RMRS Rocky Mountain Remediation Services, L.L.C.
. . . protecting the environment

Rocky Flats Environmental Technology Site
P.O. Box 464
Golden, Colorado 80402-0464
Phone:(303) 966-2729
Fax: (303) 966-8244

February 5, 1997

John Wrapp
Compliance and Performance Assurance
Building T130C
Kaiser-Hill Company, L.L.C.

Subject: WATER DATA VERIFYING RCRA STABLE CONFIGURATION FOR BUILDING 444/447 PROCESS WASTE SYSTEM-GRK-054-97

As you will recall there was a water pipe that broke in Building 444. The pipe was located on the second floor of the building and allowed several thousand gallons of water to cascade through the building. The recovery plan for the building involved collecting the water from the building floor, the process waste system components, and secondary containment areas. All of this water was placed into the process waste system and ultimately pumped to Building 374 for treatment.

Three samples of this water were collected to determine the quality. There were two objectives associated with the collection of the water: to evaluate if there had been any spread of contamination and to determine if the water in the process waste system was hazardous.

Initially, the water samples were collected to determine if there had been any spread of contamination to areas outside of the controlled area. The spread of contamination was confirmed by the presence of radiological activity in the water. The water was collected from two locations outside of the controlled area: a paved loading dock adjacent to door D-7 and within the men's locker room.

The sample taken at the concrete loading dock confirmed that the water had a minimal amount of radiological activity. It was estimated that about a gallon of water left the building. This water ran under an exit door to the building and resided on a concrete slab outside of the building. The water was removed and the area was decontaminated. Subsequent surveys indicated that the area was successfully decontaminated; consequently, there was no spread of contamination to this area. The water sample and the radiological surveys confirmed that there was no uncontrolled release and no harm to human health or the environment.

The water sample that was taken in the men's locker room also indicated that there had been a minimal spread of contamination. The men's locker room was posted as a controlled area during the time that there was water present. The water in the locker room was removed and the room decontaminated. Subsequent radiological surveys indicated that the decontamination efforts were successful. Consequently, the controlled area posting was removed. All of the water from the loading dock area and the men's locker room was placed into the process waste system.

ADMIN RECORD

The second utilization of the water samples was to determine if there were RCRA regulated constituents present in the process waste system. All three samples indicated that the water was nonhazardous (see attached RMRS letter, CMM-006-97). The water sample, reference number 97L1044, was taken from the surge tank that ultimately transfers water to Building 374 for treatment. This tank receives water from all process waste drains and the floor sumps. Consequently, this location is a representative sample of RCRA Unit Numbers 39.01, 39.02, 40.04, 40.05, 40.35, 40.36, and 40.37. The analytical results, from sample 97L1044, indicated that the water was nonhazardous.

Other waters have been collected by the process waste system over the past several years. During that time Building 444 had no active processes and consequently produced no process wastes. The process waste system was however active in removing ground water and leaking steam condense from the building. Data associated with these waters indicate that the ground water and the steam condense water were nonhazardous. The data associated with sample number 97L1044 confirm the earlier findings that the process waste system transports water that is nonhazardous.

The amount of water that has been pumped through the process waste system has rinsed the system hundreds of times over the past several years. The most recent sample is considered a representative sample of the rinse water and verification of a RCRA stable configuration.

This situation was discussed with the CDPHE on February 4, 1997. Representatives of the CDPHE concur with the RCRA stable configuration of the Building 444/447 process waste system. Due to this, daily inspections may be replaced with quarterly inspections, for the Units noted above and all ancillary equipment. A Contact Record documenting this situation is attached.

This information will be maintained in the building operating record as documentation for the modification in the inspection frequency. If you require additional information associated with this action, please contact me at extension 2729.

Gary R. Konwinski
RMRS, Environmental Manager

Attachments
As stated

cc:
Karan North
Jerrilyn McAndrew
Paul Bengal
Fred Hughes
Jana Lienemann
Dave Martin
Bill McAndrew
Gary Guinn
RMRS Records
File

Rocky Mountain Remediaton Services, L.L.C.
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MEMORANDUM

DATE: January 30, 1997

TO: G. R. Konwinski, RMRS, T130F, X2729

FROM: C. M. Moynihan, Waste Systems Group, Bldg. T130B, X5358 CM

SUBJECT: CHARACTERIZATION ADVISORY - CMM-006-97

HAZARDOUS WASTE CHARACTERIZATION

The State of Colorado Hazardous Waste Regulations require generators to characterize their waste (6 CCR 1007-3, §262.11). In order to accurately characterize waste, the generator may request waste stream sampling and analysis. The following suggested characterization is based on unvalidated results from the analysis of the sample you submitted and our understanding of the waste material origin and form. An extract of the data is attached.

Lab ID#	Description	Recommended Characterization	Hazardous Waste No.	Compatibility Code
97J1045	Cutting oil	Hazardous		4A
		(Cadmium ≥ 1.0 mg/L)	D006[1]	
		(Lead ≥ 5.0 mg/L)	D008[1]	
97L1044	Water	Nonhazardous	N/A	3A
97L0595	Water from Rm 108	Nonhazardous	N/A	3A
97L0595	Water from Rm. 117	Nonhazardous	N/A	3A

If you know through process knowledge or other analysis that this waste displays additional characteristics or is listed as a hazardous waste in the Colorado Hazardous Waste Regulations, the waste must be characterized appropriately. We can provide advice on any further characterizations that may be required.

If further technical assistance is required for clarification, please contact me at X5358 or digital pager 3040.

Attachments:
As Stated.

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[1] If the waste is oil which will be recycled, this hazardous waste number does not apply.

97J1045
Oil

?	a/ß
001	total metals
001.003	fingerprint
001.005	total VOA's
?	PCB's

97L1044
Water Tank

001.001	fingerprint
001.002	total VOA's
001.003	total VOA's
001.005	total metals

97L0595
Room 108

001.001	a/ß
001.002	total VOA's
001.003	total VOA's
001.005	fingerprint

Room 117, dock 7D

002.006	a/ß
002.007	total VOA's
002.008	total VOA's
002.009	total metals
002.010	fingerprint

881 GENERAL LAB
INCIDENTAL WATERS - RADIOCHEMISTRY RESULTS

TO: Bill Hayes FAX: 8482
APO FAX: 3400

FROM: K. HAGGLUND X7799
K. HARWARD X7128

Lab Report #	Sample ID IW #	Location	Alpha pCi/L (MDA)	Beta pCi/L (MDA)
9760595	001.001	444-Rm108	<20	<80
"	002.006	444-Rm117	<550	<550

COMMENTS:

Preliminary Results. Final activities for sample 002.006 are expected to be ~ 425 → 475 pCi/L α + β.

KM Haggland
X7799
1/15/97

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
VBLK01

Lab Name: RFETS ROL Contract: NA

Project No.: 97L0595 Site: RFETS Location: BLDG. 559 Group: ROL

Matrix: (soil/water) WATER Lab Sample ID: MBW0115

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: MBW0115.D

Level: (low/med) Date Received: 1/15/97

% Moisture: not dec. Date Analyzed: 1/15/97

GC Column: HP-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	7.5	J
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	4.8	J
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	3	J
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	4.9	J
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	1.8	J
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
001002

Lab Name: RFETS ROL Contract: NA

Project No.: 97L0595 Site: RFETS Location: BLDG. 559 Group: ROL

Matrix: (soil/water) WATER Lab Sample ID: VOAL01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VOAL01.D

Level: (low/med) Date Received: 1/15/97

% Moisture: not dec. Date Analyzed: 1/15/97

GC Column: HP-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	17	B
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	3.2	JB
67-66-3	Chloroform	5.9	
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
001002

Lab Name: RFETS ROL Contract: NA

Project No.: 97L0595 Site: RFETS Location: BLDG. 559 Group: ROL

Matrix (soil/water) WATER Lab Sample ID: VOAL01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VOAL01.D

Level: (low/med) Date Received: 1/15/97

% Moisture: not dec. Date Analyzed: 1/15/97

GC Column: HP-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U

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FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories Sample No.: 1

Lab Sample ID: 97L0695-001 Bldg 444 Aqueous Sample

Section: ICPAES

Lab Sample I.D.s beginning with X' indicates TCLP Extract.

% Solids for Sample : 0.0000

Date Sampled: 1/14/97 SDG No.: JAN14

Lab Receipt Date: 1/15/97 QC Report No.: SD011497.RPT

Matrix: Water ____ Soil ____ Sludge ____ Other X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	Q (N V * E O O S +)	M
Aluminum	0.6000	U		P
Antimony	0.2000	U		P
Arsenic	0.2000	U		P
Barium	0.1000	U		P
Beryllium	0.0100	U		P
Cadmium	0.0400	U		P
Calcium	60.1926	B	E	P
Chromium	0.1000	U		P
Cobalt	0.1000	U		P
Copper	0.2000	U		P
Iron	0.4000	U		P
Lead	0.1150	B		P
Magnesium	1.1718	B		P
Manganese	0.0200	U		P
Molybdenum	0.1000	U		P
Nickel	0.1000	U		P
Phosphorus	1.0000	U		P
Selenium	0.1500	U		P
Silver	0.0600	U		P
Strontium	0.7218	B	E	P
Thallium	0.2000	U		P
Titanium	0.0400	U		P
Vanadium	0.1000	U		P
Zinc	0.2000	U		P

Color Before: Clarity Before:

Color After: Clarity After:

Texture:

Artifacts:

Comments: Sample < 0.50 % Solids. Total Metals Digestion only !

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FORM 1A-I

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories Sample No.: 2

Lab Sample ID: 97L0595-001D Bldg 444 Aqueous Sample, Lab Duplicate

Section: ICPAES

Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

% Solids for Sample : 0.0000

Date Sampled: 1/14/97 SDG No. : JAN14

Lab Receipt Date: 1/15/97 QC Report No.: SD011497.RPT

Matrix: Water ____ Soil ____ Sludge ____ Other X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	N V * E O O S + Q	M
Aluminum	0.6000	U		P
Antimony	0.2000	U		P
Arsenic	0.2000	U		P
Barium	0.1000	U		P
Beryllium	0.0100	U		P
Cadmium	0.0400	U		P
Calcium	60.2108	B	E	P
Chromium	0.1000	U		P
Cobalt	0.1000	U		P
Copper	0.2000	U		P
Iron	0.4000	U		P
Lead	0.1000	U		P
Magnesium	1.2178	B		P
Manganese	0.0200	U		P
Molybdenum	0.1000	U		P
Nickel	0.1000	U		P
Phosphorus	1.0000	U		P
Selenium	0.1500	U		P
Silver	0.0600	U		P
Strontium	0.7164	B	E	P
Thallium	0.2000	U		P
Titanium	0.0400	U		P
Vanadium	0.1000	U		P
Zinc	0.2000	U		P

Color Before: Clarity Before:

Color After: Clarity After:

Texture:

Artifacts:

Comments: Sample < 0.50 % Solids. Total Metals Digestion only !

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559 Rad Labs Fingerprint Report

Approximately 60 mls of the container was sent to the 559 Analytical Lab for Fingerprint analysis. If the sample contained two or more layers, each layer was analyzed separately and reported as the sample ID and layer (i.e. 94E0001-01 Top, Bottom, or Middle). All analysis were done in accordance with procedure L-3220.

SAMPLE ID	97L0595-001.005
Date of Analysis	Jan-15-1997
Physical Appearance	Clear, single phase, non-viscous liquid with no particulates.

men's locker room

Water Test	Positive
pH	7
Specific Gravity	0.9869
Miscibile with	Water
Reactive with Water	No
Ignitability (degrees C)	NA. Aqueous Sample.
Chlorinated Solvents	NA. Positive water test.

Comments: NA = not applicable

Approval: [signature]

Report Date: Jan-15-1997

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
002007

Lab Name: RFETS ROL Contract: NA

Project No.: 97L0595 Site: RFETS Location: BLDG. 559 Group: ROL

Matrix: (soil/water) WATER Lab Sample ID: VOAL02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VOAL02.D

Level: (low/med) Date Received: 1/15/97

% Moisture: not dec. Date Analyzed: 1/15/97

GC Column: HP-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	16	B
75-15-0	Carbon disulfide	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5.7	JB
67-66-3	Chloroform	3.1	J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5.6	JB
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	4.1	JB
95-47-6	o-Xylene	6.8	
100-42-5	Styrene	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
002007

Lab Name: RFETS ROL Contract: NA

Project No.: 97L0595 Site: RFETS Location: BLDG. 559 Group: ROL

Matrix: (soil/water) WATER Lab Sample ID: VOAL02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VOAL02.D

Level: (low/med) Date Received: 1/15/97

% Moisture: not dec. Date Analyzed: 1/15/97

GC Column: HP-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U

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FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories **Sample No.:** 3

Lab Sample ID: 97L0595-002 Bldg 444 Aqueous Sample

Section: ICPAES Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

% Solids for Sample : 0.0000

Date Sampled: 1/14/97 **SDG No. :** JAN14

Lab Receipt Date: 1/15/97 **QC Report No.:** SD011497.RPT

Matrix: Water ____ Soil ____ Sludge ____ Other X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	N V * E O O S + Q	M
Aluminum	0.6334	B		P
Antimony	0.2000	U		P
Arsenic	0.2000	U		P
Barium	0.1000	U		P
Beryllium	0.1108	B		P
Cadmium	0.1584	B		P
Calcium	23.2140	B	E	P
Chromium	0.1000	U		P
Cobalt	0.1000	U		P
Copper	1.2882	B		P
Iron	1.9554	B		P
Lead	0.3026	B		P
Magnesium	4.8848	B		P
Manganese	0.1514	B		P
Molybdenum	0.1000	U		P
Nickel	0.1838	B		P
Phosphorus	10.2242	B		P
Selenium	0.1500	U		P
Silver	0.0600	U		P
Strontium	0.1038	B	E	P
Thallium	0.2000	U		P
Titanium	0.0400	U		P
Vanadium	0.1000	U		P
Zinc	3.9334	B		P

Color Before: **Clarity Before:**

Color After: **Clarity After:**

Texture:

Artifacts:

Comments: Sample < 0.50 % Solids. Total Metals Digestion only !

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559 Rad Labs Fingerprint Report

Approximately 60 mls of the container was sent to the 559 Analytical Lab for Fingerprint analysis. If the sample contained two or more layers, each layer was analyzed separately and reported as the sample ID and layer (i.e. 94E0001-01 Top, Bottom, or Middle). All analysis were done in accordance with procedure L-3220.

door D7

SAMPLE ID	97L0595-002.010
Date of Analysis	Jan-15-1997
Physical Appearance	Clear, single phase, non-viscous liquid with no particulates.
Water Test	Positive
pH	7
Specific Gravity	0.9739
Miscibile with	Water
Reactive with Water	No
Ignitability (degrees C)	NA. Aqueous Sample.
Chlorinated Solvents	NA. Positive water test.

Comments: NA = not applicable

Approval: Roger C. Anderson

Report Date: Jan-15-1997

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559 Analytical Report
Radiochemistry Laboratory

Fax Date	Jan-23-1997
Fax To	APO
Fax Numbers(s)	3400/4365

Date of Analysis	Jan-23-1997

Sample Matrix or Description	Cutting Oil

Sample Owner	G. Konwinski	Building	444
Phone/Page	2729	Rad Screen ✓	Gross Alpha/Beta

Sample ID	Alpha	MDA	Beta	MDA	pCi/
97J1045-001.003	(2.36 +/- 0.97) E4	4.59 E3	(5.12 +/- 1.40) E4	7.16 E3	l

Additional Results	Result	Units	Result	Units

Low-Level (LL)	✓	TRU	

Comments

The Fingerprint Report is attached.

The pCi/ headed column is for identifying the units of the Alpha and Beta results columns. A g indicates pCi/g and an l indicates pCi/l. MDA indicates the Minimum Detectable Activity.

Chemist	Dr. R.A. Henderson	Signature	
Peer Review	M.S. Brugh	Signature	

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FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 659 PA Inorganic Laboratories Sample No.: 1

Lab Sample ID: 97J1045-001 Bldg 444 Cutting Oil Sample

Section: ICPAES

Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

% Solids for Sample : 100.0000

Date Sampled: 1/22/97 SDG No. : JAN24

Lab Receipt Date: 1/22/97 QC Report No.: SD012497.RPT

Matrix: Water ___ Soil ___ Sludge ___ Other X

Elements Identified and Measured

Concentration Units: mg/Kg

Analyte	Concentration	C	Q	M
Aluminum	30.0000	U		P
Antimony	10.0000	U		P
Arsenic	10.0000	U		P
Barium	5.0000	U		P
Beryllium	0.5000	U		P
Cadmium	2.2800	B		P
Calcium	117.8600	B		P
Chromium	5.0000	U		P
Cobalt	5.0000	U		P
Copper	42.1300	B		P
Iron	157.4800	B		P
Lead	8.7200	B		P
Magnesium	20.0000	U		P
Manganese	2.1900	B		P
Molybdenum	5.0000	U		P
Nickel	5.0000	U		P
Phosphorus	153.6100	B		P
Selenium	7.5000	U		P
Silver	3.0000	U		P
Strontium	1.0000	U		P
Thallium	10.0000	U		P
Titanium	2.0000	U		P
Vanadium	5.0000	U		P
Zinc	124.8800	B		P

Color Before: Brown/Red Clarity Before: Cloudy

Color After: Yellow Clarity After: Cloudy

Texture:

Artifacts:

Comments: Sample = 100.00 % Solids, Total Metals Digestion only !

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FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories **Sample No.:** 2

Lab Sample ID: 97J1045-001 D Bldg 444 Cutting Oil Sample Lab Duplicate

Section: ICPAES

Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

% Solids for Sample: 100.0000

Date Sampled: 1/22/97 **SDG No.:** JAN24

Lab Receipt Date: 1/22/97 **QC Report No.:** SD012497.RPT

Matrix: Water ____ Soil ____ Sludge ____ Other X

Elements Identified and Measured

Concentration Units: mg/Kg

Analyte	Concentration	C	N V * E O O S + Q	M
Aluminum	29.6736	U		P
Antimony	9.8912	U		P
Arsenic	9.8912	U		P
Barium	4.9456	U		P
Beryllium	0.4946	U		P
Cadmium	2.3838	B		P
Calcium	111.7507	B		P
Chromium	4.9456	U		P
Cobalt	4.9456	U		P
Copper	41.6815	B		P
Iron	147.6162	B		P
Lead	7.7943	B		P
Magnesium	19.7824	U		P
Manganese	0.9891	U		P
Molybdenum	4.9456	U		P
Nickel	4.9456	U		P
Phosphorus	151.6024	B		P
Selenium	7.4184	U		P
Silver	2.9674	U		P
Strontium	0.9891	U		P
Thallium	9.8912	U		P
Titanium	1.9782	U		P
Vanadium	4.9456	U		P
Zinc	120.8691	B		P

Color Before: Brown/Red **Clarity Before:** Cloudy

Color After: Yellow **Clarity After:** Cloudy

Texture:

Artifacts:

Comments: Sample = 100.00 % Solids, Total Metals Digestion only !

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559 Rad Labs Fingerprint Report

Approximately 60 mls of the container was sent to the 559 Analytical Lab for Fingerprint analysis. If the sample contained two or more layers, each layer was analyzed separately and reported as the sample ID and layer (i.e. 97P0001-001 Top, Bottom, or Middle). All analysis were done in accordance with procedure L-4178, "Fingerprint Procedure".

cutting oil
2° containment

SAMPLE ID	97J1045-001.003
Date of Analysis	Jan-22-1997
Physical Appearance	Light red, single phase, viscous liquid with no particulates.
Water Test	Negative
pH	NA. Organic sample.
Specific Gravity	0.8944
Miscible with	Organics
Reactive with Water	No
Ignitability (degrees C)	>73
Chlorinated Solvents	> 1000 ppm

Comments: NA = not applicable

Approval: Roger A Henderson

Approval: [illegible]

Report Date: Jan-23-1997

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To Gary Konwinski	From Kim Bowers
Co.	Co.
Dept.	Phone # 7129
Fax # 8244	Fax # 4365

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
97J1046-001.005

Lab Name: RFETS - ROL
Contract: NA
Project No.: NA
Site: RFETS
Location: B559
Matrix: (soil/water) WATER
Group: ROL
Lab Sample ID: VOAF01
Sample wt/vol: 4.0 (g/mL) G
Lab File ID: VOAF01.D
Level: (low/med)
Date Received: 1/22/97
% Moisture: not dec.
Date Analyzed: 1/23/97
GC Column: DB-624 ID: 0.53 (mm)
Dilution Factor: 125.0
Sample Extract Vol: 10000 (uL)
Sample Extract Aliquot Volume: 100 (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	1300	U
75-01-4	Vinyl chloride	1300	U
74-83-9	Bromomethane	1300	U
75-00-3	Chloroethane	1900	U
75-35-4	1,1-Dichloroethene	1900	U
67-64-1	Acetone	1100	J
75-15-0	Carbon disulfide	1300	U
75-09-2	Methylene chloride	1300	U
156-60-5	trans-1,2-Dichloroethene	1300	U
75-34-3	1,1-Dichloroethane	1300	U
156-59-2	cis-1,2-Dichloroethene	630	U
78-93-3	2-Butanone	360	J
67-66-3	Chloroform	630	U
71-55-6	1,1,1-Trichloroethane	630	U
56-23-5	Carbon tetrachloride	630	U
71-43-2	Benzene	630	U
107-06-2	1,2-Dichloroethane	630	U
79-01-6	Trichloroethene	630	U
78-87-5	1,2-Dichloropropane	630	U
75-27-4	Bromodichloromethane	630	U
	cis-1,3-Dichloropropene	630	U
108-10-1	4-Methyl-2-pentanone	630	U
108-88-3	Toluene	630	U
	trans-1,3-Dichloropropene	630	U
79-00-5	1,1,2-Trichloroethane	630	U
127-18-4	Tetrachloroethene	630	U
591-78-6	2-Hexanone	630	U
124-48-1	Chlorodibromomethane	630	U
108-90-7	Chlorobenzene	630	U
100-41-4	Ethylbenzene	630	U
	m,p-Xylene	1300	U
95-47-6	o-Xylene	630	U
100-42-5	Styrene	630	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
97J1045-001.006

Lab Name: RFETS - ROL Contract: NA

Project No.: NA Site: RFETS Location: B559 Group: ROL

Matrix: (soil/water) WATER Lab Sample ID: VOAF01

Sample wt/vol: 4.0 (g/mL) G Lab File ID: VOAF01.D

Level: (low/med) Date Received: 1/22/97

% Moisture: not dec. Date Analyzed: 1/23/97

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 125.0

Sample Extract Vol: 10000 (uL) Sample Extract Aliquot Volume: 100 (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
75-25-2	Bromoform	630	U
79-34-5	1,1,2,2-Tetrachloroethane	630	U
	1,3-Dichlorobenzene	630	U
	1,4-Dichlorobenzene	630	U
	1,2-Dichlorobenzene	630	U

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FORM 1D
PESTICIDES/PCB ORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
001

Lab Name: RFETS RADIOACTIVE ORGANIC LAB SDG NO: 97J1045

Matrix:	ORGANIC	Lab Sample ID:	JN239701
Sample wt/ 1 (g/ml)	g	Lab File ID:	JN239701
Concentrated Extrat Volume:		Date Received:	1/22/97
Injection Volume:	1.0 ul	Date Extracted:	1/23/97
Dilution Factor:	1	Date Analyzed:	1/23/97

CAS NO.	COMPOUND	CONCENTRATION UNITS: mg/Kg	
12674-11-2	Aroclor-1016	0.1	U
11104-28-2	Aroclor-1221	0.09	U
11141-16-5	Aroclor-1232	0.09	U
53469-21-9	Aroclor-1242	0.13	U
12672-29-6	Aroclor-1248	0.09	U
11097-69-1	Aroclor-1254	0.09	U
11096-82-5	Aroclor-1260	0.17	U

Charles L

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To Gary Konwinski	From Kim Bowers
Co.	Co.
Dept.	Phone # 7129
Fax # 8244	Fax # 4365

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559 Rad Labs Fingerprint Report

Approximately 60 mls of the container was sent to the 559 Analytical Lab for Fingerprint analysis. If the sample contained two or more layers, each layer was analyzed separately and reported as the sample ID and layer (i.e. 97P0001-001 Top, Bottom, or Middle). All analysis were done in accordance with procedure L-4178, "Fingerprint Procedure".

SAMPLE ID	97L1044-001.001
Date of Analysis	Jan-22-1997
Physical Appearance	Clear, single phase, non-viscous liquid with no particulates.
Water Test	Positive
pH	7
Specific Gravity	0.9986
Miscibile with	Water
Reactive with Water	No
Ignitability (degrees C)	NA. Aqueous Sample.
Chlorinated Solvents	NA. Positive water test.

~~door D7~~ men's locker room

RCRA Tank

Comments: NA = not applicable

Approval: Roger C. Thornburg

Approval: [signature]

Report Date: Jan-23-1997

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
97L1044-001.002

Lab Name: RFETS - ROL Contract: NA

Project No.: NA Site: RFETS Location: B559 Group: ROL

Matrix: (soil/water) WATER Lab Sample ID: VOAE03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VOAE03.D

Level: (low/med) Date Received: 1/22/97

% Moisture: not dec. Date Analyzed: 1/22/97

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Sample Extract Vol: (uL) Sample Extract Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	15	U
75-35-4	1,1-Dichloroethene	15	U
67-64-1	Acetone	9.9	JB
75-15-0	Carbon disulfide	10	U
75-09-2	Methylene chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5.6	B
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	10	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
97L1044-001.002

Lab Name: RFETS - ROL Contract: NA

Project No.: NA Site: RFETS Location: B559 Group: ROL

Matrix (soil/water) WATER Lab Sample ID: VOAE03

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: VOAE03.D

Level: (low/med) Date Received: 1/22/97

% Moisture: not dec. Date Analyzed: 1/22/97

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Sample Extract Vol: (uL) Sample Extract Aliquot Volume: (uL)

Concentration Units: (ug/L or ug/Kg) ug/L

CAS No.	Compound		Q
75-25-2	Bromoform	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
	1,3-Dichlorobenzene	5	U
	1,4-Dichlorobenzene	5	U
	1,2-Dichlorobenzene	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
VBLK01

Lab Name: RFETS - ROL Contract: NA

Project No.: NA Site: RFETS Location: B559 Group: ROL

Matrix: (soil/water) WATER Lab Sample ID: MBW0122

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: MBW0122.D

Level: (low/med) Date Received:

% Moisture: not dec. Date Analyzed: 1/22/97

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Sample Extract Vol: (uL) Sample Extract Aliquot Volume: (uL)

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	15	U
75-35-4	1,1-Dichloroethene	16	U
67-64-1	Acetone	4.6	J
75-15-0	Carbon disulfide	1	J
75-09-2	Methylene chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	1.5	J
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Chlorodibromomethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
	m,p-Xylene	10	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U

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FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories Sample No.: 1

Lab Sample ID: 97L1044-001 Bldg 444 Aqueous Sample

Section: ICPAES Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

% Solids for Sample : < 0.5000

Date Sampled: 1/22/97 SDG No. : JAN23

Lab Receipt Date: 1/22/97 QC Report No.: SD012897.RPT

Matrix: Water ____ Soil ____ Sludge ____ Other X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	Q (N V * E O O B +)	M
Aluminum	0.3000	U		P
Antimony	0.1000	U		P
Arsenic	0.1000	U		P
Barium	0.0300	U		P
Beryllium	0.0069	B		P
Cadmium	0.0200	U		P
Calcium	8.6792	B	E	P
Chromium	0.0500	U		P
Cobalt	0.0500	U		P
Copper	0.2059	B		P
Iron	0.6814	B		P
Lead	0.0600	U		P
Magnesium	1.2013	B		P
Manganese	0.0393	B		P
Molybdenum	0.0500	U		P
Nickel	0.1436	B		P
Phosphorus	0.5000	U		P
Selenium	0.0750	U		P
Silver	0.0300	U		P
Strontium	0.0432	B		P
Thallium	0.2024	B		P
Titanium	0.0200	U		P
Vanadium	0.0500	U		P
Zinc	1.2180	B	E	P

Color Before: White Clarity Before: Cloudy

Color After: Colorless Clarity After: Clear

Texture:

Artifacts:

Comments: Sample < 0.50 % Solids. Total Metals Digestion only !

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FORM 1A-1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Building 559 PA Inorganic Laboratories Sample No.: 2

Lab Sample ID: 971.1044-001 D Bldg 444 Aqueous Sample Lab Duplicate

Section: ICPAES Lab Sample I.D.s beginning with 'X' indicates TCLP Extract.

% Solids for Sample : < 0.5000

Date Sampled: 1/22/97 SDG No. : JAN23

Lab Receipt Date: 1/22/97 QC Report No.: SD012397.RPT

Matrix: Water ____ Soil ____ Sludge ____ Other X

Elements Identified and Measured

Concentration Units: mg/L

Analyte	Concentration	C	Q (N V + E D O S +)	M
Aluminum	0.3000	U		P
Antimony	0.1000	U		P
Arsenic	0.1000	U		P
Barium	0.0500	U		P
Beryllium	0.0074	B		P
Cadmium	0.0200	U		P
Calcium	9.5659	B	E	P
Chromium	0.0500	U		P
Cobalt	0.0500	U		P
Copper	0.2604	B		P
Iron	0.9441	B		P
Lead	0.0500	U		P
Magnesium	1.2304	B		P
Manganese	0.0461	B		P
Molybdenum	0.0500	U		P
Nickel	0.1558	B		P
Phosphorus	0.5507	B		P
Selenium	0.0750	U		P
Silver	0.0300	U		P
Strontium	0.0508	B		P
Thallium	0.1931	B		P
Titanium	0.0200	U		P
Vanadium	0.0500	U		P
Zinc	1.3075	B	E	P

Color Before: White Clarity Before: Cloudy

Color After: Colorless Clarity After: Clear

Texture:

Artifacts:

Comments: Sample < 0.50 % Solids. Total Metals Digestion only !

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ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE
CDPHE/EPA CONTACT RECORD

DATE: 02/04/97 TIME: 2:00 PM
SITE CONTACT: Gary Konwinski EXT: 2729
CDPHE/EPA CONTACT: Cathy Alstatt, Chris Gilbreath
TELEPHONE NO: 966-4482 692-3359
AGENCY: CDPHE

Purpose of Contact:
Discuss RCRA INSPECTIONS IN BUILDING 444

Discussion:
A meeting was held, at the on-site offices of CDPHE, to discuss the recent analytical data associated with the sampling of the RCRA tank system in Building 444. The sample indicated that the solution that is contained in the tank system was nonhazardous. This is due to the "rinsing effect" that has taken place from the non-process waters that have been collected by this system and pumped to Building 374 for treatment. Based upon this situation and the analytical data, the current daily inspections will be modified to quarterly inspections, for this RCRA stable system. The Building will be instructed to note this situation in the operating record and immediately suspend daily inspections and begin conducting quarterly inspections.

Follow-up required:
Modify the Master List and the Hazardous Waste Tank Systems Management Plan to reflect the RCRA stable configuration of this tank system.

REQUIRED DISTRIBUTION

R. April	-	DOE, RFFO	Fax 3710
F. Phillips	-	K-H, Bldg. 111	Fax 2156
J.K. Wrapp	-	K-H, T130C	Fax 5001
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W.M. Wierzbicki	-	SSOC, B750	Fax 7191
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