4-60-09-18-87	CALCIUM	93.5126	MG/L			N	18-SEP-87
0460	4-60-01-06-88	CALCIUM	70.7574	MG/L			N	06-JAN-88
0460	4-60-03-17-88	CALCIUM	67.3504	MG/L			N	17-MAR-88
0460	4-60-05-18-88	CALCIUM	63.4253	MG/L			N	18-MAY-88
0460	4-60-09-07-88	CALCIUM	75.2725	MG/L			N	07-SEP-88
0460	4-60-09-07-88-FD	CALCIUM	75.4877	MG/L			N	07-SEP-88
0460	4-60-12-02-88	CALCIUM	92.4241	MG/L			N	02-DEC-88
0460	4-60-02-28-89	CALCIUM	67.9451	MG/L				28-FEB-89
0460	4-60-05-16-89	CALCIUM	66.8189	MG/L				16-MAY-89
0460	G04601189004	CALCIUM	84.00	MG/L		5000		15-NOV-89
0460	G-0460-0511-02-09	CALCIUM	83800	UG/L		5000		11-MAY-90
0460	GW00062IT	CALCIUM	93500.00	UG/L	E	5000		20-AUG-90
0460	GW00474IT	CALCIUM	116000.00	UG/L		5000		01-NOV-90
0460	GW01205IT	CALCIUM	119000.00	UG/L		5000		24-APR-91
0460	GW01394IT	CALCIUM	105000.00	UG/L		5000		10-JUN-91
0460	G046009860	CALCIUM	171	MG/L			N	
0460	G046009860	CARBONATE	350	MG/L				
0460	GW00062IT	CHROMIUM	12.80	UG/L		10		20-AUG-90
0460	GW00474IT	CHROMIUM	15.90	UG/L		10		01-NOV-90
0460	G046009860	COBALT	0.120	MG/L			N	
0460	4-60-06-25-87	GROSS ALPHA PARTICLE	62	PCI/L			N	25-JUN-87
0460	4-60-09-18-87	GROSS ALPHA PARTICLE	60	PCI/L			N	18-SEP-87
0460	4-60-09-18-87	GROSS BETA PARTICLE	61	PCI/L		71	N	18-SEP-87
0460	GW00474IT	IRON	133.00	UG/L		100		01-NOV-90
0460	G-0460-0511-02-09	LEAD	3.7	UG/L		3		11-MAY-90
0460	GW00474IT	LITHIUM	100.00	UG/L	E	100		01-NOV-90
0460	4-60-03-19-87	MAGNESIUM	17.5236	MG/L			N	19-MAR-87
0460	4-60-06-25-87	MAGNESIUM	49.0631	MG/L		0.020	N	25-JUN-87
0460	4-60-09-18-87	MAGNESIUM	40.2322	MG/L			N	18-SEP-87
0460	4-60D-09-18-87	MAGNESIUM	39.1979	MG/L			N	18-SEP-87
0460	4-60-01-06-88	MAGNESIUM	30.6871	MG/L			N	06-JAN-88
0460	4-60-03-17-88	MAGNESIUM	27.2724	MG/L			N	17-MAR-88
0460	4-60-05-18-88	MAGNESIUM	25.0846	MG/L			N	18-MAY-88
0460	4-60-09-07-88	MAGNESIUM	30.5758	MG/L			N	07-SEP-88
0460	4-60-09-07-88-FD	MAGNESIUM	30.5474	MG/L			N	07-SEP-88
0460	4-60-12-02-88	MAGNESIUM	35.3234	MG/L			N	02-DEC-88

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
0460	4-60-02-28-89	MAGNESIUM	27.3342	MG/L				28-FEB-89
0460	4-60-05-16-89	MAGNESIUM	21.6630	MG/L				16-MAY-89
0460	G04601189004	MAGNESIUM	34.90	MG/L		5000		15-NOV-89
0460	G-0460-0511-02-09	MAGNESIUM	30000	UG/L		5000		11-MAY-90
0460	GW00062IT	MAGNESIUM	38200.00	UG/L	E	5000		20-AUG-90
0460	GW00474IT	MAGNESIUM	47200.00	UG/L		5000		01-NOV-90
0460	GW01205IT	MAGNESIUM	49100.00	UG/L		5000		24-APR-91
0460	GW01394IT	MAGNESIUM	39200.00	UG/L		5000		10-JUN-91
0460	G046009860	MAGNESIUM	49.0	MG/L			N	
0460	G046009860	MERCURY	0.0012	MG/L			N	
0460	4-60-03-19-87	PLUTONIUM-239	0.79	PCI/L			N	19-MAR-87
0460	4-60-09-07-88	PLUTONIUM-239	0.06	PCI/L				07-SEP-88
0460	4-60-09-07-88	PLUTONIUM-239	0.06	PCI/L			N	07-SEP-88
0460	4-60-09-01-89	PLUTONIUM-239	.016	PCI/L		0		01-SEP-89
0460	G046009860	PLUTONIUM-239	0.03	PCI/L			N	
0460	4-60-03-19-87	POTASSIUM	12.0	MG/L		5.0	N	19-MAR-87
0460	4-60-06-25-87	POTASSIUM	23	MG/L		5.0	N	25-JUN-87
0460	4-60-09-18-87	POTASSIUM	27	MG/L			N	18-SEP-87
0460	4-60D-09-18-87	POTASSIUM	26	MG/L			N	18-SEP-87
0460	4-60-01-06-88	POTASSIUM	21.0	MG/L			N	06-JAN-88
0460	4-60-03-17-88	POTASSIUM	77	MG/L			N	17-MAR-88
0460	4-60-05-18-88	POTASSIUM	18.2	MG/L			N	18-MAY-88
0460	4-60-09-07-88	POTASSIUM	25	MG/L			N	07-SEP-88
0460	4-60-09-07-88-FD	POTASSIUM	25	MG/L			N	07-SEP-88
0460	4-60-02-28-89	POTASSIUM	12.600	MG/L				28-FEB-89
0460	4-60-05-16-89	POTASSIUM	14.32	MG/L				16-MAY-89
0460	G04601189004	POTASSIUM	14.80	MG/L		5000		15-NOV-89
0460	G-0460-0511-02-09	POTASSIUM	13100	UG/L		5000		11-MAY-90
0460	GW00062IT	POTASSIUM	13900.00	UG/L	E	5000		20-AUG-90
0460	GW00474IT	POTASSIUM	14600.00	UG/L		5000		01-NOV-90
0460	GW01205IT	POTASSIUM	12300.00	UG/L		5000		24-APR-91
0460	GW01394IT	POTASSIUM	12400.00	UG/L		5000		10-JUN-91
0460	GW00062IT	SELENIUM	6.00	UG/L		5		20-AUG-90
0460	GW00474IT	SELENIUM	5.80	UG/L	S	5		01-NOV-90
0460	GW01205IT	SELENIUM	8.00	UG/L	N	5.000		24-APR-91
0460	GW01394IT	SELENIUM	8.90	UG/L	S	5		10-JUN-91
0460	4-60-03-19-87	SODIUM	50.6191	MG/L			N	19-MAR-87
0460	4-60-06-25-87	SODIUM	151.5230	MG/L		2.100	N	25-JUN-87
0460	4-60-09-18-87	SODIUM	139.8981	MG/L			N	18-SEP-87
0460	4-60D-09-18-87	SODIUM	142.5424	MG/L			N	18-SEP-87
0460	4-60-01-06-88	SODIUM	111.0774	MG/L			N	06-JAN-88
0460	4-60-03-17-88	SODIUM	93.3555	MG/L			N	17-MAR-88
0460	4-60-05-18-88	SODIUM	70.1957	MG/L			N	18-MAY-88
0460	4-60-09-07-88	SODIUM	105.5950	MG/L			N	07-SEP-88
0460	4-60-09-07-88-FD	SODIUM	105.6072	MG/L			N	07-SEP-88
0460	4-60-12-02-88	SODIUM	116.7440	MG/L			N	02-DEC-88
0460	4-60-02-28-89	SODIUM	87.9477	MG/L				28-FEB-89
0460	4-60-05-16-89	SODIUM	58.9697	MG/L				16-MAY-89
0460	G04601189004	SODIUM	101.00	MG/L		5000		15-NOV-89
0460	G-0460-0511-02-09	SODIUM	73900	UG/L		5000		11-MAY-90
0460	GW00062IT	SODIUM	108000.00	UG/L	E	5000		20-AUG-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
0460	GW00474IT	SODIUM	125000.00	UG/L		5000		01-NOV-90
0460	GW01205IT	SODIUM	130000.00	UG/L		5000		24-APR-91
0460	GW01394IT	SODIUM	110000.00	UG/L		5000		10-JUN-91
0460	G046009860	SODIUM	127	MG/L			N	
0460	G-0460-0511-02-09	STRONTIUM	809	UG/L		100		11-MAY-90
0460	GW00062IT	STRONTIUM	970.00	UG/L	E	200		20-AUG-90
0460	GW00474IT	STRONTIUM	1230.00	UG/L		200		01-NOV-90
0460	GW01205IT	STRONTIUM	1290.00	UG/L		200		24-APR-91
0460	GW01394IT	STRONTIUM	1070.00	UG/L		200		10-JUN-91
0460	4-60-03-19-87	STRONTIUM-90	6.4	PCI/L			N	19-MAR-87
0460	4-60-06-25-87	STRONTIUM-90	1.2	PCI/L			N	25-JUN-87
0460	4-60-01-06-88	STRONTIUM-90	2.2	PCI/L			N	06-JAN-88
0460	4-60-06-25-87	SULFATE	94.0	MG/L		1.0		25-JUN-87
0460	4-60-09-18-87	SULFATE	92.6	MG/L		1.0		18-SEP-87
0460	4-60-01-05-88	SULFATE	84.0	MG/L				05-JAN-88
0460	4-60-12-02-88	SULFATE	75.7	MG/L	R			02-DEC-88
0460	4-60-02-28-89	SULFATE	74.0	MG/L	A			28-FEB-89
0460	G-0460-0511-02-09	SULFATE	6550	MG/L		2000		11-MAY-90
0460	GW00062IT	SULFATE	68	MG/L		2.0		20-AUG-90
0460	GW00474IT	SULFATE	84	MG/L		2.0		01-NOV-90
0460	GW01205IT	SULFATE	100	MG/L		2.0		24-APR-91
0460	GW01394IT	SULFATE	86	MG/L		2.0		10-JUN-91
0460	G046009860	SULFATE	91	MG/L				
0460	4-60-03-19-87	TRITIUM	1700	PCI/L			N	19-MAR-87
0460	4-60-06-25-87	TRITIUM	2600	PCI/L			N	25-JUN-87
0460	4-60-09-18-87	TRITIUM	3000	PCI/L			N	18-SEP-87
0460	4-60-09-18-87D	TRITIUM	2722	PCI/L			N	18-SEP-87
0460	4-60-01-06-88	TRITIUM	1600	PCI/L			N	06-JAN-88
0460	4-60-03-17-88	TRITIUM	1100	PCI/L			N	17-MAR-88
0460	4-60-05-18-88	TRITIUM	790	PCI/L			N	18-MAY-88
0460	4-60-09-07-88	TRITIUM	1300	PCI/L			N	07-SEP-88
0460	4-60-09-07-88-FD	TRITIUM	1300	PCI/L			N	07-SEP-88
0460	4-60-12-06-88	TRITIUM	1300	PCI/L			N	06-DEC-88
0460	4-60-02-28-89	TRITIUM	980	PCI/L			V	28-FEB-89
0460	4-60-02-28-89-FD	TRITIUM	930	PCI/L			V	28-FEB-89
0460	4-60-05-16-89D	TRITIUM	370	PCI/L				16-MAY-89
0460	GW00474IT	TRITIUM	1231	PCI/L		400		01-NOV-90
0460	4-60-03-19-87	URANIUM-233,-234	12	PCI/L			N	19-MAR-87
0460	4-60-06-25-87	URANIUM-233,-234	0.24	PCI/L			N	25-JUN-87
0460	4-60-09-18-87D	URANIUM-233,-234	28.1	PCI/L			N	18-SEP-87
0460	4-60-09-18-87	URANIUM-233,-234	16.4	PCI/L			N	18-SEP-87
0460	4-60-01-06-88	URANIUM-233,-234	24	PCI/L			N	06-JAN-88
0460	4-60-03-17-88	URANIUM-233,-234	20	PCI/L			N	17-MAR-88
0460	4-60-05-18-88	URANIUM-233,-234	20	PCI/L			N	18-MAY-88
0460	4-60-09-07-88	URANIUM-233,-234	17	PCI/L				07-SEP-88
0460	4-60-09-07-88-FD	URANIUM-233,-234	16	PCI/L			N	07-SEP-88
0460	4-60-09-07-88-FD	URANIUM-233,-234	16	PCI/L				07-SEP-88
0460	4-60-09-07-88	URANIUM-233,-234	17	PCI/L			N	07-SEP-88
0460	4-60-12-06-88	URANIUM-233,-234	19	PCI/L				06-DEC-88
0460	4-60-12-06-88	URANIUM-233,-234	19	PCI/L			N	06-DEC-88
0460	4-60-09-01-89	URANIUM-233,-234	16.25	PCI/L		0		01-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
0460	G04601189004	URANIUM-233,-234	17	PCI/L		.3		15-NOV-89
0460	GW00474IT	URANIUM-233,-234	19.15	PCI/L		.6		01-NOV-90
0460	G046009860	URANIUM-233,-234	30	PCI/L			N	
0460	4-60-03-19-87	ZINC	0.93	MG/L		0.02	N	19-MAR-87
0460	4-60-06-25-87	ZINC	0.3797	MG/L		0.020	N	25-JUN-87
0460	4-60-09-18-87	ZINC	0.3748	MG/L			N	18-SEP-87
0460	4-60D-09-18-87	ZINC	0.3356	MG/L			N	18-SEP-87
0460	4-60-01-06-88	ZINC	0.3483	MG/L			N	06-JAN-88
0460	4-60-03-17-88	ZINC	0.3583	MG/L			N	17-MAR-88
0460	4-60-05-18-88	ZINC	0.2862	MG/L			N	18-MAY-88
0460	4-60-09-07-88	ZINC	0.3824	MG/L			N	07-SEP-88
0460	4-60-09-07-88-FD	ZINC	0.3696	MG/L			N	07-SEP-88
0460	4-60-12-02-88	ZINC	0.4780	MG/L			N	02-DEC-88
0460	4-60-02-28-89	ZINC	0.2709	MG/L				28-FEB-89
0460	4-60-05-16-89	ZINC	0.6414	MG/L				16-MAY-89
0460	G04601189004	ZINC	.235	MG/L		20.0		15-NOV-89
0460	G-0460-0511-02-09	ZINC	196	UG/L		20		11-MAY-90
0460	GW00062IT	ZINC	177.00	UG/L	E	20		20-AUG-90
0460	GW00474IT	ZINC	296.00	UG/L	E	20		01-NOV-90
0460	GW01205IT	ZINC	324.00	UG/L		20.00		24-APR-91
0460	GW01394IT	ZINC	370.00	UG/L		20		10-JUN-91
0460	G046009860	ZINC	0.250	MG/L			N	
0681	6-81-06-25-87	BARIUM	0.3584	MG/L		0.010	N	25-JUN-87
0681	6-81-09-17-87	BARIUM	0.3957	MG/L			N	17-SEP-87
0681	G06811189004	BARIUM	.385	MG/L	R	200	A	20-NOV-89
0681	G06811189004	BICARBONATE	290	MG/L		.		20-NOV-89
0681	6-81-06-25-87	CALCIUM	68.4274	MG/L		0.785	N	25-JUN-87
0681	G06811189004	CALCIUM	88.40	MG/L	A	5000	A	20-NOV-89
0681	G068109860	CALCIUM	84.0	MG/L			N	
0681	G068109860	CARBONATE	210	MG/L				
0681	G068109860	COBALT	0.220	MG/L			N	
0681	G06811189004	CYANIDE	3.0	UG/L		2.5		20-NOV-89
0681	6-81-06-25-87	GROSS ALPHA PARTICLE	185	PCI/L			N	25-JUN-87
0681	6-81-06-25-87	GROSS BETA PARTICLE	166	PCI/L			N	25-JUN-87
0681	6-81-09-17-87	IRON	5.1882	MG/L			N	17-SEP-87
0681	G06811189004	MAGNESIUM	18.20	MG/L	A	5000	A	20-NOV-89
0681	6-81-06-25-87	MANGANESE	1.8842	MG/L		0.005	N	25-JUN-87
0681	6-81-09-17-87	MANGANESE	1.8527	MG/L			N	17-SEP-87
0681	G068109860	MANGANESE	1.48	MG/L			N	
0681	6-81-06-25-87	MERCURY	0.0010	MG/L		0.000	N	25-JUN-87
0681	G068109860	MERCURY	0.00088	MG/L			N	
0681	6-81-06-25-87	PLUTONIUM-239	0.07	PCI/L			N	25-JUN-87
0681	G068109860	PLUTONIUM-239	0.02	PCI/L			N	
0681	6-81-06-25-87	STRONTIUM-90	1.1	PCI/L			N	25-JUN-87
0681	6-81-09-17-87	SULFATE	137	MG/L		1.0		17-SEP-87
0681	G06811189004	SULFATE	72	MG/L		.		20-NOV-89
0681	6-81-06-25-87	URANIUM-233,-234	5.0	PCI/L			N	25-JUN-87
0681	6-81-09-18-87	URANIUM-233,-234	3.4	PCI/L			N	18-SEP-87
0681	G068109860	URANIUM-233,-234	0.59	PCI/L			N	

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
0781	G-0781-0604-02-13	BARIUM	316	UG/L		9.7		05-JUN-90
0781	G-0781-0604-02-13	CALCIUM	39100	UG/L		15.7		05-JUN-90
0781	GW00224IT	CALCIUM	39000.00	UG/L		5000		17-AUG-90
0781	GW00523IT	CALCIUM	40200.00	UG/L		5000		18-OCT-90
0781	GW01378IT	CALCIUM	36200.00	UG/L		5000		04-JUN-91
0781	G-0781-0604-02-13	LEAD	44.9	UG/L		1.0		05-JUN-90
0781	GW00224IT	LEAD	4.60	UG/L		3		17-AUG-90
0781	G-0781-0604-02-13	MAGNESIUM	8400	UG/L		51.8		05-JUN-90
0781	GW00224IT	MAGNESIUM	8330.00	UG/L		5000		17-AUG-90
0781	GW00523IT	MAGNESIUM	8570.00	UG/L		5000		18-OCT-90
0781	GW01378IT	MAGNESIUM	7670.00	UG/L		5000		04-JUN-91
0781	G078109860	MAGNESIUM	42.00	MG/L			N	
0781	G-0781-0604-02-13	MANGANESE	68.9	UG/L		1.2		05-JUN-90
0781	GW00224IT	MANGANESE	106.00	UG/L		15		17-AUG-90
0781	GW00523IT	MANGANESE	155.00	UG/L		15		18-OCT-90
0781	GW01378IT	MANGANESE	20.50	UG/L		15		04-JUN-91
0781	G078109860	MANGANESE	0.520	MG/L			N	
0781	G-0781-0604-02-13	SODIUM	22600	UG/L		15.5		05-JUN-90
0781	GW00224IT	SODIUM	34800.00	UG/L		5000		17-AUG-90
0781	GW00523IT	SODIUM	20900.00	UG/L	E	5000		18-OCT-90
0781	GW01378IT	SODIUM	21000.00	UG/L		5000		04-JUN-91
0781	GW00224IT	STRONTIUM	229.00	UG/L		200		17-AUG-90
0781	GW00523IT	STRONTIUM	237.00	UG/L		200		18-OCT-90
0781	GW01378IT	STRONTIUM	216.00	UG/L		200		04-JUN-91
0781	GW01378IT	TIN	407.00	UG/L		200		04-JUN-91
0781	G07811189004	URANIUM-233,-234	0.84	PCI/L		0.		17-NOV-89
0781	GW00224IT	URANIUM-233,-234	1.001	PCI/L		.6		17-AUG-90
0781	G078109860	URANIUM-233,-234	2.1	PCI/L			N	
0781	GW00224IT	ZINC	54.10	UG/L		20		17-AUG-90
0781	GW00523IT	ZINC	25.10	UG/L		20		18-OCT-90
0987	G-0987-0608-02-09	ALUMINUM	42.7	UG/L		10.5		08-JUN-90
0987	GW00932IT	AMERICIUM-241	.02631	PCI/L		.01		07-MAR-91
0987	G-0987-0608-02-09	ANTIMONY	22.5	UG/L		18.3		08-JUN-90
0987	G-0987-0608-02-09	BARIUM	73.1	UG/L		9.7		08-JUN-90
0987	G-0987-0608-02-09	BARIUM	76.1	UG/L		9.7		08-JUN-90
0987	G-0987-0608-02-09	BERYLLIUM	1.3	UG/L		0.90		08-JUN-90
0987	G-0987-0608-02-09	CALCIUM	71700	UG/L		15.7		08-JUN-90
0987	G-0987-0608-02-09	CALCIUM	71700	UG/L		33.2		08-JUN-90
0987	G-0987-0608-02-09	CALCIUM	68400	UG/L		15.7		08-JUN-90
0987	G-0987-0608-02-09	CALCIUM	68400	UG/L		33.2		08-JUN-90
0987	GW00399IT	CALCIUM	84300	UG/L				17-SEP-90
0987	GW00681IT	CALCIUM	84300.00	UG/L		5000		12-DEC-90
0987	GW00932IT	CALCIUM	85500	UG/L				07-MAR-91
0987	GW01297IT	CALCIUM	96600.00	UG/L		5000		15-MAY-91
0987	GW00932IT	CHROMIUM	21.6	UG/L				07-MAR-91
0987	G-0987-0608-02-09	IRON	30.6	UG/L		13.2		08-JUN-90
0987	G-0987-0608-02-09	IRON	73.5	UG/L		13.2		08-JUN-90
0987	G-0987-0608-02-09	LEAD	10.9	UG/L		1.2		08-JUN-90
0987	G-0987-0608-02-09	LEAD	10.9	UG/L		1.6		08-JUN-90
0987	G-0987-0608-02-09	LEAD	3	UG/L		1.6		08-JUN-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
0987	G-0987-0608-02-09	LEAD	3.0	UG/L		1.2		08-JUN-90
0987	G-0987-0608-02-09	MAGNESIUM	6190	UG/L		34.1		08-JUN-90
0987	G-0987-0608-02-09	MAGNESIUM	6500	UG/L		51.8		08-JUN-90
0987	G-0987-0608-02-09	MAGNESIUM	6500	UG/L		34.1		08-JUN-90
0987	G-0987-0608-02-09	MAGNESIUM	6190	UG/L		51.8		08-JUN-90
0987	GW00399IT	MAGNESIUM	7340	UG/L				17-SEP-90
0987	GW00681IT	MAGNESIUM	6930.00	UG/L		5000		12-DEC-90
0987	GW00932IT	MAGNESIUM	7730	UG/L				07-MAR-91
0987	GW01297IT	MAGNESIUM	8350.00	UG/L		5000		15-MAY-91
0987	G-0987-0608-02-09	MANGANESE	2.2	UG/L		1.2		08-JUN-90
0987	G-0987-0608-02-09	MANGANESE	6.1	UG/L		1.2		08-JUN-90
0987	GW00932IT	PLUTONIUM-239/240	.1245	PCI/L		.01		07-MAR-91
0987	GW00932IT	SILVER	11.5	UG/L				07-MAR-91
0987	G-0987-0608-02-09	SODIUM	6790	UG/L		15.5		08-JUN-90
0987	G-0987-0608-02-09	SODIUM	6790	UG/L		63.6		08-JUN-90
0987	G-0987-0608-02-09	SODIUM	7140	UG/L		63.6		08-JUN-90
0987	G-0987-0608-02-09	SODIUM	7140	UG/L		15.5		08-JUN-90
0987	GW00399IT	SODIUM	7420	UG/L				17-SEP-90
0987	GW00681IT	SODIUM	7160.00	UG/L		5000		12-DEC-90
0987	GW00932IT	SODIUM	8010	UG/L				07-MAR-91
0987	GW01297IT	SODIUM	12500.00	UG/L		5000		15-MAY-91
0987	G-0987-0608-02-09	STRONTIUM	249	UG/L		13.1		08-JUN-90
0987	G-0987-0608-02-09	STRONTIUM	233	UG/L		13.1		08-JUN-90
0987	GW00399IT	STRONTIUM	279	UG/L				17-SEP-90
0987	GW00681IT	STRONTIUM	266.00	UG/L		200		12-DEC-90
0987	GW00932IT	STRONTIUM	305	UG/L				07-MAR-91
0987	GW01297IT	STRONTIUM	336.00	UG/L		200		15-MAY-91
0987	GW00681IT	TRITIUM	707.7	PCI/L		400		12-DEC-90
0987	GW00681IT	URANIUM-233,-234	1.07	PCI/L		.6		12-DEC-90
0987	GW00932IT	URANIUM-233,-234	.7992	PCI/L		.6		07-MAR-91
0987	G-0987-0608-02-09	VANADIUM	2.9	UG/L		1.2		08-JUN-90
0987	G-0987-0608-02-09	VANADIUM	2.6	UG/L		1.2		08-JUN-90
0987	G-0987-0608-02-09	ZINC	5.8	UG/L		2.9		08-JUN-90
0987	GW00681IT	ZINC	29.80	UG/L		20		12-DEC-90
1087	G10870390001	BICARBONATE	730	MG/L				08-MAR-90
1087	GW00061IT	URANIUM-233,-234	.7255	PCI/L		.6		25-SEP-90
1986	19-86-12-18-87	AMERICIUM-241	.11	PCI/L		.90	N	18-DEC-87
1986	19-86-05-24-88	AMERICIUM-241	0.04	PCI/L		0.72	N	24-MAY-88
1986	GW00054IT	ANTIMONY	24.6	UG/L		60		25-JUL-90
1986	19-86-12-18-87	ARSENIC	0.010	MG/L			N	18-DEC-87
1986	19-86-03-26-87	BARIUM	0.2335	MG/L		0.010	N	26-MAR-87
1986	GW00054IT	BARIUM	210	UG/L		200		25-JUL-90
1986	GW01377IT	BARIUM	201.00	UG/L		200		03-JUN-91
1986	19-86-03-26-87	BICARBONATE	630	MG/L		1.0		26-MAR-87
1986	19-86-06-30-87	BICARBONATE	591	MG/L		1.0		30-JUN-87
1986	19-86D-06-30-87	BICARBONATE	592	MG/L		1.0		30-JUN-87
1986	19-86-09-15-87	BICARBONATE	647	MG/L		1.0		15-SEP-87
1986	19-86-12-18-87	BICARBONATE	713	MG/L				18-DEC-87
1986	19-86-03-17-88	BICARBONATE	386	MG/L				17-MAR-88

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
1986	19-86-05-24-88	BICARBONATE	592	MG/L				24-MAY-88
1986	19-86-11-29-88	BICARBONATE	578	MG/L	A			29-NOV-88
1986	19-86-02-28-89	BICARBONATE	750	MG/L	A			28-FEB-89
1986	19-86-05-16-89	BICARBONATE	632	MG/L	V			16-MAY-89
1986	19-86-08-29-89	BICARBONATE	599	MG/L				29-AUG-89
1986	GW00054IT	BICARBONATE AS CACO3	620	MG/L		1		25-JUL-90
1986	GW00530IT	BICARBONATE AS CACO3	610	MG/L		1		18-OCT-90
1986	GW01377IT	BICARBONATE AS CACO3	340	MG/L		1.0		03-JUN-91
1986	19-86-03-26-87	CALCIUM	214.2829	MG/L		0.750	N	26-MAR-87
1986	19-86-06-30-87	CALCIUM	179.7129	MG/L		0.750	N	30-JUN-87
1986	19-86D-06-30-87	CALCIUM	178.5739	MG/L		0.750	N	30-JUN-87
1986	19-86-09-15-87	CALCIUM	123.9907	MG/L			N	15-SEP-87
1986	19-86-12-18-87	CALCIUM	127.0779	MG/L			N	18-DEC-87
1986	19-86-03-17-88	CALCIUM	167.0982	MG/L			N	17-MAR-88
1986	19-86-05-24-88	CALCIUM	151.9402	MG/L			N	24-MAY-88
1986	19-86-09-07-88	CALCIUM	130.8454	MG/L			N	07-SEP-88
1986	19-86-11-29-88	CALCIUM	120.8060	MG/L			N	29-NOV-88
1986	19-86-02-28-89	CALCIUM	126.9875	MG/L				28-FEB-89
1986	19-86-05-16-89	CALCIUM	157.6886	MG/L				16-MAY-89
1986	G19860290001D	CALCIUM	135.00	MG/L		5000		12-FEB-90
1986	GW00054IT	CALCIUM	153000	UG/L		5000		25-JUL-90
1986	GW00530IT	CALCIUM	130000	UG/L		5000		18-OCT-90
1986	GW01377IT	CALCIUM	157000.00	UG/L		5000		03-JUN-91
1986	G198609860	CALCIUM	148.0	MG/L			N	
1986	19-86-03-17-88	CHROMIUM	0.0202	MG/L			N	17-MAR-88
1986	GW00054IT	CYANIDES (SOLUBLE SA	0.04	MG/L		0.02		25-JUL-90
1986	19-86-03-26-87	GROSS ALPHA PARTICLE	102	PCI/L			N	26-MAR-87
1986	G198609860	GROSS ALPHA PARTICLE	170	PCI/L			N	
1986	19-86-03-26-87	GROSS BETA PARTICLE	100	PCI/L			N	26-MAR-87
1986	19-86-06-30-87	GROSS BETA PARTICLE	62	PCI/L			N	30-JUN-87
1986	G198609860	GROSS BETA PARTICLE	470	PCI/L			N	
1986	19-86-06-30-87	IRON	4.0573	MG/L		0.006	N	30-JUN-87
1986	19-86D-06-30-87	IRON	4.6217	MG/L		0.006	N	30-JUN-87
1986	19-86-09-15-87	IRON	3.5696	MG/L			N	15-SEP-87
1986	19-86-12-18-87	IRON	3.7485	MG/L			N	18-DEC-87
1986	19-86-03-17-88	IRON	8.4953	MG/L			N	17-MAR-88
1986	19-86-05-24-88	IRON	5.4132	MG/L			N	24-MAY-88
1986	19-86-09-07-88	IRON	1.6329	MG/L			N	07-SEP-88
1986	19-86-11-29-88	IRON	4.6340	MG/L			N	29-NOV-88
1986	19-86-02-28-89	IRON	4.9123	MG/L				28-FEB-89
1986	19-86-05-16-89	IRON	6.5260	MG/L				16-MAY-89
1986	G19860290001D	IRON	12.70	MG/L		100		12-FEB-90
1986	GW00054IT	IRON	12600	UG/L		100		25-JUL-90
1986	GW00530IT	IRON	8920	UG/L		100		18-OCT-90
1986	GW01377IT	IRON	12100.00	UG/L		100		03-JUN-91
1986	19-86-03-26-87	MAGNESIUM	58.1247	MG/L		0.020	N	26-MAR-87
1986	19-86-06-30-87	MAGNESIUM	47.3570	MG/L		0.020	N	30-JUN-87
1986	19-86D-06-30-87	MAGNESIUM	46.8044	MG/L		0.020	N	30-JUN-87
1986	19-86-09-15-87	MAGNESIUM	38.5731	MG/L			N	15-SEP-87
1986	19-86-12-18-87	MAGNESIUM	36.4411	MG/L			N	18-DEC-87
1986	19-86-03-17-88	MAGNESIUM	48.1747	MG/L			N	17-MAR-88

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
1986	19-86-05-24-88	MAGNESIUM	46.1137	MG/L			N	24-MAY-88
1986	19-86-09-07-88	MAGNESIUM	38.1490	MG/L			N	07-SEP-88
1986	19-86-11-29-88	MAGNESIUM	33.5490	MG/L			N	29-NOV-88
1986	19-86-02-28-89	MAGNESIUM	37.6963	MG/L				28-FEB-89
1986	19-86-05-16-89	MAGNESIUM	47.7226	MG/L				16-MAY-89
1986	G19860290001D	MAGNESIUM	37.60	MG/L		5000		12-FEB-90
1986	GW00054IT	MAGNESIUM	48200	UG/L		5000		25-JUL-90
1986	GW00530IT	MAGNESIUM	38300	UG/L		5000		18-OCT-90
1986	GW01377IT	MAGNESIUM	47100.00	UG/L		5000		03-JUN-91
1986	G198609860	MAGNESIUM	45.4	MG/L			N	
1986	19-86-03-26-87	MANGANESE	3.9219	MG/L		0.005	N	26-MAR-87
1986	19-86-06-30-87	MANGANESE	3.1594	MG/L		0.005	N	30-JUN-87
1986	19-86D-06-30-87	MANGANESE	3.1908	MG/L		0.005	N	30-JUN-87
1986	19-86-09-15-87	MANGANESE	2.7198	MG/L			N	15-SEP-87
1986	19-86-12-18-87	MANGANESE	2.5587	MG/L			N	18-DEC-87
1986	19-86-03-17-88	MANGANESE	3.4966	MG/L			N	17-MAR-88
1986	19-86-05-24-88	MANGANESE	2.8963	MG/L			N	24-MAY-88
1986	19-86-09-07-88	MANGANESE	2.6842	MG/L			N	07-SEP-88
1986	19-86-11-29-88	MANGANESE	2.4762	MG/L			N	29-NOV-88
1986	19-86-02-28-89	MANGANESE	2.7515	MG/L				28-FEB-89
1986	19-86-05-16-89	MANGANESE	3.5578	MG/L				16-MAY-89
1986	G19860290001D	MANGANESE	2.79	MG/L		15.0		12-FEB-90
1986	GW00054IT	MANGANESE	3200	UG/L		15		25-JUL-90
1986	GW00530IT	MANGANESE	2770	UG/L		15		18-OCT-90
1986	GW01377IT	MANGANESE	3320.00	UG/L		15		03-JUN-91
1986	G198609860	MANGANESE	2.230	MG/L			N	
1986	19-86D-06-30-87	NICKEL	0.0461	MG/L		0.037	N	30-JUN-87
1986	19-86-03-17-88	NICKEL	0.0537	MG/L			N	17-MAR-88
1986	19-86-03-26-87	PLUTONIUM-239	0.3	PCI/L			N	26-MAR-87
1986	19-86-09-15-87	PLUTONIUM-239	.85	PCI/L		1.	N	15-SEP-87
1986	19-86-03-17-88	PLUTONIUM-239	0.03	PCI/L			N	17-MAR-88
1986	19-86-03-26-87	SODIUM	230.9371	MG/L		2.100	N	26-MAR-87
1986	19-86-06-30-87	SODIUM	205.5886	MG/L		2.100	N	30-JUN-87
1986	19-86D-06-30-87	SODIUM	204.5986	MG/L		2.100	N	30-JUN-87
1986	19-86-09-15-87	SODIUM	174-8991	MG/L			N	15-SEP-87
1986	19-86-12-18-87	SODIUM	178.7676	MG/L			N	18-DEC-87
1986	19-86-03-17-88	SODIUM	221.0428	MG/L			N	17-MAR-88
1986	19-86-05-24-88	SODIUM	183.1914	MG/L			N	24-MAY-88
1986	19-86-09-07-88	SODIUM	189.3525	MG/L			N	07-SEP-88
1986	19-86-11-29-88	SODIUM	182.4889	MG/L			N	29-NOV-88
1986	19-86-02-28-89	SODIUM	180.1591	MG/L				28-FEB-89
1986	19-86-05-16-89	SODIUM	201.5160	MG/L				16-MAY-89
1986	G19860290001D	SODIUM	171.00	MG/L		5000		12-FEB-90
1986	GW00054IT	SODIUM	392000	UG/L		5000		25-JUL-90
1986	GW00530IT	SODIUM	182000	UG/L		5000		18-OCT-90
1986	GW01377IT	SODIUM	218000.00	UG/L		5000		03-JUN-91
1986	G198609860	SODIUM	232.0	MG/L			N	
1986	GW00054IT	STRONTIUM	1030	UG/L		200		25-JUL-90
1986	GW00530IT	STRONTIUM	902	UG/L		200		18-OCT-90
1986	GW01377IT	STRONTIUM	1130.00	UG/L		200		03-JUN-91
1986	GW00054IT	STRONTIUM-89,90	1.928	PCI/L	X	1		25-JUL-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
1986	19-86-03-26-87	STRONTIUM-90	3.49	PCI/L			N	26-MAR-87
1986	19-86-09-15-87	STRONTIUM-90	1.4	PCI/L			N	15-SEP-87
1986	19-86-03-26-87	SULFATE	235	MG/L		1.0		26-MAR-87
1986	19-86-06-30-87	SULFATE	143	MG/L		1.0		30-JUN-87
1986	19-86D-06-30-87	SULFATE	175	MG/L		1.0		30-JUN-87
1986	19-86-09-15-87	SULFATE	193	MG/L		1.0		15-SEP-87
1986	19-86-12-18-87	SULFATE	93.0	MG/L				18-DEC-87
1986	19-86-03-17-88	SULFATE	150	MG/L				17-MAR-88
1986	19-86-05-24-88	SULFATE	285	MG/L				24-MAY-88
1986	19-86-11-29-88	SULFATE	108	MG/L	R			29-NOV-88
1986	19-86-02-28-89	SULFATE	102	MG/L	A			28-FEB-89
1986	19-86-05-16-89	SULFATE	227	MG/L	A			16-MAY-89
1986	19-86-08-29-89	SULFATE	174	MG/L				29-AUG-89
1986	GW00054IT	SULFATE	200	MG/L		0.2		25-JUL-90
1986	GW00530IT	SULFATE	130	MG/L		40		18-OCT-90
1986	GW01377IT	SULFATE	150	MG/L		2.0		03-JUN-91
1986	G198609860	SULFATE	230	MG/L				
1986	19-86-03-26-87	URANIUM-233,-234	2.4	PCI/L			N	26-MAR-87
1986	19-86-06-30-87	URANIUM-233,-234	0.96	PCI/L			N	30-JUN-87
1986	19-86-06-30-87D	URANIUM-233,-234	4.1	PCI/L			N	30-JUN-87
1986	19-86-09-15-87	URANIUM-233,-234	5.4	PCI/L			N	15-SEP-87
1986	19-86-12-18-87	URANIUM-233,-234	5.5	PCI/L			N	18-DEC-87
1986	19-86-03-17-88	URANIUM-233,-234	5.8	PCI/L			N	17-MAR-88
1986	19-86-05-24-88	URANIUM-233,-234	5.0	PCI/L			N	24-MAY-88
1986	19-86-09-07-88	URANIUM-233,-234	5.0	PCI/L			N	07-SEP-88
1986	19-86-09-07-88	URANIUM-233,-234	5.0	PCI/L				07-SEP-88
1986	19-86-11-29-88	URANIUM-233,-234	4.9	PCI/L				29-NOV-88
1986	19-86-11-29-88	URANIUM-233,-234	4.9	PCI/L			N	29-NOV-88
1986	19-86-08-29-89	URANIUM-233,-234	4.43	PCI/L		0.49		29-AUG-89
1986	GW00054IT	URANIUM-233,-234	3.779	PCI/L	X	.6		25-JUL-90
1986	GW00530IT	URANIUM-233,-234	2.893	PCI/L		.6		18-OCT-90
1986	G198609860	URANIUM-233,-234	23	PCI/L			N	
2186	G218611862	ALUMINUM	1.230	MG/L			N	
2186	21-86-05-24-88	AMERICIUM-241	0.02	PCI/L		0.44	N	24-MAY-88
2186	G21860290001	AMERICIUM-241	+2.417E-0	PCI /L		0.005		28-FEB-90
2186	21-86-03-07-89	BICARBONATE	252	MG/L	V			07-MAR-89
2186	G21860290001	BICARBONATE	270	MG/L				28-FEB-90
2186	G-2186-0510-02-10	CALCIUM	48100	UG/L		5000		11-MAY-90
2186	GW00059IT	CALCIUM	44900.00	UG/L	E	5000		02-AUG-90
2186	GW01379IT	CALCIUM	44400.00	UG/L		5000		04-JUN-91
2186	G218611862	CALCIUM	86.90	MG/L			N	
2186	GW01379IT	CARBONATE AS CACO3	6	MG/L		1.0		04-JUN-91
2186	GW00059IT	CHROMIUM	11.20	UG/L		10		02-AUG-90
2186	G218611860	GROSS ALPHA PARTICLE	68	PCI/L			N	
2186	G218611862	GROSS ALPHA PARTICLE	160	PCI/L			N	
2186	G218611862	GROSS BETA PARTICLE	260	PCI/L			N	
2186	G218611860	GROSS BETA PARTICLE	72	PCI/L			N	
2186	G-2186-0510-02-10	MAGNESIUM	11700	UG/L		5000		11-MAY-90
2186	GW00059IT	MAGNESIUM	10700.00	UG/L	E	5000		02-AUG-90
2186	GW01379IT	MAGNESIUM	10700.00	UG/L		5000		04-JUN-91

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
2186	G218611862	MAGNESIUM	21.60	MG/L			N	
2186	21-86-09-15-87	MANGANESE	0.2281	MG/L			N	15-SEP-87
2186	21-86-01-06-88	MANGANESE	0.3760	MG/L			N	06-JAN-88
2186	21-86-03-22-88	MANGANESE	0.2819	MG/L			N	22-MAR-88
2186	21-86-05-24-88	MANGANESE	0.2724	MG/L			N	24-MAY-88
2186	GW01379IT	MANGANESE	19.50	UG/L		15		04-JUN-91
2186	21-86-03-25-87	PLUTONIUM-239	.73	PCI/L			N	25-MAR-87
2186	21-86-11-29-88	PLUTONIUM-239	0.02	PCI/L				29-NOV-88
2186	21-86-11-29-88	PLUTONIUM-239	0.02	PCI/L			N	29-NOV-88
2186	G21861189004	PLUTONIUM-239	0.023	PCI/L		0.00		07-NOV-89
2186	G21860290001	PLUTONIUM-239/240	+1.852E-0	PCI /L		0.010		28-FEB-90
2186	21-86-06-29-87	SODIUM	132.3217	MG/L		2.100	N	29-JUN-87
2186	G-2186-0510-02-10	SODIUM	35400	UG/L		5000		11-MAY-90
2186	GW00059IT	SODIUM	34300.00	UG/L		5000		02-AUG-90
2186	GW01379IT	SODIUM	33800.00	UG/L		5000		04-JUN-91
2186	G-2186-0510-02-10	STRONTIUM	406	UG/L		100		11-MAY-90
2186	GW00059IT	STRONTIUM	374.00	UG/L	E	200		02-AUG-90
2186	GW01379IT	STRONTIUM	379.00	UG/L		200		04-JUN-91
2186	21-86-03-25-87	STRONTIUM-90	2.51	PCI/L			N	25-MAR-87
2186	21-86-09-15-87	SULFATE	68	MG/L		1.0		15-SEP-87
2186	G-2186-0510-02-10	SULFATE	6820	MG/L		2000		11-MAY-90
2186	21-86-03-25-87	URANIUM-233,-234	4.8	PCI/L			N	25-MAR-87
2186	21-86-06-29-87	URANIUM-233,-234	1.8	PCI/L			N	29-JUN-87
2186	21-86-09-15-87	URANIUM-233,-234	2.4	PCI/L			N	15-SEP-87
2186	21-86-01-06-88	URANIUM-233,-234	1.2	PCI/L			N	06-JAN-88
2186	21-86-03-22-88	URANIUM-233,-234	2.0	PCI/L			N	22-MAR-88
2186	21-86-05-24-88	URANIUM-233,-234	1.3	PCI/L			N	24-MAY-88
2186	21-86-09-15-88	URANIUM-233,-234	1.4	PCI/L				15-SEP-88
2186	21-86-09-15-88	URANIUM-233,-234	1.4	PCI/L			N	15-SEP-88
2186	21-86-11-29-88	URANIUM-233,-234	0.6	PCI/L				29-NOV-88
2186	21-86-11-29-88	URANIUM-233,-234	0.6	PCI/L			N	29-NOV-88
2186	21-86-08-29-89	URANIUM-233,-234	1.56	PCI/L		0		29-AUG-89
2186	21-86-08-29-89-FD	URANIUM-233,-234	0.82	PCI/L		0.64		29-AUG-89
2186	21-86-08-28-89D	URANIUM-233,-234	0.82	PCI/L		0.64		29-AUG-89
2186	G21861189004	URANIUM-233,-234	1.09	PCI/L		0.85		07-NOV-89
2186	G21860290001	URANIUM-233,-234	+8.133E-0	PCI /L		0.117		28-FEB-90
2186	GW00635IT	URANIUM-233,-234	.8721	PCI/L	X	.6		06-NOV-90
2186	G218611860	URANIUM-233,-234	6.1	PCI/L			N	
2186	G218611862	URANIUM-233,-234	8.2	PCI/L			N	
2186	G-2186-0510-02-10	ZINC	65.6	UG/L		20		11-MAY-90
2786	27-86-04-15-87	AMERICIUM-241	0.2	PCI/L			N	15-APR-87
2786	27-86-06-24-87	AMERICIUM-241	0.2	PCI/L			N	24-JUN-87
2786	G-2786-0514-02-09	CALCIUM	56000	UG/L		5000		14-MAY-90
2786	GW00664IT	CALCIUM	56700	UG/L		5000		13-NOV-90
2786	GW01200IT	CALCIUM	46900.00	UG/L		5000		24-APR-91
2786	GW01391IT	CALCIUM	45900.00	UG/L		5000		11-JUN-91
2786	27-86-03-22-88	COPPER	0.0477	MG/L			N	22-MAR-88
2786	27-86-05-19-88	COPPER	0.1120	MG/L			N	19-MAY-88
2786	27-86-09-13-88	COPPER	0.0903	MG/L			N	13-SEP-88
2786	27-86-05-18-89	COPPER	0.0700	MG/L				18-MAY-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
2786	27-86-03-19-87	GROSS BETA PARTICLE	73	PCI/L			N	19-MAR-87
2786	27-86-04-15-87	MAGNESIUM	16.3832	MG/L		0.020	N	15-APR-87
2786	G-2786-0514-02-09	MAGNESIUM	16600	UG/L		5000		14-MAY-90
2786	GW00664IT	MAGNESIUM	14600	UG/L		5000		13-NOV-90
2786	GW01200IT	MAGNESIUM	14100.00	UG/L		5000		24-APR-91
2786	GW01391IT	MAGNESIUM	14300.00	UG/L		5000		11-JUN-91
2786	G-2786-0514-02-09	MANGANESE	106	UG/L		15		14-MAY-90
2786	GW00664IT	MANGANESE	77.5	UG/L		20		13-NOV-90
2786	GW01200IT	MANGANESE	53.80	UG/L		15		24-APR-91
2786	GW01391IT	MANGANESE	52.30	UG/L		15		11-JUN-91
2786	27-86-03-19-87	NICKEL	0.1271	MG/L		0.037	N	19-MAR-87
2786	27-86-04-15-87	NICKEL	0.1869	MG/L		0.037	N	15-APR-87
2786	27-86-06-24-87	NICKEL	0.1158	MG/L		0.037	N	24-JUN-87
2786	27-86-09-23-87	NICKEL	0.0993	MG/L			N	23-SEP-87
2786	27-86-12-17-87	NICKEL	0.0622	MG/L			N	17-DEC-87
2786	27-86-05-19-88	NICKEL	0.0475	MG/L			N	19-MAY-88
2786	27-86-09-13-88	NICKEL	0.0500	MG/L			N	13-SEP-88
2786	27-86-05-18-89	NICKEL	0.0756	MG/L				18-MAY-89
2786	27-86-06-24-87	PLUTONIUM-239	0.5	PCI/L			N	24-JUN-87
2786	27-86-05-19-88	PLUTONIUM-239	0.02	PCI/L		0.15	N	19-MAY-88
2786	GW00664IT	POTASSIUM	6270	UG/L		5000		13-NOV-90
2786	27-86-03-19-87	SODIUM	259.9004	MG/L		2.100	N	19-MAR-87
2786	27-86-04-15-87	SODIUM	247.4084	MG/L		2.100	N	15-APR-87
2786	27-86-06-24-87	SODIUM	219.6025	MG/L		2.100	N	24-JUN-87
2786	27-86-09-23-87	SODIUM	200.8369	MG/L			N	23-SEP-87
2786	27-86-12-17-87	SODIUM	205.7062	MG/L			N	17-DEC-87
2786	27-86-03-22-88	SODIUM	201.6286	MG/L			N	22-MAR-88
2786	27-86-05-19-88	SODIUM	209.3877	MG/L			N	19-MAY-88
2786	27-86-09-13-88	SODIUM	210.8754	MG/L			N	13-SEP-88
2786	27-86-05-18-89	SODIUM	215.4379	MG/L				18-MAY-89
2786	G27861089004	SODIUM	197.00	MG/L		5000		15-NOV-89
2786	G-2786-0514-02-09	SODIUM	251000	UG/L		5000		14-MAY-90
2786	GW00664IT	SODIUM	236000	UG/L		5000		13-NOV-90
2786	GW01200IT	SODIUM	226000.00	UG/L		5000		24-APR-91
2786	GW01391IT	SODIUM	218000.00	UG/L		5000		11-JUN-91
2786	G-2786-0514-02-09	STRONTIUM	737	UG/L		100		14-MAY-90
2786	GW00664IT	STRONTIUM	656	UG/L		200		13-NOV-90
2786	GW01200IT	STRONTIUM	642.00	UG/L		200		24-APR-91
2786	GW01391IT	STRONTIUM	623.00	UG/L		200		11-JUN-91
2786	27-86-03-19-87	STRONTIUM-90	1.8	PCI/L			N	19-MAR-87
2786	27-86-03-19-87	SULFATE	245	MG/L		1.0		19-MAR-87
2786	27-86-04-15-87	SULFATE	260	MG/L		1.0		15-APR-87
2786	27-86-06-24-87	SULFATE	188	MG/L		1.0		24-JUN-87
2786	27-86-09-23-87	SULFATE	340	MG/L		1.0		23-SEP-87
2786	27-86-12-16-87	SULFATE	219	MG/L				16-DEC-87
2786	27-86-03-22-88	SULFATE	220	MG/L				22-MAR-88
2786	27-86-05-19-88	SULFATE	272	MG/L				19-MAY-88
2786	27-86-12-06-88	SULFATE	271	MG/L	R			06-DEC-88
2786	27-86-05-18-89	SULFATE	254	MG/L	V			18-MAY-89
2786	27-86-09-13-89	SULFATE	245	MG/L				13-SEP-89
2786	G27860290001	SULFATE	260	MG/L				14-FEB-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
2786	G-2786-0514-02-09	SULFATE	241	MG/L		100		14-MAY-90
2786	GW01200IT	SULFATE	240	MG/L		2.0		24-APR-91
2786	GW01391IT	SULFATE	310	MG/L		2.0		11-JUN-91
2786	27-86-03-19-87	URANIUM-233,-234	1.8	PCI/L			N	19-MAR-87
2786	27-86-04-15-87	URANIUM-233,-234	1.1	PCI/L			N	15-APR-87
2786	27-86-06-24-87	URANIUM-233,-234	1.7	PCI/L			N	24-JUN-87
2786	27-86-12-17-87	URANIUM-233,-234	.55	PCI/L			N	17-DEC-87
2786	27-86-05-19-88	URANIUM-233,-234	0.56	PCI/L		0.72	N	19-MAY-88
2786	27-86-12-06-88	URANIUM-233,-234	0.5	PCI/L				06-DEC-88
2786	27-86-12-06-88	URANIUM-233,-234	0.5	PCI/L			N	06-DEC-88
2786	27-86-09-13-89	URANIUM-233,-234	1.04	PCI/L		0		13-SEP-89
2786	G278610089004	URANIUM-233,-234	.4	PCI/L		.1		15-NOV-89
2786	G27861089004	URANIUM-233,-234	1.0	PCI/L		.2		15-NOV-89
2786	G2786029000	URANIUM-233,-234	1.4	PCI/L		.3		14-FEB-90
2786	27-86-04-15-87	ZINC	0.3	MG/L		0.02	N	15-APR-87
2786	G-2786-0514-02-09	ZINC	58.1	UG/L		20		14-MAY-90
2886	G28860290001	AMERICIUM-241	.020	PCI/L		.012		13-FEB-90
2886	28-86-06-24-87	BARIUM	0.3422	MG/L		0.100	N	24-JUN-87
2886	28-86-03-19-87	BICARBONATE	381	MG/L		1.0		19-MAR-87
2886	28-86-06-24-87	BICARBONATE	636	MG/L		1.0		24-JUN-87
2886	28-86-03-17-88	BICARBONATE	314	MG/L				17-MAR-88
2886	28-86-05-18-89	BICARBONATE	440	MG/L	V			18-MAY-89
2886	28-86-09-13-89	BICARBONATE	468	MG/L		.		13-SEP-89
2886	G-2886-0515-02-10	BICARBONATE AS CACO3	442	MG/L		2		15-MAY-90
2886	GW00094IT	BICARBONATE AS CACO3	490	MG/L		1.0		03-AUG-90
2886	GW00665IT	BICARBONATE AS CACO3	480	MG/L		1		13-NOV-90
2886	GW01189IT	BICARBONATE AS CACO3	400	MG/L		1.0		23-APR-91
2886	GW01393IT	BICARBONATE AS CACO3	340	MG/L		1.0		10-JUN-91
2886	28-86-03-19-87	CALCIUM	346.9876	MG/L		0.750	N	19-MAR-87
2886	28-86-06-24-87	CALCIUM	812.6987	MG/L		0.750	N	24-JUN-87
2886	28-86-03-17-88	CALCIUM	479.1007	MG/L			N	17-MAR-88
2886	28-86-09-07-88	CALCIUM	297.9092	MG/L			N	07-SEP-88
2886	28-86-05-18-89	CALCIUM	132.8396	MG/L				18-MAY-89
2886	G-2886-0515-02-10	CALCIUM	99600	UG/L		5000		15-MAY-90
2886	GW00094IT	CALCIUM	123000.00	UG/L		5000		03-AUG-90
2886	GW00665IT	CALCIUM	171000	UG/L		5000		13-NOV-90
2886	GW01189IT	CALCIUM	89300.00	UG/L		5000		23-APR-91
2886	GW01393IT	CALCIUM	55800.00	UG/L		5000		10-JUN-91
2886	GW00094IT	CHROMIUM	24.70	UG/L		10		03-AUG-90
2886	28-86-03-17-88	COBALT	0.0502	MG/L			N	17-MAR-88
2886	GW00665IT	COPPER	32.2	UG/L		25		13-NOV-90
2886	GW01189IT	CYANIDE	9.50	UG/L		10.00		23-APR-91
2886	GW01393IT	CYANIDE	12.00	UG/L		10		10-JUN-91
2886	G-2886-0515-02-10	CYANIDE	10.5	UG/L		10		15-MAY-90
2886	GW00094IT	GROSS ALPHA - DISSOL	219	PCI/L		2		03-AUG-90
2886	GW00665IT	GROSS ALPHA - DISSOL	337.6	PCI/L		2		13-NOV-90
2886	28-86-03-19-87	GROSS ALPHA PARTICLE	797	PCI/L			N	19-MAR-87
2886	28-86-06-24-87	GROSS ALPHA PARTICLE	2000	PCI/L			N	24-JUN-87
2886	28-86-09-07-88	GROSS ALPHA PARTICLE	720	PCI/L				07-SEP-88
2886	28-86-09-07-88	GROSS ALPHA PARTICLE	720	PCI/L			N	07-SEP-88

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
2886	28-86-05-18-89	GROSS ALPHA PARTICLE	773	PCI/L		15		18-MAY-89
2886	28-86-05-18-89	GROSS ALPHA PARTICLE	773	PCI/L		15		18-MAY-89
2886	28-86-09-13-89	GROSS ALPHA PARTICLE	229	PCI/L		5		13-SEP-89
2886	28-86-09-13-89	GROSS ALPHA PARTICLE	229	PCI/L		5		13-SEP-89
2886	G28861189004	GROSS ALPHA PARTICLE	480	PCI/L		40		10-NOV-89
2886	G2886029000	GROSS ALPHA PARTICLE	230	PCI/L		10		13-FEB-90
2886	G28860290001	GROSS ALPHA PARTICLE	490	PCI/L		20		13-FEB-90
2886	GW00094IT	GROSS BETA - DISSOLV	224.7	PCI/L		4		03-AUG-90
2886	GW00665IT	GROSS BETA - DISSOLV	270.7	PCI/L		4		13-NOV-90
2886	28-86-03-19-87	GROSS BETA PARTICLE	368	PCI/L			N	19-MAR-87
2886	28-86-06-24-87	GROSS BETA PARTICLE	745	PCI/L			N	24-JUN-87
2886	28-86-09-07-88	GROSS BETA PARTICLE	940	PCI/L				07-SEP-88
2886	28-86-09-07-88	GROSS BETA PARTICLE	940	PCI/L			N	07-SEP-88
2886	28-86-05-18-89	GROSS BETA PARTICLE	407	PCI/L		5.7		18-MAY-89
2886	28-86-05-18-89	GROSS BETA PARTICLE	407	PCI/L		5.7		18-MAY-89
2886	28-86-09-13-89	GROSS BETA PARTICLE	241	PCI/L		4		13-SEP-89
2886	28-86-09-13-89	GROSS BETA PARTICLE	241	PCI/L		4		13-SEP-89
2886	G28861189004	GROSS BETA PARTICLE	550	PCI/L		40		10-NOV-89
2886	G2886029000	GROSS BETA PARTICLE	213	PCI/L		9		13-FEB-90
2886	G28860290001	GROSS BETA PARTICLE	368	PCI/L		9		13-FEB-90
2886	G-2886-0515-02-10	LEAD	3	UG/L		3		15-MAY-90
2886	28-86-03-17-88	LITHIUM	1.4	MG/L			N	17-MAR-88
2886	G-2886-0515-02-10	LITHIUM	283	UG/L		100		15-MAY-90
2886	GW00094IT	LITHIUM	271.00	UG/L		100		03-AUG-90
2886	GW00665IT	LITHIUM	337	UG/L		100		13-NOV-90
2886	GW01189IT	LITHIUM	250.00	UG/L		100		23-APR-91
2886	GW01393IT	LITHIUM	168.00	UG/L		100		10-JUN-91
2886	28-86-03-19-87	MAGNESIUM	84.9911	MG/L		0.020	N	19-MAR-87
2886	28-86-06-24-87	MAGNESIUM	243.2036	MG/L		0.020	N	24-JUN-87
2886	28-86-03-17-88	MAGNESIUM	151.2661	MG/L			N	17-MAR-88
2886	28-86-09-07-88	MAGNESIUM	89.2169	MG/L			N	07-SEP-88
2886	28-86-05-18-89	MAGNESIUM	43.8341	MG/L				18-MAY-89
2886	G-2886-0515-02-10	MAGNESIUM	32500	UG/L		5000		15-MAY-90
2886	GW00094IT	MAGNESIUM	38100.00	UG/L		5000		03-AUG-90
2886	GW00665IT	MAGNESIUM	49700	UG/L		5000		13-NOV-90
2886	GW01189IT	MAGNESIUM	28700.00	UG/L		5000		23-APR-91
2886	GW01393IT	MAGNESIUM	17800.00	UG/L		5000		10-JUN-91
2886	28-86-03-19-87	MANGANESE	0.7376	MG/L		0.005	N	19-MAR-87
2886	28-86-06-24-87	MANGANESE	1.7085	MG/L		0.005	N	24-JUN-87
2886	28-86-03-17-88	MANGANESE	1.2420	MG/L			N	17-MAR-88
2886	28-86-09-07-88	MANGANESE	0.6903	MG/L			N	07-SEP-88
2886	28-86-05-18-89	MANGANESE	0.3553	MG/L				18-MAY-89
2886	G-2886-0515-02-10	MANGANESE	265	UG/L		15		15-MAY-90
2886	GW00094IT	MANGANESE	262.00	UG/L		15		03-AUG-90
2886	GW00665IT	MANGANESE	388	UG/L		20		13-NOV-90
2886	GW01189IT	MANGANESE	266.00	UG/L		15		23-APR-91
2886	GW01393IT	MANGANESE	119.00	UG/L		15		10-JUN-91
2886	28-86-03-19-87	NICKEL	0.0869	MG/L		0.037	N	19-MAR-87
2886	28-86-06-24-87	NICKEL	0.2854	MG/L		0.037	N	24-JUN-87
2886	28-86-03-17-88	NICKEL	0.1512	MG/L			N	17-MAR-88
2886	28-86-09-07-88	NICKEL	0.0904	MG/L			N	07-SEP-88

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
2886	28-86-06-24-87	PLUTONIUM-239	0.15	PCI/L			N	24-JUN-87
2886	28-86-03-19-87	POTASSIUM	260.0	MG/L		5.0	N	19-MAR-87
2886	28-86-06-24-87	POTASSIUM	250	MG/L		5.0	N	24-JUN-87
2886	28-86-09-07-88	POTASSIUM	435	MG/L			N	07-SEP-88
2886	28-86-05-18-89	POTASSIUM	280	MG/L				18-MAY-89
2886	G-2886-0515-02-10	POTASSIUM	147000	UG/L		5000		15-MAY-90
2886	GW00094IT	POTASSIUM	147000.00	UG/L		5000		03-AUG-90
2886	GW00665IT	POTASSIUM	190000	UG/L		5000		13-NOV-90
2886	GW01189IT	POTASSIUM	139000.00	UG/L		5000		23-APR-91
2886	GW01393IT	POTASSIUM	101000.00	UG/L		5000		10-JUN-91
2886	28-86-03-19-87	SODIUM	1211.5603	MG/L		2.100	N	19-MAR-87
2886	28-86-06-24-87	SODIUM	2535.8950	MG/L		2.100	N	24-JUN-87
2886	28-86-03-17-88	SODIUM	1800.9309	MG/L			N	17-MAR-88
2886	28-86-09-07-88	SODIUM	1411.3809	MG/L			N	07-SEP-88
2886	28-86-05-18-89	SODIUM	794.3651	MG/L				18-MAY-89
2886	G-2886-0515-02-10	SODIUM	446000	UG/L		5000		15-MAY-90
2886	GW00094IT	SODIUM	383000.00	UG/L		5000		03-AUG-90
2886	GW00665IT	SODIUM	475000	UG/L		5000		13-NOV-90
2886	GW01189IT	SODIUM	388000.00	UG/L		5000		23-APR-91
2886	GW01393IT	SODIUM	276000.00	UG/L		5000		10-JUN-91
2886	G-2886-0515-02-10	STRONTIUM	869	UG/L		100		15-MAY-90
2886	GW00094IT	STRONTIUM	1010.00	UG/L		200		03-AUG-90
2886	GW00665IT	STRONTIUM	1280	UG/L		200		13-NOV-90
2886	GW01189IT	STRONTIUM	753.00	UG/L		200		23-APR-91
2886	GW01393IT	STRONTIUM	479.00	UG/L		200		10-JUN-91
2886	28-86-03-19-87	STRONTIUM-90	6.0	PCI/L			N	19-MAR-87
2886	28-86-06-24-87	STRONTIUM-90	2.9	PCI/L			N	24-JUN-87
2886	28-86-03-19-87	SULFATE	290	MG/L		1.0		19-MAR-87
2886	28-86-06-24-87	SULFATE	390	MG/L		1.0		24-JUN-87
2886	28-86-03-17-88	SULFATE	335	MG/L				17-MAR-88
2886	28-86-05-18-89	SULFATE	182	MG/L	V			18-MAY-89
2886	28-86-09-13-89	SULFATE	132	MG/L				13-SEP-89
2886	G-2886-0515-02-10	SULFATE	106	MG/L		25		15-MAY-90
2886	GW01189IT	SULFATE	110	MG/L		2.0		23-APR-91
2886	GW01393IT	SULFATE	76	MG/L		2.0		10-JUN-91
2886	28-86-03-19-87	TRITIUM	6300	PCI/L			N	19-MAR-87
2886	28-86-06-24-87	TRITIUM	12000	PCI/L			N	24-JUN-87
2886	28-86-03-17-88	TRITIUM	9000	PCI/L			N	17-MAR-88
2886	28-86-09-07-88	TRITIUM	5900	PCI/L			N	07-SEP-88
2886	28-86-05-18-89	TRITIUM	2900	PCI/L				18-MAY-89
2886	28-86-05-18-89	TRITIUM	2900	PCI/L				18-MAY-89
2886	GW00094IT	TRITIUM	800.4	PCI/L		400		03-AUG-90
2886	GW00665IT	TRITIUM	1557	PCI/L		400		13-NOV-90
2886	28-86-03-19-87	URANIUM-233,-234	211	PCI/L			N	19-MAR-87
2886	28-86-06-24-87	URANIUM-233,-234	1000	PCI/L			N	24-JUN-87
2886	28-86-03-17-88	URANIUM-233,-234	3.2	PCI/L			N	17-MAR-88
2886	28-86-09-07-88	URANIUM-233,-234	250	PCI/L				07-SEP-88
2886	28-86-09-07-88	URANIUM-233,-234	250	PCI/L			N	07-SEP-88
2886	28-86-09-13-89	URANIUM-233,-234	175	PCI/L		0.26		13-SEP-89
2886	G28861189004	URANIUM-233,-234	250	PCI/L		2		10-NOV-89
2886	G2886029000	URANIUM-233,-234	290	PCI/L		1		13-FEB-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
2886	GW00094IT	URANIUM-233,-234	155.6	PCI/L		.6		03-AUG-90
2886	GW00665IT	URANIUM-233,-234	195.1	PCI/L		.6		13-NOV-90
2886	28-86-03-19-87	URANIUM-235	7.7	PCI/L			N	19-MAR-87
2886	28-86-06-24-87	URANIUM-235	47	PCI/L			N	24-JUN-87
2886	28-86-03-17-88	URANIUM-235	12	PCI/L			N	17-MAR-88
2886	28-86-09-07-88	URANIUM-235	8.3	PCI/L				07-SEP-88
2886	28-86-09-07-88	URANIUM-235	8.3	PCI/L			N	07-SEP-88
2886	28-86-09-13-89	URANIUM-235	9.66	PCI/L		0		13-SEP-89
2886	G28861189004	URANIUM-235	11	PCI/L		2		10-NOV-89
2886	G2886029000	URANIUM-235	9	PCI/L		.1		13-FEB-90
2886	GW00094IT	URANIUM-235	5.176	PCI/L		.6		03-AUG-90
2886	GW00665IT	URANIUM-235	7.907	PCI/L		.6		13-NOV-90
2886	28-86-03-19-87	URANIUM-238	142	PCI/L			N	19-MAR-87
2886	28-86-06-24-87	URANIUM-238	750	PCI/L			N	24-JUN-87
2886	28-86-03-17-88	URANIUM-238	220	PCI/L			N	17-MAR-88
2886	28-86-09-07-88	URANIUM-238	170	PCI/L				07-SEP-88
2886	28-86-09-07-88	URANIUM-238	170	PCI/L			N	07-SEP-88
2886	28-86-09-13-89	URANIUM-238	116	PCI/L		0		13-SEP-89
2886	G28861189004	URANIUM-238	190	PCI/L		6		10-NOV-89
2886	G2886029000	URANIUM-238	190	PCI/L		1		13-FEB-90
2886	GW00094IT	URANIUM-238	104.4	PCI/L		.6		03-AUG-90
2886	GW00665IT	URANIUM-238	135.1	PCI/L		.6		13-NOV-90
2886	GW00094IT	ZINC	26.90	UG/L		20		03-AUG-90
2886	GW00665IT	ZINC	66.0	UG/L		20		13-NOV-90
2886	GW01189IT	ZINC	24.30	UG/L		20.00		23-APR-91
5287	G52871089003	ALUMINUM	.388	MG/L		200	A	26-OCT-89
5287	52-87-04-19-88	AMERICIUM-241	0.02	PCI/L		0.79	N	19-APR-88
5287	52-87-10-18-88	AMERICIUM-241	.04	PCI/L				18-OCT-88
5287	52-87-02-13-88	BICARBONATE	502	MG/L				13-FEB-88
5287	52-87-04-19-88	BICARBONATE	359	MG/L				19-APR-88
5287	52-87-07-19-88	BICARBONATE	460	MG/L				19-JUL-88
5287	52-87-10-18-88	BICARBONATE	443	MG/L	A			18-OCT-88
5287	52-87-01-16-89	BICARBONATE	398	MG/L	V		A	16-JAN-89
5287	52-87-04-20-89	BICARBONATE	461	MG/L	V			20-APR-89
5287	52-87-07-25-89	BICARBONATE	508	MG/L				25-JUL-89
5287	G52871089003	BICARBONATE	520	MG/L	A			26-OCT-89
5287	G52870190001	BICARBONATE	570	MG/L				29-JAN-90
5287	G-5287-0621-02-14	BICARBONATE AS CACO3	482	MG/L		2		21-JUN-90
5287	GW00301IT	BICARBONATE AS CACO3	480	MG/L		1.0		24-AUG-90
5287	GW00797IT	BICARBONATE AS CACO3	490	MG/L		1.0		11-DEC-90
5287	GW01044IT	BICARBONATE AS CACO3	460	MG/L		1		26-MAR-91
5287	GW01390IT	BICARBONATE AS CACO3	490	MG/L		1.0		07-JUN-91
5287	52-87-11-24-87	CALCIUM	85.6972	MG/L			N	24-NOV-87
5287	52-87-02-13-88	CALCIUM	104.3593	MG/L			N	13-FEB-88
5287	52-87-04-19-88	CALCIUM	110.5478	MG/L		MG/L	N	19-APR-88
5287	52-87-07-19-88	CALCIUM	113.3889	MG/L			N	19-JUL-88
5287	52-87-10-18-88	CALCIUM	106.9126	MG/L			N	18-OCT-88
5287	52-87-01-16-89	CALCIUM	97.1	MG/L	V		A	16-JAN-89
5287	52-87-04-20-89	CALCIUM	111.9362	MG/L				20-APR-89
5287	G52870689001D	CALCIUM	118.00	MG/L	A	5000	A	12-JUN-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
5287	52-87-07-25-89	CALCIUM	108.1291	MG/L				25-JUL-89
5287	G52870889002	CALCIUM	125.00	MG/L	V	5000	A	14-AUG-89
5287	G52871089003	CALCIUM	117.00	MG/L		5000	A	26-OCT-89
5287	G-5287-0621-02-14	CALCIUM	119000	UG/L		5000		21-JUN-90
5287	GW00301IT	CALCIUM	113000.00	UG/L		5000		24-AUG-90
5287	GW00797IT	CALCIUM	115000.00	UG/L		5000		11-DEC-90
5287	GW01044IT	CALCIUM	122000	UG/L		5000		26-MAR-91
5287	GW01390IT	CALCIUM	120000.00	UG/L		5000		07-JUN-91
5287	GW00301IT	CHROMIUM	10.90	UG/L		10		24-AUG-90
5287	GW00797IT	CHROMIUM	14.10	UG/L		10		11-DEC-90
5287	52-87-04-20-89	COPPER	0.0587	MG/L				20-APR-89
5287	G52871089003	COPPER	.0482	MG/L		25.0	A	26-OCT-89
5287	52-87-11-24-87	GROSS ALPHA PARTICLE	70	PCI/L			N	24-NOV-87
5287	G52870689001D	GROSS ALPHA PARTICLE	62	PCI/L				12-JUN-89
5287	G52870889002	GROSS ALPHA PARTICLE	59	PCI/L		12		14-AUG-89
5287	52-87-11-24-87	GROSS BETA PARTICLE	76	PCI/L			N	24-NOV-87
5287	52-87-11-24-87	MAGNESIUM	19.5478	MG/L			N	24-NOV-87
5287	52-87-02-13-88	MAGNESIUM	25.0742	MG/L			N	13-FEB-88
5287	52-87-04-19-88	MAGNESIUM	31.2190	MG/L		MG/L	N	19-APR-88
5287	52-87-07-19-88	MAGNESIUM	31.6869	MG/L			N	19-JUL-88
5287	52-87-10-18-88	MAGNESIUM	26.1864	MG/L			N	18-OCT-88
5287	52-87-01-16-89	MAGNESIUM	23.9	MG/L	V		A	16-JAN-89
5287	52-87-04-20-89	MAGNESIUM	26.4394	MG/L				20-APR-89
5287	G52870689001D	MAGNESIUM	31.50	MG/L	V	5000	A	12-JUN-89
5287	52-87-07-25-89	MAGNESIUM	29.2514	MG/L				25-JUL-89
5287	G52870889002	MAGNESIUM	32.50	MG/L	V	5000	A	14-AUG-89
5287	G52871089003	MAGNESIUM	31.50	MG/L		5000	A	26-OCT-89
5287	G-5287-0621-02-14	MAGNESIUM	31900	UG/L		5000		21-JUN-90
5287	GW00301IT	MAGNESIUM	30400.00	UG/L		5000		24-AUG-90
5287	GW00797IT	MAGNESIUM	30600.00	UG/L		5000		11-DEC-90
5287	GW01044IT	MAGNESIUM	31200	UG/L		5000		26-MAR-91
5287	GW01390IT	MAGNESIUM	31600.00	UG/L		5000		07-JUN-91
5287	52-87-11-24-87	MANGANESE	0.2171	MG/L			N	24-NOV-87
5287	52-87-02-13-88	MANGANESE	0.7556	MG/L			N	13-FEB-88
5287	52-87-04-19-88	MANGANESE	0.4838	MG/L		MG/L	N	19-APR-88
5287	52-87-07-19-88	MANGANESE	0.5079	MG/L			N	19-JUL-88
5287	52-87-10-18-88	MANGANESE	0.7057	MG/L			N	18-OCT-88
5287	G52870689001D	MANGANESE	.250	MG/L	V	15.0	A	12-JUN-89
5287	G52870889002	MANGANESE	.234	MG/L	V	15.0	A	14-AUG-89
5287	G-5287-0621-02-14	MANGANESE	28.3	UG/L		15		21-JUN-90
5287	GW00301IT	MANGANESE	90.20	UG/L		15		24-AUG-90
5287	GW00797IT	MANGANESE	62.90	UG/L		15		11-DEC-90
5287	GW01044IT	MANGANESE	27.0	UG/L		15		26-MAR-91
5287	GW01390IT	MANGANESE	18.80	UG/L		15		07-JUN-91
5287	GW01044IT	MERCURY	0.40	UG/L		0.2		26-MAR-91
5287	52-87-07-19-88	NICKEL	0.1102	MG/L			N	19-JUL-88
5287	52-87-10-18-88	NICKEL	0.0504	MG/L			N	18-OCT-88
5287	52-87-04-20-89	NICKEL	0.1321	MG/L				20-APR-89
5287	52-87-10-18-88	PLUTONIUM-239	.02	PCI/L				18-OCT-88
5287	52-87-11-24-87	SODIUM	124.7997	MG/L			N	24-NOV-87
5287	52-87-02-13-88	SODIUM	166.3747	MG/L			N	13-FEB-88

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
5287	52-87-04-19-88	SODIUM	164.5510	MG/L		MG/L	N	19-APR-88
5287	52-87-07-19-88	SODIUM	173.5700	MG/L			N	19-JUL-88
5287	52-87-10-18-88	SODIUM	184.7438	MG/L			N	18-OCT-88
5287	52-87-01-16-89	SODIUM	166	MG/L	V		A	16-JAN-89
5287	52-87-04-20-89	SODIUM	169.9652	MG/L				20-APR-89
5287	G52870689001D	SODIUM	158.00	MG/L	V	5000	A	12-JUN-89
5287	52-87-07-25-89	SODIUM	178.1291	MG/L				25-JUL-89
5287	G52870889002	SODIUM	181.00	MG/L	V	5000	A	14-AUG-89
5287	G52871089003	SODIUM	203.00	MG/L		5000	A	26-OCT-89
5287	G-5287-0621-02-14	SODIUM	194000	UG/L		5000		21-JUN-90
5287	GW00301IT	SODIUM	184000.00	UG/L		5000		24-AUG-90
5287	GW00797IT	SODIUM	187000.00	UG/L		5000		11-DEC-90
5287	GW01044IT	SODIUM	180000	UG/L		5000		26-MAR-91
5287	GW01390IT	SODIUM	204000.00	UG/L		5000		07-JUN-91
5287	G-5287-0621-02-14	STRONTIUM	777	UG/L		100		21-JUN-90
5287	GW00301IT	STRONTIUM	760.00	UG/L		200		24-AUG-90
5287	GW00797IT	STRONTIUM	771.00	UG/L		200		11-DEC-90
5287	GW01044IT	STRONTIUM	712	UG/L		200		26-MAR-91
5287	GW01390IT	STRONTIUM	811.00	UG/L		200		07-JUN-91
5287	52-87-11-23-87	SULFATE	133	MG/L				23-NOV-87
5287	52-87-02-13-88	SULFATE	186	MG/L				13-FEB-88
5287	52-87-04-19-88	SULFATE	241	MG/L				19-APR-88
5287	52-87-07-19-88	SULFATE	225	MG/L				19-JUL-88
5287	52-87-10-18-88	SULFATE	197	MG/L	A			18-OCT-88
5287	52-87-01-16-89	SULFATE	587	MG/L	V		A	16-JAN-89
5287	52-87-04-20-89	SULFATE	214	MG/L	A			20-APR-89
5287	52-87-07-25-89	SULFATE	221	MG/L				25-JUL-89
5287	G52871089003	SULFATE	240	MG/L	A			26-OCT-89
5287	G52870190001	SULFATE	240	MG/L				29-JAN-90
5287	G-5287-0621-02-14	SULFATE	240	MG/L		50		21-JUN-90
5287	GW00301IT	SULFATE	240	MG/L		2.0		24-AUG-90
5287	GW00797IT	SULFATE	180	MG/L		2.0		11-DEC-90
5287	GW01044IT	SULFATE	230	MG/L		0.2/4		26-MAR-91
5287	GW01390IT	SULFATE	220	MG/L		2.0		07-JUN-91
5287	G52870889002	TRITIUM	380	PCI/L		27		14-AUG-89
5287	52-87-11-24-87	URANIUM-233,-234	21	PCI/L			N	24-NOV-87
5287	52-87-02-13-88	URANIUM-233,-234	4.7	PCI/L			N	13-FEB-88
5287	52-87-04-19-88	URANIUM-233,-234	29	PCI/L			N	19-APR-88
5287	52-87-07-19-88	URANIUM-233,-234	28				V	19-JUL-88
5287	52-87-10-18-88	URANIUM-233,-234	22.6	PCI/L				18-OCT-88
5287	G52870689001	URANIUM-233,-234	31	PCI/L				12-JUN-89
5287	G52870689001D	URANIUM-233,-234	37	PCI/L				12-JUN-89
5287	G52870889002	URANIUM-233,-234	33	PCI/L		0.		14-AUG-89
5287	GW00797IT	URANIUM-233,-234	27.67	PCI/L		.6		11-DEC-90
5287	G52870689001D	URANIUM-238	26	PCI/L				12-JUN-89
5287	52-87-07-19-88	ZINC	0.2643	MG/L			N	19-JUL-88
5287	52-87-10-18-88	ZINC	0.1537	MG/L			N	18-OCT-88
5287	52-87-04-20-89	ZINC	0.3786	MG/L				20-APR-89
5287	G52871089003	ZINC	.288	MG/L		20.0	A	26-OCT-89
5287	G-5287-0621-02-14	ZINC	54.2	UG/L		20		21-JUN-90
5287	GW00301IT	ZINC	30.50	UG/L		20		24-AUG-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
5287	GW00797IT	ZINC	52.30	UG/L		20		11-DEC-90
5287	GW01044IT	ZINC	51.6	UG/L		20		26-MAR-91
5287	GW01390IT	ZINC	42.10	UG/L		20		07-JUN-91
5387	G53870190001	BICARBONATE	570	MG/L				30-JAN-90
5387	G-5387-0501-02-13	BICARBONATE AS CACO3	440	MG/L		10		03-MAY-90
5387	GW01281IT	BICARBONATE AS CACO3	410	MG/L		1.0		14-MAY-91
5387	G53870689001	CALCIUM	131.00	MG/L	A	5000	A	08-JUN-89
5387	G-5387-0501-02-13	CALCIUM	105000	UG/L		28.8		03-MAY-90
5387	G53870689001	COPPER	.122	MG/L	V	25.0	A	08-JUN-89
5387	G-5387-0501-02-13	COPPER	106	UG/L		2.5		03-MAY-90
5387	G-5387-0501-02-13	LITHIUM	15.7	UG/L		2		03-MAY-90
5387	G53870689001	MAGNESIUM	37.60	MG/L	A	5000	A	08-JUN-89
5387	G-5387-0501-02-13	MAGNESIUM	31600	UG/L		19.4		03-MAY-90
5387	G53870689001	NICKEL	.345	MG/L	V	40.0	A	08-JUN-89
5387	G-5387-0501-02-13	NICKEL	115	UG/L		5.5		03-MAY-90
5387	G53870689001	SODIUM	109.00	MG/L	V	5000	A	08-JUN-89
5387	G-5387-0501-02-13	SODIUM	93600	UG/L		30.4		03-MAY-90
5387	G53870190001	SULFATE	240	MG/L				30-JAN-90
5387	GW01281IT	SULFATE	210	MG/L		2.0		14-MAY-91
5387	GW00127IT	URANIUM-233,-234	10.17	PCI/L		.6		31-JUL-90
5387	G53870689001	ZINC	.970	MG/L	V	20.0	A	08-JUN-89
5387	G-5387-0501-02-13	ZINC	266	UG/L		9.0		03-MAY-90
5487	G54870689001	CALCIUM	141.00	MG/L	V	500	A	08-JUN-89
5487	G54870689001	COPPER	3.13	MG/L	V	25.0	A	08-JUN-89
5487	G54870689001	MAGNESIUM	32.90	MG/L	V	500	A	08-JUN-89
5487	G54870689001	NICKEL	11.70	MG/L	V	40.0	A	08-JUN-89
5487	G54870689001	SODIUM	98.60	MG/L	V	500	A	08-JUN-89
5487	G54870689001	URANIUM-233,-234	0.1	PCI/L				08-JUN-89
P114789	PZ43891115	ALUMINUM	2480	UG/G	V	38.7	A	28-SEP-89
P114789	PZ43891519	ALUMINUM	4180	UG/G	V	39.4	A	28-SEP-89
P114789	PZ43891922	ALUMINUM	5480	UG/G		40.6		28-SEP-89
P114789	PZ43892631	ALUMINUM	5980	UG/G	V	48.5	A	28-SEP-89
P114789	PZ43892226	ALUMINUM	4600	UG/G	V	34.3	A	28-SEP-89
P114789	PZ43890003	ALUMINUM	7130	UG/G	V	33.9	A	28-SEP-89
P114789	PZ43890307	ALUMINUM	9730	UG/G	V	37.4	A	28-SEP-89
P114789	PZ43890711	ALUMINUM	4330	UG/G	V	39.0	A	28-SEP-89
P114789	PZ43890003	ARSENIC	4.7	UG/G	A	3.9	A	28-SEP-89
P114789	PZ43890003	BARIUM	51.3	UG/G	V	33.9	A	28-SEP-89
P114789	PZ43890711	BARIUM	57.8	UG/G	V	39.0	A	28-SEP-89
P114789	PZ43890307	BARIUM	75.3	UG/G	V	37.4	A	28-SEP-89
P114789	PZ43892631	BARIUM	116	UG/G	V	48.5	A	28-SEP-89
P114789	PZ43892226	BARIUM	69.5	UG/G	V	34.3	A	28-SEP-89
P114789	PZ43891922	BARIUM	63.1	UG/G		40.6		28-SEP-89
P114789	PZ43891519	BARIUM	86.4	UG/G	V	39.4	A	28-SEP-89
P114789	PZ43890307	BERYLLIUM	1.2	UG/G	A	0.94	A	28-SEP-89
P114789	PZ43891115	CALCIUM	1160	UG/G	A	966	A	28-SEP-89
P114789	PZ43892631	CALCIUM	5560	UG/G	A	1210	A	28-SEP-89
P114789	PZ43892226	CALCIUM	3120	UG/G	A	856	A	28-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P114789	PZ43891922	CALCIUM	2140	UG/G		1010		28-SEP-89
P114789	PZ43891519	CALCIUM	1560	UG/G	A	984	A	28-SEP-89
P114789	PZ43890003	CALCIUM	2300	UG/G	A	846	A	28-SEP-89
P114789	PZ43890711	CALCIUM	2090	UG/G	A	974	A	28-SEP-89
P114789	PZ43890307	CALCIUM	3290	UG/G	A	935	A	28-SEP-89
P114789	PZ43891115	CHROMIUM	4.7	UG/G	V	1.9	A	28-SEP-89
P114789	PZ43892631	CHROMIUM	9.1	UG/G	V	2.4	A	28-SEP-89
P114789	PZ43891519	CHROMIUM	8.3	UG/G	V	2.0	A	28-SEP-89
P114789	PZ43892226	CHROMIUM	8.7	UG/G	V	1.7	A	28-SEP-89
P114789	PZ43891922	CHROMIUM	6.6	UG/G		2.0		28-SEP-89
P114789	PZ43890003	CHROMIUM	12.6	UG/G	V	1.7	A	28-SEP-89
P114789	PZ43890307	CHROMIUM	13.0	UG/G	V	1.9	A	28-SEP-89
P114789	PZ43890711	CHROMIUM	7.6	UG/G	V	1.9	A	28-SEP-89
P114789	PZ43890307	COBALT	9.5	UG/G	V	9.4	A	28-SEP-89
P114789	PZ43890711	COBALT	10.7	UG/G	V	9.7	A	28-SEP-89
P114789	PZ43891115	COPPER	7.1	UG/G	A	4.8	A	28-SEP-89
P114789	PZ43892631	COPPER	39.4	UG/G	A	6.1	A	28-SEP-89
P114789	PZ43892226	COPPER	13.1	UG/G	A	4.3	A	28-SEP-89
P114789	PZ43891922	COPPER	11.5	UG/G		5.1		28-SEP-89
P114789	PZ43891519	COPPER	12.2	UG/G	A	4.9	A	28-SEP-89
P114789	PZ43890003	COPPER	13.2	UG/G	A	4.2	A	28-SEP-89
P114789	PZ43890307	COPPER	17.0	UG/G	A	4.7	A	28-SEP-89
P114789	PZ43890711	COPPER	10.9	UG/G	A	4.9	A	28-SEP-89
P114789	PZ43890003	IRON	10200	UG/G	V	16.9	A	28-SEP-89
P114789	PZ43891115	IRON	4380	UG/G	V	19.3	A	28-SEP-89
P114789	PZ43890711	IRON	8480	UG/G	V	19.5	A	28-SEP-89
P114789	PZ43890307	IRON	15600	UG/G	V	18.7	A	28-SEP-89
P114789	PZ43891519	IRON	8130	UG/G	V	19.7	A	28-SEP-89
P114789	PZ43891922	IRON	9080	UG/G		20.3		28-SEP-89
P114789	PZ43892226	IRON	9320	UG/G	V	17.1	A	28-SEP-89
P114789	PZ43892631	IRON	24500	UG/G	V	24.2	A	28-SEP-89
P114789	PZ43891519	LEAD	3.6	UG/G	A	1.1	A	28-SEP-89
P114789	PZ43891922	LEAD	11.1	UG/G		1.5		28-SEP-89
P114789	PZ43892226	LEAD	8.6	UG/G	A	1.4	A	28-SEP-89
P114789	PZ43892631	LEAD	11.7	UG/G	A	1.3	A	28-SEP-89
P114789	PZ43890003	LEAD	8.0	UG/G	A	1.2	A	28-SEP-89
P114789	PZ43890711	LEAD	1.5	UG/G	A	0.70	A	28-SEP-89
P114789	PZ43891115	LEAD	2.9	UG/G	A	0.90	A	28-SEP-89
P114789	PZ43890307	LEAD	4.1	UG/G	A	0.59	A	28-SEP-89
P114789	PZ43891519	MAGNESIUM	1870	UG/G	A	984	A	28-SEP-89
P114789	PZ43892631	MAGNESIUM	2390	UG/G	A	1210	A	28-SEP-89
P114789	PZ43892226	MAGNESIUM	1710	UG/G	A	856	A	28-SEP-89
P114789	PZ43891922	MAGNESIUM	1990	UG/G		1010		28-SEP-89
P114789	PZ43890003	MAGNESIUM	1470	UG/G	A	846	A	28-SEP-89
P114789	PZ43890711	MAGNESIUM	1260	UG/G	A	974	A	28-SEP-89
P114789	PZ43890307	MAGNESIUM	2320	UG/G	A	935	A	28-SEP-89
P114789	PZ43890003	MANGANESE	141	UG/G	A	2.5	A	28-SEP-89
P114789	PZ43891519	MANGANESE	358	UG/G	A	3.0	A	28-SEP-89
P114789	PZ43890307	MANGANESE	199	UG/G	A	2.8	A	28-SEP-89
P114789	PZ43890711	MANGANESE	268	UG/G	A	2.9	A	28-SEP-89
P114789	PZ43891115	MANGANESE	44.3	UG/G	A	2.9	A	28-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P114789	PZ43891922	MANGANESE	190	UG/G		3.0		28-SEP-89
P114789	PZ43892631	MANGANESE	209	UG/G	A	3.6	A	28-SEP-89
P114789	PZ43892226	MANGANESE	177	UG/G	A	2.6	A	28-SEP-89
P114789	PZ43891922	NICKEL	12.6	UG/G		8.1		28-SEP-89
P114789	PZ43892226	NICKEL	13.7	UG/G	A	6.9	A	28-SEP-89
P114789	PZ43892631	NICKEL	28.1	UG/G	A	9.7	A	28-SEP-89
P114789	PZ43890003	NICKEL	8.0	UG/G	A	6.8	A	28-SEP-89
P114789	PZ43891519	NICKEL	16.3	UG/G	A	7.9	A	28-SEP-89
P114789	PZ43890711	NICKEL	14.9	UG/G	A	7.8	A	28-SEP-89
P114789	PZ43890307	NICKEL	20.8	UG/G	A	7.5	A	28-SEP-89
P114789	PZ43890003	PLUTONIUM-239	0.090	PCI/G		0		28-SEP-89
P114789	PZ43890307	PLUTONIUM-239	0.022	PCI/G		0		28-SEP-89
P114789	PZ43890003	POTASSIUM	1010	UG/G	A	846	A	28-SEP-89
P114789	PZ43890307	POTASSIUM	988	UG/G	A	935	A	28-SEP-89
P114789	PZ43890307	STRONTIUM	22.0	UG/G	A	18.7	A	28-SEP-89
P114789	PZ43892226	STRONTIUM	20.6	UG/G	A	17.1	A	28-SEP-89
P114789	PZ43892631	STRONTIUM	49.2	UG/G	A	24.2	A	28-SEP-89
P114789	PZ43890003	STRONTIUM-90	1.50	PCI/G		0.		28-SEP-89
P114789	PZ43891519	STRONTIUM-90	2.19	PCI/G		0.		28-SEP-89
P114789	PZ43891922	STRONTIUM-90	1.76	PCI/G		0.		28-SEP-89
P114789	PZ43890003	TIN	27.8	UG/G	A	16.9	A	28-SEP-89
P114789	PZ43890307	TIN	37.5	UG/G	A	18.7	A	28-SEP-89
P114789	PZ43890711	TIN	25.4	UG/G	A	19.5	A	28-SEP-89
P114789	PZ43891922	TIN	23.4	UG/G		20.3		28-SEP-89
P114789	PZ43891519	TIN	23.6	UG/G	A	19.7	A	28-SEP-89
P114789	PZ43892226	TIN	27.1	UG/G	A	17.1	A	28-SEP-89
P114789	PZ43892631	TIN	41.4	UG/G	A	24.2	A	28-SEP-89
P114789	PZ43892631	URANIUM-233,-234	0.64	PCI/G		0		28-SEP-89
P114789	PZ43890003	URANIUM-233,-234	0.80	PCI/G		0.		28-SEP-89
P114789	PZ43892226	URANIUM-233,-234	0.39	PCI/G		0.		28-SEP-89
P114789	PZ43891922	URANIUM-233,-234	0.54	PCI/G		0		28-SEP-89
P114789	PZ43891519	URANIUM-233,-234	0.47	PCI/G		0		28-SEP-89
P114789	PZ43891115	URANIUM-233,-234	0.66	PCI/G		0.		28-SEP-89
P114789	PZ43890307	URANIUM-233,-234	0.38	PCI/G		0.		28-SEP-89
P114789	PZ43890711	URANIUM-233,-234	0.49	PCI/G		0		28-SEP-89
P114789	PZ43892226	VANADIUM	19.6	UG/G	V	8.6	A	28-SEP-89
P114789	PZ43892631	VANADIUM	41.4	UG/G	V	12.1	A	28-SEP-89
P114789	PZ43890003	VANADIUM	25.4	UG/G	V	8.5	A	28-SEP-89
P114789	PZ43891115	VANADIUM	14.4	UG/G	V	9.7	A	28-SEP-89
P114789	PZ43890711	VANADIUM	27.2	UG/G	V	9.7	A	28-SEP-89
P114789	PZ43890307	VANADIUM	38.9	UG/G	V	9.4	A	28-SEP-89
P114789	PZ43891519	VANADIUM	23.3	UG/G	V	9.8	A	28-SEP-89
P114789	PZ43891922	VANADIUM	18.3	UG/G		10.1		28-SEP-89
P114789	PZ43890003	ZINC	31.8	UG/G	A	3.4	A	28-SEP-89
P114789	PZ43890711	ZINC	18.3	UG/G	A	3.9	A	28-SEP-89
P114789	PZ43890307	ZINC	24.0	UG/G	A	3.7	A	28-SEP-89
P114789	PZ43891922	ZINC	25.8	UG/G		4.1		28-SEP-89
P114789	PZ43891115	ZINC	11.6	UG/G	A	3.9	A	28-SEP-89
P114789	PZ43891519	ZINC	23.9	UG/G	A	3.9	A	28-SEP-89
P114789	PZ43892226	ZINC	34.6	UG/G	A	3.4	A	28-SEP-89
P114789	PZ43892631	ZINC	108	UG/G	A	4.8	A	28-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P114789	PZ43890003	pH	8.6	PHUNIT				28-SEP-89
P114789	PZ43890307	pH	8.3	PHUNIT				28-SEP-89
P114889	PZ44891318	ALUMINUM	17100	UG/G		45.0		22-SEP-89
P114889	PZ44890003	ALUMINUM	17500	UG/G		45.2		22-SEP-89
P114889	PZ44890306	ALUMINUM	6380	UG/G		41.9		22-SEP-89
P114889	PZ44890913	ALUMINUM	13600	UG/G		45.1		22-SEP-89
P114889	PZ44890003	ANTIMONY	15.8	UG/G		13.6		22-SEP-89
P114889	PZ44890913	ANTIMONY	13.9	UG/G		13.5		22-SEP-89
P114889	PZ44891318	ANTIMONY	20.8	UG/G		13.5		22-SEP-89
P114889	PZ44891318	ARSENIC	8.9	UG/G		2.4		22-SEP-89
P114889	PZ44890913	ARSENIC	5.1	UG/G		2.0		22-SEP-89
P114889	PZ44890003	BARIUM	63.5	UG/G		45.2		22-SEP-89
P114889	PZ44890913	BARIUM	46.8	UG/G		45.1		22-SEP-89
P114889	PZ44891318	BARIUM	79.5	UG/G		45.0		22-SEP-89
P114889	PZ44891318	BERYLLIUM	1.1	UG/G		1.1		22-SEP-89
P114889	PZ44890003	BERYLLIUM	1.2	UG/G		1.1		22-SEP-89
P114889	PZ44891318	CALCIUM	4460	UG/G		1120		22-SEP-89
P114889	PZ44890003	CALCIUM	3820	UG/G		1130		22-SEP-89
P114889	PZ44890306	CALCIUM	1100	UG/G		1050		22-SEP-89
P114889	PZ44890913	CALCIUM	2320	UG/G		1130		22-SEP-89
P114889	PZ44891318	CHROMIUM	17.0	UG/G		2.2		22-SEP-89
P114889	PZ44890003	CHROMIUM	11.7	UG/G		2.3		22-SEP-89
P114889	PZ44890306	CHROMIUM	7.5	UG/G		2.1		22-SEP-89
P114889	PZ44890913	CHROMIUM	10.2	UG/G		2.3		22-SEP-89
P114889	PZ44890003	COPPER	14.4	UG/G		5.6		22-SEP-89
P114889	PZ44890913	COPPER	7.0	UG/G		5.6		22-SEP-89
P114889	PZ44891318	COPPER	16.3	UG/G		5.6		22-SEP-89
P114889	PZ44890003	IRON	15200	UG/G		22.6		22-SEP-89
P114889	PZ44891318	IRON	21400	UG/G		22.5		22-SEP-89
P114889	PZ44890913	IRON	12900	UG/G		22.6		22-SEP-89
P114889	PZ44890306	IRON	4680	UG/G		20.9		22-SEP-89
P114889	PZ44890003	LEAD	3.9	UG/G		1.1		22-SEP-89
P114889	PZ44891318	LEAD	9.7	UG/G		2.4		22-SEP-89
P114889	PZ44890913	LEAD	6.9	UG/G		2.0		22-SEP-89
P114889	PZ44890306	LEAD	2.9	UG/G		0.96		22-SEP-89
P114889	PZ44890003	MAGNESIUM	2800	UG/G		1130		22-SEP-89
P114889	PZ44890913	MAGNESIUM	2210	UG/G		1130		22-SEP-89
P114889	PZ44891318	MAGNESIUM	4270	UG/G		1120		22-SEP-89
P114889	PZ44890003	MANGANESE	187	UG/G		3.4		22-SEP-89
P114889	PZ44890306	MANGANESE	39.3	UG/G		3.1		22-SEP-89
P114889	PZ44891318	MANGANESE	87.9	UG/G		3.4		22-SEP-89
P114889	PZ44890913	MANGANESE	69.6	UG/G		3.4		22-SEP-89
P114889	PZ44891318	NICKEL	16.6	UG/G		9.0		22-SEP-89
P114889	PZ44890913	NICKEL	10.1	UG/G		9.0		22-SEP-89
P114889	PZ44890003	PLUTONIUM-239	0.022	PCI/G		0		22-SEP-89
P114889	PZ44890306	PLUTONIUM-239	0.025	PCI/G		0		22-SEP-89
P114889	PZ44890003	POTASSIUM	1460	UG/G		1130		22-SEP-89
P114889	PZ44891318	POTASSIUM	2190	UG/G		1120		22-SEP-89
P114889	PZ44890913	POTASSIUM	1190	UG/G		1130		22-SEP-89
P114889	PZ44890003	URANIUM-233,-234	1.16	PCI/G		0		22-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P114889	PZ44890306	URANIUM-233,-234	0.71	PCI/G		0		22-SEP-89
P114889	PZ44890608	URANIUM-233,-234	0.51	PCI/G		0		22-SEP-89
P114889	PZ44890913	URANIUM-233,-234	0.37	PCI/G		0		22-SEP-89
P114889	PZ44890913D	URANIUM-233,-234	0.80	PCI/G		0		22-SEP-89
P114889	PZ44891318	URANIUM-233,-234	0.86	PCI/G		0.		22-SEP-89
P114889	PZ44890003	VANADIUM	26.9	UG/G		11.3		22-SEP-89
P114889	PZ44891318	VANADIUM	49.6	UG/G		11.2		22-SEP-89
P114889	PZ44890913	VANADIUM	24.9	UG/G		11.3		22-SEP-89
P114889	PZ44890003	ZINC	50.2	UG/G		4.5		22-SEP-89
P114889	PZ44890306	ZINC	31.8	UG/G		4.2		22-SEP-89
P114889	PZ44891318	ZINC	54.9	UG/G		4.5		22-SEP-89
P114889	PZ44890913	ZINC	25.4	UG/G		4.5		22-SEP-89
P115489	PZ49892631	ALUMINUM	4280	UG/G		39.1		20-SEP-89
P115489	PZ49890812	ALUMINUM	5230	UG/G		33.5		20-SEP-89
P115489	PZ49891214	ALUMINUM	6210	UG/G		40.6		20-SEP-89
P115489	PZ49891822	ALUMINUM	7930	UG/G		32.6		20-SEP-89
P115489	PZ49892226	ALUMINUM	5220	UG/G		32.9		20-SEP-89
P115489	PZ49891418	ALUMINUM	7810	UG/G		44.3		20-SEP-89
P115489	PZ49890003	ALUMINUM	17100	UG/G		38.9		20-SEP-89
P115489	PZ49890306	ALUMINUM	10600	UG/G		41.9		20-SEP-89
P115489	PZ49890608	ALUMINUM	5980	UG/G		35.3		20-SEP-89
P115489	PZ49892631	ARSENIC	5.9	UG/G		3.4		20-SEP-89
P115489	PZ49890812	ARSENIC	3.6	UG/G		2.0		20-SEP-89
P115489	PZ49891822	ARSENIC	7.1	UG/G		2.3		20-SEP-89
P115489	PZ49891418	ARSENIC	6.7	UG/G		2.1		20-SEP-89
P115489	PZ49890003	ARSENIC	2.0	UG/G		1.9		20-SEP-89
P115489	PZ49890608	ARSENIC	2.5	UG/G		1.9		20-SEP-89
P115489	PZ49890003	BARIUM	89.2	UG/G		38.9		20-SEP-89
P115489	PZ49890608	BARIUM	44.8	UG/G		35.3		20-SEP-89
P115489	PZ49890306	BARIUM	56.9	UG/G		41.9		20-SEP-89
P115489	PZ49890812	BARIUM	41.2	UG/G		33.5		20-SEP-89
P115489	PZ49891214	BARIUM	66.3	UG/G		40.6		20-SEP-89
P115489	PZ49891822	BARIUM	73.8	UG/G		32.6		20-SEP-89
P115489	PZ49892226	BARIUM	52.7	UG/G		32.9		20-SEP-89
P115489	PZ49891418	BARIUM	86.7	UG/G		44.3		20-SEP-89
P115489	PZ49892631	BARIUM	93.2	UG/G		39.1		20-SEP-89
P115489	PZ49891822	BERYLLIUM	0.82	UG/G		0.82		20-SEP-89
P115489	PZ49891418	BERYLLIUM	1.1	UG/G		1.1		20-SEP-89
P115489	PZ49891214	BERYLLIUM	1.4	UG/G		1.0		20-SEP-89
P115489	PZ49890003	BERYLLIUM	2.0	UG/G		0.97		20-SEP-89
P115489	PZ49890306	BERYLLIUM	1.8	UG/G		1.0		20-SEP-89
P115489	PZ49892631	CALCIUM	5600	UG/G		978		20-SEP-89
P115489	PZ49890812	CALCIUM	2390	UG/G		838		20-SEP-89
P115489	PZ49892226	CALCIUM	3660	UG/G		822		20-SEP-89
P115489	PZ49891214	CALCIUM	2620	UG/G		1020		20-SEP-89
P115489	PZ49891822	CALCIUM	4390	UG/G		816		20-SEP-89
P115489	PZ49891418	CALCIUM	4400	UG/G		1110		20-SEP-89
P115489	PZ49890003	CALCIUM	3110	UG/G		972		20-SEP-89
P115489	PZ49890306	CALCIUM	23000	UG/G		1050		20-SEP-89
P115489	PZ49890608	CALCIUM	43800	UG/G		882		20-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P115489	PZ49890812	CHROMIUM	12.4	UG/G		1.7		20-SEP-89
P115489	PZ49892631	CHROMIUM	6.0	UG/G		2.0		20-SEP-89
P115489	PZ49892226	CHROMIUM	7.9	UG/G		1.6		20-SEP-89
P115489	PZ49891822	CHROMIUM	12.0	UG/G		1.6		20-SEP-89
P115489	PZ49891418	CHROMIUM	12.6	UG/G		2.2		20-SEP-89
P115489	PZ49891214	CHROMIUM	8.0	UG/G		2.0		20-SEP-89
P115489	PZ49890003	CHROMIUM	17.5	UG/G		1.9		20-SEP-89
P115489	PZ49890306	CHROMIUM	9.5	UG/G		2.1		20-SEP-89
P115489	PZ49890608	CHROMIUM	5.4	UG/G		1.8		20-SEP-89
P115489	PZ49891822	COBALT	12.4	UG/G		8.2		20-SEP-89
P115489	PZ49891214	COPPER	11.9	UG/G		5.1		20-SEP-89
P115489	PZ49892631	COPPER	9.9	UG/G		4.9		20-SEP-89
P115489	PZ49891822	COPPER	16.8	UG/G		4.1		20-SEP-89
P115489	PZ49892226	COPPER	16.0	UG/G		4.1		20-SEP-89
P115489	PZ49891418	COPPER	22.4	UG/G		5.5		20-SEP-89
P115489	PZ49890003	COPPER	14.0	UG/G		4.9		20-SEP-89
P115489	PZ49890306	COPPER	28.1	UG/G		5.2		20-SEP-89
P115489	PZ49890812	COPPER	13.8	UG/G		4.2		20-SEP-89
P115489	PZ49890608	COPPER	6.6	UG/G		4.4		20-SEP-89
P115489	PZ49890003	IRON	17900	UG/G		19.4		20-SEP-89
P115489	PZ49890812	IRON	10300	UG/G		16.8		20-SEP-89
P115489	PZ49890608	IRON	6290	UG/G		17.6		20-SEP-89
P115489	PZ49890306	IRON	26700	UG/G		21.0		20-SEP-89
P115489	PZ49891214	IRON	11400	UG/G		20.3		20-SEP-89
P115489	PZ49891418	IRON	15500	UG/G		22.2		20-SEP-89
P115489	PZ49892631	IRON	7270	UG/G		19.6		20-SEP-89
P115489	PZ49892226	IRON	9950	UG/G		16.4		20-SEP-89
P115489	PZ49891822	IRON	10500	UG/G		16.3		20-SEP-89
P115489	PZ49891418	LEAD	16.5	UG/G		3.1		20-SEP-89
P115489	PZ49891822	LEAD	9.6	UG/G		1.4		20-SEP-89
P115489	PZ49892226	LEAD	6.2	UG/G		2.2		20-SEP-89
P115489	PZ49892631	LEAD	19.3	UG/G		2.6		20-SEP-89
P115489	PZ49890003	LEAD	2.0	UG/G		1.1		20-SEP-89
P115489	PZ49890812	LEAD	3.3	UG/G		1.2		20-SEP-89
P115489	PZ49890608	LEAD	4.0	UG/G		2.3		20-SEP-89
P115489	PZ49890306	LEAD	1.6	UG/G		1.3		20-SEP-89
P115489	PZ49891214	LEAD	2.1	UG/G		1.8		20-SEP-89
P115489	PZ49891418	MAGNESIUM	2830	UG/G		1110		20-SEP-89
P115489	PZ49891822	MAGNESIUM	3010	UG/G		816		20-SEP-89
P115489	PZ49892631	MAGNESIUM	1780	UG/G		978		20-SEP-89
P115489	PZ49892226	MAGNESIUM	1560	UG/G		822		20-SEP-89
P115489	PZ49890003	MAGNESIUM	1320	UG/G		972		20-SEP-89
P115489	PZ49890306	MAGNESIUM	2140	UG/G		1050		20-SEP-89
P115489	PZ49890608	MAGNESIUM	2000	UG/G		882		20-SEP-89
P115489	PZ49891214	MAGNESIUM	2060	UG/G		1020		20-SEP-89
P115489	PZ49890812	MAGNESIUM	1180	UG/G		838		20-SEP-89
P115489	PZ49890003	MANGANESE	86.5	UG/G		2.9		20-SEP-89
P115489	PZ49891214	MANGANESE	172	UG/G		3.0		20-SEP-89
P115489	PZ49890306	MANGANESE	48.5	UG/G		3.1		20-SEP-89
P115489	PZ49890812	MANGANESE	106	UG/G		2.5		20-SEP-89
P115489	PZ49890608	MANGANESE	56.3	UG/G		2.6		20-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P115489	PZ49891418	MANGANESE	215	UG/G		3.3		20-SEP-89
P115489	PZ49892631	MANGANESE	202	UG/G		2.9		20-SEP-89
P115489	PZ49892226	MANGANESE	63.5	UG/G		2.5		20-SEP-89
P115489	PZ49891822	MANGANESE	179	UG/G		2.4		20-SEP-89
P115489	PZ49891418	NICKEL	20.5	UG/G		8.9		20-SEP-89
P115489	PZ49891822	NICKEL	15.2	UG/G		6.5		20-SEP-89
P115489	PZ49892631	NICKEL	9.9	UG/G		7.8		20-SEP-89
P115489	PZ49892226	NICKEL	9.2	UG/G		6.6		20-SEP-89
P115489	PZ49890003	NICKEL	16.7	UG/G		7.8		20-SEP-89
P115489	PZ49890306	NICKEL	16.9	UG/G		8.4		20-SEP-89
P115489	PZ49890812	NICKEL	8.5	UG/G		6.7		20-SEP-89
P115489	PZ49891214	NICKEL	13.8	UG/G		8.1		20-SEP-89
P115489	PZ49890003	PLUTONIUM-239	0.030	PCI/G		0		20-SEP-89
P115489	PZ49890812	POTASSIUM	873	UG/G		838		20-SEP-89
P115489	PZ49891418	POTASSIUM	1380	UG/G		1110		20-SEP-89
P115489	PZ49891822	POTASSIUM	1530	UG/G		816		20-SEP-89
P115489	PZ49890608	STRONTIUM	29.6	UG/G		17.6		20-SEP-89
P115489	PZ49891418	STRONTIUM	24.2	UG/G		22.2		20-SEP-89
P115489	PZ49890306	STRONTIUM	24.2	UG/G		21.0		20-SEP-89
P115489	PZ49891822	STRONTIUM	23.6	UG/G		16.3		20-SEP-89
P115489	PZ49892631	STRONTIUM	38.6	UG/G		19.6		20-SEP-89
P115489	PZ49892226	STRONTIUM	22.3	UG/G		16.4		20-SEP-89
P115489	PZ49891822	STRONTIUM-90	1.94	PCI/G		0.		20-SEP-89
P115489	PZ49890003	TIN	47.9	UG/G		19.4		20-SEP-89
P115489	PZ49890306	TIN	42.0	UG/G		21.0		20-SEP-89
P115489	PZ49890608	TIN	21.9	UG/G		17.6		20-SEP-89
P115489	PZ49891418	TIN	35.8	UG/G		22.2		20-SEP-89
P115489	PZ49891214	TIN	28.8	UG/G		20.3		20-SEP-89
P115489	PZ49890812	TIN	26.0	UG/G		16.8		20-SEP-89
P115489	PZ49891822	TIN	27.4	UG/G		16.3		20-SEP-89
P115489	PZ49892226	TIN	22.9	UG/G		16.4		20-SEP-89
P115489	PZ49892631	TIN	22.5	UG/G		19.6		20-SEP-89
P115489	PZ49892226	TRITIUM	400	PCI/L		52		20-SEP-89
P115489	PZ49891418	TRITIUM	400	PCI/L		42		20-SEP-89
P115489	PZ49891214	TRITIUM	430	PCI/L		45		20-SEP-89
P115489	PZ49890003	TRITIUM	380	PCI/L		52		20-SEP-89
P115489	PZ49890003	URANIUM-233,-234	1.27	PCI/G		0.		20-SEP-89
P115489	PZ49890306	URANIUM-233,-234	0.72	PCI/G		0.		20-SEP-89
P115489	PZ49890812	URANIUM-233,-234	0.50	PCI/G		0		20-SEP-89
P115489	PZ49892631	URANIUM-233,-234	1.35	PCI/G		0.		20-SEP-89
P115489	PZ49892226	URANIUM-233,-234	1.68	PCI/G		0.		20-SEP-89
P115489	PZ49891822	URANIUM-233,-234	0.84	PCI/G		0.		20-SEP-89
P115489	PZ49891418	URANIUM-233,-234	0.25	PCI/G		0.		20-SEP-89
P115489	PZ49891214	URANIUM-233,-234	0.47	PCI/G		0.		20-SEP-89
P115489	PZ49891822	VANADIUM	23.3	UG/G		8.2		20-SEP-89
P115489	PZ49892226	VANADIUM	27.9	UG/G		8.2		20-SEP-89
P115489	PZ49892631	VANADIUM	14.5	UG/G		9.8		20-SEP-89
P115489	PZ49890003	VANADIUM	52.2	UG/G		9.7		20-SEP-89
P115489	PZ49891418	VANADIUM	42.3	UG/G		11.1		20-SEP-89
P115489	PZ49891214	VANADIUM	35.1	UG/G		10.2		20-SEP-89
P115489	PZ49890306	VANADIUM	77.2	UG/G		10.5		20-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P115489	PZ49890812	VANADIUM	29.9	UG/G		8.4		20-SEP-89
P115489	PZ49890608	VANADIUM	10.2	UG/G		8.8		20-SEP-89
P115489	PZ49890003	ZINC	21.6	UG/G		3.9		20-SEP-89
P115489	PZ49890306	ZINC	22.2	UG/G		4.2		20-SEP-89
P115489	PZ49891822	ZINC	34.8	UG/G		3.3		20-SEP-89
P115489	PZ49890812	ZINC	12.8	UG/G		3.4		20-SEP-89
P115489	PZ49891418	ZINC	40.2	UG/G		4.4		20-SEP-89
P115489	PZ49891214	ZINC	16.8	UG/G		4.1		20-SEP-89
P115489	PZ49890608	ZINC	14.3	UG/G		3.5		20-SEP-89
P115489	PZ49892226	ZINC	27.5	UG/G		3.3		20-SEP-89
P115489	PZ49892631	ZINC	29.2	UG/G		3.9		20-SEP-89
P115489	PZ49890812	pH	8.8	PHUNIT				20-SEP-89
P115489	PZ49890608	pH	8.7	PHUNIT				20-SEP-89
P115489	PZ49892631	pH	8.3	PHUNIT				20-SEP-89
P115489	PZ49891822	pH	8.3	PHUNIT				20-SEP-89
P115489	PZ49891418	pH	8.5	PHUNIT				20-SEP-89
P115489	PZ49891214	pH	8.5	PHUNIT				20-SEP-89
P115589	PZ50890912	ALUMINUM	5060	UG/G		35.1		03-OCT-89
P115589	PZ50891216	ALUMINUM	3230	UG/G		36.5		03-OCT-89
P115589	PZ50891620	ALUMINUM	6520	UG/G		47.1		03-OCT-89
P115589	PZ50892024	ALUMINUM	4250	UG/G		39.7		03-OCT-89
P115589	PZ50892428	ALUMINUM	4450	UG/G		39.4		03-OCT-89
P115589	PZ50890306	ALUMINUM	4250	UG/G		38.3		03-OCT-89
P115589	PZ50890306D	ALUMINUM	5620	UG/G		41.8		03-OCT-89
P115589	PZ50890609	ALUMINUM	4310	UG/G		43.2		03-OCT-89
P115589	PZ50890306	BARIUM	46.9	UG/G		38.3		03-OCT-89
P115589	PZ50890306D	BARIUM	53.2	UG/G		41.8		03-OCT-89
P115589	PZ50892428	BARIUM	42.5	UG/G		39.4		03-OCT-89
P115589	PZ50890609	BARIUM	52.4	UG/G		43.2		03-OCT-89
P115589	PZ50891620	BARIUM	113	UG/G		47.1		03-OCT-89
P115589	PZ50890912	BARIUM	49.2	UG/G		35.1		03-OCT-89
P115589	PZ50890609	CALCIUM	2000	UG/G		1080		03-OCT-89
P115589	PZ50891216	CALCIUM	1540	UG/G		914		03-OCT-89
P115589	PZ50892024	CALCIUM	2370	UG/G		992		03-OCT-89
P115589	PZ50891620	CALCIUM	3850	UG/G		1180		03-OCT-89
P115589	PZ50890912	CALCIUM	2330	UG/G		877		03-OCT-89
P115589	PZ50892428	CALCIUM	4170	UG/G		986		03-OCT-89
P115589	PZ50890912	CHROMIUM	4.7	UG/G		1.8		03-OCT-89
P115589	PZ50891216	CHROMIUM	4.9	UG/G		1.8		03-OCT-89
P115589	PZ50892024	CHROMIUM	5.8	UG/G		2.0		03-OCT-89
P115589	PZ50892428	CHROMIUM	4.0	UG/G		2.0		03-OCT-89
P115589	PZ50891620	CHROMIUM	8.5	UG/G		2.4		03-OCT-89
P115589	PZ50890306	CHROMIUM	10.0	UG/G		1.9		03-OCT-89
P115589	PZ50890306D	CHROMIUM	10.4	UG/G		2.1		03-OCT-89
P115589	PZ50890609	CHROMIUM	7.2	UG/G		2.2		03-OCT-89
P115589	PZ50891620	COBALT	12.0	UG/G		11.8		03-OCT-89
P115589	PZ50890912	COPPER	9.1	UG/G		4.4		03-OCT-89
P115589	PZ50892428	COPPER	21.1	UG/G		4.9		03-OCT-89
P115589	PZ50892024	COPPER	18.2	UG/G		5.0		03-OCT-89
P115589	PZ50891620	COPPER	20.2	UG/G		5.9		03-OCT-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P115589	PZ50891216	COPPER	6.7	UG/G		4.6		03-OCT-89
P115589	PZ50890306	COPPER	6.3	UG/G		4.8		03-OCT-89
P115589	PZ50890306D	COPPER	9.4	UG/G		5.2		03-OCT-89
P115589	PZ50890609	COPPER	6.2	UG/G		5.4		03-OCT-89
P115589	PZ50890306	IRON	4170	UG/G		19.1		03-OCT-89
P115589	PZ50890912	IRON	7520	UG/G		17.5		03-OCT-89
P115589	PZ50890609	IRON	5120	UG/G		21.6		03-OCT-89
P115589	PZ50890306D	IRON	5550	UG/G		20.9		03-OCT-89
P115589	PZ50891216	IRON	3530	UG/G		18.3		03-OCT-89
P115589	PZ50891620	IRON	10600	UG/G		23.5		03-OCT-89
P115589	PZ50892024	IRON	9860	UG/G		19.8		03-OCT-89
P115589	PZ50892428	IRON	12900	UG/G		19.7		03-OCT-89
P115589	PZ50891216	LEAD	3.1	UG/G		1.2		03-OCT-89
P115589	PZ50891620	LEAD	5.2	UG/G		1.3		03-OCT-89
P115589	PZ50892428	LEAD	10.0	UG/G		2.5		03-OCT-89
P115589	PZ50892024	LEAD	8.3	UG/G		1.3		03-OCT-89
P115589	PZ50890306	LEAD	4.0	UG/G		1.2		03-OCT-89
P115589	PZ50890912	LEAD	4.4	UG/G		1.1		03-OCT-89
P115589	PZ50890609	LEAD	3.9	UG/G		1.0		03-OCT-89
P115589	PZ50890306D	LEAD	5.1	UG/G		1.2		03-OCT-89
P115589	PZ50892428	MAGNESIUM	1440	UG/G		986		03-OCT-89
P115589	PZ50892024	MAGNESIUM	1170	UG/G		992		03-OCT-89
P115589	PZ50891620	MAGNESIUM	2460	UG/G		1180		03-OCT-89
P115589	PZ50890912	MAGNESIUM	1360	UG/G		877		03-OCT-89
P115589	PZ50890306	MANGANESE	43.7	UG/G		2.9		03-OCT-89
P115589	PZ50890306D	MANGANESE	39.4	UG/G		3.1		03-OCT-89
P115589	PZ50890912	MANGANESE	169	UG/G		2.6		03-OCT-89
P115589	PZ50890609	MANGANESE	167	UG/G		3.2		03-OCT-89
P115589	PZ50891216	MANGANESE	56.9	UG/G		2.7		03-OCT-89
P115589	PZ50891620	MANGANESE	364	UG/G		3.5		03-OCT-89
P115589	PZ50892024	MANGANESE	65.0	UG/G		3.0		03-OCT-89
P115589	PZ50892428	MANGANESE	51.0	UG/G		3.0		03-OCT-89
P115589	PZ50890306	MERCURY	0.14	UG/G		0.11		03-OCT-89
P115589	PZ50890306D	MERCURY	0.11	UG/G		0.11		03-OCT-89
P115589	PZ50891620	NICKEL	15.5	UG/G		9.4		03-OCT-89
P115589	PZ50892428	NICKEL	15.1	UG/G		7.9		03-OCT-89
P115589	PZ50892024	NICKEL	10.3	UG/G		7.9		03-OCT-89
P115589	PZ50890003	PLUTONIUM-239	0.031	PCI/G		0		03-OCT-89
P115589	PZ50892428	PLUTONIUM-239	0.019	PCI/G		0		03-OCT-89
P115589	PZ50892024	PLUTONIUM-239	0.047	PCI/G		0		03-OCT-89
P115589	PZ50891620	PLUTONIUM-239	0.050	PCI/G		0		03-OCT-89
P115589	PZ50891216	PLUTONIUM-239	0.046	PCI/G		0.		03-OCT-89
P115589	PZ50890912	PLUTONIUM-239	0.024	PCI/G		0.		03-OCT-89
P115589	PZ50890609	PLUTONIUM-239	0.019	PCI/G		0.		03-OCT-89
P115589	PZ50890306D	PLUTONIUM-239	0.020	PCI/G		0		03-OCT-89
P115589	PZ50890306	PLUTONIUM-239	0.030	PCI/G		0		03-OCT-89
P115589	PZ50890912	POTASSIUM	1010	UG/G		877		03-OCT-89
P115589	PZ50891620	POTASSIUM	1720	UG/G		1180		03-OCT-89
P115589	PZ50892428	STRONTIUM	28.3	UG/G		19.7		03-OCT-89
P115589	PZ50890306	STRONTIUM-90	2.06	PCI/G		0.		03-OCT-89
P115589	PZ50890912	STRONTIUM-90	1.89	PCI/G		0.		03-OCT-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P115589	PZ50892428	STRONTIUM-90	1.05	PCI/G		0.		03-OCT-89
P115589	PZ50892024	STRONTIUM-90	1.47	PCI/G		0.		03-OCT-89
P115589	PZ50891620	STRONTIUM-90	1.49	PCI/G		0.		03-OCT-89
P115589	PZ50891216	STRONTIUM-90	1.28	PCI/G		0.		03-OCT-89
P115589	PZ50890306D	TIN	24.1	UG/G		20.9		03-OCT-89
P115589	PZ50890609	TIN	23.4	UG/G		21.6		03-OCT-89
P115589	PZ50891216	TIN	18.7	UG/G		18.3		03-OCT-89
P115589	PZ50891620	TIN	34.5	UG/G		23.5		03-OCT-89
P115589	PZ50890912	TIN	23.1	UG/G		17.5		03-OCT-89
P115589	PZ50892024	TIN	25.8	UG/G		19.8		03-OCT-89
P115589	PZ50892428	TIN	27.7	UG/G		19.7		03-OCT-89
P115589	PZ50890003	URANIUM-233,-234	1.10	PCI/G		0.		03-OCT-89
P115589	PZ50892428	URANIUM-233,-234	0.73	PCI/G		0		03-OCT-89
P115589	PZ50892024	URANIUM-233,-234	0.75	PCI/G		0		03-OCT-89
P115589	PZ50891620	URANIUM-233,-234	0.42	PCI/G		0.		03-OCT-89
P115589	PZ50891216	URANIUM-233,-234	0.22	PCI/G		0		03-OCT-89
P115589	PZ50890912	URANIUM-233,-234	0.38	PCI/G		0		03-OCT-89
P115589	PZ50890609	URANIUM-233,-234	0.55	PCI/G		0.		03-OCT-89
P115589	PZ50890306	URANIUM-233,-234	0.85	PCI/G		0		03-OCT-89
P115589	PZ50890306D	URANIUM-233,-234	0.84	PCI/G		0		03-OCT-89
P115589	PZ50891620	VANADIUM	32.8	UG/G		11.8		03-OCT-89
P115589	PZ50892428	VANADIUM	40.8	UG/G		9.9		03-OCT-89
P115589	PZ50892024	VANADIUM	33.4	UG/G		9.9		03-OCT-89
P115589	PZ50890306	VANADIUM	12.1	UG/G		9.6		03-OCT-89
P115589	PZ50891216	VANADIUM	11.5	UG/G		9.1		03-OCT-89
P115589	PZ50890306D	VANADIUM	16.0	UG/G		10.5		03-OCT-89
P115589	PZ50890912	VANADIUM	24.2	UG/G		8.8		03-OCT-89
P115589	PZ50890609	VANADIUM	16.6	UG/G		10.8		03-OCT-89
P115589	PZ50890306	ZINC	6.9	UG/G		3.8		03-OCT-89
P115589	PZ50890306D	ZINC	12.4	UG/G		4.2		03-OCT-89
P115589	PZ50891620	ZINC	37.0	UG/G		4.7		03-OCT-89
P115589	PZ50890912	ZINC	14.3	UG/G		3.5		03-OCT-89
P115589	PZ50891216	ZINC	10.5	UG/G		3.7		03-OCT-89
P115589	PZ50890609	ZINC	15.1	UG/G		4.3		03-OCT-89
P115589	PZ50892024	ZINC	23.0	UG/G		4.0		03-OCT-89
P115589	PZ50892428	ZINC	47.6	UG/G		3.9		03-OCT-89
P119289	P1192890003	ALUMINUM	11200	UG/G		37.2		01-DEC-89
P119289	P1192890003	ARSENIC	4.3	UG/G		2.1		01-DEC-89
P119289	P1192890003	BARIUM	88.3	UG/G		37.2		01-DEC-89
P119289	P1192890003	BERYLLIUM	1.7	UG/G		0.93		01-DEC-89
P119289	P1192890003	CALCIUM	2080	UG/G		931		01-DEC-89
P119289	P1192890003	CHROMIUM	15.7	UG/G		1.9		01-DEC-89
P119289	P1192890003	COPPER	19.1	UG/G		4.7		01-DEC-89
P119289	P1192890003	IRON	20700	UG/G		18.6		01-DEC-89
P119289	P1192890003	LEAD	3.7	UG/G		3.2		01-DEC-89
P119289	P1192890003	MAGNESIUM	1690	UG/G		931		01-DEC-89
P119289	P1192890003	MANGANESE	343	UG/G		2.8		01-DEC-89
P119289	P1192890003	MERCURY	0.17	UG/G		0.12		01-DEC-89
P119289	P1192890003	NICKEL	24.7	UG/G		7.4		01-DEC-89
P119289	P1192890003	STRONTIUM	19.4	UG/G		18.6		01-DEC-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P119289	P1192890003	TIN	22.5	UG/G		18.6		01-DEC-89
P119289	P1192890003	VANADIUM	59.0	UG/G		9.3		01-DEC-89
P119289	P1192890003	ZINC	21.3	UG/G		3.7		01-DEC-89
P119389	P1193891113	ALUMINUM	3260	UG/G		37.2		04-DEC-89
P119389	P1193891620	ALUMINUM	8790	UG/G		39.8		04-DEC-89
P119389	P1193891316	ALUMINUM	5250	UG/G		43.7		04-DEC-89
P119389	P1193890003	ALUMINUM	3750	UG/G		42.0		04-DEC-89
P119389	P1193890711	ALUMINUM	2410	UG/G		32.1		04-DEC-89
P119389	P1193890307	ALUMINUM	1320	UG/G		41.2		04-DEC-89
P119389	P1193891620	BARIUM	109	UG/G		39.8		04-DEC-89
P119389	P1193891316	BARIUM	55.2	UG/G		43.7		04-DEC-89
P119389	P1193890711	CALCIUM	1160	UG/G		804		04-DEC-89
P119389	P1193891113	CALCIUM	1210	UG/G		930		04-DEC-89
P119389	P1193891316	CALCIUM	3330	UG/G		1090		04-DEC-89
P119389	P1193891620	CALCIUM	4960	UG/G		994		04-DEC-89
P119389	P1193890003	CALCIUM	1300	UG/G		1050		04-DEC-89
P119389	P1193891113	CHROMIUM	36.8	UG/G		1.9		04-DEC-89
P119389	P1193891620	CHROMIUM	9.9	UG/G		2.0		04-DEC-89
P119389	P1193891316	CHROMIUM	6.4	UG/G		2.2		04-DEC-89
P119389	P1193890003	CHROMIUM	7.0	UG/G		2.1		04-DEC-89
P119389	P1193890307	CHROMIUM	4.3	UG/G		2.1		04-DEC-89
P119389	P1193890711	CHROMIUM	3.9	UG/G		1.6		04-DEC-89
P119389	P1193891113	COPPER	13.3	UG/G		4.6		04-DEC-89
P119389	P1193891316	COPPER	12.1	UG/G		5.5		04-DEC-89
P119389	P1193891620	COPPER	23.3	UG/G		5.0		04-DEC-89
P119389	P1193890003	COPPER	6.3	UG/G		5.2		04-DEC-89
P119389	P1193890711	COPPER	4.2	UG/G		4.0		04-DEC-89
P119389	P1193890307	COPPER	5.4	UG/G		5.1		04-DEC-89
P119389	P1193890003	IRON	5590	UG/G		21.0		04-DEC-89
P119389	P1193890711	IRON	2890	UG/G		16.1		04-DEC-89
P119389	P1193891113	IRON	10200	UG/G		18.6		04-DEC-89
P119389	P1193890307	IRON	1710	UG/G		20.6		04-DEC-89
P119389	P1193891316	IRON	9430	UG/G		21.8		04-DEC-89
P119389	P1193891620	IRON	13200	UG/G		19.9		04-DEC-89
P119389	P1193891316	LEAD	14.2	UG/G		5.1		04-DEC-89
P119389	P1193891620	LEAD	15.3	UG/G		5.3		04-DEC-89
P119389	P1193890003	LEAD	5.1	UG/G		2.5		04-DEC-89
P119389	P1193890711	LEAD	1.4	UG/G		0.99		04-DEC-89
P119389	P1193891113	LEAD	6.6	UG/G		1.0		04-DEC-89
P119389	P1193890307	LEAD	1.5	UG/G		1.2		04-DEC-89
P119389	P1193891316	MAGNESIUM	1560	UG/G		1090		04-DEC-89
P119389	P1193891620	MAGNESIUM	2160	UG/G		994		04-DEC-89
P119389	P1193890003	MANGANESE	58.0	UG/G		3.2		04-DEC-89
P119389	P1193890307	MANGANESE	10.9	UG/G		3.1		04-DEC-89
P119389	P1193891113	MANGANESE	96.9	UG/G		2.8		04-DEC-89
P119389	P1193890711	MANGANESE	20.9	UG/G		2.4		04-DEC-89
P119389	P1193891316	MANGANESE	53.7	UG/G		3.3		04-DEC-89
P119389	P1193891620	MANGANESE	104	UG/G		3.0		04-DEC-89
P119389	P1193891620	MERCURY	0.18	UG/G		0.12		04-DEC-89
P119389	P1193890003	MERCURY	0.12	UG/G		0.11		04-DEC-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P119389	P1193890307	MERCURY	0.12	UG/G		0.10		04-DEC-89
P119389	P1193891316	NICKEL	10.8	UG/G		8.7		04-DEC-89
P119389	P1193891620	NICKEL	16.2	UG/G		8.0		04-DEC-89
P119389	P1193891113	NICKEL	10.4	UG/G		7.4		04-DEC-89
P119389	P1193891620	POTASSIUM	1000	UG/G		994		04-DEC-89
P119389	P1193891316	STRONTIUM	32.3	UG/G		21.8		04-DEC-89
P119389	P1193891620	STRONTIUM	67.8	UG/G		19.9		04-DEC-89
P119389	P1193891620	VANADIUM	27.9	UG/G		9.9		04-DEC-89
P119389	P1193890003	VANADIUM	12.0	UG/G		10.5		04-DEC-89
P119389	P1193891316	VANADIUM	22.9	UG/G		10.9		04-DEC-89
P119389	P1193891113	VANADIUM	19.9	UG/G		9.3		04-DEC-89
P119389	P1193890003	ZINC	20.7	UG/G		4.2		04-DEC-89
P119389	P1193890307	ZINC	10.2	UG/G		4.1		04-DEC-89
P119389	P1193891113	ZINC	11.8	UG/G		3.7		04-DEC-89
P119389	P1193891316	ZINC	35.3	UG/G		4.4		04-DEC-89
P119389	P1193890711	ZINC	10.0	UG/G		3.2		04-DEC-89
P119389	P1193891620	ZINC	88.6	UG/G		4.0		04-DEC-89
P207389	SEP0189BR1319	ALUMINUM	3760	UG/G	A	45.4	A	05-JUN-89
P207389	SEP0189BR0307	ALUMINUM	8840	UG/G		38.8		05-JUN-89
P207389	SEP0189BR0713	ALUMINUM	7800	UG/G	A	47.0	A	05-JUN-89
P207389	GSEP01890989001	AMERICIUM-241	.184	PCI/L		0		21-SEP-89
P207389	SEP0189BR1319	ARSENIC	3.9	UG/G	A	2.2	A	05-JUN-89
P207389	SEP0189BR0307	ARSENIC	2.6	UG/G		1.5		05-JUN-89
P207389	SEP0189BR0307	BARIUM	74.5	UG/G		38.8		05-JUN-89
P207389	SEP0189BR0713	BARIUM	48.2	UG/G	A	47.0	A	05-JUN-89
P207389	SEP0189BR1319	BARIUM	63.8	UG/G	A	45.4	A	05-JUN-89
P207389	SEP0189BR1319	BERYLLIUM	2.1	UG/G	A	1.1	A	05-JUN-89
P207389	SEP0189BR0307	BERYLLIUM	2.4	UG/G		0.97		05-JUN-89
P207389	SEP0189BR0713	BERYLLIUM	1.9	UG/G	A	1.2	A	05-JUN-89
P207389	GSEP01890390001	BICARBONATE	400	MG/L				14-MAR-90
P207389	SEP0189-0604-02-0	BICARBONATE AS CACO3	329	MG/L		10		05-JUN-90
P207389	GW00244IT	BICARBONATE AS CACO3	320	MG/L		1.0		21-AUG-90
P207389	GW00799IT	BICARBONATE AS CACO3	410	MG/L		1		18-DEC-90
P207389	GW01028IT	BICARBONATE AS CACO3	310	MG/L		1.0		26-MAR-91
P207389	GW01361IT	BICARBONATE AS CACO3	320	MG/L		1.0		31-MAY-91
P207389	SEP0189BR1319	CALCIUM	5200	UG/G	A	1130	A	05-JUN-89
P207389	SEP0189BR0307	CALCIUM	75600	UG/G		970		05-JUN-89
P207389	SEP0189BR0713	CALCIUM	36500	UG/G	A	1180	A	05-JUN-89
P207389	GSEP01890989001	CALCIUM	70.20	MG/L		5000		21-SEP-89
P207389	SEP0189-0604-02-0	CALCIUM	77600	UG/L		15.7		05-JUN-90
P207389	GW00244IT	CALCIUM	75600.00	UG/L	E	5000		21-AUG-90
P207389	GW00799IT	CALCIUM	91400	UG/L		5000		18-DEC-90
P207389	GW01028IT	CALCIUM	84900.00	UG/L		5000		26-MAR-91
P207389	GW01361IT	CALCIUM	91300.00	UG/L		5000		31-MAY-91
P207389	SEP0189BR1319	CHROMIUM	6.1	UG/G	A	2.3	A	05-JUN-89
P207389	SEP0189BR0307	CHROMIUM	8.3	UG/G		1.9		05-JUN-89
P207389	SEP0189BR0713	CHROMIUM	5.4	UG/G	V	2.4	A	05-JUN-89
P207389	SEP0189BR1319	COPPER	15.2	UG/G	A	5.7	A	05-JUN-89
P207389	SEP0189BR0307	COPPER	9.3	UG/G		4.8		05-JUN-89
P207389	SEP0189BR0713	COPPER	7.4	UG/G	A	5.9	A	05-JUN-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207389	SEP0189BR0307	IRON	7030	UG/G		19.4		05-JUN-89
P207389	SEP0189BR1319	IRON	6460	UG/G	A	22.7	A	05-JUN-89
P207389	SEP0189BR0713	IRON	5470	UG/G	A	23.5	A	05-JUN-89
P207389	SEP0189BR0307	MAGNESIUM	2760	UG/G		970		05-JUN-89
P207389	SEP0189BR1319	MAGNESIUM	1590	UG/G	A	1130	A	05-JUN-89
P207389	SEP0189BR0713	MAGNESIUM	2540	UG/G	A	1180	A	05-JUN-89
P207389	GSEP01890989001	MAGNESIUM	16.80	MG/L		5000		21-SEP-89
P207389	SEP0189-0604-02-0	MAGNESIUM	18600	UG/L		51.8		05-JUN-90
P207389	GW00244IT	MAGNESIUM	18400.00	UG/L	E	5000		21-AUG-90
P207389	GW00799IT	MAGNESIUM	21300	UG/L		5000		18-DEC-90
P207389	GW01028IT	MAGNESIUM	20600.00	UG/L		5000		26-MAR-91
P207389	GW01361IT	MAGNESIUM	22000.00	UG/L		5000		31-MAY-91
P207389	SEP0189BR0307	MANGANESE	21.4	UG/G		2.9		05-JUN-89
P207389	SEP0189BR0713	MANGANESE	36.1	UG/G	A	3.5	A	05-JUN-89
P207389	SEP0189BR1319	MANGANESE	81.6	UG/G	A	3.4	A	05-JUN-89
P207389	SEP0189-0604-02-0	MERCURY	0.34	UG/L		0.2		05-JUN-90
P207389	GW01028IT	MERCURY	0.56	UG/L		0		26-MAR-91
P207389	SEP0189BR1319	NICKEL	12.5	UG/G	V	9.1	A	05-JUN-89
P207389	GSEP01890989001	SODIUM	71.70	MG/L		5000		21-SEP-89
P207389	SEP0189-0604-02-0	SODIUM	66200	UG/L		15.5		05-JUN-90
P207389	GW00244IT	SODIUM	76000.00	UG/L	E	5000		21-AUG-90
P207389	GW00799IT	SODIUM	84300	UG/L		5000		18-DEC-90
P207389	GW01028IT	SODIUM	70000.00	UG/L		5000		26-MAR-91
P207389	GW01361IT	SODIUM	64800.00	UG/L		5000		31-MAY-91
P207389	SEP0189BR0307	STRONTIUM	92.6	UG/G		19.4		05-JUN-89
P207389	SEP0189BR0713	STRONTIUM	189	UG/G	A	23.5	A	05-JUN-89
P207389	SEP0189BR1319	STRONTIUM	37.4	UG/G	A	22.7	A	05-JUN-89
P207389	GW00244IT	STRONTIUM	536.00	UG/L	E	200		21-AUG-90
P207389	GW00799IT	STRONTIUM	526	UG/L		200		18-DEC-90
P207389	GW01028IT	STRONTIUM	624.00	UG/L		200		26-MAR-91
P207389	GW01361IT	STRONTIUM	671.00	UG/L		200		31-MAY-91
P207389	GSEP01890390001	SULFATE	71	MG/L				14-MAR-90
P207389	GW00799IT	SULFATE	73	MG/L		20		18-DEC-90
P207389	GW01028IT	SULFATE	68	MG/L		2.0		26-MAR-91
P207389	SEP0189BR0307	TIN	23.4	UG/G		19.4		05-JUN-89
P207389	GSEP01890989001	TRITIUM	720	PCI/L		390		21-SEP-89
P207389	GW00799IT	TRITIUM	791.1	PCI/L		400		18-DEC-90
P207389	GSEP01890989001	URANIUM-233,-234	6.18	PCI/L		.36		21-SEP-89
P207389	GW00799IT	URANIUM-233,-234	5.078	PCI/L		.6		18-DEC-90
P207389	SEP0189BR0307	VANADIUM	18.6	UG/G		9.7		05-JUN-89
P207389	SEP0189BR0713	VANADIUM	15.9	UG/G	A	1.8	A	05-JUN-89
P207389	SEP0189BR1319	VANADIUM	21.3	UG/G	V	11.3	A	05-JUN-89
P207389	SEP0189BR0307	ZINC	32.2	UG/G		3.9		05-JUN-89
P207389	SEP0189BR0713	ZINC	27.6	UG/G	A	4.7	A	05-JUN-89
P207389	SEP0189BR1319	ZINC	46.5	UG/G	A	4.5	A	05-JUN-89
P207389	SEP0189BR0003	pH	8.5	PHUNIT				05-JUN-89
P207389	SEP0189BR1319	pH	9.0	PHUNIT				05-JUN-89
P207389	SEP0189BR0307	pH	8.7	PHUNIT				05-JUN-89
P207389	SEP0189BR0713	pH	9.1	PHUNIT				05-JUN-89
P207489	SEP02890003	ALUMINUM	6900	UG/G		43.4	A	06-JUN-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207489	SEP02890306	ALUMINUM	30400	UG/G		384	A	06-JUN-89
P207489	SEP02890610	ALUMINUM	6490	UG/G		36.7	A	06-JUN-89
P207489	GSEP02890390001	AMERICIUM-241	+1.146E-0	PCI /L		0.011		14-MAR-90
P207489	SEP02890003	ARSENIC	8.8	UG/G	A	4.7	A	06-JUN-89
P207489	SEP02890306	ARSENIC	2.5	UG/G	A	1.8	A	06-JUN-89
P207489	SEP02890003	BARIUM	56.7	UG/G		43.4	A	06-JUN-89
P207489	SEP02890306	BARIUM	120	UG/G		38.4	A	06-JUN-89
P207489	SEP02890610	BARIUM	40.4	UG/G		36.7	A	06-JUN-89
P207489	SEP02890003	BERYLLIUM	2.0	UG/G	V	1.1	A	06-JUN-89
P207489	SEP02890610	BERYLLIUM	1.4	UG/G	V	0.92	A	06-JUN-89
P207489	SEP02890306	BERYLLIUM	8.7	UG/G	V	0.96	A	06-JUN-89
P207489	GSEP02890390001	BICARBONATE	360	MG/L				14-MAR-90
P207489	SEP0289-0531-02-1	BICARBONATE AS CACO3	313	MG/L		10		01-JUN-90
P207489	GW00223IT	BICARBONATE AS CACO3	300	MG/L				14-AUG-90
P207489	GW00223IT	BICARBONATE AS CACO3	300	MG/L				14-AUG-90
P207489	GW01195IT	BICARBONATE AS CACO3	300	MG/L		1.0		01-MAY-91
P207489	GW01362IT	BICARBONATE AS CACO3	310	MG/L		1.0		31-MAY-91
P207489	SEP02890003	CALCIUM	13700	UG/G		1080	A	06-JUN-89
P207489	SEP02890306	CALCIUM	5020	UG/G		960	A	06-JUN-89
P207489	SEP02890610	CALCIUM	35300	UG/G		918	A	06-JUN-89
P207489	GSEP02890989001	CALCIUM	90.20	MG/L		5000		20-SEP-89
P207489	SEP0289-0531-02-1	CALCIUM	88200	UG/L		15.7		01-JUN-90
P207489	GW01362IT	CALCIUM	95600.00	UG/L		5000		31-MAY-91
P207489	SEP02890003	CHROMIUM	6.1	UG/G	V	2.2	A	06-JUN-89
P207489	SEP02890610	CHROMIUM	3.2	UG/G	V	1.8	A	06-JUN-89
P207489	SEP02890306	CHROMIUM	81.2	UG/G	V	1.9	A	06-JUN-89
P207489	SEP02890003	COPPER	9.9	UG/G	A	5.4	A	06-JUN-89
P207489	SEP02890306	COPPER	26.6	UG/G	V	4.8	A	06-JUN-89
P207489	SEP02890610	COPPER	5.3	UG/G	A	4.6	A	06-JUN-89
P207489	SEP02890003	IRON	5570	UG/G		21.7	A	06-JUN-89
P207489	SEP02890610	IRON	3260	UG/G		18.4	A	06-JUN-89
P207489	SEP02890306	IRON	33500	UG/G		192	A	06-JUN-89
P207489	SEP0289-0531-02-1	LEAD	3.3	UG/L		1.2		01-JUN-90
P207489	SEP02890003	MAGNESIUM	1990	UG/G		1080	A	06-JUN-89
P207489	SEP02890306	MAGNESIUM	3120	UG/G		960	A	06-JUN-89
P207489	SEP02890610	MAGNESIUM	2340	UG/G		918	A	06-JUN-89
P207489	GSEP02890989001	MAGNESIUM	23.40	MG/L		5000		20-SEP-89
P207489	SEP0289-0531-02-1	MAGNESIUM	24100	UG/L		51.8		01-JUN-90
P207489	GW01362IT	MAGNESIUM	26100.00	UG/L		5000		31-MAY-91
P207489	SEP02890003	MANGANESE	44.2	UG/G	A	3.3	A	06-JUN-89
P207489	SEP02890306	MANGANESE	163	UG/G	A	2.9	A	06-JUN-89
P207489	SEP02890610	MANGANESE	16.2	UG/G	A	2.8	A	06-JUN-89
P207489	SEP0289-0531-02-1	MANGANESE	41.3	UG/L		1.2		01-JUN-90
P207489	GW01362IT	MANGANESE	26.90	UG/L		15		31-MAY-91
P207489	SEP02890306	MOLYBDENUM	37.0	UG/G	A	19.2	A	06-JUN-89
P207489	SEP02890003	NICKEL	8.7	UG/G	V	8.7	A	06-JUN-89
P207489	SEP02890306	NICKEL	37.5	UG/G	V	7.7	A	06-JUN-89
P207489	SEP02890306	POTASSIUM	2540	UG/G	A	960	A	06-JUN-89
P207489	SEP02890306	SILVER	5.8	UG/G	A	1.9	A	06-JUN-89
P207489	SEP0289-0531-02-1	SODIUM	41600	UG/L		15.5		01-JUN-90
P207489	GW01362IT	SODIUM	46300.00	UG/L		5000		31-MAY-91

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207489	SEP02890003	STRONTIUM	47.8	UG/G	A	21.7	A	06-JUN-89
P207489	SEP02890610	STRONTIUM	61.8	UG/G	A	18.4	A	06-JUN-89
P207489	SEP02890306	STRONTIUM	27.4	UG/G	A	19.2	A	06-JUN-89
P207489	SEP0289-0531-02-1	STRONTIUM	5730	UG/L		20.4		01-JUN-90
P207489	GW01362IT	STRONTIUM	732.00	UG/L		200		31-MAY-91
P207489	GSEP02890390001	SULFATE	84	MG/L				14-MAR-90
P207489	GW00223IT	SULFATE	130	MG/L				14-AUG-90
P207489	GW00223IT	SULFATE	130	MG/L				14-AUG-90
P207489	GW01195IT	SULFATE	72	MG/L		2.0		01-MAY-91
P207489	GW01362IT	SULFATE	70	MG/L		2.0		31-MAY-91
P207489	SEP02890306	TIN	84.2	UG/G	A	19.2	A	06-JUN-89
P207489	SEP02890610	TIN	21.5	UG/G	A	18.4	A	06-JUN-89
P207489	GSEP02890989001	TRITIUM	810	PCI/L		270		20-SEP-89
P207489	GSEP0289098900	TRITIUM	810	PCI/L		270		21-SEP-89
P207489	GW00800IT	TRITIUM	774.7	PCI/L		400		18-DEC-90
P207489	GSEP0289098900	URANIUM-233,-234	1.82	PCI/L		0		21-SEP-89
P207489	GSEP02890390001	URANIUM-233,-234	+1.488E+0	PCI /L		0.173		14-MAR-90
P207489	GSEP02890390001	URANIUM-235/236	+4.503E-0	PCI /L		0.210		14-MAR-90
P207489	SEP02890003	VANADIUM	21.2	UG/G	V	10.8	A	06-JUN-89
P207489	SEP02890306	VANADIUM	64.3	UG/G	V	9.6	A	06-JUN-89
P207489	SEP02890003	ZINC	41.9	UG/G		4.3	A	06-JUN-89
P207489	SEP02890306	ZINC	62.1	UG/G		3.8	A	06-JUN-89
P207489	SEP02890610	ZINC	23.3	UG/G		3.7	A	06-JUN-89
P207489	SEP02890003	pH	8.6	PHUNIT				06-JUN-89
P207489	SEP02890610	pH	9.1	PHUNIT				06-JUN-89
P207689	SEP04890006D	ALUMINUM	8920	UG/G	A	45.9	A	05-MAY-89
P207689	SEP04890612	ALUMINUM	7340	UG/G	A	49.1	A	05-MAY-89
P207689	SEP04891215	ALUMINUM	7560	UG/G	A	47.7	A	05-MAY-89
P207689	GSEP0489098900	AMERICIUM-241	.096	PCI/L		.023	A	14-SEP-89
P207689	SEP04890006D	ARSENIC	4.5	UG/G	A	4.5	A	05-MAY-89
P207689	SEP04891215	ARSENIC	3.2	UG/G	V	2.5	A	05-MAY-89
P207689	SEP04890006D	BARIUM	147	UG/G	A	45.9	A	05-MAY-89
P207689	SEP04890612	BARIUM	76.9	UG/G	A	49.1	A	05-MAY-89
P207689	SEP04890006D	BERYLLIUM	2.7	UG/G	A	1.1	A	05-MAY-89
P207689	SEP04890612	BERYLLIUM	2.1	UG/G	A	1.2	A	05-MAY-89
P207689	SEP04891215	BERYLLIUM	2.3	UG/G	A	1.2	A	05-MAY-89
P207689	GW00003IT	BERYLLIUM	6.40	UG/L		5		17-JUL-90
P207689	GW00003IT	BICARBONATE AS CACO3	360	MG/L		1.0		17-JUL-90
P207689	GW01023IT	BICARBONATE AS CACO3	350	MG/L		1.0		25-MAR-91
P207689	GW01365IT	BICARBONATE AS CACO3	380	MG/L		1.0		31-MAY-91
P207689	GW01366IT	BICARBONATE AS CACO3	390	MG/L		1.0		31-MAY-91
P207689	GSEP0489043002121	BICARBONATE AS CACO3	320	MG/L		2		
P207689	GW00003IT	CADMIUM	5.80	UG/L		5		17-JUL-90
P207689	GW00468IT	CADMIUM	10.3	UG/L				15-OCT-90
P207689	SEP04890006D	CALCIUM	102000	UG/G	V	1150	A	05-MAY-89
P207689	SEP04890612	CALCIUM	3580	UG/G	V	1230	A	05-MAY-89
P207689	SEP04891215	CALCIUM	11200	UG/G	V	1190	A	05-MAY-89
P207689	GSEP04890989001	CALCIUM	114.00	MG/L	V	5000	A	14-SEP-89
P207689	GW00003IT	CALCIUM	94500.00	UG/L		5000		17-JUL-90
P207689	GW00468IT	CALCIUM	60900	UG/L				15-OCT-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207689	GW01023IT	CALCIUM	131000.00	UG/L		5000		25-MAR-91
P207689	GW01365IT	CALCIUM	89100.00	UG/L		5000		31-MAY-91
P207689	GW01366IT	CALCIUM	90800.00	UG/L		5000		31-MAY-91
P207689	GSEP0489043002121	CALCIUM	58900	UG/L		5000		
P207689	SEP04890006D	CHROMIUM	7.1	UG/G	A	2.3	A	05-MAY-89
P207689	SEP04891215	CHROMIUM	6.4	UG/G	A	2.4	A	05-MAY-89
P207689	SEP04890612	CHROMIUM	6.4	UG/G	A	2.5	A	05-MAY-89
P207689	GW00468IT	CHROMIUM	13	UG/L				15-OCT-90
P207689	GW01023IT	CHROMIUM	17.60	UG/L		10		25-MAR-91
P207689	SEP04890006D	COPPER	7.0	UG/G	A	5.7	A	05-MAY-89
P207689	SEP04890612	COPPER	10.4	UG/G	A	6.1	A	05-MAY-89
P207689	SEP04891215	COPPER	8.4	UG/G	A	6.0	A	05-MAY-89
P207689	GW01023IT	CYANIDE	20.50	UG/L		10		25-MAR-91
P207689	GW01366IT	CYANIDE	10.00	UG/L		10		31-MAY-91
P207689	GW01365IT	CYANIDE	8.50	UG/L		10		31-MAY-91
P207689	GW00468IT	CYANIDE	12.4	UG/L				15-OCT-90
P207689	SEP04890612	IRON	4730	UG/G	A	24.5	A	05-MAY-89
P207689	SEP04891215	IRON	7380	UG/G	A	23.9	A	05-MAY-89
P207689	SEP04890006D	IRON	7200	UG/G	A	23.0	A	05-MAY-89
P207689	SEP04890006D	LEAD	6.9	UG/G	A	4.5	A	05-MAY-89
P207689	SEP04891215	LEAD	11.8	UG/G	A	10.0	A	05-MAY-89
P207689	SEP04890612	LEAD	13.6	UG/G	A	2.5	A	05-MAY-89
P207689	GSEP04890989001	LEAD	.0404	MG/L	A	20.0	A	14-SEP-89
P207689	GW00468IT	LEAD	6.8	UG/L				15-OCT-90
P207689	SEP04890006D	LITHIUM	11.8	UG/G	V	2.3	A	05-MAY-89
P207689	SEP04890612	LITHIUM	5.1	UG/G	V	2.5	A	05-MAY-89
P207689	SEP04891215	LITHIUM	8.3	UG/G	V	2.4	A	05-MAY-89
P207689	SEP04890006D	MAGNESIUM	4790	UG/G	A	1150	A	05-MAY-89
P207689	SEP04890612	MAGNESIUM	3620	UG/G	A	1230	A	05-MAY-89
P207689	SEP04891215	MAGNESIUM	4060	UG/G	A	1190	A	05-MAY-89
P207689	GSEP04890989001	MAGNESIUM	123.00	MG/L	V	5000	A	14-SEP-89
P207689	GW00003IT	MAGNESIUM	105000.00	UG/L		5000		17-JUL-90
P207689	GW00468IT	MAGNESIUM	70600	UG/L				15-OCT-90
P207689	GW01023IT	MAGNESIUM	142000.00	UG/L		5000		25-MAR-91
P207689	GW01366IT	MAGNESIUM	98000.00	UG/L		5000		31-MAY-91
P207689	GW01365IT	MAGNESIUM	95600.00	UG/L		5000		31-MAY-91
P207689	GSEP0489043002121	MAGNESIUM	66300	UG/L		5000		
P207689	SEP04890006D	MANGANESE	101	UG/G	A	3.4	A	05-MAY-89
P207689	SEP04890612	MANGANESE	36.6	UG/G	A	3.7	A	05-MAY-89
P207689	SEP04891215	MANGANESE	62.0	UG/G	A	3.6	A	05-MAY-89
P207689	SEP04890006D	MERCURY	0.12	UG/G	A	0.11	A	05-MAY-89
P207689	GW00468IT	MERCURY	.75	UG/L				15-OCT-90
P207689	GW01023IT	MERCURY	0.27	UG/L		0		25-MAR-91
P207689	SEP04890006D	MOLYBDENUM	7.3	UG/G	V	2.3	A	05-MAY-89
P207689	SEP04890612	MOLYBDENUM	5.9	UG/G	V	2.5	A	05-MAY-89
P207689	SEP04891215	MOLYBDENUM	5.9	UG/G	V	2.4	A	05-MAY-89
P207689	GSEP0489098900	PLUTONIUM-239	.195	PCI/L		0	A	14-SEP-89
P207689	GW00003IT	SELENIUM	19.00	UG/L		5		17-JUL-90
P207689	GW00468IT	SELENIUM	13.9	UG/L				15-OCT-90
P207689	GW01366IT	SELENIUM	8.00	UG/L		5		31-MAY-91
P207689	GW01365IT	SELENIUM	7.00	UG/L		5		31-MAY-91

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207689	GSEP0489043002121	SELENIUM	20	UG/L		10		
P207689	GSEP04890989001	SODIUM	211.00	MG/L	V	5000	A	14-SEP-89
P207689	GW00003IT	SODIUM	157000.00	UG/L		5000		17-JUL-90
P207689	GW00468IT	SODIUM	179000	UG/L				15-OCT-90
P207689	GW01023IT	SODIUM	122000.00	UG/L		5000		25-MAR-91
P207689	GW01366IT	SODIUM	106000.00	UG/L		5000		31-MAY-91
P207689	GW01365IT	SODIUM	103000.00	UG/L		5000		31-MAY-91
P207689	GSEP0489043002121	SODIUM	156000	UG/L		5000		
P207689	SEP04890006D	STRONTIUM	299	UG/G	V	230	A	05-MAY-89
P207689	GW00003IT	STRONTIUM	2630.00	UG/L		200		17-JUL-90
P207689	GW00468IT	STRONTIUM	1760	UG/L				15-OCT-90
P207689	GW01023IT	STRONTIUM	3540.00	UG/L		200		25-MAR-91
P207689	GW01365IT	STRONTIUM	2420.00	UG/L		200		31-MAY-91
P207689	GW01366IT	STRONTIUM	2500.00	UG/L		200		31-MAY-91
P207689	GSEP0489043002121	STRONTIUM	1530	UG/L		100		
P207689	GW00003IT	SULFATE	290	MG/L		2.0		17-JUL-90
P207689	GW01023IT	SULFATE	110	MG/L		2.0		25-MAR-91
P207689	GW01365IT	SULFATE	93	MG/L		2.0		31-MAY-91
P207689	GW01366IT	SULFATE	150	MG/L		2.0		31-MAY-91
P207689	GSEP0489043002121	SULFATE	184	MG/L		50		
P207689	GSEP0489098900	TRITIUM	700	PCI/L		390	A	14-SEP-89
P207689	GW00003IT	TRITIUM	673.8	PCI/L		400		17-JUL-90
P207689	GSEP0489043002121	TRITIUM	360	PCI/L		400		
P207689	GSEP0489043002121	TRITIUM	360	PCI/L		400		
P207689	GSEP0489098900	URANIUM-233,-234	11.5	PCI/L		0	A	14-SEP-89
P207689	GW00003IT	URANIUM-233,-234	10.3	PCI/L		.6		17-JUL-90
P207689	GW00468IT	URANIUM-233,-234	12.04	PCI/L		.6		15-OCT-90
P207689	GSEP0489043002121	URANIUM-233,-234	9.32	PCI/L		0.6		
P207689	GSEP0489043002121	URANIUM-233,-234	9.32	PCI/L		0.6		
P207689	SEP04890006D	VANADIUM	25.5	UG/G	A	11.5	A	05-MAY-89
P207689	SEP04890612	VANADIUM	20.2	UG/G	A	12.3	A	05-MAY-89
P207689	SEP04891215	VANADIUM	22.8	UG/G	A	11.9	A	05-MAY-89
P207689	SEP04890612	ZINC	9.4	UG/G	A	4.9	A	05-MAY-89
P207689	SEP04891215	ZINC	10.1	UG/G	A	4.8	A	05-MAY-89
P207689	SEP04890006	pH	9.0	PHUNIT				05-MAY-89
P207689	SEP04890006D	pH	8.9	PHUNIT				05-MAY-89
P207689	SEP04891215	pH	9.2	PHUNIT				05-MAY-89
P207689	SEP04890612	pH	9.4	PHUNIT				05-MAY-89
P207789	SEP0589BR0006	ALUMINUM	8060	UG/G	A	46.6	A	05-MAY-89
P207789	SEP0589BR0613	ALUMINUM	8540	UG/G	A	45.3	A	05-MAY-89
P207789	SEP0589BR1318	ALUMINUM	10400	UG/G	A	49.0	A	05-MAY-89
P207789	SEP0589BR1824	ALUMINUM	6370	UG/G	A	46.7	A	05-MAY-89
P207789	SEP0589BR0006	ARSENIC	5.4	UG/G	A	4.6	A	05-MAY-89
P207789	SEP0589BR1318	ARSENIC	5.6	UG/G	A	4.9	A	05-MAY-89
P207789	SEP0589BR0613	ARSENIC	2.8	UG/G	V	2.3	A	05-MAY-89
P207789	SEP0589BR0006	BARIUM	152	UG/G	A	46.6	A	05-MAY-89
P207789	SEP0589BR0613	BARIUM	64.3	UG/G	A	45.3	A	05-MAY-89
P207789	SEP0589BR1318	BARIUM	202	UG/G	A	49.0	A	05-MAY-89
P207789	SEP0589BR0006	BERYLLIUM	2.5	UG/G	A	1.2	A	05-MAY-89
P207789	SEP0589BR0613	BERYLLIUM	2.3	UG/G	A	1.1	A	05-MAY-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207789	SEP0589BR1318	BERYLLIUM	3.0	UG/G	A	1.2	A	05-MAY-89
P207789	SEP0589BR1824	BERYLLIUM	1.9	UG/G	A	1.2	A	05-MAY-89
P207789	SEP0589BR0006	CALCIUM	105000	UG/G	V	11700	A	05-MAY-89
P207789	SEP0589BR1318	CALCIUM	23200	UG/G	V	1220	A	05-MAY-89
P207789	SEP0589BR0613	CALCIUM	80100	UG/G	V	11300	A	05-MAY-89
P207789	SEP0589BR1824	CALCIUM	2780	UG/G	V	1170	A	05-MAY-89
P207789	SEP0589BR0006	CHROMIUM	6.9	UG/G	A	2.3	A	05-MAY-89
P207789	SEP0589BR1318	CHROMIUM	8.9	UG/G	A	2.4	A	05-MAY-89
P207789	SEP0589BR0613	CHROMIUM	6.4	UG/G	A	2.3	A	05-MAY-89
P207789	SEP0589BR1824	CHROMIUM	6.3	UG/G	A	2.3	A	05-MAY-89
P207789	SEP0589BR0006	COPPER	8.4	UG/G	A	5.8	A	05-MAY-89
P207789	SEP0589BR0613	COPPER	6.3	UG/G	A	5.7	A	05-MAY-89
P207789	SEP0589BR1824	COPPER	12.0	UG/G	A	5.8	A	05-MAY-89
P207789	SEP0589BR1318	COPPER	13.1	UG/G	A	6.1	A	05-MAY-89
P207789	SEP0589BR0006	IRON	7290	UG/G	A	23.3	A	05-MAY-89
P207789	SEP0589BR1824	IRON	2690	UG/G	A	23.4	A	05-MAY-89
P207789	SEP0589BR1318	IRON	8540	UG/G	A	24.5	A	05-MAY-89
P207789	SEP0589BR0613	IRON	6600	UG/G	A	22.6	A	05-MAY-89
P207789	SEP0589BR0006	LEAD	10.5	UG/G	A	9.2	A	05-MAY-89
P207789	SEP0589BR0613	LEAD	14.6	UG/G	A	9.1	A	05-MAY-89
P207789	SEP0589BR1318	LEAD	24.7	UG/G	A	24.7	A	05-MAY-89
P207789	SEP0589BR1824	LEAD	18.5	UG/G	A	2.4	A	05-MAY-89
P207789	SEP0589BR0006	LITHIUM	9.2	UG/G	V	2.3	A	05-MAY-89
P207789	SEP0589BR0613	LITHIUM	10.8	UG/G	V	2.3	A	05-MAY-89
P207789	SEP0589BR1824	LITHIUM	3.1	UG/G	V	2.3	A	05-MAY-89
P207789	SEP0589BR1318	LITHIUM	13.6	UG/G	V	2.4	A	05-MAY-89
P207789	SEP0589BR0006	MAGNESIUM	4160	UG/G	A	1170	A	05-MAY-89
P207789	SEP0589BR0613	MAGNESIUM	4440	UG/G	A	1130	A	05-MAY-89
P207789	SEP0589BR1824	MAGNESIUM	2560	UG/G	A	1170	A	05-MAY-89
P207789	SEP0589BR1318	MAGNESIUM	4730	UG/G	A	1220	A	05-MAY-89
P207789	SEP0589BR0006	MANGANESE	159	UG/G	A	3.5	A	05-MAY-89
P207789	SEP0589BR1824	MANGANESE	32.8	UG/G	A	3.5	A	05-MAY-89
P207789	SEP0589BR1318	MANGANESE	83.0	UG/G	A	3.7	A	05-MAY-89
P207789	SEP0589BR0613	MANGANESE	116	UG/G	A	3.4	A	05-MAY-89
P207789	SEP0589BR0006	MERCURY	0.18	UG/G	A	0.12	A	05-MAY-89
P207789	SEP0589BR1824	MERCURY	0.13	UG/G	A	0.12	A	05-MAY-89
P207789	SEP0589BR0006	MOLYBDENUM	6.4	UG/G	V	2.3	A	05-MAY-89
P207789	SEP0589BR0613	MOLYBDENUM	6.2	UG/G	V	2.3	A	05-MAY-89
P207789	SEP0589BR1824	MOLYBDENUM	5.4	UG/G	V	2.3	A	05-MAY-89
P207789	SEP0589BR1318	MOLYBDENUM	8.7	UG/G	V	2.4	A	05-MAY-89
P207789	SEP0589BR0006	POTASSIUM	1320	UG/G	V	1170	A	05-MAY-89
P207789	SEP0589BR0006	STRONTIUM	236	UG/G	V	233	A	05-MAY-89
P207789	SEP0589BR0006	VANADIUM	27.5	UG/G	A	11.7	A	05-MAY-89
P207789	SEP0589BR0613	VANADIUM	16.6	UG/G	A	11.3	A	05-MAY-89
P207789	SEP0589BR1824	VANADIUM	14.4	UG/G	A	11.7	A	05-MAY-89
P207789	SEP0589BR1318	VANADIUM	34.5	UG/G	A	12.2	A	05-MAY-89
P207789	SEP0589BR1318	ZINC	29.4	UG/G	A	4.9	A	05-MAY-89
P207789	SEP0589BR0006	pH	8.8	PHUNIT				05-MAY-89
P207789	SEP0589BR0613	pH	9.4	PHUNIT				05-MAY-89
P207789	SEP0589BR1824	pH	8.7	PHUNIT				05-MAY-89
P207789	SEP0589BR1318	pH	9.1	PHUNIT				05-MAY-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207889	SEP06890003	ALUMINUM	32700	UG/G	A	51.7	A	01-MAY-89
P207889	SEP06890306	ALUMINUM	9760	UG/G	A	47.7	A	01-MAY-89
P207889	SEP06890306D	ALUMINUM	7480	UG/G	A	47.9	A	01-MAY-89
P207889	GSEP0689098900	AMERICIUM-241	.502	PCI/L		.070	R	19-SEP-89
P207889	SEP06890003	ARSENIC	9.9	UG/G	V	2.5	A	01-MAY-89
P207889	SEP06890306	ARSENIC	2.8	UG/G	V	2.3	A	01-MAY-89
P207889	SEP06890306D	ARSENIC	4.4	UG/G	V	2.3	A	01-MAY-89
P207889	SEP06890306	BARIUM	122	UG/G	V	47.7	A	01-MAY-89
P207889	SEP06890306D	BARIUM	108	UG/G	V	47.9	A	01-MAY-89
P207889	SEP06890003	BARIUM	269	UG/G	V	51.7	A	01-MAY-89
P207889	SEP06890003	BERYLLIUM	9.1	UG/G	V	1.3	A	01-MAY-89
P207889	SEP06890306	BERYLLIUM	3.2	UG/G	A	1.2	A	01-MAY-89
P207889	SEP06890306D	BERYLLIUM	2.3	UG/G	A	1.2	A	01-MAY-89
P207889	GSEP06890290001	BICARBONATE	430	MG/L				05-FEB-90
P207889	SEP0689-0501-02-1	BICARBONATE AS CACO3	270.000	MG/L		10.00		02-MAY-90
P207889	SEP0689-0501-02-1	BICARBONATE AS CACO3	620	MG/L		10		02-MAY-90
P207889	GW00020IT	BICARBONATE AS CACO3	330	MG/L		1.0		19-JUL-90
P207889	GW00470IT	BICARBONATE AS CACO3	360	MG/L		1.0		11-OCT-90
P207889	GW01031IT	BICARBONATE AS CACO3	360	MG/L		1.0		26-MAR-91
P207889	GW01409IT	BICARBONATE AS CACO3	300	MG/L		1.0		11-JUN-91
P207889	SEP06890003	CALCIUM	9620	UG/G	A	1290	A	01-MAY-89
P207889	SEP06890306	CALCIUM	154000	UG/G	A	1190	A	01-MAY-89
P207889	SEP06890306D	CALCIUM	144000	UG/G	A	1200	A	01-MAY-89
P207889	GSEP06890989001	CALCIUM	129.00	MG/L	V	5000	A	15-SEP-89
P207889	SEP0689-0501-02-1	CALCIUM	12100	UG/L		28.8		02-MAY-90
P207889	GW00020IT	CALCIUM	138000.00	UG/L		5000		19-JUL-90
P207889	GW00470IT	CALCIUM	121000.00	UG/L		5000		11-OCT-90
P207889	GW01031IT	CALCIUM	93000.00	UG/L		5000		26-MAR-91
P207889	GW01409IT	CALCIUM	118000.00	UG/L		5000		11-JUN-91
P207889	SEP06890003	CHROMIUM	28.7	UG/G	V	2.6	A	01-MAY-89
P207889	SEP06890306	CHROMIUM	7.3	UG/G	A	2.4	A	01-MAY-89
P207889	SEP06890306D	CHROMIUM	6.5	UG/G	A	2.4	A	01-MAY-89
P207889	GW00470IT	CHROMIUM	25.70	UG/L		10		11-OCT-90
P207889	SEP06890003	COPPER	14.4	UG/G	A	6.5	A	01-MAY-89
P207889	SEP06890306	COPPER	8.2	UG/G	A	6.0	A	01-MAY-89
P207889	SEP06890306D	COPPER	6.1	UG/G	A	6.0	A	01-MAY-89
P207889	SEP06890306D	IRON	5180	UG/G	V	24.0	A	01-MAY-89
P207889	SEP06890003	IRON	22800	UG/G	V	25.8	A	01-MAY-89
P207889	SEP06890306	IRON	7660	UG/G	V	23.8	A	01-MAY-89
P207889	SEP06890003	LEAD	16.7	UG/G	V	3.8	A	01-MAY-89
P207889	SEP06890306	LEAD	4.7	UG/G	V	1.2	A	01-MAY-89
P207889	SEP06890306D	LEAD	5.1	UG/G	V	1.2	A	01-MAY-89
P207889	SEP06890306D	LITHIUM	9.6	UG/G	V	2.4	A	01-MAY-89
P207889	SEP06890003	LITHIUM	23.9	UG/G	V	2.6	A	01-MAY-89
P207889	SEP06890306	LITHIUM	12.2	UG/G	V	2.4	A	01-MAY-89
P207889	SEP06890003	MAGNESIUM	4380	UG/G	A	1290	A	01-MAY-89
P207889	SEP06890306	MAGNESIUM	3730	UG/G	A	1190	A	01-MAY-89
P207889	SEP06890306D	MAGNESIUM	3240	UG/G	A	1200	A	01-MAY-89
P207889	GSEP06890989001	MAGNESIUM	71.60	MG/L	V	5000	A	15-SEP-89
P207889	GW00020IT	MAGNESIUM	88600.00	UG/L		5000		19-JUL-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207889	GW00470IT	MAGNESIUM	76600.00	UG/L		5000		11-OCT-90
P207889	GW01031IT	MAGNESIUM	69800.00	UG/L		5000		26-MAR-91
P207889	GW01409IT	MAGNESIUM	72400.00	UG/L		5000		11-JUN-91
P207889	SEP06890306D	MANGANESE	37.8	UG/G	A	3.6	A	01-MAY-89
P207889	SEP06890003	MANGANESE	91.8	UG/G	A	3.9	A	01-MAY-89
P207889	SEP06890306	MANGANESE	64.5	UG/G	A	3.6	A	01-MAY-89
P207889	SEP06890003	MERCURY	0.37	UG/G	A	0.13	A	01-MAY-89
P207889	SEP06890306	MERCURY	0.18	UG/G	A	0.12	A	01-MAY-89
P207889	SEP06890306D	MERCURY	0.12	UG/G	A	0.11	A	01-MAY-89
P207889	SEP0689-0501-02-1	MERCURY	0.28	UG/L		0.2		02-MAY-90
P207889	GW00020IT	MERCURY	0.46	UG/L		0		19-JUL-90
P207889	GW00470IT	MERCURY	0.22	UG/L		0		11-OCT-90
P207889	GW01031IT	MERCURY	0.27	UG/L		0		26-MAR-91
P207889	SEP06890306D	MOLYBDENUM	5.1	UG/G	V	2.4	A	01-MAY-89
P207889	SEP06890003	MOLYBDENUM	21.1	UG/G	V	2.6	A	01-MAY-89
P207889	SEP06890306	MOLYBDENUM	7.1	UG/G	V	2.4	A	01-MAY-89
P207889	SEP06890003	NICKEL	41.7	UG/G	A	10.3	A	01-MAY-89
P207889	SEP06890306	NICKEL	12.8	UG/G	A	9.5	A	01-MAY-89
P207889	SEP06890003	PLUTONIUM-239	0.02	PCI/G				01-MAY-89
P207889	GSEP0689098900	PLUTONIUM-239	.044	PCI/L		.036	R	19-SEP-89
P207889	SEP06890003	POTASSIUM	2820	UG/G	A	1290	A	01-MAY-89
P207889	GW00020IT	SELENIUM	37.80	UG/L	S	5		19-JUL-90
P207889	GW00470IT	SELENIUM	25.30	UG/L	S	5		11-OCT-90
P207889	GW01031IT	SELENIUM	16.00	UG/L		5		26-MAR-91
P207889	GW01409IT	SELENIUM	27.00	UG/L	S	5		11-JUN-91
P207889	SEP06890003	SILVER	3.1	UG/G	A	2.6	A	01-MAY-89
P207889	GW00470IT	SILVER	10.30	UG/L		10		11-OCT-90
P207889	GSEP06890989001	SODIUM	171.00	MG/L	V	5000	A	15-SEP-89
P207889	SEP0689-0501-02-1	SODIUM	104000	UG/L		30.4		02-MAY-90
P207889	SEP0689-0501-02-1	SODIUM	122000	UG/L		30.4		02-MAY-90
P207889	GW00020IT	SODIUM	201000.00	UG/L		5000		19-JUL-90
P207889	GW00470IT	SODIUM	171000.00	UG/L	E	5000		11-OCT-90
P207889	GW01031IT	SODIUM	180000.00	UG/L		5000		26-MAR-91
P207889	GW01409IT	SODIUM	168000.00	UG/L		5000		11-JUN-91
P207889	GW00020IT	STRONTIUM	1990.00	UG/L		200		19-JUL-90
P207889	GW00470IT	STRONTIUM	1660.00	UG/L		200		11-OCT-90
P207889	GW01031IT	STRONTIUM	1570.00	UG/L		200		26-MAR-91
P207889	GW01409IT	STRONTIUM	1670.00	UG/L		200		11-JUN-91
P207889	GSEP06890290001	SULFATE	390	MG/L				05-FEB-90
P207889	SEP0689-0501-02-1	SULFATE	247.000	MG/L		50.00		02-MAY-90
P207889	GW00020IT	SULFATE	510	MG/L		2.0		19-JUL-90
P207889	GW00470IT	SULFATE	510	MG/L		2.0		11-OCT-90
P207889	GW01031IT	SULFATE	320	MG/L		2.0		26-MAR-91
P207889	GW01409IT	SULFATE	350	MG/L		2.0		11-JUN-91
P207889	SEP06890003	URANIUM-233,-234	0.4	PCI/G				01-MAY-89
P207889	SEP06890306	URANIUM-233,-234	0.4	PCI/G				01-MAY-89
P207889	SEP06890306D	URANIUM-233,-234	0.8	PCI/G				01-MAY-89
P207889	GSEP0689098900	URANIUM-233,-234	13.0	PCI/L		0	R	19-SEP-89
P207889	GW00020IT	URANIUM-233,-234	13.44	PCI/L	X	.6		19-JUL-90
P207889	GW00470IT	URANIUM-233,-234	13.01	PCI/L		.6		11-OCT-90
P207889	SEP06890003	VANADIUM	58.7	UG/G	A	12.9	A	01-MAY-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207889	SEP06890306	VANADIUM	20.2	UG/G	A	11.9	A	01-MAY-89
P207889	SEP06890306D	VANADIUM	13.1	UG/G	A	12.0	A	01-MAY-89
P207889	SEP06890306D	ZINC	10.1	UG/G	A	4.8	A	01-MAY-89
P207889	SEP06890003	ZINC	45.3	UG/G	A	5.2	A	01-MAY-89
P207889	SEP06890306	ZINC	13.0	UG/G	A	4.8	A	01-MAY-89
P207889	GW00470IT	ZINC	24.20	UG/L		20		11-OCT-90
P207889	GW01031IT	ZINC	21.10	UG/L		20		26-MAR-91
P207889	SEP06890003	pH	8.3	PHUNIT				01-MAY-89
P207889	SEP06890306	pH	9.1	PHUNIT				01-MAY-89
P207889	SEP06890306D	pH	8.9	PHUNIT				01-MAY-89
P207989	SEP0789BR0306	ALUMINUM	11700	UG/G	A	46.2	A	02-MAY-89
P207989	SEP0789BR0612	ALUMINUM	10300	UG/G	A	49.8	A	02-MAY-89
P207989	SEP0789BR1218	ALUMINUM	8260	UG/G	A	47.0	A	02-MAY-89
P207989	SEP0789BR0003	ALUMINUM	7240	UG/G	A	41.7	A	02-MAY-89
P207989	SEP0789BR0306	ARSENIC	5.3	UG/G	V	2.4	A	02-MAY-89
P207989	SEP0789BR0612	ARSENIC	7.3	UG/G	V	2.5	A	02-MAY-89
P207989	SEP0789BR0003	ARSENIC	4.8	UG/G	V	2.1	A	02-MAY-89
P207989	SEP0789BR0003	BARIUM	82.0	UG/G	V	41.7	A	02-MAY-89
P207989	SEP0789BR0306	BARIUM	119	UG/G	V	46.2	A	02-MAY-89
P207989	SEP0789BR1218	BARIUM	70.1	UG/G	V	47.0	A	02-MAY-89
P207989	SEP0789BR0612	BARIUM	216	UG/G	V	49.8	A	02-MAY-89
P207989	SEP0789BR0306	BERYLLIUM	3.1	UG/G	A	1.2	A	02-MAY-89
P207989	SEP0789BR0612	BERYLLIUM	3.5	UG/G	V	1.2	A	02-MAY-89
P207989	SEP0789BR1218	BERYLLIUM	2.5	UG/G	V	1.2	A	02-MAY-89
P207989	SEP0789BR0003	BERYLLIUM	1.9	UG/G	V	1.0	A	02-MAY-89
P207989	GSEP07890989001	BICARBONATE	320	MG/L	V			14-SEP-89
P207989	GSEP07890290001	BICARBONATE	360	MG/L				06-FEB-90
P207989	SEP0789-0501-02-1	BICARBONATE AS CACO3	304	MG/L		2		02-MAY-90
P207989	GW00304IT	BICARBONATE AS CACO3	310	MG/L		1.0		28-AUG-90
P207989	GW01387IT	BICARBONATE AS CACO3	280	MG/L		1.0		06-JUN-91
P207989	SEP0789BR0003	CALCIUM	14000	UG/G	A	1040	A	02-MAY-89
P207989	SEP0789BR0306	CALCIUM	72300	UG/G	A	11500	A	02-MAY-89
P207989	SEP0789BR1218	CALCIUM	13900	UG/G	A	1180	A	02-MAY-89
P207989	SEP0789BR0612	CALCIUM	22800	UG/G	A	1240	A	02-MAY-89
P207989	SEP0789-0501-02-1	CALCIUM	59300	UG/L		5000		02-MAY-90
P207989	GW01032IT	CALCIUM	63700.00	UG/L		5000		26-MAR-91
P207989	GW01387IT	CARBONATE AS CACO3	6	MG/L		1.0		06-JUN-91
P207989	SEP0789BR0003	CHROMIUM	7.7	UG/G	A	2.1	A	02-MAY-89
P207989	SEP0789BR0306	CHROMIUM	7.6	UG/G	A	2.3	A	02-MAY-89
P207989	SEP0789BR0612	CHROMIUM	7.7	UG/G	A	2.5	A	02-MAY-89
P207989	SEP0789BR1218	CHROMIUM	7.4	UG/G	A	2.4	A	02-MAY-89
P207989	SEP0789BR0612	COBALT	17.8	UG/G	V	12.4	A	02-MAY-89
P207989	SEP0789BR0003	COPPER	7.5	UG/G	V	5.2	A	02-MAY-89
P207989	SEP0789BR0306	COPPER	6.4	UG/G	A	5.8	A	02-MAY-89
P207989	SEP0789BR1218	COPPER	13.8	UG/G	V	5.9	A	02-MAY-89
P207989	SEP0789BR0612	COPPER	35.9	UG/G	V	6.2	A	02-MAY-89
P207989	GW00304IT	GROSS ALPHA - DISSOL	71.28	PCI/L		2		28-AUG-90
P207989	GW00666IT	GROSS ALPHA - DISSOL	55.57	PCI/L		2		13-DEC-90
P207989	SEP0789BR0612	IRON	22300	UG/G	A	24.9	A	02-MAY-89
P207989	SEP0789BR1218	IRON	8840	UG/G	A	23.5	A	02-MAY-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207989	SEP0789BR0003	IRON	7290	UG/G	A	20.9	A	02-MAY-89
P207989	SEP0789BR0306	IRON	10500	UG/G	A	23.1	A	02-MAY-89
P207989	SEP0789BR0003	LEAD	8.9	UG/G	A	2.1	A	02-MAY-89
P207989	SEP0789BR0306	LEAD	6.0	UG/G	A	4.8	A	02-MAY-89
P207989	SEP0789BR0612	LEAD	13.8	UG/G	A	2.5	A	02-MAY-89
P207989	SEP0789BR1218	LEAD	19.0	UG/G	A	9.4	A	02-MAY-89
P207989	SEP0789BR0612	LITHIUM	7.9	UG/G	V	2.5	A	02-MAY-89
P207989	SEP0789BR1218	LITHIUM	10.1	UG/G	V	2.4	A	02-MAY-89
P207989	SEP0789BR0003	LITHIUM	6.7	UG/G	V	2.1	A	02-MAY-89
P207989	SEP0789BR0306	LITHIUM	9.9	UG/G	V	2.3	A	02-MAY-89
P207989	SEP0789BR0003	MAGNESIUM	1440	UG/G	A	1040	A	02-MAY-89
P207989	SEP0789BR0306	MAGNESIUM	4120	UG/G	A	1150	A	02-MAY-89
P207989	SEP0789BR0612	MAGNESIUM	4650	UG/G	A	1240	A	02-MAY-89
P207989	SEP0789BR1218	MAGNESIUM	3260	UG/G	A	1180	A	02-MAY-89
P207989	SEP0789-0501-02-1	MAGNESIUM	47800	UG/L		5000		02-MAY-90
P207989	GW01032IT	MAGNESIUM	49200.00	UG/L		5000		26-MAR-91
P207989	SEP0789BR0612	MANGANESE	165	UG/G	A	3.7	A	02-MAY-89
P207989	SEP0789BR1218	MANGANESE	168	UG/G	A	3.5	A	02-MAY-89
P207989	SEP0789BR0003	MANGANESE	168	UG/G	A	3.1	A	02-MAY-89
P207989	SEP0789BR0306	MANGANESE	192	UG/G	A	3.5	A	02-MAY-89
P207989	GW01032IT	MANGANESE	64.10	UG/L		15		26-MAR-91
P207989	SEP0789BR0003	MERCURY	0.21	UG/G	A	0.11	A	02-MAY-89
P207989	SEP0789BR0306	MERCURY	0.21	UG/G	A	0.10	A	02-MAY-89
P207989	SEP0789BR0612	MERCURY	0.25	UG/G	A	0.13	A	02-MAY-89
P207989	SEP0789BR1218	MERCURY	0.24	UG/G	A	0.10	A	02-MAY-89
P207989	GW01032IT	MERCURY	0.25	UG/L		0		26-MAR-91
P207989	SEP0789BR0612	MOLYBDENUM	7.9	UG/G	V	2.5	A	02-MAY-89
P207989	SEP0789BR1218	MOLYBDENUM	8.1	UG/G	V	2.4	A	02-MAY-89
P207989	SEP0789BR0003	MOLYBDENUM	6.9	UG/G	V	2.1	A	02-MAY-89
P207989	SEP0789BR0306	MOLYBDENUM	10.4	UG/G	V	2.3	A	02-MAY-89
P207989	SEP0789BR0306	NICKEL	10.2	UG/G	A	9.2	A	02-MAY-89
P207989	SEP0789BR0612	NICKEL	23.0	UG/G	A	10	A	02-MAY-89
P207989	SEP0789BR0003	PLUTONIUM-239	0.05	PCI/G				02-MAY-89
P207989	SEP0789BR0003	POTASSIUM	1750	UG/G	V	1040	A	02-MAY-89
P207989	SEP0789BR0306	POTASSIUM	1320	UG/G	V	1150	A	02-MAY-89
P207989	SEP0789-0501-02-1	SELENIUM	20.7	UG/L		5		02-MAY-90
P207989	GW01032IT	SELENIUM	17.00	UG/L		5		26-MAR-91
P207989	SEP0789BR0612	SODIUM	1340	UG/G	V	1240	A	02-MAY-89
P207989	SEP0789-0501-02-1	SODIUM	246000	UG/L		5000		02-MAY-90
P207989	GW01032IT	SODIUM	241000.00	UG/L		5000		26-MAR-91
P207989	SEP0789-0501-02-1	STRONTIUM	996	UG/L		100		02-MAY-90
P207989	GW01032IT	STRONTIUM	1060.00	UG/L		200		26-MAR-91
P207989	GSEP07890989001	SULFATE	210	MG/L	V			14-SEP-89
P207989	GSEP07890290001	SULFATE	250	MG/L				06-FEB-90
P207989	SEP0789-0501-02-1	SULFATE	209	MG/L		50		02-MAY-90
P207989	GW00304IT	SULFATE	340	MG/L		2.0		28-AUG-90
P207989	GW00666IT	SULFATE	280	MG/L		20		13-DEC-90
P207989	GW01387IT	SULFATE	180	MG/L		2.0		06-JUN-91
P207989	SEP0789BR0003	URANIUM-233,-234	0.6	PCI/G				02-MAY-89
P207989	SEP0789BR0612	URANIUM-233,-234	1.9	PCI/G				02-MAY-89
P207989	SEP0789BR0306	URANIUM-233,-234	1.2	PCI/G				02-MAY-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P207989	SEP0789BR1218	URANIUM-233,-234	0.9	PCI/G				02-MAY-89
P207989	GW003041T	URANIUM-233,-234	28.36	PCI/L		.6		28-AUG-90
P207989	GW00666IT	URANIUM-233,-234	26.54	PCI/L		.6		13-DEC-90
P207989	SEP0789BR0003	VANADIUM	24.3	UG/G	A	10.4	A	02-MAY-89
P207989	SEP0789BR0306	VANADIUM	26.9	UG/G	A	11.5	A	02-MAY-89
P207989	SEP0789BR0612	VANADIUM	68.9	UG/G	A	12.4	A	02-MAY-89
P207989	SEP0789BR1218	VANADIUM	27.8	UG/G	A	11.8	A	02-MAY-89
P207989	SEP0789BR0612	ZINC	93.4	UG/G	V	5.0	A	02-MAY-89
P207989	SEP0789BR1218	ZINC	41.4	UG/G	V	4.7	A	02-MAY-89
P207989	SEP0789BR0306	pH	8.9	PHUNIT				02-MAY-89
P207989	SEP0789BR0612	pH	9.0	PHUNIT				02-MAY-89
P207989	SEP0789BR1218	pH	8.7	PHUNIT				02-MAY-89
P207989	SEP0789BR0003	pH	8.6	PHUNIT				02-MAY-89
P209689	SEP2489BR0612	ALUMINUM	9350	UG/G	A	46.3	A	03-MAY-89
P209689	SEP2489BR1218	ALUMINUM	8770	UG/G	A	47.8	A	03-MAY-89
P209689	SEP2489BR1824	ALUMINUM	9130	UG/G	A	48.9	A	03-MAY-89
P209689	SEP2489BR1218	ARSENIC	12.5	UG/G	V	4.7	A	03-MAY-89
P209689	SEP2489BR1218	BARIUM	174	UG/G	V	47.8	A	03-MAY-89
P209689	SEP2489BR1824	BARIUM	90.5	UG/G	V	48.9	A	03-MAY-89
P209689	SEP2489BR0612	BERYLLIUM	2.3	UG/G	V	1.2	A	03-MAY-89
P209689	SEP2489BR1824	BERYLLIUM	2.7	UG/G	V	1.2	A	03-MAY-89
P209689	SEP2489BR1218	BERYLLIUM	4.1	UG/G	A	1.2	A	03-MAY-89
P209689	GW01425IT	BICARBONATE AS CACO3	300	MG/L		1.0		13-JUN-91
P209689	SEP2489BR0612	CALCIUM	3110	UG/G	A	1160	A	03-MAY-89
P209689	SEP2489BR1218	CALCIUM	2730	UG/G	A	1190	A	03-MAY-89
P209689	SEP2489BR1824	CALCIUM	4760	UG/G	A	1220	A	03-MAY-89
P209689	GW01425IT	CALCIUM	183000.00	UG/L		5000		13-JUN-91
P209689	SEP2489BR0612	CHROMIUM	8.3	UG/G	A	2.3	A	03-MAY-89
P209689	SEP2489BR1218	CHROMIUM	10.0	UG/G	A	2.4	A	03-MAY-89
P209689	SEP2489BR1824	CHROMIUM	10.2	UG/G	A	2.4	A	03-MAY-89
P209689	SEP2489BR1218	COBALT	88.9	UG/G	A	11.9	A	03-MAY-89
P209689	SEP2489BR0612	COPPER	5.9	UG/G	V	5.8	A	03-MAY-89
P209689	SEP2489BR1218	COPPER	73.6	UG/G	A	6.0	A	03-MAY-89
P209689	SEP2489BR1824	COPPER	19.4	UG/G	V	6.1	A	03-MAY-89
P209689	SEP2489BR0612	IRON	7550	UG/G	A	23.2	A	03-MAY-89
P209689	SEP2489BR1824	IRON	11200	UG/G	A	24.4	A	03-MAY-89
P209689	SEP2489BR1218	IRON	75900	UG/G	A	239	A	03-MAY-89
P209689	SEP2489BR0612	LEAD	6.9	UG/G	A	1.1	A	03-MAY-89
P209689	SEP2489BR1824	LEAD	14.8	UG/G	A	2.5	A	03-MAY-89
P209689	SEP2489BR1218	LEAD	30.9	UG/G	A	23.4	A	03-MAY-89
P209689	SEP2489BR0612	LITHIUM	10.6	UG/G	V	2.3	A	03-MAY-89
P209689	SEP2489BR1824	LITHIUM	4.7	UG/G	V	2.4	A	03-MAY-89
P209689	SEP2489BR1218	LITHIUM	4.3	UG/G	V	2.4	A	03-MAY-89
P209689	SEP2489BR0612	MAGNESIUM	3020	UG/G	A	1160	A	03-MAY-89
P209689	SEP2489BR1218	MAGNESIUM	3580	UG/G	A	1190	A	03-MAY-89
P209689	SEP2489BR1824	MAGNESIUM	3320	UG/G	A	1220	A	03-MAY-89
P209689	GW01425IT	MAGNESIUM	30200.00	UG/L		5000		13-JUN-91
P209689	SEP2489BR0612	MANGANESE	125	UG/G	A	3.5	A	03-MAY-89
P209689	SEP2489BR1218	MANGANESE	1620	UG/G	A	3.6	A	03-MAY-89
P209689	SEP2489BR1824	MANGANESE	46.0	UG/G	A	3.7	A	03-MAY-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P209689	GW01425IT	MANGANESE	16.80	UG/L		15		13-JUN-91
P209689	SEP2489BR1218	MERCURY	0.44	UG/G	A	0.12	A	03-MAY-89
P209689	SEP2489BR1824	MERCURY	0.12	UG/G	A	0.11	A	03-MAY-89
P209689	SEP2489BR0612	MOLYBDENUM	8.9	UG/G	V	2.3	A	03-MAY-89
P209689	SEP2489BR1824	MOLYBDENUM	9.0	UG/G	V	2.4	A	03-MAY-89
P209689	SEP2489BR1218	MOLYBDENUM	7.8	UG/G	V	2.4	A	03-MAY-89
P209689	SEP2489BR1218	NICKEL	133	UG/G	A	9.6	A	03-MAY-89
P209689	GW01425IT	POTASSIUM	56200.00	UG/L		5000		13-JUN-91
P209689	SEP2489BR1218	SILVER	3.7	UG/G	A	2.4	A	03-MAY-89
P209689	GW01425IT	SODIUM	291000.00	UG/L		5000		13-JUN-91
P209689	GW01425IT	STRONTIUM	852.00	UG/L		200		13-JUN-91
P209689	GW01425IT	SULFATE	120	MG/L		2.0		13-JUN-91
P209689	SEP2489BR0006	URANIUM-233,-234	0.5	PCI/G				03-MAY-89
P209689	SEP2489BR1824	URANIUM-233,-234	0.7	PCI/G				03-MAY-89
P209689	SEP2489BR1218	URANIUM-233,-234	0.7	PCI/G				03-MAY-89
P209689	SEP2489BR0612	URANIUM-233,-234	0.6	PCI/G				03-MAY-89
P209689	SEP2489BR0612	VANADIUM	17.5	UG/G	A	11.6	A	03-MAY-89
P209689	SEP2489BR1218	VANADIUM	110	UG/G	A	11.9	A	03-MAY-89
P209689	SEP2489BR1824	VANADIUM	33.4	UG/G	A	12.2	A	03-MAY-89
P209689	SEP2489BR1218	ZINC	487	UG/G	V	4.8	A	03-MAY-89
P209689	SEP2489BR1824	ZINC	50.6	UG/G	V	4.9	A	03-MAY-89
P209689	SEP2489BR0006	pH	8.6	PHUNIT				03-MAY-89
P209689	SEP2489BR1824	pH	8.8	PHUNIT				03-MAY-89
P209689	SEP2489BR1218	pH	8.8	PHUNIT				03-MAY-89
P209689	SEP2489BR0612	pH	8.9	PHUNIT				03-MAY-89
P209789	SEP25891216	ALUMINUM	7800	UG/G		49.9		04-MAY-89
P209789	SEP25890006	ALUMINUM	7460	UG/G		44.7		04-MAY-89
P209789	SEP25890608	ALUMINUM	5940	UG/G		44.1		04-MAY-89
P209789	GSEP25890989001	AMERICIUM-241	.023	PCI/L		.010	A	13-SEP-89
P209789	GSEP25890989001D	AMERICIUM-241	.044	PCI/L		.020	A	13-SEP-89
P209789	GW00538IT	AMERICIUM-241	.02593	PCI/L		.01		19-OCT-90
P209789	SEP25890006	ARSENIC	2.2	UG/G		2.1		04-MAY-89
P209789	SEP25890006	BARIUM	50.4	UG/G		44.7		04-MAY-89
P209789	SEP25891216	BARIUM	69.4	UG/G		49.9		04-MAY-89
P209789	SEP25890608	BERYLLIUM	1.5	UG/G		1.1		04-MAY-89
P209789	SEP25891216	BERYLLIUM	2.2	UG/G		1.2		04-MAY-89
P209789	SEP25890006	BERYLLIUM	1.7	UG/G		1.1		04-MAY-89
P209789	GSEP25890390001	BICARBONATE	400	MG/L				15-MAR-90
P209789	SEP2589-0504-02-0	BICARBONATE AS CACO3	258	MG/L		2		04-MAY-90
P209789	GW00034IT	BICARBONATE AS CACO3	250	MG/L		1		24-JUL-90
P209789	GW00538IT	BICARBONATE AS CACO3	280	MG/L		1.0		19-OCT-90
P209789	GW01025IT	BICARBONATE AS CACO3	280	MG/L		1.0		22-MAR-91
P209789	GW01388IT	BICARBONATE AS CACO3	290	MG/L		1.0		07-JUN-91
P209789	SEP25890608	CALCIUM	6350	UG/G		1100		04-MAY-89
P209789	SEP25891216	CALCIUM	12300	UG/G		1250		04-MAY-89
P209789	SEP25890006	CALCIUM	17800	UG/G		1120		04-MAY-89
P209789	GSEP25890989001	CALCIUM	83.30	MG/L		5000		13-SEP-89
P209789	GSEP25890989001D	CALCIUM	82.30	MG/L		5000		13-SEP-89
P209789	SEP2589-0504-02-0	CALCIUM	96100	UG/L		5000		04-MAY-90
P209789	GW00034IT	CALCIUM	96900	UG/L		5000		24-JUL-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P209789	GW00538IT	CALCIUM	104000.00	UG/L		5000		19-OCT-90
P209789	GW01025IT	CALCIUM	98600.00	UG/L		5000		22-MAR-91
P209789	GW01388IT	CALCIUM	96800.00	UG/L		5000		07-JUN-91
P209789	SEP25890608	CHROMIUM	5.6	UG/G		2.2		04-MAY-89
P209789	SEP25891216	CHROMIUM	7.3	UG/G		2.5		04-MAY-89
P209789	SEP25890006	CHROMIUM	6.4	UG/G		2.2		04-MAY-89
P209789	GW00538IT	CHROMIUM	12.10	UG/L		10		19-OCT-90
P209789	SEP25891216	COPPER	8.8	UG/G		6.2		04-MAY-89
P209789	SEP25890006	IRON	6070	UG/G		22.4		04-MAY-89
P209789	SEP25890608	IRON	4740	UG/G		22.0		04-MAY-89
P209789	SEP25891216	IRON	5210	UG/G		25.0		04-MAY-89
P209789	SEP25891216	LEAD	86.9	UG/G		49.9		04-MAY-89
P209789	SEP25890006	LEAD	3.9	UG/G		2.1		04-MAY-89
P209789	SEP25890608	LEAD	4.1	UG/G		1.1		04-MAY-89
P209789	SEP25890006	LITHIUM	6.5	UG/G		2.2		04-MAY-89
P209789	SEP25890608	LITHIUM	5.3	UG/G		2.2		04-MAY-89
P209789	SEP25891216	LITHIUM	8.9	UG/G		2.5		04-MAY-89
P209789	SEP25891216	MAGNESIUM	3260	UG/G		1250		04-MAY-89
P209789	SEP25890006	MAGNESIUM	1800	UG/G		1120		04-MAY-89
P209789	SEP25890608	MAGNESIUM	1940	UG/G		1100		04-MAY-89
P209789	GSEP25890989001	MAGNESIUM	27.30	MG/L		5000		13-SEP-89
P209789	GSEP25890989001D	MAGNESIUM	27.00	MG/L		5000		13-SEP-89
P209789	SEP2589-0504-02-0	MAGNESIUM	31600	UG/L		5000		04-MAY-90
P209789	GW00034IT	MAGNESIUM	32900	UG/L		5000		24-JUL-90
P209789	GW00538IT	MAGNESIUM	35700.00	UG/L		5000		19-OCT-90
P209789	GW01025IT	MAGNESIUM	35900.00	UG/L		5000		22-MAR-91
P209789	GW01388IT	MAGNESIUM	32600.00	UG/L		5000		07-JUN-91
P209789	SEP25890006	MANGANESE	80.6	UG/G		3.4		04-MAY-89
P209789	SEP25890608	MANGANESE	45.3	UG/G		3.3		04-MAY-89
P209789	SEP25891216	MANGANESE	67.2	UG/G		3.7		04-MAY-89
P209789	SEP25890006	MERCURY	0.32	UG/G		0.11		04-MAY-89
P209789	SEP25890608	MERCURY	0.30	UG/G		0.10		04-MAY-89
P209789	GW01025IT	MERCURY	0.29	UG/L		0		22-MAR-91
P209789	SEP25890006	MOLYBDENUM	7.0	UG/G		2.2		04-MAY-89
P209789	SEP25890608	MOLYBDENUM	4.4	UG/G		2.2		04-MAY-89
P209789	SEP25891216	MOLYBDENUM	6.2	UG/G		2.5		04-MAY-89
P209789	SEP25890006	PLUTONIUM-239	0.03	PCI/G				04-MAY-89
P209789	GSEP25890989001	PLUTONIUM-239	.018	PCI/L		0	A	13-SEP-89
P209789	GW00538IT	SELENIUM	5.00	UG/L		5		19-OCT-90
P209789	GW01025IT	SELENIUM	6.00	UG/L		5		22-MAR-91
P209789	GW01388IT	SELENIUM	6.00	UG/L		5		07-JUN-91
P209789	GSEP25890989001	SODIUM	56.80	MG/L		5000		13-SEP-89
P209789	GSEP25890989001D	SODIUM	55.50	MG/L		5000		13-SEP-89
P209789	SEP2589-0504-02-0	SODIUM	55200	UG/L		5000		04-MAY-90
P209789	GW00034IT	SODIUM	74000	UG/L		5000		24-JUL-90
P209789	GW00538IT	SODIUM	80200.00	UG/L	E	5000		19-OCT-90
P209789	GW01025IT	SODIUM	77600.00	UG/L		5000		22-MAR-91
P209789	GW01388IT	SODIUM	67100.00	UG/L		5000		07-JUN-91
P209789	SEP2589-0504-02-0	STRONTIUM	871	UG/L		100		04-MAY-90
P209789	GW00034IT	STRONTIUM	832	UG/L		200		24-JUL-90
P209789	GW00538IT	STRONTIUM	955.00	UG/L		200		19-OCT-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P209789	GW01025IT	STRONTIUM	957.00	UG/L		200		22-MAR-91
P209789	GW01388IT	STRONTIUM	902.00	UG/L		200		07-JUN-91
P209789	GW00034IT	TRITIUM	585.6	PCI/L		400		24-JUL-90
P209789	GW00538IT	TRITIUM	792.4	PCI/L		400		19-OCT-90
P209789	SEP25890006	URANIUM-233,-234	0.2	PCI/G				04-MAY-89
P209789	SEP25890812	URANIUM-233,-234	0.4	PCI/G				04-MAY-89
P209789	SEP25890608	URANIUM-233,-234	0.5	PCI/G				04-MAY-89
P209789	SEP25891216	URANIUM-233,-234	0.7	PCI/G				04-MAY-89
P209789	GSEP25890989001D	URANIUM-233,-234	2.87	PCI/L		0	A	13-SEP-89
P209789	GSEP25890989001	URANIUM-233,-234	3.45	PCI/L		.07	A	13-SEP-89
P209789	GW00034IT	URANIUM-233,-234	3.973	PCI/L		.6		24-JUL-90
P209789	GW00538IT	URANIUM-233,-234	2.886	PCI/L		.6		19-OCT-90
P209789	SEP25891216	VANADIUM	17.0	UG/G		12.5		04-MAY-89
P209789	SEP25890006	VANADIUM	13.6	UG/G		11.2		04-MAY-89
P209789	GW01388IT	ZINC	43.70	UG/L		20		07-JUN-91
P209789	SEP25890006	pH	8.8	PHUNIT				04-MAY-89
P209789	SEP25891216	pH	9.1	PHUNIT				04-MAY-89
P209789	SEP25890812	pH	9.0	PHUNIT				04-MAY-89
P209789	SEP25890608	pH	9.1	PHUNIT				04-MAY-89
P210289	SEP3189BR0306	ALUMINUM	18200	UG/G	V	46.1	A	15-MAY-89
P210289	SEP3189BR1319	ALUMINUM	6130	UG/G	V	48.4	A	15-MAY-89
P210289	SEP3189BR0713	ALUMINUM	6310	UG/G	V	47.3	A	15-MAY-89
P210289	GSEP31890989001	AMERICIUM-241	0.18	PCI/L			R	25-SEP-89
P210289	SEP3189BR1319	ARSENIC	7.3	UG/G	V	2.5	A	15-MAY-89
P210289	SEP3189BR0306	ARSENIC	14.1	UG/G	V	2.3	A	15-MAY-89
P210289	SEP3189BR0713	ARSENIC	3.1	UG/G	V	2.3	A	15-MAY-89
P210289	SEP3189BR0306	BARIUM	144	UG/G	V	46.1	A	15-MAY-89
P210289	SEP3189BR0713	BARIUM	254	UG/G	V	47.3	A	15-MAY-89
P210289	SEP3189BR0306	BERYLLIUM	5.5	UG/G	V	1.2	A	15-MAY-89
P210289	SEP3189BR1319	BERYLLIUM	2.4	UG/G	V	1.2	A	15-MAY-89
P210289	SEP3189BR0713	BERYLLIUM	2.5	UG/G	V	1.2	A	15-MAY-89
P210289	GW00174IT	BICARBONATE AS CACO3	260	MG/L		1		26-JUL-90
P210289	GW00615IT	BICARBONATE AS CACO3	260	MG/L		1.0		12-DEC-90
P210289	SEP3189BR0306	CALCIUM	5870	UG/G	V	1150	A	15-MAY-89
P210289	SEP3189BR0713	CALCIUM	48900	UG/G	V	11800	A	15-MAY-89
P210289	SEP3189BR1319	CALCIUM	3270	UG/G	V	1210	A	15-MAY-89
P210289	GSEP31890989001	CALCIUM	211.00	MG/L		5000		25-SEP-89
P210289	SEP3189-0501-02-1	CALCIUM	227000	UG/L		5000		02-MAY-90
P210289	GW00174IT	CALCIUM	134000	UG/L		5000		26-JUL-90
P210289	SEP3189BR0306	CHROMIUM	18.1	UG/G	V	2.3	A	15-MAY-89
P210289	SEP3189BR0713	CHROMIUM	7.2	UG/G	V	2.4	A	15-MAY-89
P210289	SEP3189BR1319	CHROMIUM	7.5	UG/G	V	2.4	A	15-MAY-89
P210289	SEP3189BR0306	COPPER	7.3	UG/G	A	5.8	A	15-MAY-89
P210289	SEP3189BR0713	COPPER	18.0	UG/G	V	5.9	A	15-MAY-89
P210289	SEP3189BR1319	COPPER	15.7	UG/G	V	6.1	A	15-MAY-89
P210289	GW00174IT	GROSS ALPHA - DISSOL	82.88	PCI/L		2		26-JUL-90
P210289	SEP3189BR0306	IRON	15300	UG/G	V	23.1	A	15-MAY-89
P210289	SEP3189BR1319	IRON	7640	UG/G	V	24.2	A	15-MAY-89
P210289	SEP3189BR0713	IRON	6650	UG/G	V	23.6	A	15-MAY-89
P210289	SEP3189BR0306	LEAD	20.2	UG/G	V	4.6	A	15-MAY-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P210289	SEP3189BR0713	LEAD	25.9	UG/G	V	4.7	A	15-MAY-89
P210289	SEP3189BR1319	LEAD	31.1	UG/G	V	4.9	A	15-MAY-89
P210289	SEP3189BR0306	LITHIUM	11.9	UG/G	V	2.3	A	15-MAY-89
P210289	SEP3189BR0713	LITHIUM	5.8	UG/G	V	2.4	A	15-MAY-89
P210289	SEP3189BR1319	LITHIUM	4.1	UG/G	V	2.4	A	15-MAY-89
P210289	SEP3189BR0306	MAGNESIUM	1720	UG/G	V	1150	A	15-MAY-89
P210289	SEP3189BR0713	MAGNESIUM	3590	UG/G	V	1180	A	15-MAY-89
P210289	SEP3189BR1319	MAGNESIUM	2870	UG/G	V	1210	A	15-MAY-89
P210289	GSEP31890989001	MAGNESIUM	158.00	MG/L		5000		25-SEP-89
P210289	SEP3189-0501-02-1	MAGNESIUM	173000	UG/L		5000		02-MAY-90
P210289	GW00174IT	MAGNESIUM	102000	UG/L		5000		26-JUL-90
P210289	SEP3189BR0306	MANGANESE	226	UG/G	V	3.5	A	15-MAY-89
P210289	SEP3189BR1319	MANGANESE	75.4	UG/G	V	3.6	A	15-MAY-89
P210289	SEP3189BR0713	MANGANESE	57.8	UG/G	V	3.5	A	15-MAY-89
P210289	GSEP31890989001	MANGANESE	.266	MG/L		15.0		25-SEP-89
P210289	GW00174IT	MANGANESE	15.1	UG/L		15		26-JUL-90
P210289	SEP3189BR0306	MERCURY	0.17	UG/G	A	0.11	A	15-MAY-89
P210289	GW00174IT	MERCURY	0.33	UG/L		0.2		26-JUL-90
P210289	SEP3189BR0306	MOLYBDENUM	11.3	UG/G	V	2.3	A	15-MAY-89
P210289	SEP3189BR0713	MOLYBDENUM	3.8	UG/G	V	2.4	A	15-MAY-89
P210289	SEP3189BR1319	MOLYBDENUM	4.5	UG/G	V	2.4	A	15-MAY-89
P210289	SEP3189BR0306	NICKEL	10.5	UG/G	A	9.2	A	15-MAY-89
P210289	GSEP31890989001	NICKEL	.174	MG/L		40.0		25-SEP-89
P210289	GSEP31890989001	SELENIUM	.455	MG/L		125		25-SEP-89
P210289	SEP3189-0501-02-1	SELENIUM	302	UG/L		100		02-MAY-90
P210289	GW00174IT	SELENIUM	206	UG/L		5		26-JUL-90
P210289	GSEP31890989001	SODIUM	290.00	MG/L		5000		25-SEP-89
P210289	SEP3189-0501-02-1	SODIUM	312000	UG/L		5000		02-MAY-90
P210289	GW00174IT	SODIUM	198000	UG/L		5000		26-JUL-90
P210289	SEP3189-0501-02-1	STRONTIUM	3620	UG/L		100		02-MAY-90
P210289	GW00174IT	STRONTIUM	2180	UG/L		200		26-JUL-90
P210289	GSEP31890390001	SULFATE	770	MG/L				05-MAR-90
P210289	SEP3189-0501-02-1	SULFATE	748	MG/L		250		02-MAY-90
P210289	GW00174IT	SULFATE	700	MG/L		0.2		26-JUL-90
P210289	GW00615IT	SULFATE	710	MG/L		2.0		12-DEC-90
P210289	GW01372IT	SULFATE	670	MG/L		2.0		05-JUN-91
P210289	GSEP31890989001	URANIUM-233,-234	6.2	PCI/L			R	25-SEP-89
P210289	GW00174IT	URANIUM-233,-234	47.82	PCI/L		.6		26-JUL-90
P210289	GW00615IT	URANIUM-233,-234	54.12	PCI/L		.6		12-DEC-90
P210289	GW00174IT	URANIUM-238	40.81	PCI/L		.6		26-JUL-90
P210289	GW00615IT	URANIUM-238	46.44	PCI/L		.6		12-DEC-90
P210289	SEP3189BR0306	VANADIUM	47.0	UG/G	V	11.5	A	15-MAY-89
P210289	SEP3189BR0713	VANADIUM	21.9	UG/G	V	11.8	A	15-MAY-89
P210289	SEP3189BR1319	VANADIUM	26.5	UG/G	V	12.1	A	15-MAY-89
P210289	SEP3189BR0306	ZINC	15.5	UG/G	V	4.6	A	15-MAY-89
P210289	SEP3189BR1319	ZINC	66.6	UG/G	V	4.8	A	15-MAY-89
P210289	SEP3189BR0713	ZINC	48.0	UG/G	V	4.7	A	15-MAY-89
P210289	SEP3189BR0713	pH	8.9	PHUNIT				15-MAY-89
P218389	P2183891216	ALUMINUM	2080	UG/G		46.3		08-NOV-89
P218389	P2183890003	ALUMINUM	4820	UG/G		36.2		08-NOV-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P218389	P2183890312	ALUMINUM	11900	UG/G		38.1		08-NOV-89
P218389	P2183890003	BARIUM	57.7	UG/G		36.2		08-NOV-89
P218389	P2183890312	BARIUM	99.9	UG/G		38.1		08-NOV-89
P218389	P2183890312	BERYLLIUM	1.4	UG/G		0.95		08-NOV-89
P218389	P2183891216	CALCIUM	2300	UG/G		1160		08-NOV-89
P218389	P2183890003	CALCIUM	16900	UG/G		906		08-NOV-89
P218389	P2183890312	CALCIUM	2450	UG/G		952		08-NOV-89
P218389	P2183891216	CHROMIUM	2.4	UG/G		2.3		08-NOV-89
P218389	P2183890003	CHROMIUM	6.6	UG/G		1.8		08-NOV-89
P218389	P2183890312	CHROMIUM	12.5	UG/G		1.9		08-NOV-89
P218389	P2183891216	COPPER	23.3	UG/G		5.8		08-NOV-89
P218389	P2183890003	COPPER	11.5	UG/G		4.5		08-NOV-89
P218389	P2183890312	COPPER	13.3	UG/G		4.8		08-NOV-89
P218389	P2183890003	IRON	6680	UG/G		18.1		08-NOV-89
P218389	P2183891216	IRON	22700	UG/G		23.2		08-NOV-89
P218389	P2183890312	IRON	12800	UG/G		19.0		08-NOV-89
P218389	P2183891216	LEAD	8.7	UG/G		1.2		08-NOV-89
P218389	P2183890003	MAGNESIUM	1100	UG/G		906		08-NOV-89
P218389	P2183890312	MAGNESIUM	1360	UG/G		952		08-NOV-89
P218389	P2183890003	MANGANESE	117	UG/G		2.7		08-NOV-89
P218389	P2183890312	MANGANESE	594	UG/G		2.9		08-NOV-89
P218389	P2183891216	MANGANESE	236	UG/G		3.5		08-NOV-89
P218389	P2183890312	MERCURY	0.10	UG/G		0.10		08-NOV-89
P218389	P2183890312	NICKEL	18.9	UG/G		7.6		08-NOV-89
P218389	P2183891216	NICKEL	18.8	UG/G		9.3		08-NOV-89
P218389	P2183890003	POTASSIUM	1050	UG/G		906		08-NOV-89
P218389	P2183890312	POTASSIUM	1120	UG/G		952		08-NOV-89
P218389	P2183890003	STRONTIUM	20.8	UG/G		18.1		08-NOV-89
P218389	P2183890003	TIN	20.0	UG/G		18.1		08-NOV-89
P218389	P2183890312	TIN	33.8	UG/G		19.0		08-NOV-89
P218389	P2183891216	TIN	29.7	UG/G		23.2		08-NOV-89
P218389	P2183890003	VANADIUM	20.9	UG/G		9.1		08-NOV-89
P218389	P2183890312	VANADIUM	35.0	UG/G		9.5		08-NOV-89
P218389	P2183891216	VANADIUM	22.8	UG/G		11.6		08-NOV-89
P218389	P2183890003	ZINC	28.2	UG/G		3.6		08-NOV-89
P218389	P2183890312	ZINC	20.9	UG/G		3.8		08-NOV-89
P218389	P2183891216	ZINC	59.4	UG/G		4.6		08-NOV-89
P218389	P2183890003	pH	8.6	PHUNIT				08-NOV-89
P218389	P2183891216	pH	8.3	PHUNIT				08-NOV-89
P219489	P2194890307	ALUMINUM	6250	UG/G		36.8		05-DEC-89
P219489	P2194890709	ALUMINUM	4820	UG/G		33.0		05-DEC-89
P219489	P2194890911	ALUMINUM	8190	UG/G		32.5		05-DEC-89
P219489	P2194891114	ALUMINUM	4450	UG/G		40.5		05-DEC-89
P219489	P2194891418	ALUMINUM	15100	UG/G		45.6		05-DEC-89
P219489	P2194891114	ARSENIC	6.2	UG/G		3.4		05-DEC-89
P219489	P2194891418	ARSENIC	4.9	UG/G		2.3		05-DEC-89
P219489	P2194891418	BARIUM	114	UG/G		45.6		05-DEC-89
P219489	P2194890307	BARIUM	59.9	UG/G		36.8		05-DEC-89
P219489	P2194890911	BARIUM	50.1	UG/G		32.5		05-DEC-89
P219489	P2194890307	CALCIUM	20100	UG/G		920		05-DEC-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P219489	P2194890911	CALCIUM	5490	UG/G		813		05-DEC-89
P219489	P2194890709	CALCIUM	1810	UG/G		826		05-DEC-89
P219489	P2194891114	CALCIUM	2090	UG/G		1010		05-DEC-89
P219489	P2194891418	CALCIUM	18500	UG/G		1140		05-DEC-89
P219489	P2194890307	CHROMIUM	7.9	UG/G		1.8		05-DEC-89
P219489	P2194890709	CHROMIUM	6.1	UG/G		1.7		05-DEC-89
P219489	P2194891114	CHROMIUM	6.0	UG/G		2.0		05-DEC-89
P219489	P2194890911	CHROMIUM	7.5	UG/G		1.6		05-DEC-89
P219489	P2194891418	CHROMIUM	12.8	UG/G		2.3		05-DEC-89
P219489	P2194890307	COPPER	8.3	UG/G		4.6		05-DEC-89
P219489	P2194890709	COPPER	7.6	UG/G		4.1		05-DEC-89
P219489	P2194891114	COPPER	16.9	UG/G		5.1		05-DEC-89
P219489	P2194890911	COPPER	9.9	UG/G		4.1		05-DEC-89
P219489	P2194891418	COPPER	15.2	UG/G		5.7		05-DEC-89
P219489	P2194890307	IRON	6970	UG/G		18.4		05-DEC-89
P219489	P2194891418	IRON	12400	UG/G		22.8		05-DEC-89
P219489	P2194890709	IRON	5900	UG/G		16.5		05-DEC-89
P219489	P2194891114	IRON	6230	UG/G		20.3		05-DEC-89
P219489	P2194890911	IRON	8230	UG/G		16.3		05-DEC-89
P219489	P2194890307	LEAD	3.8	UG/G		2.6		05-DEC-89
P219489	P2194890911	LEAD	5.0	UG/G		3.0		05-DEC-89
P219489	P2194891114	LEAD	8.5	UG/G		2.6		05-DEC-89
P219489	P2194891418	LEAD	7.7	UG/G		3.5		05-DEC-89
P219489	P2194890709	LEAD	4.2	UG/G		2.4		05-DEC-89
P219489	P2194890307	MAGNESIUM	2370	UG/G		920		05-DEC-89
P219489	P2194890911	MAGNESIUM	2210	UG/G		813		05-DEC-89
P219489	P2194891418	MAGNESIUM	4710	UG/G		1140		05-DEC-89
P219489	P2194891114	MAGNESIUM	1330	UG/G		1010		05-DEC-89
P219489	P2194890709	MAGNESIUM	1590	UG/G		826		05-DEC-89
P219489	P2194890307	MANGANESE	357	UG/G		2.8		05-DEC-89
P219489	P2194891114	MANGANESE	59.1	UG/G		3.0		05-DEC-89
P219489	P2194891418	MANGANESE	248	UG/G		3.4		05-DEC-89
P219489	P2194890911	MANGANESE	55.9	UG/G		2.4		05-DEC-89
P219489	P2194890709	MANGANESE	51.4	UG/G		2.5		05-DEC-89
P219489	P2194891114	MERCURY	0.13	UG/G		0.12		05-DEC-89
P219489	P2194890307	NICKEL	15.8	UG/G		7.4		05-DEC-89
P219489	P2194891418	NICKEL	16.5	UG/G		9.1		05-DEC-89
P219489	P2194891114	NICKEL	9.7	UG/G		8.1		05-DEC-89
P219489	P2194890911	NICKEL	7.0	UG/G		6.5		05-DEC-89
P219489	P2194890709	POTASSIUM	957	UG/G		826		05-DEC-89
P219489	P2194891418	POTASSIUM	3570	UG/G		1140		05-DEC-89
P219489	P2194890911	POTASSIUM	1400	UG/G		813		05-DEC-89
P219489	P2194890307	STRONTIUM	42.5	UG/G		18.4		05-DEC-89
P219489	P2194890911	STRONTIUM	30.9	UG/G		16.3		05-DEC-89
P219489	P2194891418	STRONTIUM	38.7	UG/G		22.8		05-DEC-89
P219489	P2194890709	STRONTIUM	17.0	UG/G		16.5		05-DEC-89
P219489	P2194890911	TIN	16.9	UG/G		16.3		05-DEC-89
P219489	P2194891418	TIN	27.2	UG/G		22.8		05-DEC-89
P219489	P2194890307	VANADIUM	15.8	UG/G		9.2		05-DEC-89
P219489	P2194891418	VANADIUM	25.8	UG/G		11.4		05-DEC-89
P219489	P2194890709	VANADIUM	14.7	UG/G		8.3		05-DEC-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P219489	P2194891114	VANADIUM	17.1	UG/G		10.1		05-DEC-89
P219489	P2194890911	VANADIUM	14.7	UG/G		8.1		05-DEC-89
P219489	P2194890307	ZINC	13.9	UG/G		3.7		05-DEC-89
P219489	P2194890709	ZINC	13.0	UG/G		3.3		05-DEC-89
P219489	P2194891114	ZINC	20.9	UG/G		4.1		05-DEC-89
P219489	P2194891418	ZINC	47.9	UG/G		4.6		05-DEC-89
P219489	P2194890911	ZINC	21.8	UG/G		3.3		05-DEC-89
P219489	P2194891822	pH	8.7	PHUNIT				05-DEC-89
P219489	P2194891418	pH	8.6	PHUNIT				05-DEC-89
P219489	P2194891114	pH	8.6	PHUNIT				05-DEC-89
P219489	P2194890911	pH	8.7	PHUNIT				05-DEC-89
P219489	P2194890709	pH	8.9	PHUNIT				05-DEC-89
P219489	P2194890307	pH	8.6	PHUNIT				05-DEC-89
P219489	P2194892226	pH	8.9	PHUNIT				06-DEC-89
P219589	P2195891719	ALUMINUM	4830	UG/G		48.2		
P219589	P2195890003	ALUMINUM	5580	UG/G		41.7		
P219589	P2195890711	ALUMINUM	7590	UG/G		34.6		
P219589	P2195891117	ALUMINUM	2440	UG/G		33.4		
P219589	P2195891719	ARSENIC	18.0	UG/G		8.5		
P219589	P2195890003	ARSENIC	3.8	UG/G		2.3		
P219589	P2195891117	ARSENIC	2.6	UG/G		2.1		
P219589	P2195890003	BARIUM	81.2	UG/G		41.7		
P219589	P2195890711	BARIUM	70.9	UG/G		34.6		
P219589	P2195890003	BERYLLIUM	1.1	UG/G		1.0		
P219589	P2195891719	CALCIUM	2310	UG/G		1200		
P219589	P2195890003	CALCIUM	4520	UG/G		1040		
P219589	P2195891117	CALCIUM	2020	UG/G		834		
P219589	P2195890711	CALCIUM	7230	UG/G		866		
P219589	P2195891719	CHROMIUM	7.1	UG/G		2.4		
P219589	P2195890003	CHROMIUM	7.8	UG/G		2.1		
P219589	P2195890711	CHROMIUM	4.7	UG/G		1.7		
P219589	P2195891117	CHROMIUM	4.4	UG/G		1.7		
P219589	P2195890003	COBALT	22.2	UG/G		10.4		
P219589	P2195890003	COPPER	13.1	UG/G		5.2		
P219589	P2195890711	COPPER	6.6	UG/G		4.3		
P219589	P2195891117	COPPER	9.1	UG/G		4.2		
P219589	P2195891719	COPPER	11.4	UG/G		6.0		
P219589	P2195890003	IRON	8430	UG/G		20.9		
P219589	P2195890711	IRON	4160	UG/G		17.3		
P219589	P2195891719	IRON	6420	UG/G		24.1		
P219589	P2195891117	IRON	4950	UG/G		16.7		
P219589	P2195890003	LEAD	1.2	UG/G		0.69		
P219589	P2195891117	LEAD	3.7	UG/G		1.3		
P219589	P2195891719	LEAD	15.8	UG/G		6.4		
P219589	P2195890711	LEAD	8.8	UG/G		1.2		
P219589	P2195890003	MAGNESIUM	1400	UG/G		1040		
P219589	P2195890711	MAGNESIUM	1780	UG/G		866		
P219589	P2195891719	MAGNESIUM	1800	UG/G		1200		
P219589	P2195890003	MANGANESE	562	UG/G		3.1		
P219589	P2195890711	MANGANESE	196	UG/G		2.6		

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P219589	P2195891719	MANGANESE	53.2	UG/G		3.6		
P219589	P2195891117	MANGANESE	135	UG/G		2.5		
P219589	P2195890003	MERCURY	0.12	UG/G		0.12		
P219589	P2195890711	MERCURY	0.12	UG/G		0.12		
P219589	P2195891719	MERCURY	0.12	UG/G		0.12		
P219589	P2195890003	NICKEL	20.8	UG/G		8.3		
P219589	P2195890711	NICKEL	13.6	UG/G		6.9		
P219589	P2195891117	NICKEL	7.7	UG/G		6.7		
P219589	P2195891719	POTASSIUM	1250	UG/G		1200		
P219589	P2195890711	POTASSIUM	1060	UG/G		866		
P219589	P2195890003	STRONTIUM	21.6	UG/G		20.9		
P219589	P2195890711	STRONTIUM	23.2	UG/G		17.3		
P219589	P2195890003	VANADIUM	27.7	UG/G		10.4		
P219589	P2195891719	VANADIUM	13.0	UG/G		12.0		
P219589	P2195891117	VANADIUM	14.8	UG/G		8.3		
P219589	P2195890003	ZINC	34.1	UG/G		4.2		
P219589	P2195891719	ZINC	23.4	UG/G		4.8		
P219589	P2195891117	ZINC	9.6	UG/G		3.3		
P219589	P2195890711	ZINC	47.1	UG/G		3.5		
P219589	P2195890003	pH	8.8	PHUNIT				
P219589	P2195891719	pH	8.4	PHUNIT				
P219589	P2195891117	pH	9.0	PHUNIT				
P219589	P2195890711	pH	8.9	PHUNIT				
P219589	P2195890307	pH	8.8	PHUNIT				
P313589	PZ07890003	ALUMINUM	3870	UG/G	V	40.9	A	12-OCT-89
P313589	PZ07890812	ALUMINUM	3510	UG/G	V	36.8	A	12-OCT-89
P313589	PZ07891216	ALUMINUM	3010	UG/G	V	41.6	A	12-OCT-89
P313589	PZ07890003	BARIUM	57.3	UG/G	V	40.9	A	12-OCT-89
P313589	PZ07890812	BARIUM	36.9	UG/G	V	36.8	A	12-OCT-89
P313589	PZ07890003	CALCIUM	11500	UG/G	V	1020	A	12-OCT-89
P313589	PZ07890812	CALCIUM	23500	UG/G	V	919	A	12-OCT-89
P313589	PZ07891216	CALCIUM	17800	UG/G	V	1040	A	12-OCT-89
P313589	PZ07890003	CHROMIUM	13.6	UG/G	V	2.0	A	12-OCT-89
P313589	PZ07890812	CHROMIUM	4.9	UG/G	A	1.8	A	12-OCT-89
P313589	PZ07891216	CHROMIUM	3.3	UG/G	A	2.1	A	12-OCT-89
P313589	PZ07890003	COPPER	10.7	UG/G	A	5.1	A	12-OCT-89
P313589	PZ07890812	COPPER	11.0	UG/G	A	4.6	A	12-OCT-89
P313589	PZ07891216	COPPER	14.0	UG/G	A	5.2	A	12-OCT-89
P313589	PZ07890003	IRON	7020	UG/G	V	20.4	A	12-OCT-89
P313589	PZ07891216	IRON	11100	UG/G	V	20.8	A	12-OCT-89
P313589	PZ07890812	IRON	8550	UG/G	V	18.4	A	12-OCT-89
P313589	PZ07890003	LEAD	9.5	UG/G	V	1.1	A	12-OCT-89
P313589	PZ07891216	LEAD	3.5	UG/G	V	1.2	A	12-OCT-89
P313589	PZ07890812	LEAD	1.8	UG/G	V	1.3	A	12-OCT-89
P313589	PZ07890812	MAGNESIUM	1890	UG/G	V	919	A	12-OCT-89
P313589	PZ07891216	MAGNESIUM	1410	UG/G	V	1040	A	12-OCT-89
P313589	PZ07890003	MANGANESE	129	UG/G	V	3.1	A	12-OCT-89
P313589	PZ07890812	MANGANESE	37.8	UG/G	V	2.8	A	12-OCT-89
P313589	PZ07891216	MANGANESE	51.2	UG/G	V	3.1	A	12-OCT-89
P313589	PZ07890003	MERCURY	0.22	UG/G	A	0.11	A	12-OCT-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P313589	PZ07890812	MERCURY	0.23	UG/G	A	0.12	A	12-OCT-89
P313589	PZ07891216	MERCURY	0.19	UG/G	A	0.12	A	12-OCT-89
P313589	PZ07890812	NICKEL	8.5	UG/G	A	7.4	A	12-OCT-89
P313589	PZ07891216	NICKEL	12.9	UG/G	A	8.3	A	12-OCT-89
P313589	PZ07890003	STRONTIUM	40.9	UG/G	A	20.4	A	12-OCT-89
P313589	PZ07891216	STRONTIUM	47.8	UG/G	A	20.8	A	12-OCT-89
P313589	PZ07890812	STRONTIUM	56.3	UG/G	A	18.4	A	12-OCT-89
P313589	PZ07890812	TIN	24.8	UG/G	A	18.4	A	12-OCT-89
P313589	PZ07891216	TIN	26.8	UG/G	A	20.8	A	12-OCT-89
P313589	PZ07890003	VANADIUM	17.5	UG/G	V	10.2	A	12-OCT-89
P313589	PZ07890812	VANADIUM	32.6	UG/G	V	9.2	A	12-OCT-89
P313589	PZ07891216	VANADIUM	33.5	UG/G	V	10.4	A	12-OCT-89
P313589	PZ07890003	ZINC	22.0	UG/G	V	4.1	A	12-OCT-89
P313589	PZ07890812	ZINC	14.6	UG/G	V	3.7	A	12-OCT-89
P313589	PZ07891216	ZINC	25.7	UG/G	V	4.2	A	12-OCT-89
P313589	PZ07890003	pH	9.1	PHUNIT				12-OCT-89
P313589	PZ07890408	pH	8.6	PHUNIT				12-OCT-89
P313589	PZ07891216	pH	9.1	PHUNIT				12-OCT-89
P313589	PZ07890812	pH	9.1	PHUNIT				12-OCT-89
P314289	PZ31891318	ALUMINUM	8570	UG/G	V	6.7	A	11-OCT-89
P314289	PZ31890003	ALUMINUM	14000	UG/G	V	6.4	A	11-OCT-89
P314289	PZ31890711	ALUMINUM	12000	UG/G	V	6.6	A	11-OCT-89
P314289	PZ31890307	ALUMINUM	35300	UG/G	V	6.8	A	11-OCT-89
P314289	PZ31891318	ARSENIC	6.8	UG/G	V	0.45	A	11-OCT-89
P314289	PZ31890003	ARSENIC	8.7	UG/G	V	0.44	A	11-OCT-89
P314289	PZ31890307	ARSENIC	10.2	UG/G	V	2.3	A	11-OCT-89
P314289	PZ31890711	ARSENIC	7.4	UG/G	V	2.2	A	11-OCT-89
P314289	PZ31890003	BARIUM	87.4	UG/G	A	10.7	A	11-OCT-89
P314289	PZ31890711	BARIUM	54.7	UG/G	A	10.9	A	11-OCT-89
P314289	PZ31890307	BARIUM	161	UG/G	A	11.4	A	11-OCT-89
P314289	PZ31891318	BARIUM	113	UG/G	A	11.1	A	11-OCT-89
P314289	PZ31890307	BERYLLIUM	1.7	UG/G	A	0.46	A	11-OCT-89
P314289	PZ31890003	CADMIUM	0.99	UG/G	V	0.86	A	11-OCT-89
P314289	PZ31891318	CADMIUM	1.1	UG/G	V	0.89	A	11-OCT-89
P314289	PZ31891318	CALCIUM	4260	UG/G	A	22.3	A	11-OCT-89
P314289	PZ31890003	CALCIUM	4400	UG/G	A	21.5	A	11-OCT-89
P314289	PZ31890711	CALCIUM	2290	UG/G	A	21.9	A	11-OCT-89
P314289	PZ31890307	CALCIUM	27900	UG/G	A	22.8	A	11-OCT-89
P314289	PZ31890003	CHROMIUM	15.2	UG/G	V	4.3	A	11-OCT-89
P314289	PZ31890711	CHROMIUM	16.7	UG/G	V	4.4	A	11-OCT-89
P314289	PZ31890307	CHROMIUM	34.5	UG/G	V	4.6	A	11-OCT-89
P314289	PZ31891318	CHROMIUM	12.9	UG/G	V	4.5	A	11-OCT-89
P314289	PZ31890003	COBALT	5.0	UG/G	V	4.3	A	11-OCT-89
P314289	PZ31890711	COBALT	4.5	UG/G	V	4.4	A	11-OCT-89
P314289	PZ31891318	COBALT	8.9	UG/G	V	4.5	A	11-OCT-89
P314289	PZ31890307	COBALT	9.4	UG/G	V	4.6	A	11-OCT-89
P314289	PZ31890003	COPPER	36.6	UG/G	V	4.3	A	11-OCT-89
P314289	PZ31890307	COPPER	9.5	UG/G	A	4.6	A	11-OCT-89
P314289	PZ31890711	COPPER	8.6	UG/G	A	4.4	A	11-OCT-89
P314289	PZ31891318	COPPER	17.3	UG/G	A	4.5	A	11-OCT-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P314289	PZ31890003	IRON	13800	UG/G	V	6.4	A	11-OCT-89
P314289	PZ31890307	IRON	23300	UG/G	V	6.8	A	11-OCT-89
P314289	PZ31890711	IRON	11600	UG/G	V	6.6	A	11-OCT-89
P314289	PZ31891318	IRON	26100	UG/G	V	6.7	A	11-OCT-89
P314289	PZ31890003	LEAD	47.7	UG/G	V	4.4	A	11-OCT-89
P314289	PZ31890307	LEAD	12.5	UG/G	V	0.92	A	11-OCT-89
P314289	PZ31891318	LEAD	13.5	UG/G	V	0.89	A	11-OCT-89
P314289	PZ31890711	LEAD	7.4	UG/G	V	0.44	A	11-OCT-89
P314289	PZ31890003	LITHIUM	9.9	UG/G	A	0.43	A	11-OCT-89
P314289	PZ31891318	LITHIUM	4.5	UG/G	A	0.45	A	11-OCT-89
P314289	PZ31890711	LITHIUM	7.2	UG/G	A	0.44	A	11-OCT-89
P314289	PZ31890307	LITHIUM	22.6	UG/G	A	0.46	A	11-OCT-89
P314289	PZ31890003	MAGNESIUM	2150	UG/G	V	43.0	A	11-OCT-89
P314289	PZ31890711	MAGNESIUM	1840	UG/G	V	43.7	A	11-OCT-89
P314289	PZ31891318	MAGNESIUM	1900	UG/G	V	44.5	A	11-OCT-89
P314289	PZ31890307	MAGNESIUM	4640	UG/G	V	45.6	A	11-OCT-89
P314289	PZ31890003	MANGANESE	197	UG/G	A	2.1	A	11-OCT-89
P314289	PZ31891318	MANGANESE	431	UG/G	A	2.2	A	11-OCT-89
P314289	PZ31890711	MANGANESE	187	UG/G	A	2.2	A	11-OCT-89
P314289	PZ31890307	MANGANESE	137	UG/G	A	2.3	A	11-OCT-89
P314289	PZ31890003	MERCURY	0.23	UG/G	V	0.090	A	11-OCT-89
P314289	PZ31890711	MERCURY	0.12	UG/G	V	0.095	A	11-OCT-89
P314289	PZ31890307	MERCURY	0.21	UG/G	V	0.095	A	11-OCT-89
P314289	PZ31890003	NICKEL	12.9	UG/G	V	4.3	A	11-OCT-89
P314289	PZ31890307	NICKEL	28.7	UG/G	V	4.6	A	11-OCT-89
P314289	PZ31891318	NICKEL	27.9	UG/G	V	4.5	A	11-OCT-89
P314289	PZ31890711	NICKEL	14.2	UG/G	V	4.4	A	11-OCT-89
P314289	PZ31890003	PLUTONIUM-239	0.096	PCI/G		0		11-OCT-89
P314289	PZ31890307	PLUTONIUM-239	0.023	PCI/G		0		11-OCT-89
P314289	PZ31891318	PLUTONIUM-239	0.016	PCI/G		0		11-OCT-89
P314289	PZ31890003	POTASSIUM	1900	UG/G	A	43.0	A	11-OCT-89
P314289	PZ31890307	POTASSIUM	1480	UG/G	A	45.6	A	11-OCT-89
P314289	PZ31891318	POTASSIUM	873	UG/G	A	44.5	A	11-OCT-89
P314289	PZ31890711	POTASSIUM	1070	UG/G	A	43.7	A	11-OCT-89
P314289	PZ31890003	SODIUM	146	UG/G	A	10.7	A	11-OCT-89
P314289	PZ31890307	SODIUM	228	UG/G	A	11.4	A	11-OCT-89
P314289	PZ31891318	SODIUM	95.8	UG/G	A	11.1	A	11-OCT-89
P314289	PZ31890711	SODIUM	76.1	UG/G	A	10.9	A	11-OCT-89
P314289	PZ31890003	STRONTIUM	50.3	UG/G	A	2.1	A	11-OCT-89
P314289	PZ31891318	STRONTIUM	46.1	UG/G	A	2.2	A	11-OCT-89
P314289	PZ31890711	STRONTIUM	15.6	UG/G	A	2.2	A	11-OCT-89
P314289	PZ31890307	STRONTIUM	98.0	UG/G	A	2.3	A	11-OCT-89
P314289	PZ31890003	STRONTIUM-90	1.68	PCI/G		0.		11-OCT-89
P314289	PZ31890711	URANIUM-233,-234	0.42	PCI/G		0.		11-OCT-89
P314289	PZ31891318	URANIUM-233,-234	0.55	PCI/G		0		11-OCT-89
P314289	PZ31891113	URANIUM-233,-234	0.59	PCI/G		0.		11-OCT-89
P314289	PZ31890003	URANIUM-233,-234	1.66	PCI/G		0		11-OCT-89
P314289	PZ31890307	URANIUM-233,-234	0.71	PCI/G		0.		11-OCT-89
P314289	PZ31890003	VANADIUM	32.4	UG/G	V	2.1	A	11-OCT-89
P314289	PZ31890307	VANADIUM	64.6	UG/G	V	2.3	A	11-OCT-89
P314289	PZ31891318	VANADIUM	23.4	UG/G	V	2.2	A	11-OCT-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P314289	PZ31890711	VANADIUM	23.5	UG/G	V	2.2	A	11-OCT-89
P314289	PZ31890003	ZINC	94.5	UG/G	V	2.1	A	11-OCT-89
P314289	PZ31890307	ZINC	35.5	UG/G	V	2.3	A	11-OCT-89
P314289	PZ31891318	ZINC	108	UG/G	V	2.2	A	11-OCT-89
P314289	PZ31890711	ZINC	19.6	UG/G	V	2.2	A	11-OCT-89
P314289	PZ31890003	pH	8.5	PHUNIT				11-OCT-89
P314289	PZ31891113	pH	8.3	PHUNIT				11-OCT-89
P314289	PZ31891318	pH	8.6	PHUNIT				11-OCT-89
P416289	PZ57890306	ALUMINUM	5840	UG/G		35.6		19-SEP-89
P416289	PZ57890608	ALUMINUM	4800	UG/G		27.5		19-SEP-89
P416289	PZ57891014	ALUMINUM	4610	UG/G		35.5		19-SEP-89
P416289	PZ57891416	ALUMINUM	4270	UG/G		39.1		19-SEP-89
P416289	PZ57891618	ALUMINUM	4140	UG/G		41.5		19-SEP-89
P416289	PZ57891822D	ALUMINUM	4820	UG/G		35.8		19-SEP-89
P416289	PZ57892223	ALUMINUM	3180	UG/G		32.0		19-SEP-89
P416289	PZ57891822	ALUMINUM	2780	UG/G		36.9		19-SEP-89
P416289	PZ57892327	ALUMINUM	3640	UG/G		42.8		19-SEP-89
P416289	PZ57892730	ALUMINUM	4840	UG/G		40.9		19-SEP-89
P416289	PZ57893034	ALUMINUM	2920	UG/G		37.3		19-SEP-89
P416289	PZ57893842	ALUMINUM	2040	UG/G		37.0		19-SEP-89
P416289	PZ57890306	ARSENIC	5.6	UG/G		3.1		19-SEP-89
P416289	PZ57890608	ARSENIC	2.3	UG/G		1.9		19-SEP-89
P416289	PZ57891014	ARSENIC	2.4	UG/G		1.7		19-SEP-89
P416289	PZ57891416	ARSENIC	4.0	UG/G		2.0		19-SEP-89
P416289	PZ57892223	ARSENIC	1.8	UG/G		1.5		19-SEP-89
P416289	PZ57892730	ARSENIC	4.0	UG/G		1.6		19-SEP-89
P416289	PZ57893842	ARSENIC	3.2	UG/G		2.4		19-SEP-89
P416289	PZ57893034	ARSENIC	3.2	UG/G		1.8		19-SEP-89
P416289	PZ57892327	BARIUM	66.1	UG/G		42.8		19-SEP-89
P416289	PZ57892730	BARIUM	63.1	UG/G		40.9		19-SEP-89
P416289	PZ57893034	BARIUM	61.9	UG/G		37.3		19-SEP-89
P416289	PZ57891822D	BARIUM	47.0	UG/G		35.8		19-SEP-89
P416289	PZ57892223	BARIUM	65.6	UG/G		32.0		19-SEP-89
P416289	PZ57890306	BARIUM	40.7	UG/G		35.6		19-SEP-89
P416289	PZ57890608	BARIUM	29.2	UG/G		27.5		19-SEP-89
P416289	PZ57890306	BERYLLIUM	1.6	UG/G		0.89		19-SEP-89
P416289	PZ57890306	CALCIUM	1330	UG/G		890		19-SEP-89
P416289	PZ57891014	CALCIUM	5280	UG/G		886		19-SEP-89
P416289	PZ57890608	CALCIUM	1800	UG/G		688		19-SEP-89
P416289	PZ57891416	CALCIUM	1220	UG/G		978		19-SEP-89
P416289	PZ57892327	CALCIUM	2910	UG/G		1070		19-SEP-89
P416289	PZ57892223	CALCIUM	2530	UG/G		800		19-SEP-89
P416289	PZ57891618	CALCIUM	1740	UG/G		1040		19-SEP-89
P416289	PZ57891822D	CALCIUM	1600	UG/G		896		19-SEP-89
P416289	PZ57891822	CALCIUM	1040	UG/G		922		19-SEP-89
P416289	PZ57892730	CALCIUM	3830	UG/G		1020		19-SEP-89
P416289	PZ57893034	CALCIUM	2720	UG/G		932		19-SEP-89
P416289	PZ57893842	CALCIUM	2190	UG/G		926		19-SEP-89
P416289	PZ57890306	CHROMIUM	8.3	UG/G		1.8		19-SEP-89
P416289	PZ57890608	CHROMIUM	4.9	UG/G		1.4		19-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416289	PZ57891014	CHROMIUM	6.9	UG/G		1.8		19-SEP-89
P416289	PZ57891416	CHROMIUM	5.3	UG/G		2.0		19-SEP-89
P416289	PZ57891618	CHROMIUM	5.2	UG/G		2.1		19-SEP-89
P416289	PZ57892327	CHROMIUM	3.7	UG/G		2.1		19-SEP-89
P416289	PZ57892223	CHROMIUM	2.8	UG/G		1.6		19-SEP-89
P416289	PZ57891822D	CHROMIUM	7.9	UG/G		1.8		19-SEP-89
P416289	PZ57891822	CHROMIUM	7.0	UG/G		1.8		19-SEP-89
P416289	PZ57892730	CHROMIUM	5.2	UG/G		2.0		19-SEP-89
P416289	PZ57893034	CHROMIUM	2.6	UG/G		1.9		19-SEP-89
P416289	PZ57890306	COBALT	13.6	UG/G		8.9		19-SEP-89
P416289	PZ57890306	COPPER	13.3	UG/G		4.4		19-SEP-89
P416289	PZ57891416	COPPER	7.6	UG/G		4.9		19-SEP-89
P416289	PZ57890608	COPPER	3.6	UG/G		3.4		19-SEP-89
P416289	PZ57891014	COPPER	7.2	UG/G		4.4		19-SEP-89
P416289	PZ57892327	COPPER	10.3	UG/G		5.4		19-SEP-89
P416289	PZ57892223	COPPER	7.5	UG/G		4.0		19-SEP-89
P416289	PZ57891822D	COPPER	6.9	UG/G		4.5		19-SEP-89
P416289	PZ57892730	COPPER	14.6	UG/G		5.1		19-SEP-89
P416289	PZ57893034	COPPER	8.4	UG/G		4.7		19-SEP-89
P416289	PZ57893842	COPPER	8.6	UG/G		4.6		19-SEP-89
P416289	PZ57893034	IRON	7330	UG/G		18.6		19-SEP-89
P416289	PZ57893842	IRON	7420	UG/G		18.5		19-SEP-89
P416289	PZ57891822	IRON	4100	UG/G		18.4		19-SEP-89
P416289	PZ57891822D	IRON	6980	UG/G		17.9		19-SEP-89
P416289	PZ57892327	IRON	6330	UG/G		21.4		19-SEP-89
P416289	PZ57892730	IRON	11200	UG/G		20.4		19-SEP-89
P416289	PZ57892223	IRON	4870	UG/G		16.0		19-SEP-89
P416289	PZ57890306	IRON	20000	UG/G		17.8		19-SEP-89
P416289	PZ57891618	IRON	5160	UG/G		20.8		19-SEP-89
P416289	PZ57891416	IRON	7880	UG/G		19.6		19-SEP-89
P416289	PZ57891014	IRON	8960	UG/G		17.7		19-SEP-89
P416289	PZ57890608	IRON	4860	UG/G		13.8		19-SEP-89
P416289	PZ57891822	LEAD	3.1	UG/G		0.54		19-SEP-89
P416289	PZ57892730	LEAD	10.9	UG/G		2.4		19-SEP-89
P416289	PZ57892327	LEAD	6.1	UG/G		2.2		19-SEP-89
P416289	PZ57893034	LEAD	7.4	UG/G		1.1		19-SEP-89
P416289	PZ57892223	LEAD	13.2	UG/G		2.3		19-SEP-89
P416289	PZ57891822D	LEAD	1.4	UG/G		0.50		19-SEP-89
P416289	PZ57893842	LEAD	5.2	UG/G		1.4		19-SEP-89
P416289	PZ57891014	MAGNESIUM	986	UG/G		886		19-SEP-89
P416289	PZ57890608	MAGNESIUM	1030	UG/G		688		19-SEP-89
P416289	PZ57892730	MAGNESIUM	1450	UG/G		1020		19-SEP-89
P416289	PZ57891822D	MAGNESIUM	1420	UG/G		896		19-SEP-89
P416289	PZ57892327	MAGNESIUM	1110	UG/G		1070		19-SEP-89
P416289	PZ57892223	MAGNESIUM	1050	UG/G		800		19-SEP-89
P416289	PZ57893842	MANGANESE	56.2	UG/G		2.8		19-SEP-89
P416289	PZ57891822	MANGANESE	69.7	UG/G		2.8		19-SEP-89
P416289	PZ57891822D	MANGANESE	122	UG/G		2.7		19-SEP-89
P416289	PZ57892327	MANGANESE	161	UG/G		3.2		19-SEP-89
P416289	PZ57893034	MANGANESE	151	UG/G		2.8		19-SEP-89
P416289	PZ57892730	MANGANESE	97.8	UG/G		3.1		19-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416289	PZ57892223	MANGANESE	168	UG/G		2.4		19-SEP-89
P416289	PZ57890306	MANGANESE	343	UG/G		2.7		19-SEP-89
P416289	PZ57891618	MANGANESE	47.0	UG/G		3.1		19-SEP-89
P416289	PZ57891416	MANGANESE	30.8	UG/G		2.9		19-SEP-89
P416289	PZ57891014	MANGANESE	52.7	UG/G		2.7		19-SEP-89
P416289	PZ57890608	MANGANESE	67.6	UG/G		2.1		19-SEP-89
P416289	PZ57890306	NICKEL	16.1	UG/G		7.1		19-SEP-89
P416289	PZ57890608	NICKEL	6.2	UG/G		5.5		19-SEP-89
P416289	PZ57891822D	NICKEL	10.6	UG/G		7.2		19-SEP-89
P416289	PZ57893034	NICKEL	9.1	UG/G		7.5		19-SEP-89
P416289	PZ57892730	NICKEL	11.1	UG/G		8.2		19-SEP-89
P416289	PZ57892327	NICKEL	9.4	UG/G		8.6		19-SEP-89
P416289	PZ57891618	PLUTONIUM-239	0.029	PCI/G		0		19-SEP-89
P416289	PZ57891822	PLUTONIUM-239	0.021	PCI/G		0		19-SEP-89
P416289	PZ57893538	PLUTONIUM-239	0.061	PCI/G		0		19-SEP-89
P416289	PZ57893842	PLUTONIUM-239	0.019	PCI/G		0		19-SEP-89
P416289	PZ57890810	PLUTONIUM-239	0.015	PCI/G		0		19-SEP-89
P416289	PZ57891416	PLUTONIUM-239	0.039	PCI/G		0		19-SEP-89
P416289	PZ57891822D	POTASSIUM	1390	UG/G		896		19-SEP-89
P416289	PZ57890608	POTASSIUM	695	UG/G		688		19-SEP-89
P416289	PZ57890306	SILVER	1.8	UG/G		1.8		19-SEP-89
P416289	PZ57892223	STRONTIUM	19.8	UG/G		16.0		19-SEP-89
P416289	PZ57893034	STRONTIUM	24.9	UG/G		18.6		19-SEP-89
P416289	PZ57892730	STRONTIUM	32.3	UG/G		20.4		19-SEP-89
P416289	PZ57892327	STRONTIUM	22.5	UG/G		21.4		19-SEP-89
P416289	PZ57892223	TIN	17.1	UG/G		16.0		19-SEP-89
P416289	PZ57893034	TIN	19.4	UG/G		18.6		19-SEP-89
P416289	PZ57892730	TIN	27.5	UG/G		20.4		19-SEP-89
P416289	PZ57892327	TIN	22.2	UG/G		21.4		19-SEP-89
P416289	PZ57890306	TIN	31.2	UG/G		17.8		19-SEP-89
P416289	PZ57891822D	TIN	20.4	UG/G		17.9		19-SEP-89
P416289	PZ57891822	TIN	19.3	UG/G		18.4		19-SEP-89
P416289	PZ57891014	TIN	25.4	UG/G		17.7		19-SEP-89
P416289	PZ57890003	URANIUM-233,-234	1.05	PCI/G		0.		19-SEP-89
P416289	PZ57891618	URANIUM-233,-234	0.53	PCI/G		0		19-SEP-89
P416289	PZ57891416	URANIUM-233,-234	0.39	PCI/G		0		19-SEP-89
P416289	PZ57891014	URANIUM-233,-234	0.63	PCI/G		0		19-SEP-89
P416289	PZ57890810	URANIUM-233,-234	0.18	PCI/G		0		19-SEP-89
P416289	PZ57890306	URANIUM-233,-234	0.77	PCI/G		0.		19-SEP-89
P416289	PZ57890608	URANIUM-233,-234	0.33	PCI/G		0.		19-SEP-89
P416289	PZ57891822	URANIUM-233,-234	0.39	PCI/G		0.		19-SEP-89
P416289	PZ57892327	URANIUM-233,-234	0.62	PCI/G		0.		19-SEP-89
P416289	PZ57893842	URANIUM-233,-234	0.55	PCI/G		0		19-SEP-89
P416289	PZ57893538	URANIUM-233,-234	0.46	PCI/G		0.		19-SEP-89
P416289	PZ57893034	URANIUM-233,-234	0.42	PCI/G		0.		19-SEP-89
P416289	PZ57892730	URANIUM-233,-234	0.58	PCI/G		0		19-SEP-89
P416289	PZ57892223	URANIUM-233,-234	0.62	PCI/G		0		19-SEP-89
P416289	PZ57891822D	URANIUM-233,-234	0.41	PCI/G		0		19-SEP-89
P416289	PZ57893842D	URANIUM-233,-234	1.01	PCI/G		0.		20-SEP-89
P416289	PZ57890306	VANADIUM	60.6	UG/G		8.9		19-SEP-89
P416289	PZ57891014	VANADIUM	22.0	UG/G		8.9		19-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416289	PZ57891822D	VANADIUM	14.9	UG/G		9.0		19-SEP-89
P416289	PZ57891618	VANADIUM	15.3	UG/G		10.4		19-SEP-89
P416289	PZ57891416	VANADIUM	21.0	UG/G		9.8		19-SEP-89
P416289	PZ57890608	VANADIUM	10.4	UG/G		6.9		19-SEP-89
P416289	PZ57892223	VANADIUM	8.2	UG/G		8.0		19-SEP-89
P416289	PZ57892730	VANADIUM	13.3	UG/G		10.2		19-SEP-89
P416289	PZ57892223	ZINC	25.2	UG/G		3.2		19-SEP-89
P416289	PZ57893034	ZINC	38.8	UG/G		3.7		19-SEP-89
P416289	PZ57892730	ZINC	60.6	UG/G		4.1		19-SEP-89
P416289	PZ57893842	ZINC	25.6	UG/G		3.7		19-SEP-89
P416289	PZ57892327	ZINC	39.6	UG/G		4.3		19-SEP-89
P416289	PZ57890306	ZINC	14.4	UG/G		3.6		19-SEP-89
P416289	PZ57891014	ZINC	13.1	UG/G		3.5		19-SEP-89
P416289	PZ57891822D	ZINC	13.5	UG/G		3.6		19-SEP-89
P416289	PZ57891822	ZINC	9.0	UG/G		3.7		19-SEP-89
P416289	PZ57891618	ZINC	9.3	UG/G		4.2		19-SEP-89
P416289	PZ57891416	ZINC	10.5	UG/G		3.9		19-SEP-89
P416289	PZ57890608	ZINC	12.3	UG/G		2.8		19-SEP-89
P416289	PZ57891822	pH	8.3	PHUNIT				19-SEP-89
P416289	PZ57891416	pH	8.4	PHUNIT				19-SEP-89
P416289	PZ57891014	pH	8.7	PHUNIT				19-SEP-89
P416289	PZ57890810	pH	8.4	PHUNIT				19-SEP-89
P416589	PZ60890003	ALUMINUM	26800	UG/G		50.4		13-SEP-89
P416589	PZ60890307	ALUMINUM	10700	UG/G		41.6		13-SEP-89
P416589	PZ60890307D	ALUMINUM	9280	UG/G		44.4		13-SEP-89
P416589	PZ60891620	ALUMINUM	8300	UG/G		44.3		14-SEP-89
P416589	PZ60892024	ALUMINUM	9400	UG/G		37.6		14-SEP-89
P416589	PZ60892428	ALUMINUM	12000	UG/G		44.4		14-SEP-89
P416589	PZ60892831	ALUMINUM	8000	UG/G		43.5		14-SEP-89
P416589	PZ60893135	ALUMINUM	8340	UG/G		45.0		14-SEP-89
P416589	PZ60890003	ANTIMONY	29.6	UG/G		15.1		13-SEP-89
P416589	PZ60890003	ARSENIC	8.9	UG/G		2.5		13-SEP-89
P416589	PZ60890307	ARSENIC	3.4	UG/G		2.2		13-SEP-89
P416589	PZ60890307D	ARSENIC	3.7	UG/G		1.9		13-SEP-89
P416589	PZ60891620	ARSENIC	5.9	UG/G		2.1		14-SEP-89
P416589	PZ60892024	ARSENIC	2.9	UG/G		2.0		14-SEP-89
P416589	PZ60892428	ARSENIC	4.9	UG/G		2.1		14-SEP-89
P416589	PZ60892831	ARSENIC	2.7	UG/G		2.2		14-SEP-89
P416589	PZ60893135	ARSENIC	5.4	UG/G		2.1		14-SEP-89
P416589	PZ60890307D	BARIUM	53.4	UG/G		44.4		13-SEP-89
P416589	PZ60890003	BARIUM	191	UG/G		50.4		13-SEP-89
P416589	PZ60890307	BARIUM	64.2	UG/G		41.6		13-SEP-89
P416589	PZ60893135	BARIUM	164	UG/G		45.0		14-SEP-89
P416589	PZ60891620	BARIUM	113	UG/G		44.3		14-SEP-89
P416589	PZ60892831	BARIUM	53.1	UG/G		43.5		14-SEP-89
P416589	PZ60892024	BARIUM	64.2	UG/G		37.6		14-SEP-89
P416589	PZ60892428	BARIUM	105	UG/G		44.4		14-SEP-89
P416589	PZ60890003	BERYLLIUM	1.8	UG/G		1.3		13-SEP-89
P416589	PZ60890307	BERYLLIUM	1.2	UG/G		1.0		13-SEP-89
P416589	PZ60891620	BERYLLIUM	1.2	UG/G		1.1		14-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416589	PZ60890003	CALCIUM	4450	UG/G		1260		13-SEP-89
P416589	PZ60890307	CALCIUM	4140	UG/G		1040		13-SEP-89
P416589	PZ60890307D	CALCIUM	3140	UG/G		1110		13-SEP-89
P416589	PZ60891620	CALCIUM	2930	UG/G		1110		14-SEP-89
P416589	PZ60892831	CALCIUM	1900	UG/G		1090		14-SEP-89
P416589	PZ60892024	CALCIUM	2650	UG/G		939		14-SEP-89
P416589	PZ60892428	CALCIUM	3020	UG/G		1110		14-SEP-89
P416589	PZ60893135	CALCIUM	5130	UG/G		1130		14-SEP-89
P416589	PZ60890003	CHROMIUM	28.4	UG/G		2.5		13-SEP-89
P416589	PZ60890307	CHROMIUM	16.5	UG/G		2.1		13-SEP-89
P416589	PZ60890307D	CHROMIUM	15.9	UG/G		2.2		13-SEP-89
P416589	PZ60891620	CHROMIUM	13.5	UG/G		2.2		14-SEP-89
P416589	PZ60892831	CHROMIUM	8.7	UG/G		2.2		14-SEP-89
P416589	PZ60892428	CHROMIUM	12.5	UG/G		2.2		14-SEP-89
P416589	PZ60892024	CHROMIUM	11.9	UG/G		1.9		14-SEP-89
P416589	PZ60893135	CHROMIUM	8.2	UG/G		2.3		14-SEP-89
P416589	PZ60890003	COPPER	25.9	UG/G		6.3		13-SEP-89
P416589	PZ60890307	COPPER	5.8	UG/G		5.2		13-SEP-89
P416589	PZ60891620	COPPER	11.9	UG/G		5.5		14-SEP-89
P416589	PZ60893135	COPPER	15.6	UG/G		5.6		14-SEP-89
P416589	PZ60892024	COPPER	10.4	UG/G		4.7		14-SEP-89
P416589	PZ60892831	COPPER	10.7	UG/G		5.4		14-SEP-89
P416589	PZ60892428	COPPER	13.2	UG/G		5.6		14-SEP-89
P416589	PZ60890307D	IRON	10400	UG/G		22.2		13-SEP-89
P416589	PZ60890003	IRON	33100	UG/G		25.2		13-SEP-89
P416589	PZ60890307	IRON	12500	UG/G		20.8		13-SEP-89
P416589	PZ60892024	IRON	13000	UG/G		18.8		14-SEP-89
P416589	PZ60892428	IRON	14900	UG/G		22.2		14-SEP-89
P416589	PZ60893135	IRON	13900	UG/G		22.5		14-SEP-89
P416589	PZ60892831	IRON	11900	UG/G		21.7		14-SEP-89
P416589	PZ60891620	IRON	16800	UG/G		22.1		14-SEP-89
P416589	PZ60890003	LEAD	12.9	UG/G		2.5		13-SEP-89
P416589	PZ60890307	LEAD	4.7	UG/G		1.1		13-SEP-89
P416589	PZ60890307D	LEAD	5.1	UG/G		0.97		13-SEP-89
P416589	PZ60891620	LEAD	7.4	UG/G		2.1		14-SEP-89
P416589	PZ60892024	LEAD	7.5	UG/G		2.0		14-SEP-89
P416589	PZ60893135	LEAD	13.5	UG/G		3.1		14-SEP-89
P416589	PZ60892831	LEAD	5.6	UG/G		1.1		14-SEP-89
P416589	PZ60892428	LEAD	11.0	UG/G		2.1		14-SEP-89
P416589	PZ60890003	MAGNESIUM	7110	UG/G		1260		13-SEP-89
P416589	PZ60890307D	MAGNESIUM	1760	UG/G		1110		13-SEP-89
P416589	PZ60890307	MAGNESIUM	2040	UG/G		1040		13-SEP-89
P416589	PZ60891620	MAGNESIUM	2250	UG/G		1110		14-SEP-89
P416589	PZ60892024	MAGNESIUM	2570	UG/G		939		14-SEP-89
P416589	PZ60892428	MAGNESIUM	3360	UG/G		1110		14-SEP-89
P416589	PZ60893135	MAGNESIUM	2380	UG/G		1130		14-SEP-89
P416589	PZ60892831	MAGNESIUM	2050	UG/G		1090		14-SEP-89
P416589	PZ60890003	MANGANESE	354	UG/G		3.8		13-SEP-89
P416589	PZ60890307D	MANGANESE	255	UG/G		3.3		13-SEP-89
P416589	PZ60890307	MANGANESE	350	UG/G		3.1		13-SEP-89
P416589	PZ60892024	MANGANESE	146	UG/G		2.8		14-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416589	PZ60892428	MANGANESE	254	UG/G		3.3		14-SEP-89
P416589	PZ60893135	MANGANESE	425	UG/G		3.4		14-SEP-89
P416589	PZ60892831	MANGANESE	169	UG/G		3.3		14-SEP-89
P416589	PZ60891620	MANGANESE	295	UG/G		3.3		14-SEP-89
P416589	PZ60890003	MERCURY	0.20	UG/G		0.20		13-SEP-89
P416589	PZ60890307	MERCURY	0.20	UG/G		0.20		13-SEP-89
P416589	PZ60890307D	MERCURY	0.20	UG/G		0.20		13-SEP-89
P416589	PZ60890003	NICKEL	20.3	UG/G		10.1		13-SEP-89
P416589	PZ60890307D	NICKEL	16.6	UG/G		8.9		13-SEP-89
P416589	PZ60890307	NICKEL	19.6	UG/G		8.3		13-SEP-89
P416589	PZ60891620	NICKEL	15.7	UG/G		8.9		14-SEP-89
P416589	PZ60892024	NICKEL	10.8	UG/G		7.5		14-SEP-89
P416589	PZ60892428	NICKEL	15.0	UG/G		8.9		14-SEP-89
P416589	PZ60893135	NICKEL	17.2	UG/G		9.0		14-SEP-89
P416589	PZ60892831	NICKEL	9.5	UG/G		8.7		14-SEP-89
P416589	PZ60891216	PLUTONIUM-239	0.015	PCI/G		0		14-SEP-89
P416589	PZ60892428	PLUTONIUM-239	0.015	PCI/G		0		14-SEP-89
P416589	PZ60891620	PLUTONIUM-239	0.106	PCI/G		0.		14-SEP-89
P416589	PZ60890003	POTASSIUM	6840	UG/G		1260		13-SEP-89
P416589	PZ60892024	POTASSIUM	1260	UG/G		939		14-SEP-89
P416589	PZ60892428	POTASSIUM	1800	UG/G		1110		14-SEP-89
P416589	PZ60890003	TIN	35.7	UG/G		25.2		13-SEP-89
P416589	PZ60891216	URANIUM-233,-234	0.74	PCI/G		0		14-SEP-89
P416589	PZ60892831	URANIUM-233,-234	0.56	PCI/G		0.		14-SEP-89
P416589	PZ60892428	URANIUM-233,-234	1.05	PCI/G		0		14-SEP-89
P416589	PZ60892024	URANIUM-233,-234	0.87	PCI/G		0		14-SEP-89
P416589	PZ60891620	URANIUM-233,-234	0.46	PCI/G		0		14-SEP-89
P416589	PZ60893135	URANIUM-233,-234	0.93	PCI/G		0.		14-SEP-89
P416589	PZ60890003	VANADIUM	71.3	UG/G		12.6		13-SEP-89
P416589	PZ60890307	VANADIUM	30.6	UG/G		10.4		13-SEP-89
P416589	PZ60890307D	VANADIUM	24.0	UG/G		11.1		13-SEP-89
P416589	PZ60891620	VANADIUM	42.7	UG/G		11.1		14-SEP-89
P416589	PZ60892024	VANADIUM	26.5	UG/G		9.4		14-SEP-89
P416589	PZ60892428	VANADIUM	28.1	UG/G		11.1		14-SEP-89
P416589	PZ60893135	VANADIUM	20.1	UG/G		11.3		14-SEP-89
P416589	PZ60892831	VANADIUM	20.6	UG/G		10.9		14-SEP-89
P416589	PZ60890003	ZINC	62.6	UG/G		5.0		13-SEP-89
P416589	PZ60890307	ZINC	10.5	UG/G		4.2		13-SEP-89
P416589	PZ60890307D	ZINC	8.5	UG/G		4.4		13-SEP-89
P416589	PZ60892024	ZINC	27.9	UG/G		3.8		14-SEP-89
P416589	PZ60893135	ZINC	62.7	UG/G		4.5		14-SEP-89
P416589	PZ60892831	ZINC	27.2	UG/G		4.3		14-SEP-89
P416589	PZ60892428	ZINC	37.4	UG/G		4.4		14-SEP-89
P416589	PZ60891620	ZINC	13.9	UG/G		4.4		14-SEP-89
P416789	PZ62890003	ALUMINUM	4630	UG/G		42.1		15-SEP-89
P416789	PZ62890306	ALUMINUM	46600	UG/G		470		15-SEP-89
P416789	PZ62890610	ALUMINUM	10600	UG/G		40.3		15-SEP-89
P416789	PZ62891012D	ALUMINUM	9630	UG/G		42.1		15-SEP-89
P416789	PZ62891720	ALUMINUM	17100	UG/G		46.9		18-SEP-89
P416789	PZ62892226	ALUMINUM	8830	UG/G		44.2		18-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416789	PZ62892022	ALUMINUM	18000	UG/G		46.4		18-SEP-89
P416789	PZ62892630	ALUMINUM	7550	UG/G		36.3		18-SEP-89
P416789	PZ62891217	AMERICIUM-241	.201	PCI/G		.035		18-SEP-89
P416789	PZ62892022	AMERICIUM-241	.035	PCI/G		0		18-SEP-89
P416789	PZ62892226	AMERICIUM-241	.046	PCI/G		.025		18-SEP-89
P416789	PZ62891720	AMERICIUM-241	.025	PCI/G		.029		18-SEP-89
P416789	PZ62890306	ANTIMONY	22.9	UG/G		14.1		15-SEP-89
P416789	PZ62891720	ANTIMONY	14.6	UG/G		14.1		18-SEP-89
P416789	PZ62890003	ARSENIC	2.7	UG/G		1.9		15-SEP-89
P416789	PZ62890610	ARSENIC	2.5	UG/G		1.8		15-SEP-89
P416789	PZ62890306	ARSENIC	13.8	UG/G		2.1		15-SEP-89
P416789	PZ62891012D	ARSENIC	4.3	UG/G		1.9		15-SEP-89
P416789	PZ62891720	ARSENIC	4.8	UG/G		1.7		18-SEP-89
P416789	PZ62892022	ARSENIC	4.7	UG/G		2.3		18-SEP-89
P416789	PZ62892226	ARSENIC	3.3	UG/G		2.0		18-SEP-89
P416789	PZ62891012D	BARIUM	74.5	UG/G		42.1		15-SEP-89
P416789	PZ62890003	BARIUM	45.5	UG/G		42.1		15-SEP-89
P416789	PZ62890306	BARIUM	121	UG/G		47.0		15-SEP-89
P416789	PZ62890610	BARIUM	43.3	UG/G		40.3		15-SEP-89
P416789	PZ62892630	BARIUM	51.3	UG/G		36.3		18-SEP-89
P416789	PZ62891720	BARIUM	102	UG/G		46.9		18-SEP-89
P416789	PZ62892022	BARIUM	89.9	UG/G		46.4		18-SEP-89
P416789	PZ62890306	BERYLLIUM	2.7	UG/G		1.2		15-SEP-89
P416789	PZ62890003	CALCIUM	1190	UG/G		1050		15-SEP-89
P416789	PZ62890306	CALCIUM	4060	UG/G		1170		15-SEP-89
P416789	PZ62890610	CALCIUM	24400	UG/G		1010		15-SEP-89
P416789	PZ62891012D	CALCIUM	3450	UG/G		1050		15-SEP-89
P416789	PZ62891720	CALCIUM	5130	UG/G		1170		18-SEP-89
P416789	PZ62892022	CALCIUM	3950	UG/G		1160		18-SEP-89
P416789	PZ62892226	CALCIUM	2530	UG/G		1100		18-SEP-89
P416789	PZ62892630	CALCIUM	3970	UG/G		908		18-SEP-89
P416789	PZ62890003	CHROMIUM	8.4	UG/G		2.1		15-SEP-89
P416789	PZ62890306	CHROMIUM	33.2	UG/G		2.3		15-SEP-89
P416789	PZ62890610	CHROMIUM	17.8	UG/G		2.0		15-SEP-89
P416789	PZ62891012D	CHROMIUM	10.6	UG/G		2.1		15-SEP-89
P416789	PZ62891720	CHROMIUM	18.9	UG/G		2.3		18-SEP-89
P416789	PZ62892022	CHROMIUM	17.9	UG/G		2.3		18-SEP-89
P416789	PZ62892226	CHROMIUM	10.7	UG/G		2.2		18-SEP-89
P416789	PZ62892630	CHROMIUM	6.7	UG/G		1.8		18-SEP-89
P416789	PZ62890003	COPPER	8.9	UG/G		5.3		15-SEP-89
P416789	PZ62890306	COPPER	11.5	UG/G		5.9		15-SEP-89
P416789	PZ62890610	COPPER	5.2	UG/G		5.0		15-SEP-89
P416789	PZ62891012D	COPPER	6.0	UG/G		5.3		15-SEP-89
P416789	PZ62891720	COPPER	15.7	UG/G		5.9		18-SEP-89
P416789	PZ62892022	COPPER	15.7	UG/G		5.8		18-SEP-89
P416789	PZ62892226	COPPER	10.7	UG/G		5.5		18-SEP-89
P416789	PZ62892630	COPPER	8.5	UG/G		4.5		18-SEP-89
P416789	PZ62890003	IRON	7140	UG/G		21.0		15-SEP-89
P416789	PZ62890306	IRON	27400	UG/G		23.5		15-SEP-89
P416789	PZ62891012D	IRON	13200	UG/G		21.1		15-SEP-89
P416789	PZ62890610	IRON	9700	UG/G		20.2		15-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416789	PZ62891720	IRON	20000	UG/G		23.4		18-SEP-89
P416789	PZ62892630	IRON	5340	UG/G		18.2		18-SEP-89
P416789	PZ62892226	IRON	13200	UG/G		22.1		18-SEP-89
P416789	PZ62892022	IRON	18700	UG/G		23.2		18-SEP-89
P416789	PZ62890003	LEAD	37.6	UG/G		9.7		15-SEP-89
P416789	PZ62890610	LEAD	4.4	UG/G		0.91		15-SEP-89
P416789	PZ62891012D	LEAD	5.8	UG/G		0.97		15-SEP-89
P416789	PZ62890306	LEAD	24.9	UG/G		5.2		15-SEP-89
P416789	PZ62891720	LEAD	9.3	UG/G		2.6		18-SEP-89
P416789	PZ62892022	LEAD	8.8	UG/G		2.3		18-SEP-89
P416789	PZ62892226	LEAD	4.3	UG/G		1.0		18-SEP-89
P416789	PZ62892630	LEAD	13.9	UG/G		3.6		18-SEP-89
P416789	PZ62890306	MAGNESIUM	2800	UG/G		1170		15-SEP-89
P416789	PZ62890610	MAGNESIUM	1640	UG/G		1010		15-SEP-89
P416789	PZ62891012D	MAGNESIUM	1840	UG/G		1050		15-SEP-89
P416789	PZ62891720	MAGNESIUM	4740	UG/G		1170		18-SEP-89
P416789	PZ62892022	MAGNESIUM	4430	UG/G		1160		18-SEP-89
P416789	PZ62892630	MAGNESIUM	1260	UG/G		908		18-SEP-89
P416789	PZ62892226	MAGNESIUM	1710	UG/G		1100		18-SEP-89
P416789	PZ62890003	MANGANESE	116	UG/G		3.2		15-SEP-89
P416789	PZ62890306	MANGANESE	56.9	UG/G		3.5		15-SEP-89
P416789	PZ62891012D	MANGANESE	302	UG/G		3.2		15-SEP-89
P416789	PZ62890610	MANGANESE	107	UG/G		3.0		15-SEP-89
P416789	PZ62891720	MANGANESE	188	UG/G		3.5		18-SEP-89
P416789	PZ62892630	MANGANESE	37.2	UG/G		2.7		18-SEP-89
P416789	PZ62892226	MANGANESE	91.4	UG/G		3.3		18-SEP-89
P416789	PZ62892022	MANGANESE	147	UG/G		3.5		18-SEP-89
P416789	PZ62890306	MERCURY	0.31	UG/G		0.12		15-SEP-89
P416789	PZ62891012D	MERCURY	0.13	UG/G		0.11		15-SEP-89
P416789	PZ62892630	MERCURY	0.28	UG/G		0.12		18-SEP-89
P416789	PZ62890306	MOLYBDENUM	27.4	UG/G		23.5		15-SEP-89
P416789	PZ62891012D	NICKEL	11.0	UG/G		8.4		15-SEP-89
P416789	PZ62890306	NICKEL	34.6	UG/G		9.4		15-SEP-89
P416789	PZ62890610	NICKEL	11.4	UG/G		8.1		15-SEP-89
P416789	PZ62891720	NICKEL	16.2	UG/G		9.4		18-SEP-89
P416789	PZ62892022	NICKEL	16.1	UG/G		9.3		18-SEP-89
P416789	PZ62892022	PLUTONIUM-239	.084	PCI/G		0		18-SEP-89
P416789	PZ62890306	POTASSIUM	1980	UG/G		1170		15-SEP-89
P416789	PZ62891720	POTASSIUM	3530	UG/G		1170		18-SEP-89
P416789	PZ62892226	POTASSIUM	1140	UG/G		1100		18-SEP-89
P416789	PZ62892022	POTASSIUM	3280	UG/G		1160		18-SEP-89
P416789	PZ62890306	TIN	27.8	UG/G		23.5		15-SEP-89
P416789	PZ62891217	URANIUM-233,-234	.97	PCI/G		.07		18-SEP-89
P416789	PZ62892630	URANIUM-233,-234	.68	PCI/G		.08		18-SEP-89
P416789	PZ62892226	URANIUM-233,-234	1.15	PCI/G		0		18-SEP-89
P416789	PZ62892022	URANIUM-233,-234	1.41	PCI/G		0		18-SEP-89
P416789	PZ62891720	URANIUM-233,-234	.91	PCI/G		.07		18-SEP-89
P416789	PZ62890003	VANADIUM	20.8	UG/G		10.5		15-SEP-89
P416789	PZ62891012D	VANADIUM	32.0	UG/G		10.5		15-SEP-89
P416789	PZ62890610	VANADIUM	24.2	UG/G		10.1		15-SEP-89
P416789	PZ62890306	VANADIUM	81.4	UG/G		11.7		15-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416789	PZ62891720	VANADIUM	42.3	UG/G		11.7		18-SEP-89
P416789	PZ62892022	VANADIUM	44.0	UG/G		11.6		18-SEP-89
P416789	PZ62892630	VANADIUM	13.2	UG/G		9.1		18-SEP-89
P416789	PZ62892226	VANADIUM	33.2	UG/G		11.0		18-SEP-89
P416789	PZ62890003	ZINC	96.1	UG/G		4.2		15-SEP-89
P416789	PZ62891012D	ZINC	50.8	UG/G		4.2		15-SEP-89
P416789	PZ62890610	ZINC	15.2	UG/G		4.0		15-SEP-89
P416789	PZ62890306	ZINC	77.0	UG/G		4.7		15-SEP-89
P416789	PZ62891720	ZINC	103	UG/G		4.7		18-SEP-89
P416789	PZ62892630	ZINC	46.6	UG/G		3.6		18-SEP-89
P416789	PZ62892226	ZINC	37.7	UG/G		4.4		18-SEP-89
P416789	PZ62892022	ZINC	70.7	UG/G		4.6		18-SEP-89
P416789	PZ62891012D	pH	9.0	PHUNIT				15-SEP-89
P416789	PZ62891012	pH	8.7	PHUNIT				15-SEP-89
P416789	PZ62890610	pH	8.8	PHUNIT				15-SEP-89
P416789	PZ62891217	pH	8.6	PHUNIT				18-SEP-89
P416889	PZ63890002	ALUMINUM	8460	UG/G		40.5		19-SEP-89
P416889	PZ63890305	ALUMINUM	12000	UG/G		46.0		19-SEP-89
P416889	PZ63891520	ALUMINUM	12100	UG/G		38.0		19-SEP-89
P416889	PZ63892023	ALUMINUM	10300	UG/G		38.5		19-SEP-89
P416889	PZ63892023D	ALUMINUM	11500	UG/G		40.7		19-SEP-89
P416889	PZ63890507	ALUMINUM	9040	UG/G		35.3		19-SEP-89
P416889	PZ63891315	ALUMINUM	16400	UG/G		37.6		19-SEP-89
P416889	PZ63890709	ALUMINUM	9390	UG/G		41.0		19-SEP-89
P416889	PZ63890912	ALUMINUM	9460	UG/G		37.5		19-SEP-89
P416889	PZ63891315	ANTIMONY	13.0	UG/G		11.3		19-SEP-89
P416889	PZ63890912	ANTIMONY	12.3	UG/G		11.3		19-SEP-89
P416889	PZ63891520	ANTIMONY	14.2	UG/G		11.4		19-SEP-89
P416889	PZ63892023	ANTIMONY	19.6	UG/G		11.5		19-SEP-89
P416889	PZ63892023D	ANTIMONY	18.0	UG/G		12.2		19-SEP-89
P416889	PZ63890002	ARSENIC	2.6	UG/G		1.8		19-SEP-89
P416889	PZ63890305	ARSENIC	4.4	UG/G		2.3		19-SEP-89
P416889	PZ63891520	ARSENIC	5.7	UG/G		1.9		19-SEP-89
P416889	PZ63892023	ARSENIC	3.2	UG/G		2.1		19-SEP-89
P416889	PZ63892023D	ARSENIC	2.6	UG/G		1.8		19-SEP-89
P416889	PZ63891315	ARSENIC	4.5	UG/G		1.7		19-SEP-89
P416889	PZ63890912	ARSENIC	5.4	UG/G		2.0		19-SEP-89
P416889	PZ63890709	ARSENIC	8.0	UG/G		2.1		19-SEP-89
P416889	PZ63890507	BARIUM	49.4	UG/G		35.3		19-SEP-89
P416889	PZ63890912	BARIUM	56.2	UG/G		37.5		19-SEP-89
P416889	PZ63891315	BARIUM	110	UG/G		37.6		19-SEP-89
P416889	PZ63890709	BARIUM	95.3	UG/G		41.0		19-SEP-89
P416889	PZ63891520	BARIUM	89.7	UG/G		38.0		19-SEP-89
P416889	PZ63892023	BARIUM	164	UG/G		38.5		19-SEP-89
P416889	PZ63892023D	BARIUM	174	UG/G		40.7		19-SEP-89
P416889	PZ63890002	BARIUM	71.2	UG/G		40.5		19-SEP-89
P416889	PZ63890305	BARIUM	62.6	UG/G		46.0		19-SEP-89
P416889	PZ63892023D	BERYLLIUM	1.2	UG/G		1.0		19-SEP-89
P416889	PZ63892023	BERYLLIUM	1.2	UG/G		0.96		19-SEP-89
P416889	PZ63891315	BERYLLIUM	1.1	UG/G		0.94		19-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416889	PZ63890912	BERYLLIUM	0.98	UG/G		0.94		19-SEP-89
P416889	PZ63890002	CALCIUM	1480	UG/G		1010		19-SEP-89
P416889	PZ63890305	CALCIUM	31100	UG/G		1150		19-SEP-89
P416889	PZ63891520	CALCIUM	2490	UG/G		949		19-SEP-89
P416889	PZ63892023D	CALCIUM	5390	UG/G		1020		19-SEP-89
P416889	PZ63892023	CALCIUM	5440	UG/G		962		19-SEP-89
P416889	PZ63890507	CALCIUM	5960	UG/G		882		19-SEP-89
P416889	PZ63890709	CALCIUM	2820	UG/G		1020		19-SEP-89
P416889	PZ63891315	CALCIUM	4040	UG/G		940		19-SEP-89
P416889	PZ63890912	CALCIUM	2890	UG/G		938		19-SEP-89
P416889	PZ63890002	CHROMIUM	8.7	UG/G		2.0		19-SEP-89
P416889	PZ63890305	CHROMIUM	11.2	UG/G		2.3		19-SEP-89
P416889	PZ63892023	CHROMIUM	11.0	UG/G		1.9		19-SEP-89
P416889	PZ63892023D	CHROMIUM	12.1	UG/G		2.0		19-SEP-89
P416889	PZ63890507	CHROMIUM	7.8	UG/G		1.8		19-SEP-89
P416889	PZ63891315	CHROMIUM	22.6	UG/G		1.9		19-SEP-89
P416889	PZ63890912	CHROMIUM	12.4	UG/G		1.9		19-SEP-89
P416889	PZ63891520	CHROMIUM	17.2	UG/G		1.9		19-SEP-89
P416889	PZ63890709	CHROMIUM	10.3	UG/G		2.0		19-SEP-89
P416889	PZ63891315	COBALT	10.4	UG/G		9.4		19-SEP-89
P416889	PZ63890709	COBALT	20.2	UG/G		10.2		19-SEP-89
P416889	PZ63890002	COBALT	17.6	UG/G		10.1		19-SEP-89
P416889	PZ63890002	COPPER	7.4	UG/G		5.1		19-SEP-89
P416889	PZ63892023	COPPER	18.8	UG/G		4.8		19-SEP-89
P416889	PZ63892023D	COPPER	18.4	UG/G		5.1		19-SEP-89
P416889	PZ63890709	COPPER	11.0	UG/G		5.1		19-SEP-89
P416889	PZ63890912	COPPER	14.0	UG/G		4.7		19-SEP-89
P416889	PZ63891520	COPPER	15.9	UG/G		4.7		19-SEP-89
P416889	PZ63891315	COPPER	17.2	UG/G		4.7		19-SEP-89
P416889	PZ63890709	IRON	12400	UG/G		20.5		19-SEP-89
P416889	PZ63892023	IRON	20800	UG/G		19.2		19-SEP-89
P416889	PZ63890912	IRON	17500	UG/G		18.8		19-SEP-89
P416889	PZ63891520	IRON	18000	UG/G		19.0		19-SEP-89
P416889	PZ63891315	IRON	19400	UG/G		18.8		19-SEP-89
P416889	PZ63892023D	IRON	20100	UG/G		20.4		19-SEP-89
P416889	PZ63890002	IRON	9810	UG/G		20.3		19-SEP-89
P416889	PZ63890507	IRON	6500	UG/G		17.6		19-SEP-89
P416889	PZ63890305	IRON	11700	UG/G		23.0		19-SEP-89
P416889	PZ63890002	LEAD	63.3	UG/G		23.0		19-SEP-89
P416889	PZ63890305	LEAD	7.9	UG/G		2.3		19-SEP-89
P416889	PZ63890507	LEAD	4.1	UG/G		1.1		19-SEP-89
P416889	PZ63892023D	LEAD	15.4	UG/G		3.5		19-SEP-89
P416889	PZ63890709	LEAD	11.8	UG/G		2.1		19-SEP-89
P416889	PZ63890912	LEAD	4.1	UG/G		0.99		19-SEP-89
P416889	PZ63891520	LEAD	7.6	UG/G		1.9		19-SEP-89
P416889	PZ63892023	LEAD	18.9	UG/G		3.2		19-SEP-89
P416889	PZ63891315	LEAD	17.4	UG/G		4.3		19-SEP-89
P416889	PZ63890305	MAGNESIUM	2720	UG/G		1150		19-SEP-89
P416889	PZ63890507	MAGNESIUM	2150	UG/G		882		19-SEP-89
P416889	PZ63892023D	MAGNESIUM	2250	UG/G		1020		19-SEP-89
P416889	PZ63890709	MAGNESIUM	1980	UG/G		1020		19-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416889	PZ63890912	MAGNESIUM	2180	UG/G		938		19-SEP-89
P416889	PZ63891315	MAGNESIUM	3610	UG/G		940		19-SEP-89
P416889	PZ63892023	MAGNESIUM	2180	UG/G		962		19-SEP-89
P416889	PZ63891520	MAGNESIUM	2630	UG/G		949		19-SEP-89
P416889	PZ63890709	MANGANESE	418	UG/G		3.1		19-SEP-89
P416889	PZ63892023D	MANGANESE	419	UG/G		3.1		19-SEP-89
P416889	PZ63892023	MANGANESE	371	UG/G		2.9		19-SEP-89
P416889	PZ63890912	MANGANESE	327	UG/G		2.8		19-SEP-89
P416889	PZ63891520	MANGANESE	196	UG/G		2.8		19-SEP-89
P416889	PZ63891315	MANGANESE	481	UG/G		2.8		19-SEP-89
P416889	PZ63890002	MANGANESE	751	UG/G		3.0		19-SEP-89
P416889	PZ63890507	MANGANESE	70.5	UG/G		2.6		19-SEP-89
P416889	PZ63890305	MANGANESE	214	UG/G		3.4		19-SEP-89
P416889	PZ63890002	NICKEL	14.5	UG/G		8.1		19-SEP-89
P416889	PZ63890709	NICKEL	11.7	UG/G		8.2		19-SEP-89
P416889	PZ63890305	NICKEL	12.5	UG/G		9.2		19-SEP-89
P416889	PZ63890912	NICKEL	10.5	UG/G		7.5		19-SEP-89
P416889	PZ63891315	NICKEL	20.5	UG/G		7.5		19-SEP-89
P416889	PZ63892023	NICKEL	13.2	UG/G		7.7		19-SEP-89
P416889	PZ63892023D	NICKEL	12.3	UG/G		8.1		19-SEP-89
P416889	PZ63891520	NICKEL	16.0	UG/G		7.6		19-SEP-89
P416889	PZ63890002	PLUTONIUM-239	0.137	PCI/G		0		19-SEP-89
P416889	PZ63890912	PLUTONIUM-239	0.053	PCI/G		0		19-SEP-89
P416889	PZ63892023D	PLUTONIUM-239	0.018	PCI/G		0		19-SEP-89
P416889	PZ63891315	PLUTONIUM-239	0.023	PCI/G		0		19-SEP-89
P416889	PZ63892023D	POTASSIUM	1080	UG/G		1020		19-SEP-89
P416889	PZ63891315	POTASSIUM	1410	UG/G		940		19-SEP-89
P416889	PZ63892023	POTASSIUM	1020	UG/G		962		19-SEP-89
P416889	PZ63891520	POTASSIUM	1210	UG/G		949		19-SEP-89
P416889	PZ63892023	STRONTIUM-90	1.33	PCI/G		0.		19-SEP-89
P416889	PZ63890002	STRONTIUM-90	1.18	PCI/G		0.		19-SEP-89
P416889	PZ63892023	TRITIUM	380	PCI/L		48		19-SEP-89
P416889	PZ63890912	URANIUM-233,-234	0.74	PCI/G		0		19-SEP-89
P416889	PZ63891315	URANIUM-233,-234	1.08	PCI/G		0.		19-SEP-89
P416889	PZ63892023D	URANIUM-233,-234	1.46	PCI/G		0		19-SEP-89
P416889	PZ63892023	URANIUM-233,-234	1.13	PCI/G		0		19-SEP-89
P416889	PZ63891520	URANIUM-233,-234	0.70	PCI/G		0.		19-SEP-89
P416889	PZ63890002	URANIUM-233,-234	0.95	PCI/G		0		19-SEP-89
P416889	PZ63890305	URANIUM-233,-234	0.62	PCI/G		0		19-SEP-89
P416889	PZ63890507	URANIUM-233,-234	0.44	PCI/G		0		19-SEP-89
P416889	PZ63890709	URANIUM-233,-234	0.61	PCI/G		0		19-SEP-89
P416889	PZ63890002	VANADIUM	30.1	UG/G		10.1		19-SEP-89
P416889	PZ63890305	VANADIUM	29.8	UG/G		11.5		19-SEP-89
P416889	PZ63890709	VANADIUM	35.4	UG/G		10.2		19-SEP-89
P416889	PZ63890507	VANADIUM	11.9	UG/G		8.8		19-SEP-89
P416889	PZ63890912	VANADIUM	44.4	UG/G		9.4		19-SEP-89
P416889	PZ63892023D	VANADIUM	42.2	UG/G		10.2		19-SEP-89
P416889	PZ63891315	VANADIUM	46.6	UG/G		9.4		19-SEP-89
P416889	PZ63892023	VANADIUM	38.4	UG/G		9.6		19-SEP-89
P416889	PZ63891520	VANADIUM	40.0	UG/G		9.5		19-SEP-89
P416889	PZ63890912	ZINC	32.6	UG/G		3.8		19-SEP-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P416889	PZ63891315	ZINC	71.9	UG/G		3.8		19-SEP-89
P416889	PZ63892023	ZINC	87.3	UG/G		3.8		19-SEP-89
P416889	PZ63892023D	ZINC	134	UG/G		4.1		19-SEP-89
P416889	PZ63891520	ZINC	48.5	UG/G		3.8		19-SEP-89
P416889	PZ63890002	ZINC	37.7	UG/G		4.1		19-SEP-89
P416889	PZ63890709	ZINC	43.8	UG/G		4.1		19-SEP-89
P416889	PZ63890507	ZINC	47.9	UG/G		3.5		19-SEP-89
P416889	PZ63890305	ZINC	18.3	UG/G		4.6		19-SEP-89
P418289	P4182890306	ALUMINUM	9520	UG/G		34.3		07-NOV-89
P418289	P4182890610	ALUMINUM	6000	UG/G		40.7		07-NOV-89
P418289	P4182891014	ALUMINUM	6210	UG/G		37.8		07-NOV-89
P418289	P4182891416	ALUMINUM	6860	UG/G		32.7		07-NOV-89
P418289	P4182891619	ALUMINUM	7060	UG/G		32.0		07-NOV-89
P418289	P4182892326	ALUMINUM	3760	UG/G		47.2		07-NOV-89
P418289	P4182891923	ALUMINUM	7630	UG/G		38.5		07-NOV-89
P418289	P4182890610	ARSENIC	1.7	UG/G		1.5		07-NOV-89
P418289	P4182891923	ARSENIC	2.5	UG/G		1.7		07-NOV-89
P418289	P4182891014	BARIUM	51.0	UG/G		37.8		07-NOV-89
P418289	P4182891923	BARIUM	52.8	UG/G		38.5		07-NOV-89
P418289	P4182891619	BARIUM	60.6	UG/G		32.0		07-NOV-89
P418289	P4182891416	BARIUM	57.9	UG/G		32.7		07-NOV-89
P418289	P4182892326	BARIUM	78.1	UG/G		47.2		07-NOV-89
P418289	P4182890306	BARIUM	43.1	UG/G		34.3		07-NOV-89
P418289	P4182890610	BARIUM	51.8	UG/G		40.7		07-NOV-89
P418289	P4182891289004	BARIUM	.255	MG/L		50.0		14-DEC-89
P418289	P418289-0519-02-0	BARIUM	284	UG/L		200		19-MAY-90
P418289	GW00363IT	BARIUM	236.00	UG/L		200		11-SEP-90
P418289	GW00683IT	BARIUM	267	UG/L		200		19-NOV-90
P418289	GW01001IT	BARIUM	255.00	UG/L		200		19-MAR-91
P418289	GW01430IT	BARIUM	264.00	UG/L	E	200		18-JUN-91
P418289	P4182890306	BERYLLIUM	1.4	UG/G		0.86		07-NOV-89
P418289	P4182891619	BERYLLIUM	0.86	UG/G		0.80		07-NOV-89
P418289	P4182891416	BERYLLIUM	0.88	UG/G		0.82		07-NOV-89
P418289	GOP01890390001	BICARBONATE	360	MG/L				22-MAR-90
P418289	P418289-0519-02-0	BICARBONATE AS CACO3	314	MG/L		2		19-MAY-90
P418289	GW00363IT	BICARBONATE AS CACO3	310	MG/L		1.0		11-SEP-90
P418289	GW00683IT	BICARBONATE AS CACO3	300	MG/L		1		19-NOV-90
P418289	GW01001IT	BICARBONATE AS CACO3	300	MG/L		1.0		19-MAR-91
P418289	GW01430IT	BICARBONATE AS CACO3	290	MG/L		1.0		18-JUN-91
P418289	P4182890306	CALCIUM	2410	UG/G		858		07-NOV-89
P418289	P4182890610	CALCIUM	30300	UG/G		1020		07-NOV-89
P418289	P4182891014	CALCIUM	4040	UG/G		946		07-NOV-89
P418289	P4182892326	CALCIUM	5070	UG/G		1180		07-NOV-89
P418289	P4182891416	CALCIUM	2880	UG/G		816		07-NOV-89
P418289	P4182891923	CALCIUM	3680	UG/G		964		07-NOV-89
P418289	P4182891619	CALCIUM	3320	UG/G		800		07-NOV-89
P418289	P4182891289004	CALCIUM	142.00	MG/L		100		14-DEC-89
P418289	P418289-0519-02-0	CALCIUM	159000	UG/L		5000		19-MAY-90
P418289	GW00363IT	CALCIUM	132000.00	UG/L		5000		11-SEP-90
P418289	GW00683IT	CALCIUM	155000	UG/L		5000		19-NOV-90

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P418289	GW01001IT	CALCIUM	142000.00	UG/L		5000		19-MAR-91
P418289	GW01430IT	CALCIUM	145000.00	UG/L		5000		18-JUN-91
P418289	P4182890306	CHROMIUM	9.0	UG/G		1.7		07-NOV-89
P418289	P4182890610	CHROMIUM	5.6	UG/G		2.0		07-NOV-89
P418289	P4182891014	CHROMIUM	19.3	UG/G		1.9		07-NOV-89
P418289	P4182892326	CHROMIUM	4.3	UG/G		2.4		07-NOV-89
P418289	P4182891923	CHROMIUM	9.7	UG/G		1.9		07-NOV-89
P418289	P4182891619	CHROMIUM	9.9	UG/G		1.6		07-NOV-89
P418289	P4182891416	CHROMIUM	12.5	UG/G		1.6		07-NOV-89
P418289	GW00363IT	CHROMIUM	20.30	UG/L		10		11-SEP-90
P418289	GW01430IT	CHROMIUM	10.30	UG/L		10		18-JUN-91
P418289	P4182890306	COBALT	11.5	UG/G		8.6		07-NOV-89
P418289	P4182890306	COPPER	8.4	UG/G		4.3		07-NOV-89
P418289	P4182890610	COPPER	8.6	UG/G		5.1		07-NOV-89
P418289	P4182891014	COPPER	13.6	UG/G		4.7		07-NOV-89
P418289	P4182892326	COPPER	12.5	UG/G		5.9		07-NOV-89
P418289	P4182891416	COPPER	16.2	UG/G		4.1		07-NOV-89
P418289	P4182891923	COPPER	16.6	UG/G		4.8		07-NOV-89
P418289	P4182891619	COPPER	11.4	UG/G		4.0		07-NOV-89
P418289	P4182891416	IRON	11200	UG/G		16.3		07-NOV-89
P418289	P4182891619	IRON	8040	UG/G		16.0		07-NOV-89
P418289	P4182892326	IRON	5480	UG/G		23.6		07-NOV-89
P418289	P4182891923	IRON	11900	UG/G		19.3		07-NOV-89
P418289	P4182890306	IRON	12700	UG/G		17.2		07-NOV-89
P418289	P4182891014	IRON	9530	UG/G		18.9		07-NOV-89
P418289	P4182890610	IRON	6500	UG/G		20.4		07-NOV-89
P418289	P4182890306	LEAD	1.3	UG/G		1.2		07-NOV-89
P418289	P4182891014	LEAD	3.2	UG/G		1.2		07-NOV-89
P418289	P4182890610	LEAD	4.2	UG/G		0.92		07-NOV-89
P418289	P4182891416	LEAD	3.1	UG/G		0.94		07-NOV-89
P418289	P4182892326	LEAD	4.5	UG/G		1.1		07-NOV-89
P418289	P4182891923	LEAD	8.6	UG/G		1.0		07-NOV-89
P418289	P4182891014	MAGNESIUM	1950	UG/G		946		07-NOV-89
P418289	P4182890610	MAGNESIUM	1860	UG/G		1020		07-NOV-89
P418289	P4182891416	MAGNESIUM	2600	UG/G		816		07-NOV-89
P418289	P4182891619	MAGNESIUM	1920	UG/G		800		07-NOV-89
P418289	P4182892326	MAGNESIUM	1220	UG/G		1180		07-NOV-89
P418289	P4182891923	MAGNESIUM	2140	UG/G		964		07-NOV-89
P418289	P4182891289004	MAGNESIUM	22.30	MG/L		200		14-DEC-89
P418289	P418289-0519-02-0	MAGNESIUM	20900	UG/L		5000		19-MAY-90
P418289	GW00363IT	MAGNESIUM	17400.00	UG/L		5000		11-SEP-90
P418289	GW00683IT	MAGNESIUM	20000	UG/L		5000		19-NOV-90
P418289	GW01001IT	MAGNESIUM	18400.00	UG/L		5000		19-MAR-91
P418289	GW01430IT	MAGNESIUM	18400.00	UG/L		5000		18-JUN-91
P418289	P4182891416	MANGANESE	129	UG/G		2.4		07-NOV-89
P418289	P4182891619	MANGANESE	209	UG/G		2.4		07-NOV-89
P418289	P4182892326	MANGANESE	148	UG/G		3.5		07-NOV-89
P418289	P4182891923	MANGANESE	99.9	UG/G		2.9		07-NOV-89
P418289	P4182890306	MANGANESE	71.3	UG/G		2.6		07-NOV-89
P418289	P4182890610	MANGANESE	285	UG/G		3.1		07-NOV-89
P418289	P4182891014	MANGANESE	145	UG/G		2.8		07-NOV-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P418289	P418289-0519-02-0	MANGANESE	16.2	UG/L		15		19-MAY-90
P418289	GW00363IT	MANGANESE	62.40	UG/L		15		11-SEP-90
P418289	GW00683IT	MANGANESE	36.2	UG/L		15		19-NOV-90
P418289	GW01001IT	MANGANESE	25.30	UG/L		15		19-MAR-91
P418289	GW01430IT	MANGANESE	33.80	UG/L		15		18-JUN-91
P418289	P4182891289004	MERCURY	.0017	MG/L		0.20		14-DEC-89
P418289	P418289-0519-02-0	MERCURY	1.7	UG/L		0.2		19-MAY-90
P418289	GW00363IT	MERCURY	1.20	UG/L		0		11-SEP-90
P418289	GW00683IT	MERCURY	1.4	UG/L		0.2		19-NOV-90
P418289	GW01001IT	MERCURY	0.58	UG/L		0		19-MAR-91
P418289	GW01430IT	MERCURY	1.40	UG/L		0		18-JUN-91
P418289	P4182890306	NICKEL	12.1	UG/G		6.9		07-NOV-89
P418289	P4182891416	NICKEL	10.7	UG/G		6.5		07-NOV-89
P418289	P4182891014	NICKEL	10.0	UG/G		7.6		07-NOV-89
P418289	P4182890610	NICKEL	15.1	UG/G		8.1		07-NOV-89
P418289	P4182891619	NICKEL	11.2	UG/G		6.4		07-NOV-89
P418289	P4182891923	NICKEL	10.7	UG/G		7.7		07-NOV-89
P418289	P4182891289004	PLUTONIUM-239	0.022	PCI/L		0		14-DEC-89
P418289	P4182891619	POTASSIUM	1400	UG/G		800		07-NOV-89
P418289	P4182891923	POTASSIUM	1590	UG/G		964		07-NOV-89
P418289	P4182890610	POTASSIUM	1120	UG/G		1020		07-NOV-89
P418289	P4182891416	POTASSIUM	1390	UG/G		816		07-NOV-89
P418289	P4182891014	POTASSIUM	1400	UG/G		946		07-NOV-89
P418289	P418289-0519-02-0	SODIUM	29800	UG/L		5000		19-MAY-90
P418289	GW00363IT	SODIUM	31400.00	UG/L		5000		11-SEP-90
P418289	GW00683IT	SODIUM	33000	UG/L		5000		19-NOV-90
P418289	GW01001IT	SODIUM	29100.00	UG/L		5000		19-MAR-91
P418289	GW01430IT	SODIUM	30600.00	UG/L		5000		18-JUN-91
P418289	P4182892326	STRONTIUM	28.6	UG/G		23.6		07-NOV-89
P418289	P4182890610	STRONTIUM	27.1	UG/G		20.4		07-NOV-89
P418289	P418289-0519-02-0	STRONTIUM	653	UG/L		100		19-MAY-90
P418289	GW00363IT	STRONTIUM	516.00	UG/L		200		11-SEP-90
P418289	GW00683IT	STRONTIUM	543	UG/L		200		19-NOV-90
P418289	GW01001IT	STRONTIUM	582.00	UG/L		200		19-MAR-91
P418289	GW01430IT	STRONTIUM	590.00	UG/L		200		18-JUN-91
P418289	GW00683IT	SULFATE	600	MG/L		10		19-NOV-90
P418289	P4182891923	TIN	31.6	UG/G		19.3		07-NOV-89
P418289	P4182890306	TIN	31.6	UG/G		17.2		07-NOV-89
P418289	P4182891416	TIN	25.3	UG/G		16.3		07-NOV-89
P418289	P4182890610	TIN	24.0	UG/G		20.4		07-NOV-89
P418289	P4182891619	TIN	24.7	UG/G		16.0		07-NOV-89
P418289	P4182891014	TIN	23.0	UG/G		18.9		07-NOV-89
P418289	P4182891289004	URANIUM-233,-234	2.82	PCI/L		0		14-DEC-89
P418289	GOP01890390001	URANIUM-233,-234	2.727	PC/L		0.424		22-MAR-90
P418289	GW00683IT	URANIUM-233,-234	1.552	PCI/L		.6		19-NOV-90
P418289	P4182890306	VANADIUM	40.5	UG/G		8.6		07-NOV-89
P418289	P4182890610	VANADIUM	18.3	UG/G		10.2		07-NOV-89
P418289	P4182891416	VANADIUM	23.5	UG/G		8.2		07-NOV-89
P418289	P4182891014	VANADIUM	22.4	UG/G		9.5		07-NOV-89
P418289	P4182891619	VANADIUM	13.5	UG/G		8.0		07-NOV-89
P418289	P4182892326	VANADIUM	13.1	UG/G		11.8		07-NOV-89

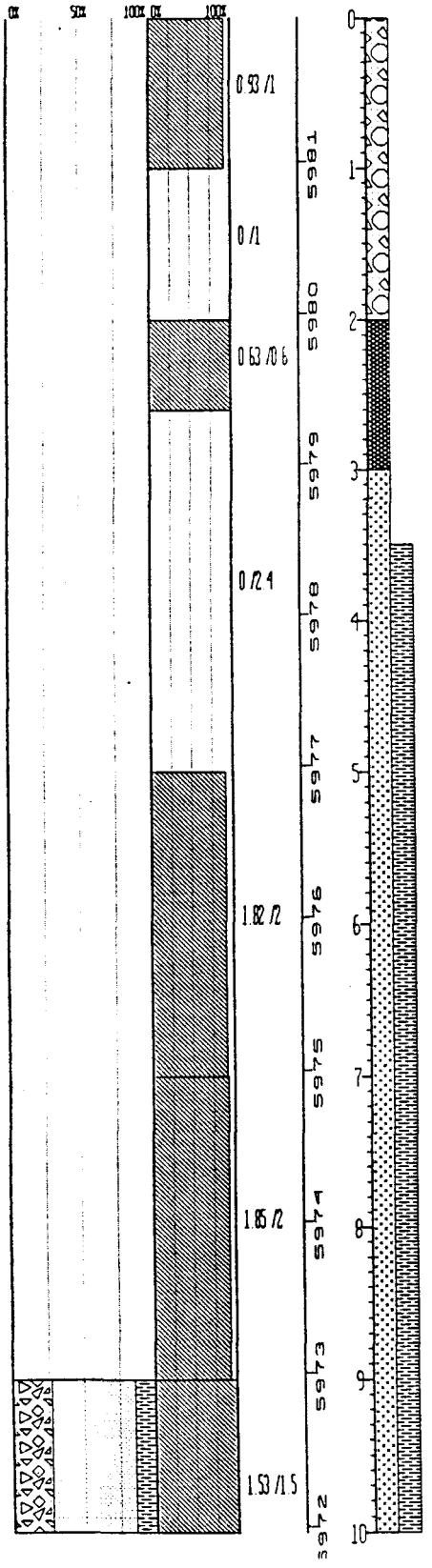
Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P418289	P4182891923	VANADIUM	27.3	UG/G		9.6		07-NOV-89
P418289	P4182891923	ZINC	37.0	UG/G		3.9		07-NOV-89
P418289	P4182892326	ZINC	33.7	UG/G		4.7		07-NOV-89
P418289	P4182890306	ZINC	11.6	UG/G		3.4		07-NOV-89
P418289	P4182890610	ZINC	14.6	UG/G		4.1		07-NOV-89
P418289	P4182891416	ZINC	29.7	UG/G		3.3		07-NOV-89
P418289	P4182891014	ZINC	21.1	UG/G		3.8		07-NOV-89
P418289	P4182891619	ZINC	21.9	UG/G		3.2		07-NOV-89
P418289	P4182892326	pH	8.3	PHUNIT				07-NOV-89
P418289	P4182891619	pH	8.5	PHUNIT				07-NOV-89
P418289	P4182891416	pH	8.6	PHUNIT				07-NOV-89
P418289	P4182891014	pH	8.7	PHUNIT				07-NOV-89
P418289	P4182890610	pH	8.4	PHUNIT				07-NOV-89
P419689	P4196890711	ALUMINUM	3440	UG/G		37.5		08-DEC-89
P419689	P4196891822	ALUMINUM	4260	UG/G		39.2		08-DEC-89
P419689	P4196892223	ALUMINUM	5510	UG/G		34.2		08-DEC-89
P419689	P4196891518	ALUMINUM	4980	UG/G		38.6		08-DEC-89
P419689	P4196891115	ALUMINUM	4080	UG/G		36.3		08-DEC-89
P419689	P4196892326	ALUMINUM	5940	UG/G		47.1		08-DEC-89
P419689	P4196890003	ALUMINUM	7080	UG/G		44.1		08-DEC-89
P419689	P4196890307D	ALUMINUM	5660	UG/G		35.7		08-DEC-89
P419689	P4196890307	ALUMINUM	5430	UG/G		31.6		08-DEC-89
P419689	P4196892223	ARSENIC	2.9	UG/G		1.8		08-DEC-89
P419689	P4196891518	ARSENIC	2.3	UG/G		1.8		08-DEC-89
P419689	P4196890003	ARSENIC	4.0	UG/G		3.2		08-DEC-89
P419689	P4196890307D	ARSENIC	4.2	UG/G		3.6		08-DEC-89
P419689	P4196890003	BARIUM	48.7	UG/G		44.1		08-DEC-89
P419689	P4196890307D	BARIUM	41.3	UG/G		35.7		08-DEC-89
P419689	P4196890711	BARIUM	39.6	UG/G		37.5		08-DEC-89
P419689	P4196891822	BARIUM	42.3	UG/G		39.2		08-DEC-89
P419689	P4196891518	BARIUM	80.6	UG/G		38.6		08-DEC-89
P419689	P4196891115	BARIUM	49.0	UG/G		36.3		08-DEC-89
P419689	P4196892326	BARIUM	72.8	UG/G		47.1		08-DEC-89
P419689	P4196890307D	BERYLLIUM	0.89	UG/G		0.89		08-DEC-89
P419689	P4196890711	CALCIUM	3580	UG/G		938		08-DEC-89
P419689	P4196891115	CALCIUM	3120	UG/G		908		08-DEC-89
P419689	P4196892326	CALCIUM	5170	UG/G		1180		08-DEC-89
P419689	P4196891822	CALCIUM	1960	UG/G		980		08-DEC-89
P419689	P4196892223	CALCIUM	1710	UG/G		855		08-DEC-89
P419689	P4196891518	CALCIUM	2220	UG/G		966		08-DEC-89
P419689	P4196890003	CALCIUM	5510	UG/G		1100		08-DEC-89
P419689	P4196890307D	CALCIUM	24000	UG/G		892		08-DEC-89
P419689	P4196890307	CALCIUM	16500	UG/G		790		08-DEC-89
P419689	P4196891115	CHROMIUM	16.8	UG/G		1.8		08-DEC-89
P419689	P4196891518	CHROMIUM	6.9	UG/G		1.9		08-DEC-89
P419689	P4196891822	CHROMIUM	4.9	UG/G		2.0		08-DEC-89
P419689	P4196892326	CHROMIUM	7.0	UG/G		2.4		08-DEC-89
P419689	P4196892223	CHROMIUM	8.4	UG/G		1.7		08-DEC-89
P419689	P4196890003	CHROMIUM	12.6	UG/G		2.2		08-DEC-89
P419689	P4196890307D	CHROMIUM	43.7	UG/G		1.8		08-DEC-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P419689	P4196890711	CHROMIUM	15.0	UG/G		1.9		08-DEC-89
P419689	P4196890307	CHROMIUM	34.2	UG/G		1.6		08-DEC-89
P419689	P4196890307D	COBALT	15.4	UG/G		8.9		08-DEC-89
P419689	P4196891115	COPPER	6.9	UG/G		4.5		08-DEC-89
P419689	P4196891518	COPPER	9.5	UG/G		4.8		08-DEC-89
P419689	P4196892223	COPPER	13.0	UG/G		4.3		08-DEC-89
P419689	P4196892326	COPPER	16.7	UG/G		5.9		08-DEC-89
P419689	P4196891822	COPPER	6.8	UG/G		4.9		08-DEC-89
P419689	P4196890003	COPPER	9.5	UG/G		5.5		08-DEC-89
P419689	P4196890307D	COPPER	10.7	UG/G		4.5		08-DEC-89
P419689	P4196890307	COPPER	8.1	UG/G		3.9		08-DEC-89
P419689	P4196890711	COPPER	6.0	UG/G		4.7		08-DEC-89
P419689	P4196890003	IRON	12600	UG/G		22.0		08-DEC-89
P419689	P4196890711	IRON	7530	UG/G		18.8		08-DEC-89
P419689	P4196890307D	IRON	10100	UG/G		17.8		08-DEC-89
P419689	P4196891115	IRON	6640	UG/G		18.2		08-DEC-89
P419689	P4196890307	IRON	7880	UG/G		15.8		08-DEC-89
P419689	P4196891518	IRON	9450	UG/G		19.3		08-DEC-89
P419689	P4196892326	IRON	10500	UG/G		23.5		08-DEC-89
P419689	P4196892223	IRON	12300	UG/G		17.1		08-DEC-89
P419689	P4196891822	IRON	5940	UG/G		19.6		08-DEC-89
P419689	P4196891518	LEAD	4.0	UG/G		1.1		08-DEC-89
P419689	P4196891822	LEAD	14.9	UG/G		6.0		08-DEC-89
P419689	P4196892326	LEAD	10.9	UG/G		6.6		08-DEC-89
P419689	P4196892223	LEAD	6.5	UG/G		5.3		08-DEC-89
P419689	P4196890003	LEAD	11.1	UG/G		4.7		08-DEC-89
P419689	P4196891115	LEAD	2.5	UG/G		1.2		08-DEC-89
P419689	P4196890711	LEAD	3.3	UG/G		1.3		08-DEC-89
P419689	P4196890307D	LEAD	4.3	UG/G		1.1		08-DEC-89
P419689	P4196890307	LEAD	2.9	UG/G		1.1		08-DEC-89
P419689	P4196891518	MAGNESIUM	1970	UG/G		966		08-DEC-89
P419689	P4196891822	MAGNESIUM	1120	UG/G		980		08-DEC-89
P419689	P4196892326	MAGNESIUM	1590	UG/G		1180		08-DEC-89
P419689	P4196892223	MAGNESIUM	1340	UG/G		855		08-DEC-89
P419689	P4196890003	MAGNESIUM	1170	UG/G		1100		08-DEC-89
P419689	P4196891115	MAGNESIUM	1110	UG/G		908		08-DEC-89
P419689	P4196890307D	MAGNESIUM	1310	UG/G		892		08-DEC-89
P419689	P4196890307	MAGNESIUM	972	UG/G		790		08-DEC-89
P419689	P4196890003	MANGANESE	219	UG/G		3.3		08-DEC-89
P419689	P4196891115	MANGANESE	69.3	UG/G		2.7		08-DEC-89
P419689	P4196890711	MANGANESE	104	UG/G		2.8		08-DEC-89
P419689	P4196890307D	MANGANESE	153	UG/G		2.7		08-DEC-89
P419689	P4196890307	MANGANESE	43.3	UG/G		2.4		08-DEC-89
P419689	P4196891518	MANGANESE	176	UG/G		2.9		08-DEC-89
P419689	P4196892223	MANGANESE	53.1	UG/G		2.6		08-DEC-89
P419689	P4196892326	MANGANESE	119	UG/G		3.5		08-DEC-89
P419689	P4196891822	MANGANESE	91.6	UG/G		2.9		08-DEC-89
P419689	P4196890003	NICKEL	9.6	UG/G		8.8		08-DEC-89
P419689	P4196891518	NICKEL	9.4	UG/G		7.7		08-DEC-89
P419689	P4196890307	NICKEL	8.1	UG/G		6.3		08-DEC-89
P419689	P4196890307D	NICKEL	12.2	UG/G		7.1		08-DEC-89

Location	Sample Number	Chemical	Result	Unit	Qualifier	Detection Limit	VA	Sample Date
P419689	P4196892223	POTASSIUM	915	UG/G		855		08-DEC-89
P419689	P4196891518	POTASSIUM	1230	UG/G		966		08-DEC-89
P419689	P4196892326	STRONTIUM	32.7	UG/G		23.5		08-DEC-89
P419689	P4196890307D	STRONTIUM	23.3	UG/G		17.8		08-DEC-89
P419689	P4196890307	STRONTIUM	18.3	UG/G		15.8		08-DEC-89
P419689	P4196890003	VANADIUM	41.6	UG/G		11.0		08-DEC-89
P419689	P4196891822	VANADIUM	14.8	UG/G		9.8		08-DEC-89
P419689	P4196891518	VANADIUM	22.9	UG/G		9.7		08-DEC-89
P419689	P4196891115	VANADIUM	17.4	UG/G		9.1		08-DEC-89
P419689	P4196890307	VANADIUM	23.6	UG/G		7.9		08-DEC-89
P419689	P4196890711	VANADIUM	23.7	UG/G		9.4		08-DEC-89
P419689	P4196890307D	VANADIUM	35.0	UG/G		8.9		08-DEC-89
P419689	P4196892223	VANADIUM	25.6	UG/G		8.6		08-DEC-89
P419689	P4196892326	VANADIUM	23.5	UG/G		11.8		08-DEC-89
P419689	P4196892223	ZINC	30.0	UG/G		3.4		08-DEC-89
P419689	P4196892326	ZINC	55.3	UG/G		4.7		08-DEC-89
P419689	P4196890003	ZINC	19.1	UG/G		4.4		08-DEC-89
P419689	P4196890307	ZINC	6.7	UG/G		3.2		08-DEC-89
P419689	P4196890711	ZINC	8.3	UG/G		3.8		08-DEC-89
P419689	P4196891518	ZINC	20.9	UG/G		3.9		08-DEC-89
P419689	P4196891822	ZINC	20.7	UG/G		3.9		08-DEC-89
P419689	P4196891115	ZINC	7.2	UG/G		3.6		08-DEC-89
P419689	P4196890307D	ZINC	15.1	UG/G		3.6		08-DEC-89

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 17	GROUND ELEVATION (FT)	5981 96	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH	748947	AREA 903 PAD	CASING DIAMETER (IN)	2 ID	GEOLOGIST	TSD/DCB	10-87
EAST	2085289	LOCATOR NUMBER M8	BOREHOLE DIAMETER (IN)	7 5	DATE DRILLED	06/15/87	

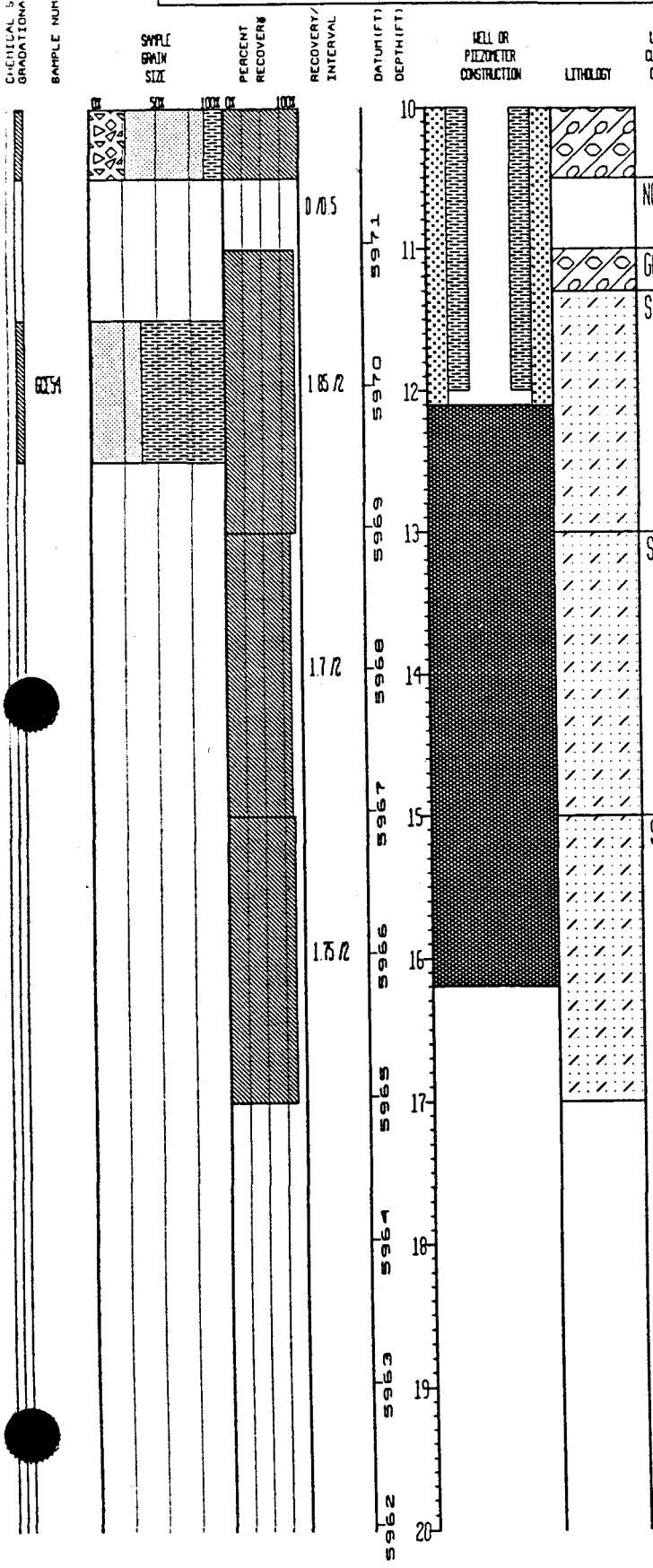
REMARKS Hollow Stem Auger



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC	GRAVEL - light gray (N7) and grayish orange pink (10R 8/2), angular to sub-rounded, low to high sphericity, poorly graded, some clay, grayish brown (5YR 3/2), trace of roots
NO SAMPLE	
GC	GRAVEL - grayish pink (5R 8/2) to light brownish gray (5YR 6/1), angular to sub-angular, sphericity is low to high, well graded, some clay, silt and sand
NO SAMPLE	
GP	SANDY GRAVEL - light gray (N7), angular to sub-rounded, low to high sphericity, moderately graded, some calcareous mineralization
GC	Same as above with some clay occurring from approximately 8.4 ft to 9.0 ft.
GC	Same as above including clay fraction.

GDI13

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 17	GROUND ELEVATION (FT) 5981.96	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH: 748947	AREA 903 PAD	CASING DIAMETER (IN) 2 ID	GEOLOGIST TSD/DCB	10-87
EAST: 2085289	LOCATOR NUMBER M8	BOREHOLE DIAMETER (IN) 7.5	DATE DRILLED 06/15/87	
REMARKS: Hollow Stem Auger				



NO SAMPLE:

GC: Same as above.

SILTY SANDSTONE: Top of Bedrock
Very weathered, fine to very fine, white (N9) and dark yellowish orange (10YR 6/6), some calcareous mineralization and black (carbonaceous?) mineralization, some horizontal bedding 3 - <1 mm thick.

SILTY SANDSTONE: Same as above.

SILTY SANDSTONE: Same as above with decreasing amounts of staining and calcareous mineralization with depth. NOTE: Interval blocks from 15' to 17' appear to be reversed based on color gradation between 15' - 17' int. and 13' to 15' interval.

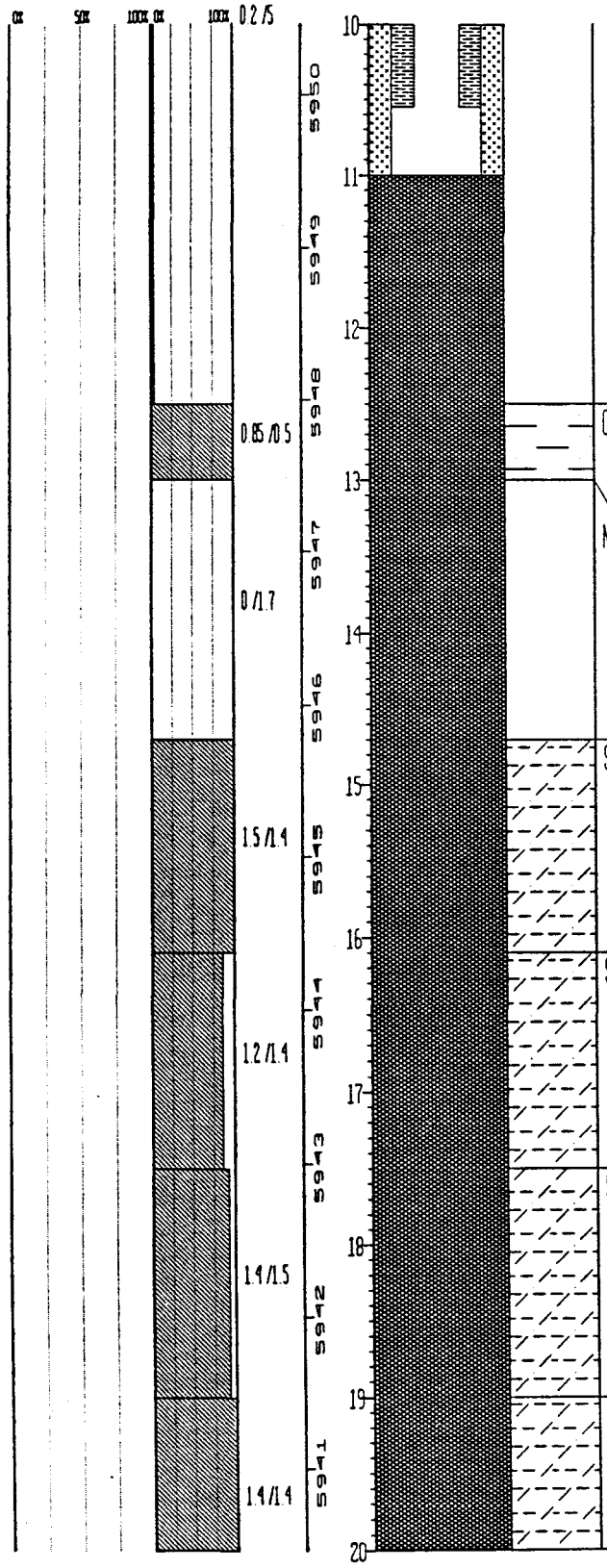
NOTE: No water encountered while drilling.

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 22	GROUND ELEVATION (FT)	5960 47	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH	751112	AREA SOLAR POND	CASING DIAMETER (IN)	2 10	GEOLOGIST	DAT	20-86
EAST	2084358	LOCATOR NUMBER L11	BOREHOLE DIAMETER (IN)	7 25	DATE DRILLED	09/04/86	
REMARKS	Hollow Stem Auger						

CHEMICAL DEPTH / GRADATIONAL DEPTH	SAMPLE NUMB	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	17/2	5960 5959	0 1 2			CH	Gravelly Sandy Clay - grayish orange (10YR 7/4), mod. - high plast., sand is VFG -FG, max gravel size = 7 cm, some silt, some iron staining as mottles, some calc material, some roots
				0/2	5958 5957	3 4			NO SAMPLE	No Sample - a sample block is in the interval with only v coarse gravel, questionable representation of interval
				0.5/2.5	5956 5955	5 6			GC	Sandy Clayey Gravel - matrix color is grayish orange (10YR 7/4) grading to moderate yellowish brown (10YR 5/4), angular to sub-angular, mod to poorly graded, max size = 6 cm., sand is FG to MG, some calc. material.
				0/1	5954 5953	7 8			NO SAMPLE	
				0.2/5	5952 5951	9 10			CONCRETE	Concrete

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 22	GROUND ELEVATION (FT)	5960 97	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH	751112	AREA SOLAR POND	CASING DIAMETER (IN)	2 10	GEOLOGIST	DAT	20-86
EAST	2084358	LOCATOR NUMBER L11	BOREHOLE DIAMETER (IN)	7 25	DATE DRILLED	09/04/86	
REMARKS	Hollow Stem Auger						

CHEMICAL DEPTH / GRADATIONAL DEPTH | SAMPLE NUMB | SAMPLE GRAIN SIZE | PERCENT RECOVERY | RECOVERY/INTERVAL | DATUM (FT) | DEPTH (FT) | WELL OR PIEZOMETER CONSTRUCTION | LITHOLOGY | UNIFIED SOILS CLASSIFICATION OR ROCK TYPE | DESCRIPTION



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYEY SANDSTONE	Top of Bedrock Dark yellowish orange, sub-angular to sub-rounded, poorly graded, sand is VFG - FG, abundant iron staining as mottles
NO SAMPLE	
SILTY CLAYSTONE	Yellowish gray (5Y 8/1) at top grading to pale yellowish brown (10YR 6/2), apparent massive bedding, highly weathered, mod - poorly friable, abundant carb. material at base of interval (trace of carb. material at top), some iron staining as mottles, top of interval shows sharp contact with sand (FG - MG), trace of sand at top of interval
SILTY CLAYSTONE	Same as above (base of interval): fracture at approx. 80 degrees filled with calc. material
SILTY CLAYSTONE	Same as above: no apparent fractures.
SILTY CLAYSTONE	Same as above: light olive gray (5Y 6/1), some carb. material

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 22	GROUND ELEVATION (FT) 5960.47	PROJECT NUMBER 667.11	LOG OF BORING NUMBER	
NORTH 751112	AREA SOLAR POND	CASING DIAMETER (IN) 2 ID	GEOLOGIST DAT	20-86	
EAST 2084958	LOCATOR NUMBER L11	BOREHOLE DIAMETER (IN) 7.25	DATE DRILLED 09/04/86		
REMARKS Hollow Stem Auger					

CHEMICAL GRADATION	SAMPLE NU	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/ INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50%	100% 0% 100%	0/21	5940 5939 5938 5937 5936 5935 5934 5933 5932 5931	20 21 22 23 24 25 26 27 28 29 30				NO SAMPLE

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 15.5	GROUND ELEVATION (FT) 5961.23	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH 750818	AREA SOLAR POND	CASING DIAMETER (IN) 2 ID	GEOLOGIST DCB	28-86
EAST 2085241	LOCATOR NUMBER M10	BOREHOLE DIAMETER (IN) 7.25	DATE DRILLED 08/28/86	

REMARKS: Hollow Stem Auger

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0.7/1	5961	0			CL:	GRAVELLY CLAY, moderate brown (5 YR 3/4), low to moderate plasticity, some silt and sand, abundant caliche precipitate dispersed throughout clay
				0/1	5960	1			NO SAMPLE:	
				0.5/1	5959	2			GC:	Clayey Gravel, light gray (N7) matrix is moderate brown (5 YR 3/4), angular to sub-angular, poorly graded, max. size 5.5 cm, some sand and silt.
				1/1	5958	3			GC:	Same as above; interval contains abundant caliche disseminated in clay matrix and as a rind on the gravel.
				0.4/0.4	5957	4			GC:	Same as above.
				1.3/2.1	5956	5			GC:	Same as above.
				0/1.5	5954	7			NO SAMPLE:	
				0.1/0.1	5953	8			GP:	Two small cobbles, med. gray (N5), sub-rounded, max. size 7 cm.
				1.5/1.2	5952	9			CL:	Clay, light gray (N7), bedding not apparent, highly weathered, slightly friable, localized iron staining.
									CLAYSTONE:	Top of Bedrock Light gray (N7), bedding not apparent, highly weathered, slightly friable, localized iron staining, body of caliche at approx. 8.8 ft.
						10			CLAYSTONE:	Light gray (N7), bedding not apparent, highly weathered, slightly friable, localized iron staining, color varies to yellowish gray (5 Y 7/2).

STATE PLANE COORDINATE:	TOTAL DEPTH (FT): 15.5	GROUND ELEVATION (FT):	5961.23	PROJECT NUMBER:	667.11
NORTH: 750818	AREA: SOLAR POND	CASING DIAMETER (IN):	2 ID	GEOLOGIST:	DCB
EAST: 2085241	LOCATOR NUMBER: K10	BOREHOLE DIAMETER (IN):	7.25	DATE DRILLED:	08/28/86
REMARKS: Hollow Stem Auger					

LOG OF BORING NUMBER: 28-86

GRADATIONAL DEPTH	SAMPLE NUMBER	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				1.7/1.7	5951	10				
				1.5/1.5	5950	11			CLAYSTONE:	Same as above.
				1.5/1.5	5949	12			CLAYSTONE:	Same as above.
				0.8/0.8	5948	13			CLAYSTONE:	Same as above.
				0.7/0.7	5947	14			CLAYSTONE:	Same as above.
					5946	15			CLAYSTONE:	Same as above.
					5945	16				
					5944	17				
					5943	18				
					5942	19				
						20				

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 16.8	GROUND ELEVATION (FT)	5949.28	PROJECT NUMBER	667.11	LOG OF BORING NUMBER
NORTH	749963	AREA MOUND AREA	CASING DIAMETER (IN)	0	GEOLOGIST	DCB	33-86
EAST	2085000	LOCATOR NUMBER: M9	BOREHOLE DIAMETER (IN)	0	DATE DRILLED	09/10/86	
REMARKS	Hollow Stem Auger						

CHEMICAL SOIL DEPTH
GRADATIONAL DEPTH
SAMPLE NUMBER

SAMPLE GRAIN SIZE: 0% 50%
PERCENT RECOVERY: 100% 0% 100%
RECOVERY/INTERVAL: 1.7/1.7; 1.3/1.1; 1.4/2; 1.6/1.6; 1.7/1.7
DATUM (FT): 5949, 5948, 5947, 5946, 5945, 5944, 5943, 5942, 5941, 5940
DEPTH (FT): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
WELL OR PIEZOMETER CONSTRUCTION
LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
GC	Clayey Gravel, dominantly light gray (N7), clay matrix is light brownish gray (5YR 6/1), sub-angular to sub-rounded, poorly graded, max. size 6 cm, some roots, matrix is calcareous
CL	GRAVELLY CLAY, pale yellowish brown (10YR 6/2), low to moderate plasticity, some silt, calcareous, color grades to dusky brown (5YR 2/2), from approx. 4.6 ft. to approx. 6.0 ft
GC	Clayey Gravel, dominantly light gray (N7), clay matrix is pale brown (5YR 5/2), sub-angular, poorly graded, max. size approx. 2.5 cm.
CLAYSTONE	Top of Bedrock Moderate yellowish brown (10YR 5/4), moderately low plasticity, trace of silt
CLAYSTONE	Mottled yellowish brown (10YR 5/4) to light gray (N7), bedding not apparent, highly weathered, slightly friable, local iron staining

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 16.8	GROUND ELEVATION (FT) 5949.28	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH 749963	AREA MOUND AREA	CASING DIAMETER (IN) 0	GEOLOGIST DCB	33-86
EAST 2085000	LOCATOR NUMBER M9	BOREHOLE DIAMETER (IN) 0	DATE DRILLED 09/10/86	

REMARKS: Hollow Stem Auger

CHEMICAL SAMPLE DEPTH
GRADATIONAL SAMPLE DEPTH
SAMPLE NUMB

SAMPLE GRAIN SIZE: 0% 50% 100%

PERCENT RECOVERY: 0% 100%

RECOVERY/INTERVAL: 1.7/1.7; 1.9/1.9; 1.8/1.8; 1.3/1.3

DATUM (FT): 5939, 5938, 5937, 5936, 5935, 5934, 5933, 5932, 5931, 5930

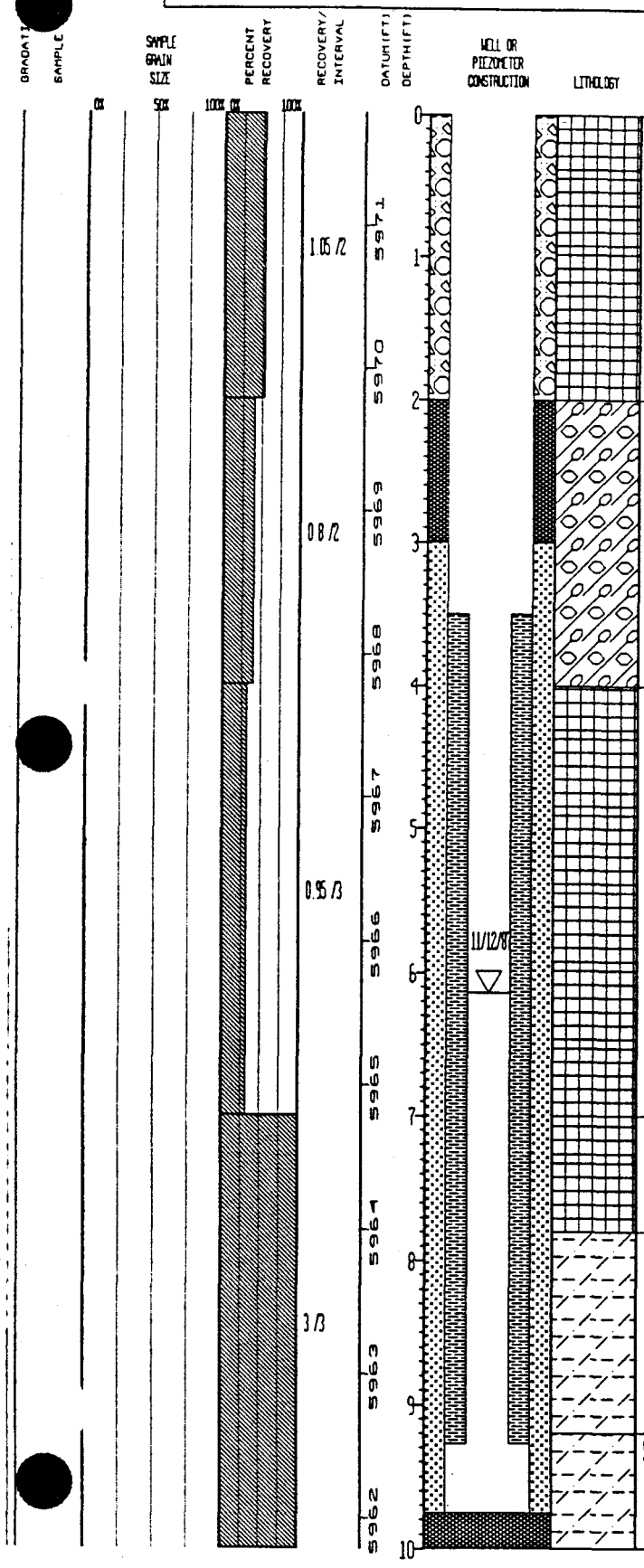
DEPTH (FT): 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

WELL OR PIEZOMETER CONSTRUCTION

LITHOLOGY

UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CLAYSTONE	Same as above
CLAYSTONE	As above with abundant iron staining from approx 11.8 ft. to 13.6 ft.
CLAYSTONE	As above with slickensides at approx 14.8 ft., attitude 45 degrees.
CLAYSTONE	As above with some carbonaceous mineralization at approx 16.6 ft.

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 15.2	GROUND ELEVATION (FT) 5971.79	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH 750357	AREA SOLAR POND	CASING DIAMETER (IN) 2 ID	GEOLOGIST TSD	38-87
EAST 2085125	LOCATOR NUMBER M10	BOREHOLE DIAMETER (IN) 7.5	DATE DRILLED 10/27/87	
REMARKS Hollow Stem Auger				



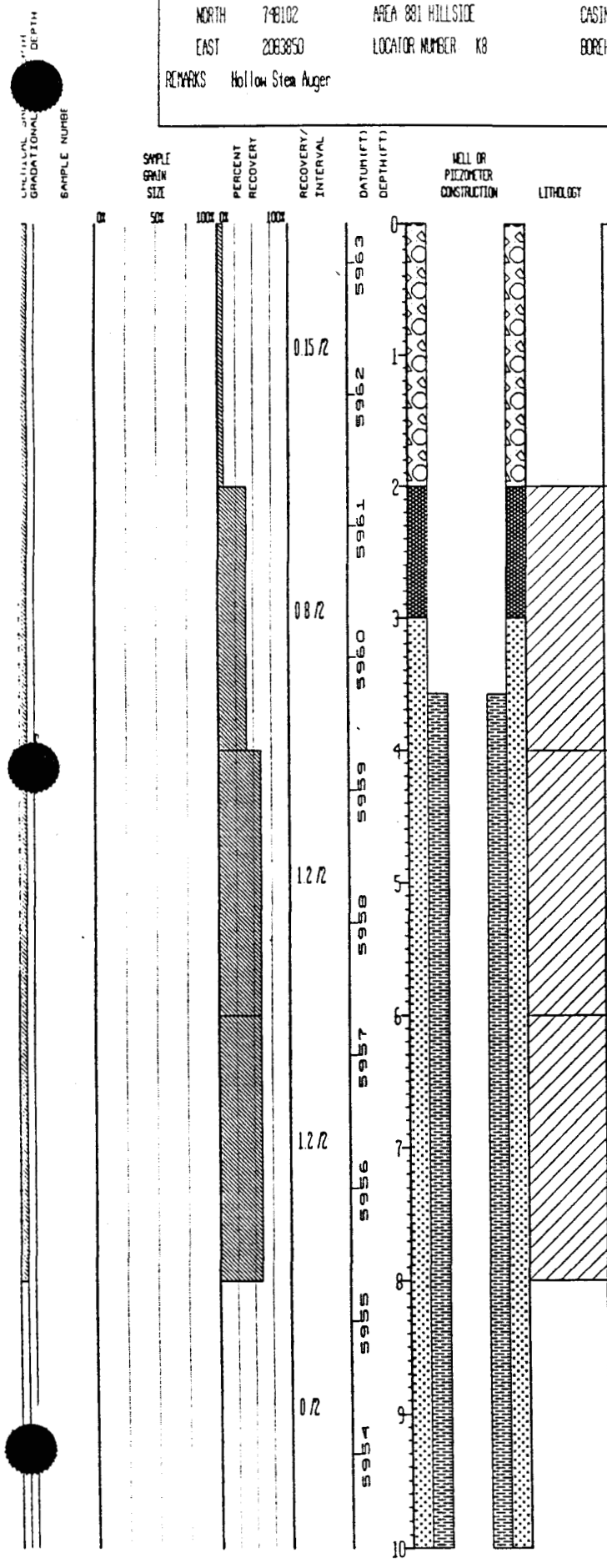
UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
CALICHE	Very pale orange (10YR 8/2), some sand and gravel (max. size approx. 6 cm.) trace clay and roots.
GC	GRAVEL - matrix is grayish brown (5YR 3/2), angular to sub-angular, mod. - well graded, max. size = 6 cm. some clay and sand, becoming calcareous at bottom of interval.
CALICHE	Very pale orange (10YR 8/2), some sand and gravel (max. size approx. 5 cm.) trace clay.
CALICHE	Same as above; less sand and gravel, (top 10" of interval). Next 1.75 ft. consists of caliche - white (N9), some clay in pockets.
SILTY CLAYSTONE	Top of Bedrock Lt. gray and caliche - white (N9), trace FG sand, med. plast. becoming more clay at bottom of interval.
SILTY CLAYSTONE	Lt. gray and caliche - white (N9), trace FG sand, med. plast. becoming more clay at bottom of interval.

STATE PLANE COORDINATE	TOTAL DEPTH (FT) 15.2	GROUND ELEVATION (FT) 5971.79	PROJECT NUMBER 667.11	LOG OF BORING NUMBER
NORTH 750357	AREA SOLAR POND	CASING DIAMETER (IN) 2 ID	GEOLOGIST TSD	38-87
EAST 2085125	LOCATOR NUMBER M10	BOREHOLE DIAMETER (IN) 7.5	DATE DRILLED 10/27/87	

REMARKS: Hollow Stem Auger

GRADATIONAL DEPTH	SAMPLE NUMB	SAMPLE GRAIN SIZE	PERCENT RECOVERY	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
		0% 50% 100%	0% 100%	2.4/2.4	5961	10–12			SILTY CLAYSTONE	Mottled lt. gray (N7) and dark yellowish orange (10YR 6/6) (becomes more dk. yellowish orange below top 8" of sample), mod. - high plasticity, calcareous in top 8" of sample becoming slightly calcareous, trace of VFG sand and carb. staining.
				1.6/1.6	5960	12–14			SILTY CLAYSTONE	Same as above (description below top 8").
				1.2/1.2	5959	14–15			SILTY CLAYSTONE	Same as above, no CaCO3 or carb. staining Note: No water encountered during drilling
					5958	15–16				
					5957	16–17				
					5956	17–18				
					5955	18–19				
					5954	19–20				
					5953					
					5952					

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 18	GROUND ELEVATION (FT)	5963 3	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH	748102	AREA 881 HILLSIDE	CASING DIAMETER (IN)	2 ID	GEOLOGIST	TSD	51-87
EAST	2083850	LOCATOR NUMBER K8	BOREHOLE DIAMETER (IN)	7 5	DATE DRILLED	10/21/87	
REMARKS	Hollow Stem Auger						



UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
Aspahlt	Asphalt
CL	SANDY GRAVELLY CLAY - grayish orange (10YR 7/4), mod plasticity, some calcareous material, max gravel size = 5 5 cm, trace of iron staining
CL	Same as above
CL	Same as above
NO SAMPLE	

STATE PLANE COORDINATE		TOTAL DEPTH (FT) 18	GROUND ELEVATION (FT)	5963 3	PROJECT NUMBER	667 11	LOG OF BORING NUMBER
NORTH	748102	AREA 881 HILLSIDE	CASING DIAMETER (IN)	2 ID	GEOLOGIST	TSD	51-87
EAST	2083850	LOCATOR NUMBER K8	BOREHOLE DIAMETER (IN)	7 5	DATE DRILLED	10/21/87	
REMARKS: Hollow Stem Auger							

CHEMICAL GRADATION	SAMPLE NUM	SAMPLE GRAIN SIZE (0% 50% 100%)	PERCENT RECOVERY (0% 100%)	RECOVERY/INTERVAL	DATUM (FT)	DEPTH (FT)	WELL OR PIEZOMETER CONSTRUCTION	LITHOLOGY	UNIFIED SOILS CLASSIFICATION OR ROCK TYPE	DESCRIPTION
				0 /2	5953	10			NO SAMPLE	
					5952	11	10/21/87			
				0 /0.5	5951	12			NO SAMPLE	
	BH628712CT			0.9 /1.5	5950	13	01/11/88		SILTY CLAYSTONE	Top of Bedrock Light brownish gray (5YR 6/1) to medium gray (N5), massive bedding? highly weathered, moderately friable, trace of iron staining
	BH628714BR			2.8 /2	5949	14	02/04/88		SILTY CLAYSTONE	Same as above
					5948	15				
				1.7 /2	5947	16			SILTY CLAYSTONE	Same as above with some organic material
					5946	17				
					5945	18				
					5944	19				
						20				

LOG OF BOREHOLE

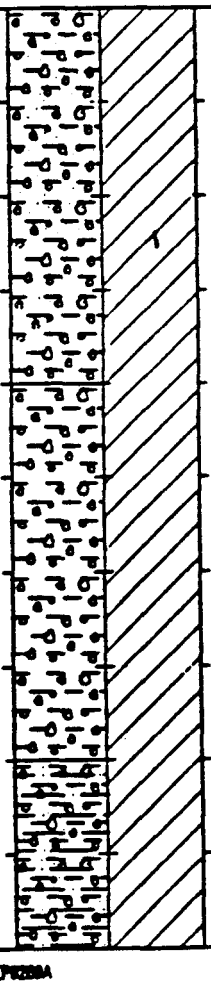
QA BY/DATE J.B. Burman 11-28-89
LOCATION Rocky Flats Plant; Solar Ponds Area
COORDINATES N37,212.89 E21,376.11 (RFP)
TOTAL DEPTH 10.0'

DRILLING COMPANY Boyles Brothers
DATE DRILLED June 6, 1989
DRILLING METHOD Hollow Stem Auger
LOGGED BY R.A. Chapuis
GEOLOGIST

BOREHOLE/WELL NO. P207489
GROUND SURFACE ELEVATION 5980.71'
WATER LEVEL ENCOUNTERED None
STATIC 5.20' (09/20/89)
DRILLER R. Sharp HELPER P. Mesa
DRILLING FLUID None
CHECKED BY J.B. Burman
SITE MANAGER

CEARP MANAGER

COMMENTS

DEPTH (FT)	GRAPHIC LOG	SAMPLE TYPE	LITHOLOGIC DESCRIPTION	SAMPLES COLLECTED OR OTHER TESTS PERFORMED
0 1 2 3 4 5			**ARTIFICIAL FILL** 0.0-2.0' SAMPLE. Recovered 2.0/2.0' = 100%. CLAYEY SAND AND GRAVEL: grayish orange (10 YR 7/4); lower 1.5' moderate brown (5 YR 4/4); (60%) fine to coarse-grained sand; poorly sorted; quartzose; subangular to subrounded; (25%) non to medium plastic fines; (15%) gravel; maximum size 5cm; poorly sorted; quartzose; weakly consolidated; soft; (sp-gp); damp. **ROCKY FLATS ALLUVIUM** 2.0-4.0' SAMPLE. Recovered 2.0/2.0' = 100%. GRAVELLY CLAY: moderate brown (5 YR 4/4); (50%) medium to highly plastic fines; (36%) gravel; subangular; quartzose; (15%) fine to coarse-grained sand; poorly sorted; subangular to subrounded; quartzose; weakly consolidated; soft to firm; (cl); dry.	HNU background = 0.0 OVA background = 0.0 All readings on cuttings, in breathing zone, on core, and in augers: 0.0; unless otherwise noted below. TRIP BLANK SAMPLE TB060789A 0.0-3.0' SAMPLE SEP02890003 0.0-2.0' SAMPLE (VOA's only) SEP02890002

SEP02890A

WELL NO. P207489

LOG OF BOREHOLE

DEPTH (FT)	GRAPHIC LOG	SAMPLE TYPE	LITHOLOGIC DESCRIPTION	SAMPLES COLLECTED OR OTHER TESTS PERFORMED
5			4.0-6.0' SAMPLE. Recovered 1.0/2.0' = 50%. SILTY CLAYEY SAND AND GRAVEL: moderate brown (5 YR 4/4); (35%) gravel; poorly sorted; subangular; quartzose; maximum size 5cm; (35%) fine to coarse-grained sand; poorly sorted; subangular to subrounded; quartzose; (30%) non to medium plastic fines; soft; crumbly; (sm-gc); dry.	5.20' 4.0-5.0' SAMPLE (VOA's only) SEP02890406
6			6.0-8.0' SAMPLE. Recovered 2.0/2.0' = 100%. 6.0-6.5': SILTY CLAYEY SAND AND GRAVEL: same as above.	3.0-6.5' SAMPLE SEP02890306
7			ARAPAHOE/LARAMIE FORMATION 6.5-8.0': CLAYSTONE: pale olive (10 Y 6/2); (100%) medium to highly plastic fines; soft; caliche zones to 2 cm; moldable; iron staining; damp.	6.5-10.0' SAMPLE SEP02890610
8			8.0-10.0' SAMPLE. Recovered 2.0/2.0' = 100%. CLAYSTONE: pale olive (10 Y 6/2); (95%) non to medium plastic fines; trace (5%) very fine-grained sand; subangular to subrounded; soft to firm; crumbly in part; caliche; iron stainings; sandier towards bottom; weakly consolidated; dry.	8.0-10.0' SAMPLE (VOA's only) SEP02890810
9			TOTAL DEPTH = 10.0'	
10				
11				
12				
13				

SEP02890

WELL COMPLETION INFORMATION

QA By/Date Janell Berman 10-8-89

Location Rocky Flats Plant: Solar Ponds Area

Well No. P207489

Coordinates N 37212.89 E 21376.11 (RFP)

Elevation: Ground Surface 5980.71'

Total Depth: Well 8.23'

Top of Casing 5982.64'

Borehole 10.0'

Formation of Completion Rocky Flats Alluvium

Casing Material Schedule 40 PVC

Casing Diameter 4 1/2" O.D.

Screen Material Schedule 40 10-slotted PVC

Surface Casing Diameter 8 5/8" O.D.

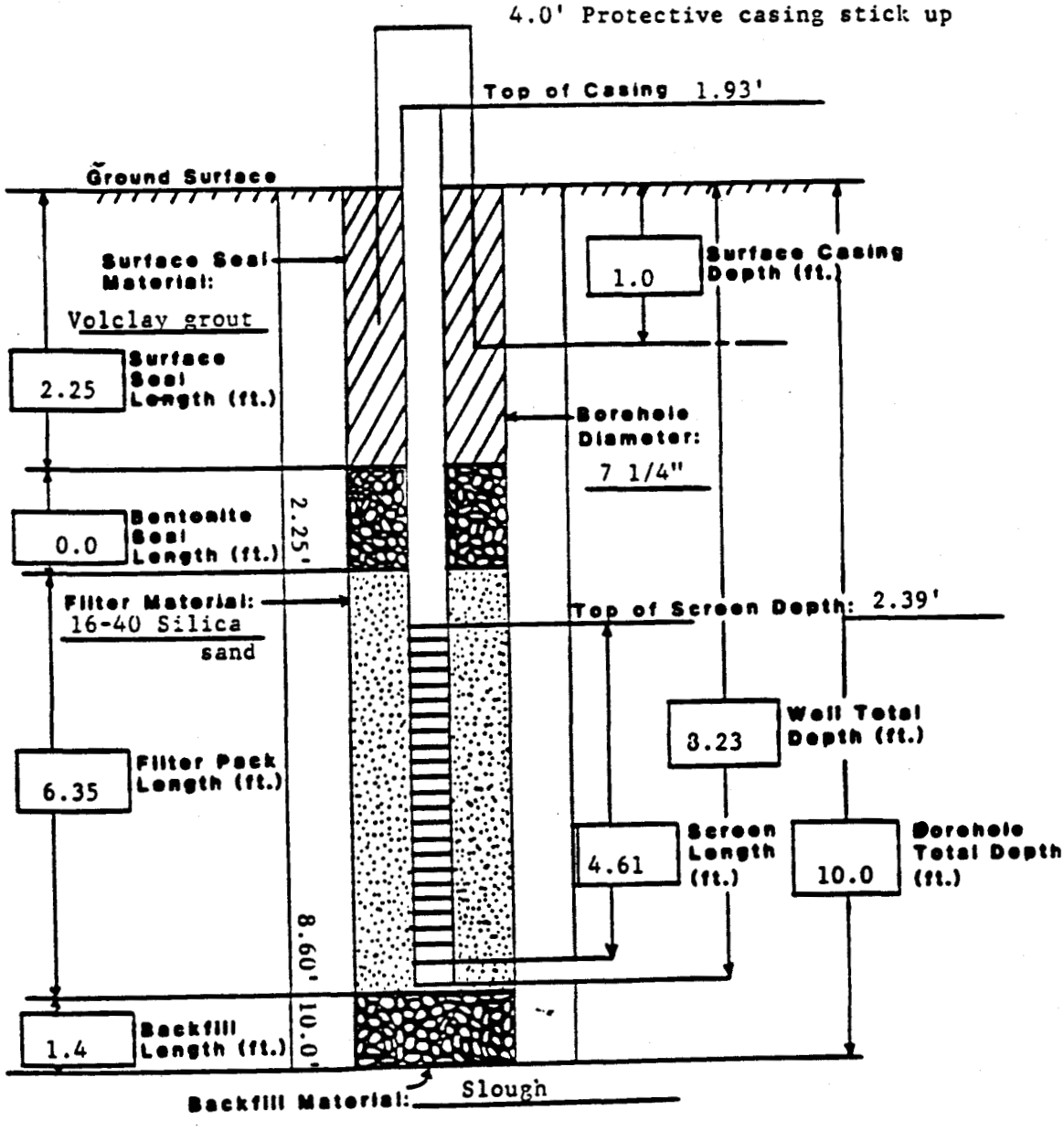
Date Installed 06/06/1989

Approved By Janell Berman
Site Manager

Installed By R.A. Chapuis
Geologist

CEARP Manager

Comments No centralizer used.



LOG OF BOREHOLE

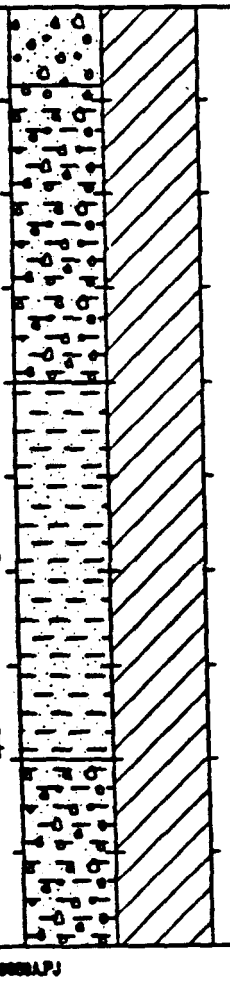
QA BY/DATE J.B. Burman 13-12-90
LOCATION Rocky Flats Plant; Original Process Waste Lines
COORDINATES N35,543.73 E19,401.98 (RFP)
TOTAL DEPTH 33.0'

DRILLING COMPANY Boyles Brothers
DATE DRILLED December 8, 1989
DRILLING METHOD Hollow Stem Auger
LOGGED BY S.P. Carpenter
GEOLOGIST

BOREHOLE/WELL NO. P419689
GROUND SURFACE ELEVATION 6022.4'
WATER LEVEL ENCOUNTERED 22.0'
STATIC 19.31' (01/18/90)
DRILLER K. Parker HELPER T. Merritt
DRILLING FLUID None
CHECKED BY J.B. Burman
SITE MANAGER

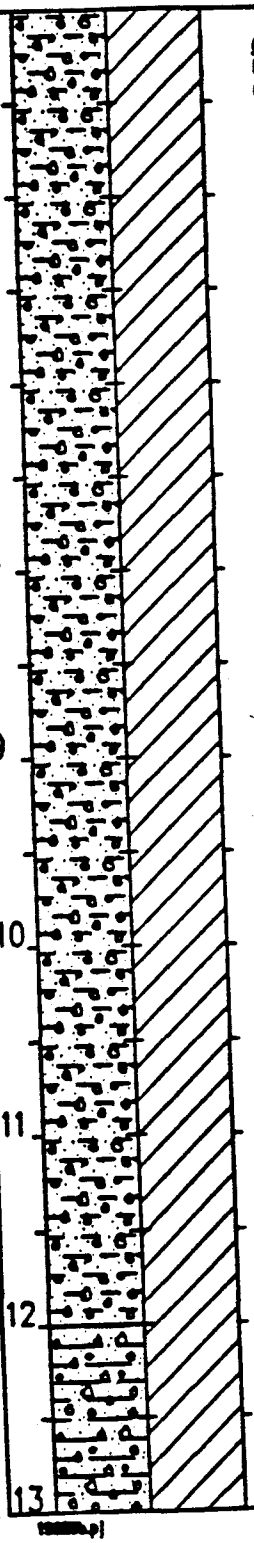
CEARP MANAGER

COMMENTS

DEPTH (FT)	GRAPHIC LOG	SAMPLE TYPE	LITHOLOGIC DESCRIPTION	SAMPLES COLLECTED OR OTHER TESTS PERFORMED
0 1 2 3 4 5			**ARTIFICIAL FILL** 0.0-2.0' SAMPLE. Recovered 2.0/2.0' = 100%. 0.0-0.4': GRAVELLY SAND: dark yellowish brown (10 YR 4/2), dusky yellowish brown (10 YR 2/2); nonstratified; fine- to very coarse-grained sand quartzose; 1 to 6 cm gravels; some clay; poor sorting; subangular; non plastic; medium dense; moist. **ROCKY FLATS ALLUVIUM** 0.4-2.0': GRAVELLY SANDY CLAY: moderate brown (5 YR 4/4), moderate reddish brown (5 YR 4/4); fine- to very coarse-grained quartzose sand; 1 to 4 cm gravels; poor sorting; subangular, low plasticity; stiff; moist. 2.0-4.0' SAMPLE. Recovered 1.4/2.0' = 70%. CLAYEY SAND AND CLAY: same as above; light brown (5 YR 5/6) moderate reddish brown (10 R 4/6). 4.0-5.5' SAMPLE. Recovered 1.5/1.5' = 100%. GRAVELLY CLAYEY SAND: grayish orange (10 YR 7/4), yellowish gray (5 Y 7/2), pale red (5 R 6/2); fine- to very coarse-grained quartzose sand; 1 to 5 cm gravels; some silt; poorly sorted; subangular; low to no plasticity; dense; dry to damp. Note: 5.5-6.0': Drilled with center bit. No sample taken.	HNu Background: 0.0 All HNu readings in augers, on core, and in breathing zone: 0.0. TRIP BLANK SAMPLE TB120889B 0.0-2.0' SAMPLE (VOAs only) P419689002 0.0-3.0' SAMPLE P4196890003 2.0-3.4' SAMPLE (VOAs only) P4196890204 3.0-6.8' SAMPLE P4196890307 P4196890307D 4.0-5.5' SAMPLE (VOAs only) P4196890406 P4196890406D

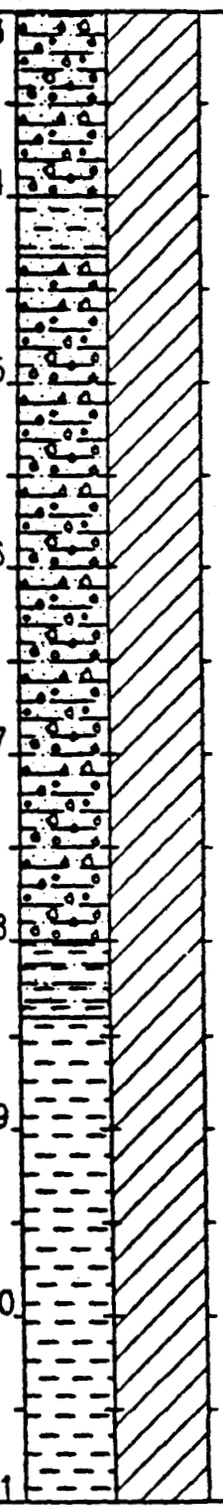
WELL NO. P419689

LOG OF BOREHOLE

DEPTH (FT)	GRAPHIC LOG	SAMPLE TYPE	LITHOLOGIC DESCRIPTION	SAMPLES COLLECTED OR OTHER TESTS PERFORMED
5			6.0-8.0' SAMPLE. Recovered 0.8/2.0' = 40%. GRAVELLY CLAYEY SAND: same as above; light brown (5 YR 5/6), dark yellowish orange (10 YR 6/6); 1 to 7 cm gravels. 8.0-10.0' SAMPLE. Recovered 1.1/2.0' = 55%. GRAVELLY CLAYEY SAND: same as above. 10.0-12.0' SAMPLE. Recovered 1.8/2.0' = 90%. GRAVELLY CLAYEY SAND: same as above; light brown (5 YR 5/6); greyish orange (10 YR 7/4); greyish orange pink (5 YR 7/2). 12.0-14.0' SAMPLE. Recovered 0.8/2.0' = 40%. GRAVELLY SILTY SAND: same as above; light brown (5 YR 5/6 to 5 YR 6/4); some clay; more silt.	6.0-6.8' SAMPLE (VOAs only) P4196890608 8.0-9.1' SAMPLE (VOAs only) P4196890810 8.0-11.0' SAMPLE P4196891012 10.0-11.8' SAMPLE (VOAs only) P4196891012 11.0-15.0' SAMPLE P4196891115 12.0-12.8 SAMPLE (VOAs only) P4196891214
6				
7				
8				
9				
10				
11				
12				
13				

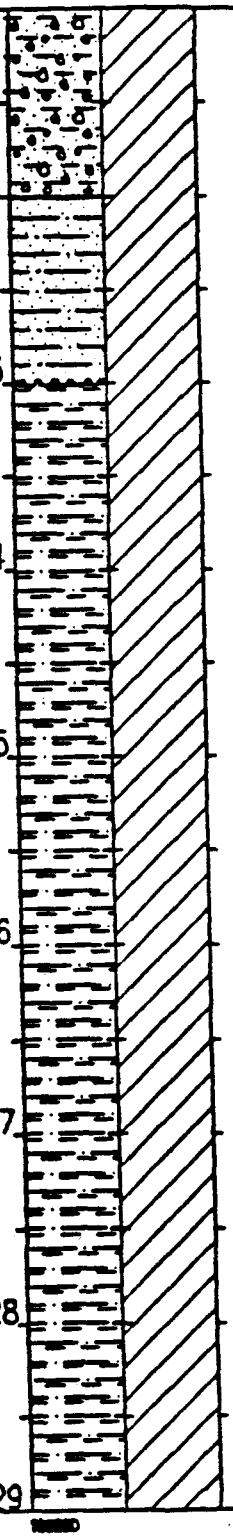
WELL NO. P419689

LOG OF BOREHOLE

DEPTH (FT)	GRAPHIC LOG	SAMPLE TYPE	LITHOLOGIC DESCRIPTION	SAMPLES COLLECTED OR OTHER TESTS PERFORMED
13 14 15 16 17 18 19 20 21			14.0-16.0' SAMPLE. Recovered 1.4/2.0' = 70%. 14.0-14.3': CLAYEY SAND: light brown (5 YR 5/6); nonstratified; fine- to coarse-grained quartzose sand; moderate sorting; rounded to subrounded; low plasticity; medium dense; moist. 14.3-15.4': GRAVELLY SILTY SAND: same as 12.0-12.8'; light brown (5 YR 5/6 to 5 YR 6/4), grayish red (10 R 4/2). 16.0-18.0' SAMPLE. Recovered 1.3/2.0' = 65%. GRAVELLY SILTY SAND: same as above. 18.0-20.0' SAMPLE. Recovered 2.0/2.0' = 100%. 18.0-18.4': SILTY SANDY CLAY: light brown (5 YR 5/6), pale red (10 R 6/2), yellowish gray (5 Y 7/2); nonstratified; mottled; fine- to medium-grained sand; trace gravel; claystone inclusions; medium to low plasticity; manganese staining; very stiff to stiff; damp. 18.4-20.0': CLAY: light olive gray (5 Y 6/1), yellowish gray (5 Y 7/2), stained light brown (5 YR 5/6), grayish red (10 R 4/2); nonstratified; trace fine-grained sand; trace silt; high to medium plasticity; reworked claystone; iron staining; trace manganese; trace gypsum; hard; damp to moist. 20.0-22.0' SAMPLE. Recovered 2.0/2.0' = 100%. 20.0-21.0': CLAY: same as above. 21.0-22.0': GRAVELLY SANDY CLAY: pale red (10 R 6/2), light brown (5 YR 5/6), dark yellowish orange (10 YR 6/6); nonstratified; fine- to very coarse-grained sand; 1 to 5 cm gravels; poor sorting; subround; quartzose; low to medium plasticity; very stiff; damp.	14.0-15.4' SAMPLE (VOAs only) P4196891416 15.0-18.4' SAMPLE P4196891518 16.0-17.3' SAMPLE (VOAs only) P4196891618 18.0-20.0' SAMPLE (VOAs only) P4196891820 18.4-22.0' SAMPLE P4196891822 20.0-22.0' SAMPLE (VOAs only) P4196892022 19.31'

WELL NO. P419689

LOG OF BOREHOLE

DEPTH (FT)	GRAPHIC LOG	SAMPLE TYPE	LITHOLOGIC DESCRIPTION	SAMPLES COLLECTED OR OTHER TESTS PERFORMED
21 22 23 24 25 26 27 28 29			**22.0-24.0' SAMPLE.** Recovered 2.9/2.0' = 100%. 22.0-23.0': SILTY SAND: light brown (5 YR 5/6), dark yellowish orange (10 YR 6/6); medium- to coarse-grained quartzose sand; trace very fine gravels; moderate sorting; rounded to subrounded; low to non plastic; wet. **ARAPAHOE/LARAMIE FORMATION** 23.0-24.0': SILTY CLAYSTONE: dusky yellow (5 Y 6/4), yellowish gray (5 Y 7/2), blocky to platy; nonstratified, low to medium plasticity; weathered; scattered iron staining; firm; damp. **24.0-26.0' SAMPLE.** Recovered 0.4/2.0' = 20%. SILTY CLAYSTONE: same as above; yellowish gray (5 Y 7/2). **26.0-28.0' SAMPLE.** Recovered 2.0/2.0' = 100%. SILTY CLAYSTONE: same as above; light olive gray (5 Y 5/2), yellowish gray (5 Y 7/2); medium plasticity; medium to hard. **28.0-30.0' SAMPLE.** Recovered 2.0/2.0' = 100%. 28.0-29.4': SILTY CLAYSTONE: same as above; light olive gray (5 Y 5/2), dusky yellow (5 Y 6/4); decreasing silt with depth. 29.4-30.0': CLAYSTONE: olive gray (5 Y 4/1); blocky; nonstratified; trace to some silt; medium to high plasticity; weathered; iron and manganese staining; hard.	**22.0-23.0' SAMPLE** P4196892223 ▽ 22.0' **22.0-24.0' SAMPLE** (VOAs only) P4196892224 **23.0-24.4' SAMPLE** P4196892326 **24.0-24.4' SAMPLE** (VOAs only) P4196892426 **FIELD BLANK SAMPLE** P4196890026FB

WELL NO. P419689

LOG OF BOREHOLE

DEPTH (FT)	GRAPHIC LOG	SAMPLE TYPE	LITHOLOGIC DESCRIPTION	SAMPLES COLLECTED OR OTHER TESTS PERFORMED
29			**30.0-32.0' SAMPLE.** Recovered 2.0/2.0 = 100%. CLAYSTONE: same as above; medium grey (N 5/0), banded dusky yellow (5 Y 6/4); some silt to silty; decreasing silt with depth; scattered iron staining.	
30			**32.0-33.0' SAMPLE.** Recovered 1.0/1.0' = 100%. CLAYSTONE: same as above; light olive grey (5 Y 6/1 to 5 Y 5/2); some silt to silty; increasing silt with depth.	
31				
			TOTAL DEPTH 33.0'	
32				
33				
34				
35				
36				
37				

WELL COMPLETION INFORMATION

QA By/Date J.B. Burman 12-29-89

Location Rocky Flats Plant: Original Process Waste Lines (RFP) Well No. P419689

Coordinates N 35543.73 E 19401.98 Elevation: Ground Surface 6022.4'

Total Depth: Well 24.77' Top of Casing 6023.42'

Borehole 33.0'

Formation of Completion Rocky Flats Alluvium

Casing Material Schedule 40 PVC Casing Diameter 2 3/8" O.D.

Screen Material Schedule 40 10-slotted PVC Surface Casing Diameter 5 5/8" O.D.

Date Installed 12/08/1989 Approved By J.B. Burman

Installed By S.P. Carpenter Site Manager

Geologist

CEARP Manager

Comments Set stainless steel centralizer from 24.77' to 23.55' below ground surface

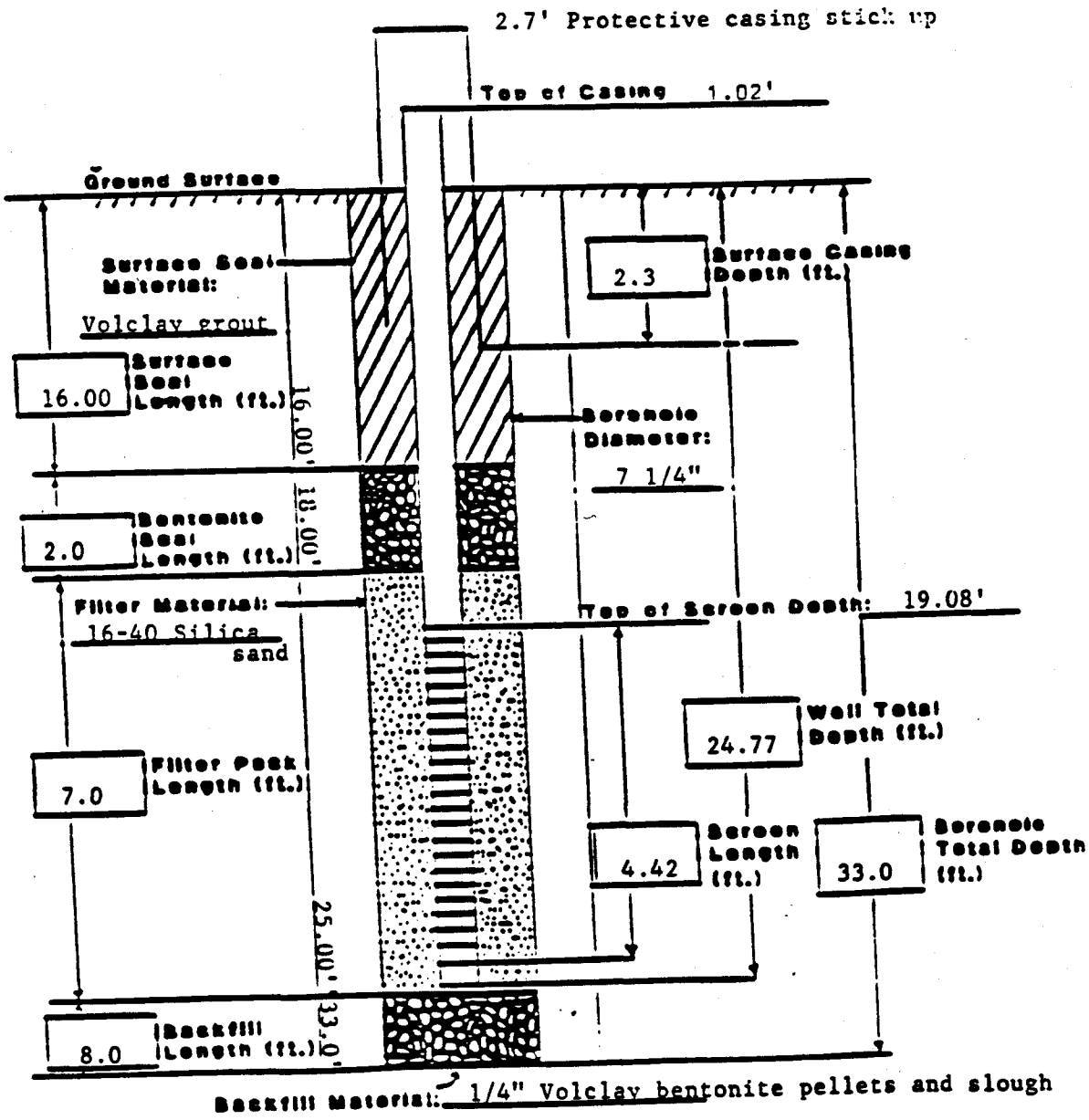


Table C-1 IHSS 129 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg)			
Methylene chloride	FOT1	2/2	4.0J, 14B
	FOT2	2/2	65J, 430
	FOT3	1/1	1100
	FOT4	2/2	57J, 60J
Acetone	FOT1	1/2	18
	FOT4	1/1	370J
1,1,1-Trichloroethane	FOT2	1/1	340
Benzene	FOT1	2/2	3.0J, 5.0J
	FOT3	1/1	570
	FOT4	2/2	78J, 180J
Toluene	FOT1	2/2	10, 11
	FOT2	2/2	71J, 180J
	FOT3	1/1	1700
	FOT4	2/2	170J, 320
Ethylbenzene	FOT1	2/2	33, 40
	FOT2	2/2	140J, 200J
	FOT3	1/1	1600
	FOT4	2/2	360, 490
Total Xylenes	FOT1	2/2	35, 42
	FOT2	2/2	330, 1500
	FOT3	1/1	4700
	FOT4	2/2	2000, 3000
2-Methylnaphthalene	FOT1	1/1	7800J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram

RFL/TBL0215 4/9/92 4:37 pm sma

Table C-1 IHSS 129 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg) contd.			
Pyrene	FOT1	1/1	7100J
Benzo(a)anthracene	FOT1	1/1	3600J
Chrysene	FOT1	1/1	8100J
Metals and Other Inorganics (mg/kg)			
Aluminum	FOT1	1/1	8100
	FOT2	1/1	3900
	FOT3	1/1	9300
	FOT4	1/1	3500
Arsenic	FOT3	1/1	2.4
Beryllium	FOT1	1/1	1.3
Calcium	FOT1	1/1	4900
	FOT2	1/1	3200
	FOT3	1/1	1700
Cadmium	FOT1	1/1	3.6
	FOT2	1/1	1.5
	FOT3	1/1	3.4
Chromium	FOT1	1/1	8.4
	FOT2	1/1	6.8
	FOT4	1/1	4.3

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram

RFL/TBL0215 4/7/92 8:31 am sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Copper	FOT1	1/1	12
	FOT2	1/1	6.4
	FOT3	1/1	9.6
Iron	FOT1	1/1	12000
	FOT2	1/1	6200
	FOT3	1/1	9100
	FOT4	1/1	3700
Lead	FOT1	1/1	14
	FOT2	1/1	4.8
	FOT3	1/1	38
	FOT4	1/1	570
Mercury	FOT1	1/1	0.47
	FOT2	1/1	0.45
	FOT3	1/1	0.28
	FOT4	1/1	0.18
Magnesium	FOT1	1/1	1800
	FOT3	1/1	1300
Manganese	FOT1	1/1	110
	FOT2	1/1	67
	FOT3	1/1	88
	FOT4	1/1	42
Nickel	FOT1	1/1	19
	FOT3	1/1	8.7
Potassium	FOT1	1/1	1100

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram

RFL/TBL0215 4/9/92 4:38 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Vanadium	FOT1	1/1	23
	FOT2	1/1	16
	FOT3	1/1	22
Zinc	FOT1	1/1	30
	FOT2	1/1	13
	FOT3	1/1	20
	FOT4	1/1	16

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram

RFL/TBL0215 4/9/92 4:38 pm sma

Table C-2 IHSS 170 Downgradient Groundwater Sampling Summary (1990 Groundwater Monitoring Report).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (mg/l)			
Acetone	1086	2/6	11.0 - 42.0
Methylene chloride	1086	1/6	22.0
Inorganics (mg/l)			
Nitrate/Nitrite	1086	4/8	3.60 - 4.30

mg/l - milligram per liter

RFL/TBL0233 4/7/92 8:37 am sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg)			
Methylene chloride	CS001	1/1	9.0B
	CS002	1/1	7.0B
	CS003	1/1	8.0B
	CS004	1/1	20B
	CS005	1/1	12B
	CS006	1/1	26B
	CS007	1/1	22B
	CS008	1/1	5.0JB
	CS009	1/1	7.0B
	CS010	1/1	7.0B
	CS011	1/1	40B
	CS012	1/1	32B
	CS013	2/2	36B, 17B
	CS014	1/1	8.0B
	CS015	1/1	31B
	CS016	1/1	4.0JB
	CS017	1/1	3.0JB
Acetone	CS001	1/1	5.0J
	CS005	1/1	32
	CS009	1/1	7.0J
	CS011	1/1	7.0J
	CS012	1/1	4.0J
	CS013	1/2	10J
	CS017	1/1	12
1,1,1-Trichloroethane	CS005	1/1	160
Tetrachloroethene	CS002	1/1	2.0J
	CS004	1/1	94

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/9/92 4:39 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg) contd.			
Toluene	CS001	1/1	2.0J
	CS002	1/1	2.0J
	CS003	1/1	2.0J
	CS005	1/1	4.0J
	CS006	1/1	1.0J
	CS007	1/1	1.0J
	CS009	1/1	2.0J
	CS010	1/1	1.0J
	CS011	1/1	1.0J
	CS013	1/1	3.0J, 5.0J
	CS014	1/1	2.0J
	CS015	1/1	1.0J
Phenanthrene	CS003	1/1	90J
	CS007	1/1	76J
Anthracene	CS004	1/1	180J
Fluoranthene	CS001	1/1	130J
	CS003	1/1	130J
	CS007	1/1	130J
	CS016	1/1	110J
Pyrene	CS001	1/1	97J
	CS003	1/1	110J
	CS007	1/1	86J
Benzo(a)anthracene	CS003	1/1	110J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg) contd.			
Bis(2-ethylhexyl) Phthalate	CS002	1/1	1400J
	CS004	1/1	1700
	CS005	1/1	1700J
	CS006	1/1	1700J
	CS007	1/1	430
	CS008	1/1	430
	CS009	1/1	630
	CS010	1/1	420
	CS011	1/1	1100J
	CS012	1/1	410
	CS013	1/1	590
	CS014	1/1	530
	CS015	1/1	380
	CS016	1/1	96J
Chrysene	CS001	1/1	98J
	CS003	1/1	130J
Phenol	CS004	1/1	320J
Benzoic acid	CS004	1/1	400J
4-Chloro-3-methylphenol	CS004	1/1	740
	CS013	1/1	720
Ethylbenzene	CS013 dup	1/1	1.0J
N-Nitrosodiphenylamine	CS017	1/1	490J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg) contd.			
Di-n-butyl Phthalate	CS016	1/1	590B
	CS017	1/1	810JB
Total Xylenes	CS001	1/1	2.0J
	CS003	1/1	2.0J
	CS005	1/1	3.0J
	CS009	1/1	1.0J
	CS010	1/1	2.0J
	CS014	1/1	2.0J
Metals and Other Inorganics (mg/kg)			
Aluminum	CS001	1/1	7900
	CS002	1/1	8600
	CS003	1/1	6900
	CS004	1/1	6200
	CS005	1/1	7100
	CS006	1/1	5200
	CS007	1/1	8400
	CS008	1/1	7900
	CS009	1/1	10000
	CS010	1/1	9700
	CS011	1/1	5500
	CS012	1/1	8200
	CS013	1/1	7800
	CS014	1/1	8300
	CS015	1/1	11000
	CS016	2/2	10000, 11000
	CS017	1/1	12000

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Arsenic	CS001	1/1	3.4
	CS002	1/1	3.7
	CS003	1/1	2.3
	CS004	1/1	2.9
	CS005	1/1	3.3
	CS006	1/1	2.5
	CS007	1/1	3.6
	CS009	1/1	3.8
	CS010	1/1	4.4
	CS011	1/1	3.3
	CS012	1/1	3.4
	CS013	1/1	3.4
	CS014	1/1	4.0
	CS015	1/1	3.3
	CS016	2/2	4.9, 4.9
	CS017	1/1	2.9
Barium	CS001	1/1	77
	CS002	1/1	82
	CS003	1/1	67
	CS004	1/1	67
	CS005	1/1	81
	CS006	1/1	60
	CS007	1/1	75
	CS008	1/1	82
	CS009	1/1	93
	CS010	1/1	84
	CS011	1/1	62
	CS012	1/1	74
	CS013	1/1	77
	CS014	1/1	75

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Barium - contd.	CS015	1/1	87
	CS016	2/2	83, 76
	CS017	1/1	100
Beryllium	CS005	1/1	14
	CS009	1/1	13
	CS013	1/1	1.3
Cadmium	CS001	1/1	2.9
	CS002	1/1	2.2
	CS003	1/1	3.3
	CS004	1/1	1.3
	CS005	1/1	2.4
	CS006	1/1	1.6
	CS007	1/1	3.5
	CS008	1/1	1.5
	CS009	1/1	1.3
	CS010	1/1	3.6
	CS012	1/1	27
	CS013	1/1	1.3
	CS014	1/1	2.3
	CS015	1/1	3.0
	CS016	2/2	2.9, 2.2
	CS017	1/1	2.9
Calcium	CS001	1/1	1900
	CS002	1/1	2100
	CS003	1/1	1200
	CS004	1/1	1400
	CS005	1/1	1600
	CS006	1/1	1500

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Calcium - contd.	CS007	1/1	1800
	CS008	1/1	1700
	CS009	1/1	2200
	CS010	1/1	2000
	CS011	1/1	1800
	CS012	1/1	2000
	CS013	1/1	1500
	CS014	1/1	1900
	CS015	1/1	2200
	CS016	2/2	2400, 2300
	CS017	1/1	5900
Chromium	CS001	1/1	4.0
	CS002	1/1	10
	CS003	1/1	2.5
	CS004	1/1	6.5
	CS005	1/1	13
	CS006	1/1	4.1
	CS007	1/1	7.4
	CS008	1/1	7.8
	CS009	1/1	9.8
	CS010	1/1	5.0
	CS011	1/1	6.0
	CS012	1/1	10
	CS013	1/1	8.0
	CS014	1/1	9.0
	CS015	1/1	12
	CS016	2/2	12, 12
	CS017	1/1	13

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Copper	CS002	1/1	8.1
	CS003	1/1	5.3
	CS004	1/1	9.8
	CS005	1/1	10.3
	CS006	1/1	8.2
	CS007	1/1	9.0
	CS008	1/1	11
	CS009	1/1	8.4
	CS011	1/1	13
	CS012	1/1	14
	CS013	1/1	12
	CS014	1/1	8.2
	CS015	1/1	13
	CS016	2/2	12, 11
	CS017	1/1	23
Cobalt	CS016	2/2	10, 10
Iron	CS001	1/1	10000
	CS002	1/1	11000
	CS003	1/1	9400
	CS004	1/1	7500
	CS005	1/1	7700
	CS006	1/1	8400
	CS007	1/1	10000
	CS008	1/1	11000
	CS009	1/1	13000
	CS010	1/1	12000
	CS011	1/1	8700
	CS012	1/1	11000
	CS013	1/1	9400

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Iron - contd.	CS014	1/1	11000
	CS015	1/1	15000
	CS016	2/2	13000, 14000
	CS017	1/1	21000
Lead	CS001	1/1	24
	CS002	1/1	19
	CS003	1/1	25
	CS004	1/1	19
	CS005	1/1	16
	CS006	1/1	29
	CS007	1/1	25
	CS008	1/1	21
	CS009	1/1	17
	CS010	1/1	19
	CS011	1/1	26
	CS012	1/1	22
	CS013	1/1	20
	CS014	1/1	19
	CS015	1/1	21
	CS016	2/2	20, 19
	CS017	1/1	17
Magnesium	CS001	1/1	1400
	CS002	1/1	1500
	CS003	1/1	1400
	CS004	1/1	1600
	CS005	1/1	1500
	CS006	1/1	1300
	CS007	1/1	1600
	CS008	1/1	1600

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Magnesium - contd.	CS009	1/1	1600
	CS010	1/1	1600
	CS011	1/1	1600
	CS012	1/1	1700
	CS013	1/1	1500
	CS014	1/1	1600
	CS015	1/1	2000
	CS016	2/2	1600, 1800
	CS017	1/1	4700
Manganese	CS001	1/1	210
	CS002	1/1	180
	CS003	1/1	150
	CS004	1/1	150
	CS005	1/1	240
	CS006	1/1	190
	CS007	1/1	200
	CS008	1/1	230
	CS009	1/1	230
	CS010	1/1	180
	CS011	1/1	190
	CS012	1/1	210
	CS013	1/1	210
	CS014	1/1	190
	CS015	1/1	220
	CS016	2/2	200, 190
	CS017	1/1	470

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Nickel	CS005	1/1	10
	CS010	1/1	9.9
	CS015	1/1	9.8
	CS016	2/2	37, 33
	CS017	1/1	43
Nitrate/Nitrite	CS001	1/1	1.1
	CS002	1/1	4.1
	CS003	1/1	4.1
	CS004	1/1	4.1
	CS005	1/1	2.4
	CS006	1/1	2.0
	CS007	1/1	2.1
	CS008	1/1	2.3
	CS009	1/1	2.2
	CS010	1/1	4.1
	CS011	1/1	4.1
	CS012	1/1	1.6
	CS013	1/1	4.1
	CS014	1/1	2.1
	CS015	1/1	1.2
	CS016	1/1	1.9
	CS017	1/1	4.6
Potassium	CS001	1/1	1500
	CS002	1/1	1500
	CS003	1/1	1600
	CS004	1/1	1600
	CS005	1/1	1700
	CS006	1/1	1300
	CS007	1/1	1700

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Potassium - contd.	CS008	1/1	1700
	CS009	1/1	1900
	CS010	1/1	1700
	CS011	1/1	1500
	CS012	1/1	1600
	CS013	1/1	1700
	CS014	1/1	1700
	CS015	1/1	2000
	CS016	2/2	1600, 1600
	CS017	1/1	2900
Sodium	CS001	1/1	260
	CS002	1/1	830
	CS003	1/1	920
	CS004	1/1	590
	CS005	1/1	690
	CS006	1/1	480
	CS007	1/1	560
	CS008	1/1	480
	CS009	1/1	470
	CS010	1/1	380
	CS011	1/1	320
	CS012	1/1	540
	CS013	1/1	300
	CS014	1/1	400
	CS015	1/1	250
	CS016	2/2	410, 1400
	CS017	1/1	1300

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Vanadium	CS001	1/1	21
	CS002	1/1	41
	CS003	1/1	20
	CS004	1/1	21
	CS005	1/1	2100
	CS006	1/1	17
	CS007	1/1	24
	CS008	1/1	25
	CS009	1/1	2600
	CS010	1/1	30
	CS011	1/1	15
	CS012	1/1	27
	CS013	1/1	140
	CS014	1/1	24
	CS015	1/1	29
	CS016	2/2	32, 31
	CS017	1/1	40
Zinc	CS001	1/1	36
	CS002	1/1	33
	CS003	1/1	35
	CS004	1/1	52
	CS005	1/1	43
	CS006	1/1	43
	CS007	1/1	38
	CS008	1/1	36
	CS009	1/1	28
	CS010	1/1	36
	CS011	1/1	71
	CS012	1/1	38
	CS013	1/1	38

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) contd.			
Zinc - contd.	CS014	1/1	30
	CS015	1/1	39
	CS016	2/2	110, 110
	CS017	1/1	73
Radionuclides (pCi/g)			
Uranium 233, 234	CS001	1/1	0.65 ± 0.10
	CS002	1/1	0.50 ± 0.10
	CS003	1/1	0.70 ± 0.10
	CS004	1/1	0.67 ± 0.13
	C2005	1/1	0.65 ± 0.11
	CS006	1/1	0.90 ± 0.12
	CS007	1/1	0.59 ± 0.09
	CS008	1/1	0.63 ± 0.09
	CS009	1/1	0.72 ± 0.11
	CS010	1/1	0.48 ± 0.08
	CS011	1/1	0.87 ± 0.11
	CS012	1/1	0.80 ± 0.11
	CS013	1/1	0.83 ± 0.12
	CS014	1/1	0.72 ± 0.20
	CS015	1/1	0.83 ± 0.13
	CS016	1/1	0.58 ± 0.09
	CS017	1/1	0.70 ± 0.11
Uranium 238	CS001	1/1	0.73 ± 0.11
	CS002	1/1	0.64 ± 0.11
	CS003	1/1	0.69 ± 0.10
	CS004	1/1	0.65 ± 0.13
	CS005	1/1	0.55 ± 0.10
	CS006	1/1	0.77 ± 0.11

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g)			
Uranium 238 - contd.	CS007	1/1	0.66 ± 0.09
	CS008	1/1	0.65 ± 0.09
	CS009	1/1	0.84 ± 0.11
	CS010	1/1	0.50 ± 0.08
	CS011	1/1	0.84 ± 0.11
	CS012	1/1	0.69 ± 0.11
	CS013	1/1	0.81 ± 0.11
	CS014	1/1	0.72 ± 0.20
	CS015	1/1	0.83 ± 0.13
	CS016	1/1	0.53 ± 0.09
	CS017	1/1	0.70 ± 0.11
Americium 241	CS001	1/1	0.04 ± 0.05
	CS002	1/1	0.00 ± 0.03
	CS003	1/1	0.01 ± 0.03
	CS004	1/1	0.01 ± 0.03
	CS005	1/1	0.00 ± 0.03
	CS006	1/1	-0.01 ± 0.02
	CS007	1/1	-0.01 ± 0.03
	CS008	1/1	-0.01 ± 0.03
	CS009	1/1	0.00 ± 0.03
	CS010	1/1	-0.01 ± 0.03
	CS011	1/1	0.02 ± 0.05
	CS012	1/1	-0.01 ± 0.02
	CS013	1/1	0.03 ± 0.05
	CS014	1/1	-0.01 ± 0.03
	CS015	1/1	0.00 ± 0.04
	CS016	1/1	0.03 ± 0.05
	CS017	1/1	-0.01 ± 0.03

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/9/92 4:40 pm sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g)			
Gross Alpha	CS001	1/1	27 ± 10
	CS002	1/1	18 ± 9
	CS003	1/1	28 ± 10
	CS004	1/1	15 ± 7
	CS005	1/1	11 ± 8
	CS006	1/1	20 ± 9
	CS007	1/1	13 ± 8
	CS008	1/1	16 ± 9
	CS009	1/1	12 ± 8
	CS010	1/1	14 ± 8
	CS011	1/1	42 ± 12
	CS012	1/1	26 ± 10
	CS013	1/1	18 ± 9
	CS014	1/1	26 ± 10
	CS015	1/1	28 ± 10
	CS016	1/1	21 ± 9
	CS017	1/1	15 ± 8
Gross Beta	CS001	1/1	22 ± 5
	CS002	1/1	18 ± 6
	CS003	1/1	22 ± 6
	CS004	1/1	27 ± 6
	CS005	1/1	22 ± 6
	CS006	1/1	31 ± 6
	CS007	1/1	24 ± 6
	CS008	1/1	15 ± 5
	CS009	1/1	24 ± 6
	CS010	1/1	22 ± 5
	CS011	1/1	36 ± 6
	CS012	1/1	29 ± 6
	CS013	1/1	26 ± 6
	CS014	1/1	18 ± 5

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g)			
Gross Beta - contd.	CS015	1/1	25 ± 6
	CS016	1/1	15 ± 5
	CS017	1/1	24 ± 5
Plutonium 239, 240	CS001	1/1	0.01 ± 0.03
	CS002	1/1	0.01 ± 0.02
	CS003	1/1	0.02 ± 0.03
	CS004	1/1	0.04 ± 0.03
	CS005	1/1	0.01 ± 0.03
	CS006	1/1	0.07 ± 0.05
	CS007	1/1	0.01 ± 0.03
	CS008	1/1	0.01 ± 0.03
	CS009	1/1	0.01 ± 0.03
	CS010	1/1	0.00 ± 0.03
	CS011	1/1	0.03 ± 0.03
	CS012	1/1	0.01 ± 0.03
	CS013	1/1	0.01 ± 0.03
	CS014	1/1	0.00 ± 0.02
	CS015	1/1	0.05 ± 0.03
	CS016	1/1	0.03 ± 0.03
	CS017	1/1	0.05 ± 0.03
Tritium	CS001	1/1	0.00 ± 0.15
	CS002	1/1	0.10 ± 0.16
	CS003	1/1	0.07 ± 0.15
	CS004	1/1	-0.05 ± 0.15
	CS005	1/1	0.22 ± 0.16
	CS006	1/1	0.10 ± 0.16
	CS007	1/1	0.08 ± 0.16
	CS008	1/1	0.01 ± 0.15
	CS009	1/1	0.06 ± 0.15
	CS010	1/1	0.08 ± 0.15

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0208 4/7/92 1:38 pm sma

Table C-3 IHSS 174 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g)			
Tritium - contd.	CS011	1/1	0.00 ± 0.15
	CS012	1/1	0.05 ± 0.15
	CS013	1/1	0.03 ± 0.15
	CS014	1/1	-0.01 ± 0.03
	CS015	1/1	0.00 ± 0.04
	CS016	1/1	0.21 ± 0.16
	CS017	1/1	0.07 ± 0.15

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Table C-4 IHSS 174 Downgradient Groundwater Sampling Summary (1990 Groundwater Monitoring Report).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (mg/l)			
Acetone	1086	2/6	11.0 - 42.0
Methylene chloride	1086	1/6	22.0
Inorganics (mg/l)			
Nitrate/Nitrite	1086	4/8	3.60 - 4.30

mg/l - milligram per liter

RFL/TBL0234 4/7/92 1:41 pm sma

Table C-5 IHSS 175 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg)			
Methylene chloride	CS018	1/1	8.0B
	CS019	1/1	6.0B
	CS020	1/1	28
	CS021	1/1	10
Acetone	CS020	1/1	23
	CS021	1/1	20
Bis(2-ethylhexyl) Phthalate	CS018	1/1	180JB
	CS019	1/1	190JB
	CS020	1/1	120JB
	CS021	1/1	370B
Metals and Other Inorganics (mg/kg)			
Aluminum	CS018	1/1	6600
	CS019	1/1	7000
	CS020	1/1	8300
	CS021	1/1	7800
Arsenic	CS018	1/1	2.0
	CS020	1/1	2.2
Barium	CS018	1/1	66
	CS019	1/1	64
	CS020	1/1	79
	CS021	1/1	67
Beryllium	CS020	1/1	1.3

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0207 4/9/92 4:42 pm sma

Table C-5 IHSS 175 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Calcium	CS018	1/1	11000
	CS019	1/1	8600
	CS020	1/1	11000
	CS021	1/1	7200
Cadmium	CS018	1/1	2.3
	CS019	1/1	3.1
	CS020	1/1	3.8
	CS021	1/1	3.6
Chromium	CS018	1/1	6.6
	CS019	1/1	16
	CS020	1/1	8.4
	CS021	1/1	9.8
Copper	CS018	1/1	14
	CS019	1/1	23
	CS020	1/1	19
	CS021	1/1	22
Iron	CS018	1/1	9500
	CS019	1/1	12000
	CS020	1/1	13000
	CS021	1/1	11000
Lead	CS018	1/1	13
	CS019	1/1	26
	CS020	1/1	15
	CS021	1/1	28
Magnesium	CS018	1/1	2300
	CS019	1/1	2500
	CS020	1/1	2600
	CS021	1/1	2400

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Table C-5 IHSS 175 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Manganese	CS018	1/1	140
	CS019	1/1	210
	CS020	1/1	150
	CS021	1/1	160
Mercury	CS018	1/1	0.98
	CS019	1/1	2.1
	CS020	1/1	0.16
	CS021	1/1	2.3
Nickel	CS020	1/1	10
Nitrate/Nitrite	CS018	1/1	2.2
	CS019	1/1	2.2
	CS020	1/1	7.5
	CS021	1/1	5.6
Potassium	CS018	1/1	1500
	CS019	1/1	1700
	CS020	1/1	2000
	CS021	1/1	1700
Strontium	CS018	1/1	21
	CS020	1/1	28
Vanadium	CS018	1/1	19
	CS019	1/1	21
	CS020	1/1	23
	CS021	1/1	21
Zinc	CS018	1/1	30
	CS019	1/1	58
	CS020	1/1	40
	CS021	1/1	80

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Table C-5 IHSS 175 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g)			
Uranium 233, 234	CS018	1/1	0.68 ± 0.11
	CS019	1/1	0.79 ± 0.11
	CS020	1/1	0.75 ± 0.18
	CS021	1/1	0.70 ± 0.17
Uranium 238	CS018	1/1	0.71 ± 0.10
	CS019	1/1	0.87 ± 0.11
	CS020	1/1	0.80 ± 0.18
	CS021	1/1	0.77 ± 0.17
Plutonium 239,240	CS018	1/1	0.02 ± 0.13
	CS019	1/1	0.04 ± 0.12
	CS020	1/1	0.06 ± 0.14
	CS021	1/1	0.42 ± 0.18
Americum 241	CS018	1/1	0.01 ± 0.04
	CS019	1/1	0.01 ± 0.04
	CS020	1/1	0.06 ± 0.06
	CS021	1/1	0.15 ± 0.08
Tritium	CS018	1/1	0.30 ± 0.16
	CS019	1/1	0.22 ± 0.16
	CS020	1/1	0.04 ± 0.16
	CS021	1/1	0.12 ± 0.16
Gross Alpha	CS018	1/1	40 ± 15
	CS019	1/1	58 ± 17
	CS020	1/1	35 ± 14
	CS021	1/1	50 ± 16

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Table C-5 IHSS 175 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g)			
Gross Beta	CS018	1/1	41 ± 7
	CS019	1/1	45 ± 17
	CS020	1/1	35 ± 14
	CS021	1/1	50 ± 16

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Table C-6 IHSS 176 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg)			
Methylene chloride	CS024	1/1	25B
	CS025	1/1	20B
	CS026	1/1	18B
	CS027	1/1	20B
	CS028	1/1	6B
	CS029	1/1	14
	CS030	1/1	20B
	CS031	1/1	5B
	CS038	1/1	14B
	CS033	1/1	8B
Acetone	CS024	1/1	14
	CS025	1/1	10J
	CS026	1/1	12
	CS027	1/1	11J
	CS029	1/1	26
	CS030	1/1	10J
	CS032	1/1	12
	CS033	1/1	20
Chloroform	CS024	1/1	1.0J
	CS025	1/1	1.0J
	CS026	1/1	1.0J
	CS027	1/1	1.0J
	CS030	1/1	1.0J
	CS032	1/1	1.0J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg) - contd.			
Toluene	CS024	1/1	1.0J
	CS025	1/1	2.0J
	CS026	1/1	3.0J
	CS027	1/1	2.0J
	CS030	1/1	2.0J
	CS032	1/1	2.0J
Total Xylenes	CS025	1/1	2.0J
	CS026	1/1	3.0J
	CS027	1/1	2.0J
	CS032	1/1	1.0J
4-Nitrophenol	CS032	1/1	160J
Pentachlorophenol	CS032	1/1	110J
Phenanthrene	CS029	1/1	76J
	CS030	1/1	210J
	CS033	1/1	49J
Anthracene	CS032	1/1	41J
Di-n-butyl Phthalate	CS030	1/1	450JB
Fluoranthene	CS025	1/1	350J
	CS028	1/1	46J
	CS029	1/1	120J
	CS030	1/1	290J
	CS032	1/1	58J
	CS033	1/1	82J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg) - contd.			
Pyrene	CS028	1/1	43J
	CS029	1/1	100J
	CS030	1/1	370J
	CS032	1/1	56J
	CS033	1/1	77J
Benzo(a)anthracene	CS029	1/1	53J
	CS033	1/1	37J
Bis(2-ethylhexy) Phthalate	CS028	1/1	130JB
	CS029	1/1	110JB
	CS031	1/1	130JB
	CS032	1/1	600B
	CS033	1/1	110JB
Chrysene	CS025	1/1	210J
	CS029	1/1	61J
	CS033	1/1	42J
Benzo(b)fluoranthene	CS029	1/1	51J
	CS033	1/1	28J
Benzo(k)fluoranthene	CS029	1/1	53J
	CS033	1/1	52J
Benzo(a)pyrene	CS029	1/1	57J
	CS033	1/1	40J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Aluminum	CS024	1/1	12000
	CS025	1/1	9800
	CS026	1/1	13000
	CS027	1/1	12000
	CS028	1/1	8000
	CS029	1/1	10000
	CS030	1/1	14000
	CS031	1/1	8700
	CS032	1/1	13000
	CS033	1/1	10000
Arsenic	CS024	1/1	6.9
	CS026	1/1	8.8
	CS027	1/1	6.6
	CS029	1/1	0.53
	CS030	1/1	19
	CS031	1/1	3.2
	CS032	1/1	4.7
	CS033	1/1	5.3
Barium	CS024	1/1	110
	CS025	1/1	76
	CS026	1/1	83
	CS027	1/1	92
	CS028	1/1	84
	CS029	1/1	80
	CS031	1/1	87
	CS032	1/1	120
	CS033	1/1	97

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Beryllium	CS024	1/1	1.1
	CS026	1/1	1.3
	CS028	1/1	1.1
	CS029	1/1	1.2
	CS030	1/1	1.1
	CS031	1/1	1.1
	CS032	1/1	1.1
	CS033	1/1	1.2
Calcium	CS024	1/1	14000
	CS025	1/1	7600
	CS026	1/1	3500
	CS027	1/1	3500
	CS028	1/1	3600
	CS029	1/1	2900
	CS030	1/1	3900
	CS031	1/1	2100
	CS032	1/1	4100
	CS033	1/1	4000
Cadmium	CS024	1/1	5.4
	CS025	1/1	2.3
	CS026	1/1	4.5
	CS027	1/1	4.7
	CS028	1/1	5.5
	CS029	1/1	4.2
	CS030	1/1	7.3
	CS031	1/1	4.1
	CS032	1/1	3.6
	CS033	1/1	8.8

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Chromium	CS024	1/1	21
	CS025	1/1	13
	CS026	1/1	16
	CS027	1/1	13
	CS028	1/1	12
	CS029	1/1	10
	CS030	1/1	19
	CS031	1/1	14
	CS032	1/1	15
	CS033	1/1	8.6
Copper	CS024	1/1	13
	CS025	1/1	17
	CS026	1/1	12
	CS027	1/1	13
	CS028	1/1	19
	CS029	1/1	17
	CS030	1/1	21
	CS031	1/1	16
	CS032	1/1	12
	CS033	1/1	18
Iron	CS024	1/1	12000
	CS025	1/1	11000
	CS026	1/1	14000
	CS027	1/1	13000
	CS028	1/1	11000
	CS029	1/1	14000
	CS030	1/1	18000
	CS031	1/1	11000

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Iron - contd.	CS032	1/1	13000
	CS033	1/1	13000
Mercury	CS031	1/1	2.9
	CS033	1/1	2.3
Potassium	CS024	1/1	2800
	CS025	1/1	1800
	CS026	1/1	2300
	CS027	1/1	2300
	CS028	1/1	1900
	CS029	1/1	1900
	CS030	1/1	2300
	CS031	1/1	1600
	CS032	1/1	2800
	CS033	1/1	2100
Magnesium	CS024	1/1	2200
	CS025	1/1	1700
	CS026	1/1	1600
	CS027	1/1	1700
	CS028	1/1	2600
	CS029	1/1	2300
	CS030	1/1	1800
	CS031	1/1	2400
	CS032	1/1	2300
	CS033	1/1	2200

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Manganese	CS024	1/1	360
	CS025	1/1	240
	CS026	1/1	210
	CS027	1/1	260
	CS028	1/1	180
	CS029	1/1	220
	CS030	1/1	260
	CS031	1/1	180
	CS032	1/1	330
	CS033	1/1	270
Sodium	CS024	1/1	460
	CS025	1/1	340
	CS027	1/1	270
	CS030	1/1	370
	CS032	1/1	620
Nickel	CS024	1/1	47
	CS025	1/1	70
	CS026	1/1	39
	CS027	1/1	49
	CS029	1/1	20
	CS030	1/1	46
	CS032	1/1	38
Lead	CS024	1/1	74
	CS025	1/1	13
	CS026	1/1	18
	CS027	1/1	24
	CS028	1/1	17

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Lead - contd.	CS029	1/1	1.6
	CS030	1/1	33
	CS031	1/1	11
	CS032	1/1	16
	CS033	1/1	28
Strontium	CS024	1/1	42
	CS031	1/1	30
Thallium	CS027	1/1	2.3
Vanadium	CS024	1/1	33
	CS025	1/1	29
	CS026	1/1	44
	CS027	1/1	35
	CS028	1/1	24
	CS029	1/1	31
	CS030	1/1	33
	CS031	1/1	24
	CS032	1/1	31
	CS033	1/1	30
Zinc	CS024	1/1	93
	CS025	1/1	51
	CS026	1/1	35
	CS027	1/1	42
	CS028	1/1	46
	CS029	1/1	48
	CS030	1/1	58
	CS031	1/1	35

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Table C-6 IHSS 176 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Zinc - contd.	CS032	1/1	42
	CS033	1/1	44
Nitrate/Nitrite	CS024	1/1	25
	CS025	1/1	4.5
	CS026	1/1	4.9
	CS027	1/1	5.2
	CS028	1/1	6.0
	CS029	1/1	4.6
	CS030	1/1	15
	CS031	1/1	2.1
	CS032	1/1	48
	CS033	1/1	20
Radionuclides (pCi/g)			
Uranium 233, 234	CS024	1/1	1.3 ± 0.3
	CS025	1/1	0.66 ± 0.16
	CS026	1/1	0.67 ± 0.14
	CS027	1/1	0.51 ± 0.14
	CS028	1/1	0.92 ± 0.18
	CS029	1/1	0.46 ± 0.14
	CS030	1/1	0.80 ± 0.15
	CS031	1/1	0.74 ± 0.16
	CS032	1/1	0.66 ± 0.17
	CS033	1/1	0.97 ± 0.22

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

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Table C-6 IHSS 176 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g) - contd.			
Uranium 238	CS024	1/1	1.1 ± 0.3
	CS025	1/1	0.79 ± 0.16
	CS026	1/1	0.56 ± 0.12
	CS027	1/1	0.53 ± 0.13
	CS028	1/1	1.0 ± 0.2
	CS029	1/1	0.57 ± 0.14
	CS030	1/1	0.57 ± 0.12
	CS031	1/1	0.53 ± 0.13
	CS032	1/1	0.64 ± 0.16
	CS033	1/1	0.93 ± 0.21
Plutonium 239, 240	CS024	1/1	0.43 ± 0.17
	CS025	1/1	0.20 ± 0.15
	CS026	1/1	0.19 ± 0.15
	CS027	1/1	1.0 ± 0.2
	CS028	1/1	0.34 ± 0.16
	CS029	1/1	0.32 ± 0.17
	CS030	1/1	0.70 ± 0.16
	CS031	1/1	0.01 ± 0.12
	CS032	1/1	0.00 ± 0.12
	CS033	1/1	0.44 ± 0.15
Americium 241	CS024	1/1	0.39 ± 0.11
	CS025	1/1	0.17 ± 0.07
	CS026	1/1	0.28 ± 0.08
	CS027	1/1	0.34 ± 0.08
	CS028	1/1	0.15 ± 0.08
	CS029	1/1	0.20 ± 0.07
	CS030	1/1	0.30 ± 0.08
	CS031	1/1	0.07 ± 0.16

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0216 4/9/92 4:44 pm sma

Table C-6 IHSS 176 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g) - contd.			
Americium 241 - contd.	CS032	1/1	0.18 ± 0.07
	CS033	1/1	0.21 ± 0.08
Tritium	CS024	1/1	-0.05 ± 0.15
	CS025	1/1	0.07 ± 0.16
	CS026	1/1	-0.03 ± 0.15
	CS027	1/1	-0.01 ± 0.15
	CS028	1/1	0.08 ± 0.16
	CS029	1/1	0.09 ± 0.16
	CS030	1/1	0.05 ± 0.15
	CS031	1/1	0.09 ± 0.16
	CS032	1/1	0.18 ± 0.16
	CS033	1/1	0.20 ± 0.16
Gross Alpha	CS024	1/1	28 ± 13
	CS025	1/1	21 ± 12
	CS026	1/1	16 ± 11
	CS027	1/1	18 ± 12
	CS028	1/1	22 ± 12
	CS029	1/1	26 ± 12
	CS030	1/1	28 ± 13
	CS031	1/1	29 ± 13
	CS032	1/1	31 ± 14
	CS033	1/1	35 ± 14
Gross Beta	CS024	1/1	29 ± 6
	CS025	1/1	22 ± 6
	CS026	1/1	14 ± 6
	CS027	1/1	18 ± 6
	CS028	1/1	30 ± 6
	CS029	1/1	24 ± 6

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0216 4/9/92 4:44 pm sma

Table C-6 IHSS 176 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g) - contd.			
Gross Beta - contd.	CS030	1/1	20 ± 6
	CS031	1/1	32 ± 6
	CS032	1/1	15 ± 6
	CS033	1/1	29 ± 6

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0216 4/9/92 4:44 pm sma

Table C-7 IHSS 176 Upgradient Groundwater Sampling Summary (Rocky Flats Groundwater Database).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/l)			
Aluminum	P207689	3/11	7.34 - 8.92
Beryllium	P207689	1/11	0.006
Calcium	P207689	5/11	89.1 - 131
Lead	P207689	1/11	0.040
Magnesium	P207689	7/11	66.3 - 142
Sodium	P207689	7/11	103 - 211
Cyanide	P207689	3/7	0.0100 - 0.025
Sulfate	P207689	5/6	93.0 - 290
Radionuclides (pCi/l)			
Americium 241	P207689	1/6	0.096
Plutonium 239	P207689	1/1	0.195
Tritium	P207689	4/5	360 - 700
Uranium 233, 234	P207689	5/5	9.32 - 12.0

mg/l - milligram per liter
pCi/l - picocurie per liter

RFL/TBL0241 4/7/92 3:40 pm sma

Table C-8 IHSS 176 Downgradient Groundwater Sampling Summary (Rocky Flats Groundwater Database).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/l)			
Calcium	0460	18/19	63.4 - 171[N,E]
Cobalt	0460	1/19	0.120[N]
Magnesium	0460	19/19	17.5 - 49.1[N,E]
Mercury	0460	1/19	0.001[N]
Potassium	0460	19/19	12.0 - 77.0[N,E]
Sodium	0460	19/19	50.6 - 152[N,E]
Zinc	0460	19/19	0.177 - 0.930[N,E]
Carbonate	0460	1/9	350
Sulfate	0460	10/19	68.0 - 6550
Radionuclides (pCi/l)			
Americium 241	0460	6/15	0.020 - 0.080[N]
Gross Alpha	0460	3/24	60 - 62[N]
Plutonium 239	0460	5/17	0.016 - 0.790[N]
Strontium 90	0460	3/8	1.20 - 6.40[N]
Tritium	0460	14/17	370 - 3000[N]
Uranium 233, 234	0460	17/17	0.240 - 28.1[N]

[N] - Data not validated
[E] - Value estimated because of interference
mg/l - milligram per liter
pCi/l - picocurie per liter

RFL/TBL0242 4/7/92 3:43 pm sma

Table C-9 IHSS 177 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg)			
Acetone	CS034	1/1	71
	CS035	1/1	43
	CS036	1/1	15
	CS037	1/1	71
2-Butanone	CS037	1/1	15
Methylene chloride	CS034	1/1	39B
	CS035	1/1	38B
	CS036	1/1	35B
	CS037	1/1	14B
trans-1,2-Dichloroethene	CS034	1/1	8.0
	CS035	1/1	4.0J
Tetrachloroethene	CS034	1/1	4.0J
	CS035	1/1	3.0J
Toluene	CS034	1/1	2.0J
	CS035	1/1	1.0J
	CS036	1/1	2.0J
	CS037	1/1	1.0J
Chlorobenzene	CS035	1/1	2.0J
Ethylbenzene	CS035	1/1	2.0J
Total Xylenes	CS034	1/1	3.0J
	CS035	1/1	3.0J
	CS036	1/1	2.0J
	CS037	1/1	2.0J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0211 4/7/92 4:30 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg) - contd.			
Benzo(b)fluorathene	CS035	1/1	290J
	CS037	1/1	350J
Benzo(k)fluroanthene	CS035	1/1	400J
	CS037	1/1	320J
Benzo(a)pyrene	CS035	1/1	470J
	CS037	1/1	230J
Ideno(1,2,3-c,d)pyrene	CS035	1/1	270J
Benzo(g,h,i)perylene	CS035	1/1	340J
N-Nitrosodiphenylamine	CS037	1/1	880J
Phenanthrene	CS035	1/1	770J
	CS037	1/1	500J
Anthracene	CS035	1/1	250J
Di-n-butyl Phthalate	CS037	1/1	1300J
Fluoranthene	CS035	1/1	930J
	CS037	1/1	780J
Pyrene	CS034	1/1	240J
	CS035	1/1	1100J
	CS037	1/1	880J
Butylbenzyl phthalate	CS037	1/1	510J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0211 4/7/92 4:30 pm sma

Table C-9 IHSS 177 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg) - contd.			
Bis(2-ethylhexyl) Phthalate	CS034	1/1	2000JB
	CS035	1/1	1200JB
	CS036	1/1	2100B
	CS037	1/1	1400JB
Chrysene	CS035	1/1	550J
	CS037	1/1	550J
Di-n-octyl Phthalate	CS037	1/1	290J
Metals and Other Inorganics (mg/kg)			
Aluminum	CS034	1/1	15000
	CS035	1/1	9500
	CS036	1/1	8300
	CS037	1/1	13000
Arsenic	CS034	1/1	3.3
	CS035	1/1	3.6
	CS036	1/1	3.5
	CS037	1/1	3.4
Barium	CS034	1/1	160
	CS035	1/1	150
	CS036	1/1	57
	CS037	1/1	190
Beryllium	CS037	1/1	1.4

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0211 4/7/92 4:30 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Cadmium	CS034	1/1	44000
	CS035	1/1	12000
	CS036	1/1	9200
	CS037	1/1	93000
Calcium	CS034	1/1	3.2
	CS035	1/1	1.5
	CS036	1/1	2.4
	CS037	1/1	2.9
Chromium	CS034	1/1	10
	CS035	1/1	9.9
	CS036	1/1	7.2
	CS037	1/1	10
Copper	CS034	1/1	14
	CS035	1/1	19
	CS036	1/1	42
	CS037	1/1	13
Iron	CS034	1/1	13000
	CS035	1/1	15000
	CS036	1/1	22000
	CS037	1/1	15000
Lead	CS034	1/1	37
	CS035	1/1	50
	CS036	1/1	44
	CS037	1/1	62

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0211 4/7/92 4:30 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Magnesium	CS034	1/1	3700
	CS035	1/1	2500
	CS036	1/1	6300
	CS037	1/1	4200
Manganese	CS034	1/1	190
	CS035	1/1	200
	CS036	1/1	530
	CS037	1/1	260
Mercury	CS034	1/1	0.59
	CS035	1/1	0.27
	CS036	1/1	0.22
	CS037	1/1	0.28
Potassium	CS034	1/1	1500
	CS036	1/1	2800
	CS037	1/1	1300
Strontium	CS034	1/1	130
	CS035	1/1	79
	CS036	1/1	23
	CS037	1/1	180
Vanadium	CS034	1/1	28
	CS035	1/1	25
	CS036	1/1	31
	CS037	1/1	34

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0211 4/7/92 4:30 pm sma

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Zinc	CS034	1/1	42
	CS035	1/1	55
	CS036	1/1	68
	CS037	1/1	37
Nitrate/Nitrite	CS034	1/1	1.2
	CS035	1/1	1.1
	CS036	1/1	1.2
	CS037	1/1	1.1
Radionuclides (pCi/g)			
Gross Alpha	CS034	1/1	38 ± 15
	CS035	1/1	45 ± 12
	CS036	1/1	23 ± 12
	CS037	1/1	39 ± 15
Gross Beta	CS034	1/1	32 ± 7
	CS035	1/1	43 ± 7
	CS036	1/1	35 ± 7
	CS037	1/1	37 ± 7
Uranium 233, 234	CS034	1/1	1.0 ± 0.2
	CS035	1/1	1.3 ± 0.5
	CS036	1/1	0.8 ± 0.2
	CS037	1/1	1.3 ± 0.5
Uranium 238	CS034	1/1	1.1 ± 0.3
	CS035	1/1	1.1 ± 0.2
	CS036	1/1	0.7 ± 0.19
	CS037	1/1	0.7 ± 0.3

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0211 4/9/92 4:45 pm sma

Table C-9 IHSS 177 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g)			
Plutonium 239, 240	CS034	1/1	0.03 ± 0.06
	CS035	1/1	-0.01 ± 0.10
	CS036	1/1	-0.02 ± 0.11
	CS037	1/1	0.03 ± 0.12
Americum 241	CS034	1/1	-0.03 ± 0.08
	CS035	1/1	0.02 ± 0.1
	CS036	1/1	0.02 ± 0.1
	CS037	1/1	-0.02 ± 0.10
Tritium	CS034	1/1	0.24 ± 0.15
	CS035	1/1	0.08 ± 0.14
	CS036	1/1	0.04 ± 0.14
	CS037	1/1	0.28 ± 0.15

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0211 4/9/92 4:46 pm sma

Table C-10 IHSS 177 Upgradient Groundwater Sampling Summary (Rocky Flats Groundwater Database).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/l)			
Aluminum	5287	1/16	0.388
Calcium	5287	16/16	85.7 - 125[N]
Copper	5287	2/16	0.048 - 0.059
Magnesium	5287	16/16	19.5 - 32.5[N]
Manganese	5287	7/16	0.217 - 0.756[N]
Nickel	5287	3/16	0.050 - 0.132[N]
Sodium	5287	16/16	125 - 204[N]
Zinc	5287	3/16	0.154 - 0.379
Sulfate	5287	15/16	180 - 587
Radionuclides (pCi/l)			
Americium 241	5287	2/9	0.020 - 0.040
Gross Alpha	5287	4/13	59 - 76[N]
Plutonium 239	5287	1/9	0.020
Uranium 233, 234	5287	9/9	4.70 - 37.0[N]
Uranium 238	5287	1/9	26.0
Tritium	5287	1/12	380

[N] - Data not validated
mg/l - milligram per liter
pCi/l - picocurie per liter

RFL/TBL0239 4/7/92 4:33 pm sma

Table C-11 IHSS 177 Downgradient Groundwater Sampling Summary (Rocky Flats Groundwater Database).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/l)			
Calcium	5387	2/2	105 - 131
Copper	5387	2/2	0.106 - 0.122
Magnesium	5387	2/2	31.6 - 37.6
Nickel	5387	2/2	0.115 - 0.345
Sodium	5387	2/2	93.6 - 109
Zinc	5387	2/2	0.266 - 0.970
Sulfate	5387	2/2	210 - 240
Radionuclides (pCi/l)			
Uranium 233, 234	5387	1/1	10.2

mg/l - milligram per liter
pCi/l - picocurie per liter

RFL/TBL0240 4/7/92 4:35 pm sma

Table C-12 IHSS 182 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg)			
Methylene chloride	CS022	1/1	8.0B
	CS023	1/1	7.0B
Acetone	CS022	1/1	19
	CS023	1/1	19
1,1-Dichloroethene	CS022	1/3	5.0J
1,1-Dichloroethane	CS022	1/3	4.0J
1,1,1-Trichloroethane	CS022	2/3	220, 980
Tetrachloroethene	CS022	1/3	1.0J
Toluene	CS022	1/2	7.0
Ethylbenzene	CS022	1/2	7.0
Total Xylenes	CS022	1/2	14
Naphthalene	CS022	1/1	44000
2-Methylnaphthalene	CS022	1/1	13000J
Acenaphthene	CS022	1/1	27000J
Dibenzofuran	CS022	1/1	14000J
Fluorene	CS022	1/1	23000J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0213 4/7/92 4:54 pm sma

Table C-12 IHSS 182 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Volatile and Semivolatile Organics (µg/kg) - contd.			
Phenanthrene	CS022	1/1	95000
	CS023	1/1	380J
Anthracene	CS022	1/1	28000J
Fluoranthene	CS022	1/1	77000
	CS023	1/1	410J
Pyrene	CS022	1/1	62000
	CS023	1/1	320J
Benzo(a)anthracene	CS022	1/1	25000J
Bis(2-ethylhexyl) Phthalate	CS022	1/1	12000J
	CS023	1/1	630J
Benzo(b)fluoranthene	CS022	1/1	26000J
Benzo(k)fluoranthene	CS022	1/1	27000J
	CS023	1/1	180J
Benzo(a)pyrene	CS022	1/1	34000J
	CS023	1/1	220J
Ideno(1,2,3-c,d)pyrene	CS022	1/1	28000J
Dibenz(a,h)anthracene	CS022	1/1	14000J
Benzo(g,h,i)perylene	CS022	1/1	32000J

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0213 4/7/92 4:54 pm sma

Table C-12 IHSS 182 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg)			
Aluminum	CS022	1/1	14000
	CS023	1/1	11000
Cadmium	CS022	1/1	5.4
	CS023	1/1	4.9
Barium	CS022	1/1	73
	CS023	1/1	68
Beryllium	CS022	1/1	1.4
	CS023	1/1	1.1
Calcium	CS022	1/1	7800
	CS023	1/1	5000
Chromium	CS022	1/1	9.6
	CS023	1/1	8.4
Copper	CS022	1/1	21
	CS023	1/1	32
Iron	CS022	1/1	18000
	CS023	1/1	18000
Mercury	CS022	1/1	0.38
	CS023	1/1	0.23
Potassium	CS022	1/1	2300
	CS023	1/1	2800

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0213 4/7/92 4:54 pm sma

Table C-12 IHSS 182 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/kg) - contd.			
Magnesium	CS022	1/1	4000
	CS023	1/1	4000
Manganese	CS022	1/1	280
	CS023	1/1	28
Nickel	CS022	1/1	22
	CS023	1/1	15
Lead	CS022	1/1	2.6
	CS023	1/1	3.4
Vanadium	CS022	1/1	39
	CS023	1/1	36
Zinc	CS022	1/1	72.8
	CS023	1/1	45.4
Nitrate/Nitrite	CS022	1/1	1.1
	CS023	1/1	1.1
Radionuclides (pCi/g)			
Uranium 233, 234	CS022	1/1	1.3 ± 0.2
	CS023	1/1	0.56 ± 0.1
Uranium 238	CS022	1/1	5.9 ± 0.3
	CS023	1/1	0.54 ± 0.1
Plutonium 239, 240	CS022	1/1	-0.02 ± 0.1
	CS023	1/1	-0.02 ± 0.1

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0213 4/7/92 4:54 pm sma

Table C-12 IHSS 182 Soil Sampling Summary (10/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g) - contd.			
Americium 241	CS022	1/1	-0.03 ± 0.09
	CS023	1/1	-0.04 ± 0.09
Tritium	CS022	1/1	0.13 ± 0.14
	CS023	1/1	0.09 ± 0.14
Gross Alpha	CS022	1/1	26 ± 13
	CS023	1/1	22 ± 13
Gross Beta	CS022	1/1	25 ± 6
	CS023	1/1	29 ± 6

J - Present below detection limit
B - Present in blanks
Note: Data not validated
µg/kg - microgram per kilogram
mg/kg - milligram per kilogram
pCi/g - picocurie per gram

RFL/TBL0213 4/7/92 4:54 pm sma

Table C-13 IHSS 213 Soil Sampling Summary (4/87-6/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g)			
Gross Alpha	Pad	21/21	2 ± 10 to 53 ± 18
	Pad Puddle	4/4	-1 ± 7 to 17 ± 10
Gross Beta	Pad	21/21	8 ± 17 to 110 ± 40
	Pad Puddle	4/4	21 ± 14 to 41 ± 15
Plutonium Total	1	1/1	3.7 ± 0.20
	2	1/1	2.8 ± 0.20
	3	1/1	0.30 ± 0.10
	4	1/1	0.20 ± 0.10
	5	1/1	16 ± 1.0
	6	1/1	34 ± 1.0
	7	1/1	4.0 ± 0.20
	8	1/1	3.3 ± 0.10
Uranium Total	1	1/1	2.3
	2	1/1	1.9
	3	1/1	2.4
	4	1/1	2.7
	5	1/1	3.7
	6	1/1	3.1
	7	1/1	3.4
	8	1/1	4.0
Uranium 234	1	1/1	0.95 ± 0.10
	2	1/1	1.1 ± 0.12
	5	1/1	0.72 ± 0.08
	6	1/1	1.1 ± 0.18
Uranium 238	1	1/1	0.98 ± 0.10
	2	1/1	1.1 ± 0.12
	5	1/1	0.67 ± 0.07
	6	1/1	1.0 ± 0.11

Note: Data not validated
pCi/g - picocurie per gram

RFL/TBL0210 4/9/92 4:47 pm sma

Table C-13 IHSS 213 Soil Sampling Summary (4/87-6/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g) - contd.			
Americium 241	1	1/1	0.14 ± 0.01
	2	1/1	1.5 ± 0.08
	3	1/1	24 ± 1.0
	4	1/1	3.6 ± 0.15
	5	1/1	0.23 ± 0.01
	6	1/1	0.35 ± 0.02
Plutonium-239	87-903NW	1/1	0.030
	87-903NE	1/1	1.8
	87-903SW	1/1	0.12
	87-903SE	1/1	4.2
	W-903-1	2/2	8.1 ± 0.66
		9.2 ± 0.88	
	W-903-2	1/2	19 ± 1.8
	W-903-3	2/2	14 ± 1.2
		17 ± 1.5	
	W-903-4	2/2	67 ± 5.4
		67 ± 8.1	
	1	1/1	0.24 ± 0.0028
	2	1/1	2.3 ± 0.22
	5	1/1	0.23 ± 0.022
	6	1/1	0.26 ± 0.026

Note: Data not validated
pCi/g - picocurie per gram

RFL/TBL0210 4/8/92 8:18 am sma

Table C-14 IHSS 213 Surface Water Sampling Summary
(9/88-2/90, Analytical Data).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/l)			
Cadmium	Pad Puddle	5/5	4.60 to 10.2
Nitrate	Pad	23/23	1.9 to 73
	Pad Puddle	10/10	1.2 to 25
	Pad Puddle Runoff	38/38	0.08 to 180
Cyanide	Pad Puddle	6/6	0.029 to <2.50
Radionuclides (pCi/l)			
Gross Alpha	Pad	4/4	11 ± 11 to 27 ± 13
	Pad Puddle	6/6	0 ± 9 to 14 ± 13
	Pad Puddle Runoff	40/40	-4 ± 17 to 53 ± 18
Gross Beta	Pad	4/4	20 ± 17 to 49 ± 19
	Pad Puddle	6/6	9 ± 17 to 55 ± 22
	Pad Puddle Runoff	37/37	0 ± 47 to 150 ± 60

mg/l - milligram per liter
pCi/l - picocurie per liter

RFL/TBL0235 4/9/92 4:48 pm sma

Table C-15 IHSS 213 Upgradient Groundwater Sampling Summary (Rocky Flats Groundwater Database).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/l)			
Barium	0187	4/4	0.244 - 0.281
Calcium	0187	4/4	136 - 162
Iron	0187	4/4	1.06 - 5.82
Magnesium	0187	4/4	36.4 - 41.0
Manganese	0187	4/4	0.941 - 3.33
Nickel	0187	2/4	0.229 - 0.370
Sodium	0187	4/4	9.13 - 117
Zinc	0187	1/4	0.260
Sulfate	0187	4/4	96.0 - 120
Radionuclides (pCi/l)			
Americium 241	0187	1/2	0.030[N]
Uranium 233, 234	0187	4/4	8.40 - 14.7[N]

[N] - Data not validated
mg/l - milligram per liter
pCi/l - picocurie per liter

RFL/TBL0236 4/8/92 8:37 am sma

Table C-16 IHSS 214 Soil Sampling Summary
(9/88-1/89, Weston Analytics).

Analyte	Station Number	Frequency of Detection	Concentration Range
Radionuclides (pCi/g)			
Gross Alpha	Pad Culvert and Puddle Samples	18/18	5 ± 16 to 55 ± 28
	Pad Culvert	7/7	2 ± 9 to 49 ± 20
	Pad Puddle	3/3	5 ± 8 to 27 ± 13
Gross Beta	Pad Culvert and Puddle Samples	18/18	-2 ± 12 to 42 ± 28
	Pad Culvert	7/7	3 ± 18 to 17 ± 14
	Pad Puddle	3/3	15 ± 14 to 45 ± 16

Note: Data not validated
pCi/g - picocurie per gram

RFL/TBL0209 4/9/92 4:49 pm sma

Table C-17 IHSS 214 Surface Water Sampling Summary (9/88-3/90, Analytical Data).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/l)			
Cadmium	Pad Puddle	5/5	2.20 to 5.60
	Pad Runoff	1/1	0.16
Nitrate	Pad Culvert	40/40	<0.02 to 5.9
	Pad Culvert and Puddle	18/18	0.99 to 9.5
	Pad Puddle	29/29	0.05 to 87
	Pad Runoff	1/1	1.2
Cyanide	Pad Puddle	8/8	<0.0025 to <2.50
	Pad Runoff	1/1	<0.003
Radionuclides (pCi/l)			
Gross Alpha	Pad Culvert	33/33	-2 ± 8 to 26 ± 15
	Pad Puddle	26/26	-1 ± 8 to 40 ± 18
	Pad Runoff	1/1	-13 ± 49
Gross Beta	Pad Culvert	33/33	-8 ± 17 to 41 ± 17
	Pad Puddle	26/26	3 ± 8 to 95 ± 22
	Pad Runoff	1/1	$(1.1 \pm 0.1) \times 10^3$

mg/l - milligram per liter
pCi/l - picocurie per liter

RFL/TBL0237 4/9/92 4:51 pm sma

Table C-18 IHSS 214 Upgradient Groundwater Sampling Summary (Rocky Flats Groundwater Database).

Analyte	Station Number	Frequency of Detection	Concentration Range
Metals and Other Inorganics (mg/l)			
Calcium	P207489	3/6	88.2 - 95.6
Magnesium	P207489	3/6	23.4 - 26.1
Manganese	P207489	2/6	0.269 - 0.413
Sulfate	P207489	5/5	70.0 - 130
Radionuclides (pCi/l)			
Americium 241	P207489	1/1	1.15
Tritium	P207489	3/3	775 - 810
Uranium 233, 234	P207489	2/2	1.49 - 1.82
Uranium 235, 236	P207489	1/1	4.50

mg/l - milligram per liter
pCi/l - picocurie per liter

RFL/TBL0238 4/8/92 8:54 am sma