550 South Wadsworth Blvd., Suite 500, Lakewood, CO 80226 303/935-6505, Fax 303/935-6575

DATA ASSESSM ENT FORM

<u>Project Title</u>: Rocketdyne SSFL RFI

ProjectM anager: D.Hambrick

A nalysis/M ethod: A rom atic and H alogenated V olatiles by G C /EPA M ethod 8021B

QC Level: V1

<u>SDG</u>: L9902672

Matrix: Soil

No.ofSamples: 7

No.ofReanalyses/Dilutions: 0

<u>Date Reviewed</u>: April 17,2001 <u>Reviewer</u>: H.Chang

Reference: National Functional Guidelines for Organic Data Review (2/94)
Samples Reviewed: RS287, RS291, RS874, RS875, RS876, RS879, and RS880

Data Validation Findings

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	Findings	Q ualifications
1. <u>Sam ple M anagem ent</u>	A coording to the COCs, there were no broken sample containers and the COCs matched the samples. All samples were received within $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. All samples were analyzed within 14 days of sample collection.	N o qualifications were required.
3. <u>M ethod B lanks</u>	Four soilm ethod blanks, three on a prim ary column and one on a confirm ation column, were analyzed in this SDG. No target analyte detects were reported in any of the method blanks.	No qualifications were required.
4. LCS/BS	Three soilLCSswere analyzed in this SDG. All&Rswere within the laboratory QC limits.	No qualifications were required.
5. <u>Surrogates</u>	The surrogate recoveries for all sam ples were within the laboratory QC limits of 60-135% for 4-brom ochlorobenzene and 61-150% for fluorobenzene.	No qualifications were required.
6. MS/MSDs	MS/MSD analyseswere performed on sample RS291. All% Rs and RPDswere within the laboratory QC limits.	No qualifications were required.

Project: Rocketdyne SDG: L9902672 Analysis:GC-VOA

	Findings	Q ualifications
7. Field Q C Samples ER: RS300 (SDG L9902687) TB: RS877 and RS882 (SDG L9902687) FB: None FD: None	No associated field blank was identified for the sam ples this SDG. Equipm entrinsate RS300 had detects for chloroform and brom odichlorom ethane; how ever, neither compound was detected in the site sam ples. There were no detects reported in trip blanks.	No qualifications were required.
8. <u>Other</u>	The laboratory perform ed confirm ation analysis for sample RS800. The laboratory reported the confirm ation analysis results on a separate Form I. The Form I for the confirm ation analysis was used for validation since the detection the primary column was not confirmed and reported as a nondetect.	No qualifications were required.
	All sam ples were reported on a dry-weight basis. Reporting lim its for Sam ple RS879 were correctly adjusted for the dilution factor.	
Comments	Sam ple RS879 was analyzed at 2x dilution. A lithough the laboratory reported this sam ples as RS879D L, since the undiluted analysis was not reported, the D L suffix was removed from the sample ID on the Form I.	N one

 $^{^{1}}$ LevelV validation consists of cursory review of the sum m ary forms only. The reported values on the sum m ary forms are presumed to be correct and no verification of the values from the raw instrument output is performed.

Analytical Report

Client: Ogden Environmental
Project: Rocketdyne/313150002
Sample Matrix: Soil

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: RS287 Units: UG/KG Lab Code: L9902672-004 Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3 3 Notes r 0 0
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021B	11	1	NA	6/18/99	11	υμ
Chloromethane	EPA 5030	8021B	11	1	NA	6/18/99	11	ן ט
Vinyl Chloride	EPA 5030	8021B	11	1	NA	6/18/99	11	υl
Bromomethane	EPA 5030	8021B	11	. 1	NA	6/18/99	11	U
Chloroethane	EPA 5030	8021B	11	1	NA	6/18/99	11	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,1-Dichloroethene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Methylene Chloride	EPA 5030	8021B	21	1	NA	6/18/99	21	U
trans-1,2-Dichloroethene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
cis-1,2-Dichloroethene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1.1-Dichloroethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Chloroform	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Carbon Tetrachloride	EPA 5030	8021B	5	1	NA	6/18/99	5	υ
Benzene	EPA 5030	8021B	5	1	NA	6/18/99	5	υll
1.2-Dichloroethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Trichloroethene (TCE)	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,2-Dichloropropane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Bromodichloromethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021B	53	1	NA	6/18/99	53	U
Toluene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
trans-1,3-Dichloropropene	EPA 5030	8021B	5	1	NA	6/18/99	5	บ
cis-1,3-Dichloropropene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,1,2-Trichloroethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Tetrachloroethene (PCE)	EPA 5030	8021B	5	1	NA	6/18/99	5	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021B	21	1	NA	6/18/99	21	U
Chlorobenzene	EPA 5030	8021B	5	. 1	NA	6/18/99	5	U
Ethylbenzene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
m,p-Xylenes	EPA 5030	8021B	5	1	NA	6/18/99	5	U
o-Xylene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Bromoform	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1.3-Dichlorobenzene	EPA 5030	8021B	11	1	NA	6/18/99	11	U
1,4-Dichlorobenzene	EPA 5030	8021B	11	î	NA	6/18/99	11	U
1,2-Dichlorobenzene	EPA 5030	8021B	11	ī	NA	6/18/99	11	Ü
Chlorotrifluoroethene	EPA 5030	8021B	21	i	NA	6/18/99	21	Ū
1,1,1,2-Tetrachloroethane	EPA 5030	8021B	21	i	NA	6/18/99	21	Ū I
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021B	21	1	NA	6/18/99	21	ŭ l
2-Butanone (MEK)	EPA 5030	8021B	53	i	NA	6/18/99	53	บ
Acetone (WEK)	EPA 5030	8021B	53	î	NA	6/18/99	53	ŭ
1,2,4-Trimethylbenzene	EPA 5030	8021B	21	î	NA	6/18/99	21	ŭ
1,3,5-Trimethylbenzene	EPA 5030	8021B	21	1	NA	6/18/99	21	Ü
	EPA 5030	8021B	21	1	NA	6/18/99	21	ŭ 🗸
1,2-Dibromo-3-chloropropane (DBCP)	Pt W 2020	00211	21	1	1 47 1	3/10/22	4.	

Approved By

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Service Request: L9902672

Analytical Report

Client: Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9902672 Date Collected: 6/17/99 Date Received: 6/17/99

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RS291

L9902672-008

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result V 3
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021B	11	1	NA	6/18/99	11	υμ
Chloromethane	EPA 5030	8021B	11	1	NA	6/18/99	11	U
Vinyl Chloride	EPA 5030	8021B	11	ī	NA	6/18/99	11	U
Bromomethane	EPA 5030	8021B	11	ī	NA	6/18/99	11	U
Chloroethane	EPA 5030	8021B	11	1	NA	6/18/99	11	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1.1-Dichloroethene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Methylene Chloride	EPA 5030	8021B	22	1	NA	6/18/99	22	U
trans-1,2-Dichloroethene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
cis-1,2-Dichloroethene	EPA 5030	8021B	5	1	NA	6/18/99	5	ט
1,1-Dichloroethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Chloroform	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Carbon Tetrachloride	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Benzene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,2-Dichloroethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Trichloroethene (TCE)	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,2-Dichloropropane	EPA 5030	8021B	5	1	NA	6/18/99	5	บ
Bromodichloromethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021B	54	1	NA	6/18/99	54	U
Toluene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
trans-1,3-Dichloropropene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
cis-1,3-Dichloropropene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,1,2-Trichloroethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Tetrachloroethene (PCE)	EPA 5030	8021B	5	1	NA	6/18/99	5	บ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021B	22	1	NA	6/18/99	22	U
Chlorobenzene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Ethylbenzene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
m,p-Xylenes	EPA 5030	8021B	5	1	NA	6/18/99	5	U
o-Xylene	EPA 5030	8021B	5	1	NA	6/18/99	5	U
Bromoform	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1.1.2.2-Tetrachloroethane	EPA 5030	8021B	5	1	NA	6/18/99	5	U
1,3-Dichlorobenzene	EPA 5030	8021B	11	1	NA	6/18/99	11	U
1,4-Dichlorobenzene	EPA 5030	8021B	11	1	NA	6/18/99	11	U
1.2-Dichlorobenzene	EPA 5030	8021B	11	1	NA	6/18/99	11	U
Chlorotrifluoroethene	EPA 5030	8021B	22	1	NA	6/18/99	22	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021B	22	1	NA	6/18/99	22	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021B	22	1	NA	6/18/99	22	U
2-Butanone (MEK)	EPA 5030	8021B	54	1	NA	6/18/99	54	U
Acetone	EPA 5030	8021B	54	1	NA	6/18/99	54	υ
1,2,4-Trimethylbenzene	EPA 5030	8021B	22	1	NA	6/18/99	22	U
1,3,5-Trimethylbenzene	EPA 5030	8021B	22	1	NA	6/18/99	22	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021B	22	1	NA	6/18/99	22	υ {
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Approved By: 1844/021397p

Analytical Report

Ogden Environmental Client: Rocketdyne/313150002 Project: Soil

Sample Matrix:

Service Request: L9902672 Date Collected: 6/14/99 Date Received: 6/14/99

Halogenated and Aromatic Volatile Organic Compounds

Units: UG/KG RS874 Sample Name: Basis: Dry Lab Code: L9902672-001

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3 3 Notes (CO)
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021B	11	1	NA	6/15/99	11	υu
Chloromethane	EPA 5030	8021B	11	1	NA	6/15/99	11	U
Vinyl Chloride	EPA 5030	8021B	11	1	NA	6/15/99	11	U
Bromomethane	EPA 5030	8021B	11	1	NA	6/15/99	11	U
Chloroethane	EPA 5030	8021B	11	1	NA	6/15/99	11	บ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021B	6	1	NA	6/15/99	6	U
1.1-Dichloroethene	EPA 5030	8021B	6	1	NA.	6/15/99	6	U
Methylene Chloride	EPA 5030	8021B	22	1	NA	6/15/99	22	U
trans-1,2-Dichloroethene	EPA 5030	8021B	6	1	NA	6/15/99	6	U
cis-1,2-Dichloroethene	EPA 5030	8021B	6	1	NA	6/15/99	6	U
1,1-Dichloroethane	EPA 5030	8021B	6	1	NA	6/15/99	6	U
Chloroform	EPA 5030	8021B	6	1	NA	6/15/99	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021B	6	1	NA	6/15/99	6	U
Carbon Tetrachloride	EPA 5030	8021B	6	1	NA	6/15/99	6	U
Benzene	EPA 5030	8021B	6	1	NA	6/15/99	6	U
1,2-Dichloroethane	EPA 5030	8021B	6	i	NA	6/15/99	6	U
Trichloroethene (TCE)	EPA 5030	8021B	6	ĺ	NA	6/15/99	6	U
1,2-Dichloropropane	EPA 5030	8021B	6	i	NA	6/15/99	6	U
Bromodichloromethane	EPA 5030	8021B	6	i	NA	6/15/99	6	Ü
2-Chloroethyl Vinyl Ether	EPA 5030	8021B	56	i	NA	6/15/99	56	ŭ
Toluene	EPA 5030	8021B	6	1	NA	6/15/99	6	Ū
trans-1,3-Dichloropropene	EPA 5030	8021B	6	i	NA	6/15/99	6	υ
cis-1,3-Dichloropropene	EPA 5030	8021B	6	1	NA	6/15/99	6	ŭ
	EPA 5030	8021B	6	i	NA	6/15/99	6	ŭ
1,1,2-Trichloroethane	EPA 5030	8021B	6	ì	NA	6/15/99	6	Ŭ
Tetrachloroethene (PCE)	EPA 5030	8021B	22	i	NA	6/15/99	22	Ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021B	6	1	NA	6/15/99	6	ŭ
Chlorobenzene	EPA 5030	8021B	6	1	NA	6/15/99	6	ŭ
Ethylbenzene	EPA 5030	8021B	6	1	NA	6/15/99	6	Ŭ
m,p-Xylenes	EPA 5030	8021B	6	1	NA	6/15/99	6	ŭ
o-Xylene	EPA 5030	8021B	6	1	NA	6/15/99	6	ŭ
Bromoform		8021B	6	1	NA	6/15/99	6	Ü
1,1,2,2-Tetrachloroethane	EPA 5030	8021B	11	1	NA NA	6/15/99	11	บี
1,3-Dichlorobenzene	EPA 5030	8021B	11	1	NA	6/15/99	11	ŭ
1,4-Dichlorobenzene	EPA 5030		11	1	NA	6/15/99	11	υ
1,2-Dichlorobenzene	EPA 5030	8021B		1	NA NA	6/15/99	22	Ü
Chlorotrifluoroethene	EPA 5030	8021B	22				22	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021B	22	1	NA NA	6/15/99 6/15/99	22	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021B	22	_			56	บ
2-Butanone (MEK)	EPA 5030	8021B	56	1	NA	6/15/99	56	U
Acetone	EPA 5030	8021B	56	1	NA	6/15/99		U
1,2,4-Trimethylbenzene	EPA 5030	8021B	22	1	NA	6/15/99	22	
1,3,5-Trimethylbenzene	EPA 5030	8021B	22	1	NA	6/15/99	22	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021B	22	1	NA	6/15/99	22	บ ∜

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Analytical Report

Ogden Environmental Client: Rocketdyne/313150002 Project: Soil

Service Request: L9902672 Date Collected: 6/14/99

Sample Matrix:

Test Notes:

Date Received: 6/14/99

Halogenated and Aromatic Volatile Organic Compounds

RS875 Sample Name: Lab Code: L9902672-002 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3 3 8
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021B	14	1	NA	6/15/99	14	υu
Chloromethane	EPA 5030	8021B	14	i	NA	6/15/99	14	ŭΙ
Vinyl Chloride	EPA 5030	8021B	14	1	NA	6/15/99	14	Ŭ
Bromomethane	EPA 5030	8021B	14	1	NA	6/15/99	14	Ŭ
Chloroethane	EPA 5030	8021B	14	i	NA	6/15/99	14	ŭ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021B	7	1	NA	6/15/99	7	ŭ
1,1-Dichloroethene	EPA 5030	8021B	7	î	NA	6/15/99	7	ŭ
Methylene Chloride	EPA 5030	8021B	28	1	NA	6/15/99	28	ŭ
trans-1,2-Dichloroethene	EPA 5030	8021B	7	1	NA	6/15/99	7	ŭ
cis-1,2-Dichloroethene	EPA 5030	8021B	7	1	NA	6/15/99	7	ŭ
1,1-Dichloroethane	EPA 5030	8021B	7	1	NA	6/15/99	7	ŭ
	EPA 5030	8021B	7	1	NA	6/15/99	7	ŭ
Chloroform	EPA 5030	8021B	7	1	NA	6/15/99	7	Ü
1,1,1-Trichloroethane (TCA)		8021B	7	l	NA NA	6/15/99	7	Ü
Carbon Tetrachloride	EPA 5030			i I	NA NA	6/15/99	7	Ü
Benzene	EPA 5030	8021B	7	1	NA NA	6/15/99	7	บี
1,2-Dichloroethane	EPA 5030	8021B	7	1	NA NA		7	Ü
Trichloroethene (TCE)	EPA 5030	8021B	7	-		6/15/99	7	Ü
1,2-Dichloropropane	EPA 5030	8021B	7	1	NA	6/15/99		1 1
Bromodichloromethane	EPA 5030	8021B	7	1	NA	6/15/99	7	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021B	70	1	NA	6/15/99	70	U
Toluene	EPA 5030	8021B	7	1	NA	6/15/99	7	U
trans-1,3-Dichloropropene	EPA 5030	8021B	7	1	NA	6/15/99	7	U
cis-1,3-Dichloropropene	EPA 5030	8021B	7	1	NA	6/15/99	7	U
1,1,2-Trichloroethane	EPA 5030	8021B	7	I .	NA	6/15/99	7	U
Tetrachloroethene (PCE)	EPA 5030	8021B	7	I	NA	6/15/99	7	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021B	28	l .	NA	6/15/99	28	U
Chlorobenzene	EPA 5030	8021B	7	1	NA	6/15/99	7	U
Ethylbenzene	EPA 5030	8021B	7	1	NA	6/15/99	7	U
m,p-Xylenes	EPA 5030	8021B	7	I	NA	6/15/99	7	U
o-Xylene	EPA 5030	8021B	7	1	NA	6/15/99	7	U
Bromoform	EPA 5030	8021B	7	1	NA	6/15/99	7	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021B	7	1	NA	6/15/99	7	U
1,3-Dichlorobenzene	EPA 5030	8021B	14	1	NA	6/15/99	14	U
1,4-Dichlorobenzene	EPA 5030	8021B	14	1	NA	6/15/99	14	U
1,2-Dichlorobenzene	EPA 5030	8021B	14	l	NA	6/15/99	14	U
Chlorotrifluoroethene	EPA 5030	8021B	28	1	NA	6/15/99	28	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021B	28	1	NA	6/15/99	28	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021B	28	1	NA	6/15/99	28	U
2-Butanone (MEK)	EPA 5030	8021B	70	1	NA	6/15/99	70	U
Acetone	EPA 5030	8021B	70	1	NA	6/15/99	70	U
1,2,4-Trimethylbenzene	EPA 5030	8021B	28	1	NA	6/15/99	28	U
1,3,5-Trimethylbenzene	EPA 5030	8021B	28	1	NA	6/15/99	28	U ,
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021B	28	1	NA	6/15/99	28	U 🕻
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Analytical Report

Client: Ogden Environmental
Project: Rocketdyne/313150002
Sample Matrix: Soil

Service Request: L9902672 **Date Collected:** 6/14/99 **Date Received:** 6/14/99

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: RS876 Lab Code: L9902672-003 Units: UG/KG Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result v 3 Notes W 0	geng.
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021B	11	1	NA	6/15/99	11	υμ	
Chloromethane	EPA 5030	8021B	11	1	NA	6/15/99	11	U	
Vinyl Chloride	EPA 5030	8021B	11	1	NA	6/15/99	11	U	
Bromomethane	EPA 5030	8021B	11	1	NA	6/15/99	11	U	
Chloroethane	EPA 5030	8021B	11	1	NA	6/15/99	11	U	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
1,1-Dichloroethene	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
Methylene Chloride	EPA 5030	8021B	21	1	NA	6/15/99	21	U	
trans-1,2-Dichloroethene	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
cis-1,2-Dichloroethene	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
1,1-Dichloroethane	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
Chloroform	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
Carbon Tetrachloride	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
Benzene	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
1,2-Dichloroethane	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
Trichloroethene (TCE)	EPA 5030	8021B	5	ī	NA	6/15/99	5	Ū I	
1,2-Dichloropropane	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
Bromodichloromethane	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
2-Chloroethyl Vinyl Ether	EPA 5030	8021B	53	ī	NA	6/15/99	53	U	
Toluene	EPA 5030	8021B	5	ī	NA	6/15/99	5	U	
trans-1,3-Dichloropropene	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
cis-1,3-Dichloropropene	EPA 5030	8021B	5	î	NA	6/15/99	5	U	
1,1,2-Trichloroethane	EPA 5030	8021B	5	1	NA	6/15/99	5	U	
Tetrachloroethene (PCE)	EPA 5030	8021B	5	ī	NA	6/15/99	5	U	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021B	21	î	NA	6/15/99	21	Ū	
Chlorobenzene	EPA 5030	8021B	5	i	NA	6/15/99	5	Ŭ	
Ethylbenzene	EPA 5030	8021B	5	î	NA	6/15/99	5	Ü	
m,p-Xylenes	EPA 5030	8021B	5	1	NA	6/15/99	5	Ü	
o-Xylene	EPA 5030	8021B	5	ì	NA	6/15/99	5	ŭ	
Bromoform	EPA 5030	8021B	5	1	NA	6/15/99	5	ŭ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021B	5	1	NA NA	6/15/99	5	Ŭ	
1,3-Dichlorobenzene	EPA 5030	8021B	11	î	NA	6/15/99	11	ŭ	
1,4-Dichlorobenzene	EPA 5030	8021B	11	1	NA NA	6/15/99	11	ŭ	
1.2-Dichlorobenzene	EPA 5030	8021B	11	1	NA NA	6/15/99	11	Ü	
Chlorotrifluoroethene	EPA 5030	8021B	21	1	NA NA	6/15/99	21	Ü	
	EPA 5030	8021B	21	1	NA NA	6/15/99	21	ŭ	
1,1,2-Tetrachloroethane 1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021B	21	1	NA	6/15/99	21	ŭ	
	EPA 5030	8021B	53	1	NA NA	6/15/99	53	υ	
2-Butanone (MEK)	EPA 5030	8021B	53	1	NA NA	6/15/99	53	υ	
Acetone	EPA 5030	8021B	33 21	1	NA NA	6/15/99	21	Ü	
1,2,4-Trimethylbenzene	EPA 5030	8021B	21	1	NA NA	6/15/99	21	U ,	
1,3,5-Trimethylbenzene	EPA 5030	8021B	21	1	NA NA	6/15/99	21	บ √	
1,2-Dibromo-3-chloropropane (DBCP)	ELW 2020	6021D	41	1	IAM	0/13/77	4 I		

Approved By:

OGDEN VALUDATED

Date: 8/2/99

07,005

Analytical Report

Client: Ogden Environmental
Project: Rocketdyne/313150002

Sample Matrix: S

Service Request: L9902672 Date Collected: 6/17/99 Date Received: 6/17/99

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: RS8795L Lab Code: L9902672-018

Test Notes: C4A

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 0 3 Notes [CO]
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021B	21	2	NA	6/18/99	21	บน
Chloromethane	EPA 5030	8021B	21	2	NA	6/18/99	21	ן ט
Vinyl Chloride	EPA 5030	8021B	21	2	NA	6/18/99	21	υ
Bromomethane	EPA 5030	8021B	21	2	NA	6/18/99	21	U
Chloroethane	EPA 5030	8021B	21	2	NA	6/18/99	21	υll
Trichlorofluoromethane (CFC 11)	EPA 5030	8021B	10	2	NA	6/18/99	10	U
1,1-Dichloroethene	EPA 5030	8021B	10	2	NA	6/18/99	10	υll
Methylene Chloride	EPA 5030	8021B	41	2	NA	6/18/99	41	Ū
trans-1,2-Dichloroethene	EPA 5030	8021B	10	2	NA	6/18/99	10	Ü
cis-1,2-Dichloroethene	EPA 5030	8021B	10	2	NA	6/18/99	10	ŭ
1,1-Dichloroethane	EPA 5030	8021B	10	2	NA	6/18/99	10	ŭ
Chloroform	EPA 5030	8021B	10	2	NA	6/18/99	10	ŭ
	EPA 5030	8021B	10	2	NA	6/18/99	10	Ŭ
1,1,1-Trichloroethane (TCA) Carbon Tetrachloride	EPA 5030	8021B	10	2	NA	6/18/99	10	ŭ
	EPA 5030	8021B	10	2	NA	6/18/99	10	ŭ
Benzene	EPA 5030	8021B	10	2	NA	6/18/99	10	บี
1,2-Dichloroethane	EPA 5030	8021B	10	2	NA NA	6/18/99	10	บี
Trichloroethene (TCE)	EPA 5030	8021B	10	2	NA NA	6/18/99	10	Ü
1,2-Dichloropropane		8021B	10		NA NA	6/18/99	10	Ü
Bromodichloromethane	EPA 5030			2	NA NA		103	บ
2-Chloroethyl Vinyl Ether	EPA 5030	8021B	103	2		6/18/99		บี
Toluene	EPA 5030	8021B	10	2	NA	6/18/99	10	Ü
trans-1,3-Dichloropropene	EPA 5030	8021B	10	2	NA	6/18/99	10	
cis-1,3-Dichloropropene	EPA 5030	8021B	10	2	NA	6/18/99	10	U
1,1,2-Trichloroethane	EPA 5030	8021B	10	2	NA	6/18/99	10	Ü
Tetrachloroethene (PCE)	EPA 5030	8021B	10	2	NA	6/18/99	10	រ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021B	41	2	NA	6/18/99	41	บ
Chlorobenzene	EPA 5030	8021B	10	. 2	NA	6/18/99	10	Ü
Ethylbenzene	EPA 5030	8021B	10	2	NA	6/18/99	10	U
m,p-Xylenes	EPA 5030	8021B	10	2	NA	6/18/99	10	U
o-Xylene	EPA 5030	8021B	10	2	NA	6/18/99	10	U
Bromoform	EPA 5030	8021B	10	2	NA	6/18/99	10	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021B	10	2	NA	6/18/99	10	U
1,3-Dichlorobenzene	EPA 5030	8021B	21	2	NA	6/18/99	21	U
1,4-Dichlorobenzene	EPA 5030	8021B	21	2	NA	6/18/99	21	U
1,2-Dichlorobenzene	EPA 5030	8021B	21	2	NA	6/18/99	21	U
Chlorotrifluoroethene	EPA 5030	8021B	41	2	NA	6/18/99	41	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021B	41	2	NA	6/18/99	41	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021B	41	2	NA	6/18/99	41	U
2-Butanone (MEK)	EPA 5030	8021B	103	2	NA	6/18/99	103	U
Acetone	EPA 5030	8021B	103	2	NA	6/18/99	103	U
1,2,4-Trimethylbenzene	EPA 5030	8021B	41	2	NA	6/18/99	41	U
1,3,5-Trimethylbenzene	EPA 5030	8021B	41	2	NA	6/18/99	41	U ,
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021B	41	2	NA	6/18/99	41	บ ₩

C4A

PQL is elevated because of matrix interferences and because the sample required diluting.

Approved By

GDEN VALIDATED

Date: 8/2/99

Analytical Report

Client: Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9902672 Date Collected: 6/17/99 Date Received: 6/17/99

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RS880 L9902672-019 Confirmation

Units: UG/KG

Basis: Dry

	ξ.
Result Notes	(X)

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3 Notes &
Dichlorodifluoromethane (CFC 12)	EPA 5030	8260B	11	1	NA	6/19/99	11	υu
Chloromethane	EPA 5030	8260B	11	i	NA	6/19/99	11	U
Vinyl Chloride	EPA 5030	8260B	11	ī	NA	6/19/99	11	Ū
Bromomethane	EPA 5030	8260B	11	1	NA	6/19/99	11	U
Chloroethane	EPA 5030	8260B	11	I	NA	6/19/99	11	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8260B	6	1	NA	6/19/99	6	U
1,1-Dichloroethene	EPA 5030	8260B	6	1	NA	6/19/99	6	U
Methylene Chloride	EPA 5030	8260B	23	l	NA	6/19/99	23	U
trans-1,2-Dichloroethene	EPA 5030	8260B	6	1	NA	6/19/99	6	υ
cis-1,2-Dichloroethene	EPA 5030	8260B	6	1	NA	6/19/99	6	U
1.1-Dichloroethane	EPA 5030	8260B	6	1	NA	6/19/99	6	Ū
Chloroform	EPA 5030	8260B	6	1	NA	6/19/99	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8260B	6	ĺ	NA	6/19/99	6	Ū
Carbon Tetrachloride	EPA 5030	8260B	6	1	NA	6/19/99	6	U
Benzene	EPA 5030	8260B	6	1	NA	6/19/99	6	Ŭ
1,2-Dichloroethane	EPA 5030	8260B	6	î	NA	6/19/99	6	Ū
Trichloroethene (TCE)	EPA 5030	8260B	6	i	NA	6/19/99	6	Ŭ
1,2-Dichloropropane	EPA 5030	8260B	6	1	NA	6/19/99	6	Ü
Bromodichloromethane	EPA 5030	8260B	6	i	NA	6/19/99	6	Ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8260B	56	1	NA	6/19/99	56	Ü
Toluene	EPA 5030	8260B	6	i	NA	6/19/99	6	Ü
trans-1,3-Dichloropropene	EPA 5030	8260B	6	1	NA	6/19/99	6	ŭ
cis-1,3-Dichloropropene	EPA 5030	8260B	6	1	NA	6/19/99	6	บี่
1,1,2-Trichloroethane	EPA 5030	8260B	6	1	NA	6/19/99	6	ŭ
Tetrachloroethene (PCE)	EPA 5030	8260B	6	ì	NA	6/19/99	6	Ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8260B	23	1	NA	6/19/99	23	ŭ
Chlorobenzene	EPA 5030	8260B	6	1	NA	6/19/99	6	Ü
Ethylbenzene	EPA 5030	8260B	6	1	NA	6/19/99	6	U
•	EPA 5030	8260B	6	1	NA NA	6/19/99	6	U
m,p-Xylenes	EPA 5030	8260B	6	1	NA NA	6/19/99	6	U
o-Xylene	EPA 5030	8260B	6	1	NA NA	6/19/99	6	U
Bromoform	EPA 5030	8260B	6	1	NA NA	6/19/99	6	Ü
1,1,2,2-Tetrachloroethane	EPA 5030	8260B	11	1	NA NA	6/19/99	11	U
1,3-Dichlorobenzene	EPA 5030	8260B	11	l l	NA NA	6/19/99	11	U
1,4-Dichlorobenzene	EPA 5030	8260B	11	1	NA NA	6/19/99	11	Ü
1,2-Dichlorobenzene		8260B	23	1	NA NA	6/19/99	23	U
Chlorotrifluoroethene	EPA 5030			1 1				
1,1,1,2-Tetrachloroethane	EPA 5030	8260B 8260B	23 23	•	NA NA	6/19/99 6/19/99	23 23	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030			1			23 56	1 1
2-Butanone (MEK)	EPA 5030	8260B	56	1	NA NA	6/19/99	56 56	UU
Acetone	EPA 5030	8260B	56 22	•		6/19/99		1 1
1,2,4-Trimethylbenzene	EPA 5030	8260B	23	1	NA	6/19/99	23	U
1,3,5-Trimethylbenzene	EPA 5030	8260B	23	1	NA	6/19/99	23 23	n 1
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8260B	23	1	NA	6/19/99	23	U 1

07016

OZG72VOA DO OGDEN VALIDATED

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550 South W adsworth B lvd . Ste . 500 D enver, CO 80226 (803) 935-6505

Rocketdyne

ProjectM anager: D .H am brick

Analysis/M ethod: H exavalentchrom ium , pH

No.ofSamples:12

Date Completed: October 20, 1998

Reviewer: K.Chapman

Ref: USEPA ContractLaboratory Program National Functional Guidelines For Inorganic Data Review (Feb. 1994), Colum bia Analytical Services SO P 96 W ET -PH S-00 (Revision 1,7/26/96), and Colum bia Analytical Services SO P

96₩ ET-C16S-00M (Revision 1,7/26/96)

SDG: L9800238

SamplesReviewed: RS683, RS684, RS685, RS686, RS688, RS689, RS690, RS691, RS692, RS693, RS694, RS696

EPA LevelV-GeneralM inerals A seessment Form

	Problem s	Q ualifications
1. Sample Management	The holding time for the pH analysis was exceeded. A llother holding times were met. The temperature upon receipt at the laboratory was 7 C.	The pH result for sam ple RS683 was qualified as estim ated, "U." As the target analytes are not volatile, qualifications were not deem ed necessary.
2. Method Blanks	A comptable as reviewed.	N one
3. LCS/BS	A coeptable as reviewed.	N one
4. Duplicates Perform ed on sam ple RS683	Acceptable as reviewed. (pH only)	N one
5. MSMSDs Perform ed on sam ple RS688	A coeptable as reviewed.	N one
6. Field Q.C. Samples ER: RF724 FB: RF848 Field duplicates: none	No detects were reported for either field Q C sample.	N one

T400W C66 Revision 1

7. <u>0 ther</u>	N one	N one
8. Comments	N one	N one

T400W C66 Revision 1

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9800238

Date Collected: 1/29/98 Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RS683

L9800238-003

Basis: Dry

Analyte

pН

Units pH UNITS Analysis Method 9045

PQL 0.1

Dilution Date Factor Extracted

Date Analyzed 1/30/98 1/30/98

Result

7.2

LEVEL V

OGDEN VALIDATED

Approved By: 1844/021397p

7002

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9800238 Date Collected: 1/29/98

Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code:

RS684

Test Notes:

L9800238-004

Basis: Dry

Analysis Dilution Date Date Analyte Units Method PQL Factor Extracted Analyzed Result Chromium, Hexavalent MG/KG 7196 0.2 5 1/30/98 1/30/98 1

LEVEL V

OGDEN VALIDATED

7003

00238WET.SA2 - Sample 3/16/98

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Service Request: L9800238 Date Collected: 1/29/98

Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code:

RS685

Soil

Test Notes:

L9800238-005

Basis: Dry

Analyte

Chromium, Hexavalent

Units MG/KG Analysis Method 7196

PQL 0.2

Dilution Factor Extracted 5

Date 1/30/98

Date Analyzed 1/30/98

Result 1

Result Notes

U

LEVEL V

GDEN VALIDATED

7004

00238WET.SA2 - Sample (2) 3/16/98

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Sludge

Service Request: L9800238 Date Collected: 1/29/98

Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code:

RS686

Test Notes:

L9800238-006

Basis: Dry

Analyte

Units

Analysis Method

Dilution

Date Factor Extracted

Date Analyzed

Result

Chromium, Hexavalent

MG/KG

7196

PQL 0.2

5

1/30/98

1/30/98

1

U

LEVEL V

<u>OGDEN</u> VALIDATED

7005

00238WET.SA2 - Sample (3) 3/16/98

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9800238

Date Collected: 1/29/98

Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code:

RS688

Test Notes:

L9800238-008

Basis: Dry

Analyte

Chromium, Hexavalent

Units MG/KG Analysis Method 7196

PQL 0.2

Dilution Factor Extracted

Date 1/30/98

Date Analyzed 1/30/98

Result 0.2

U

LEVEL V

GDEN VALIDATED

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9800238

Date Collected: 1/29/98 Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code:

RS689

Test Notes:

L9800238-009

Basis: Dry

Analysis Dilution Date Date Analyte Units Method PQL Factor Extracted Analyzed Result Chromium, Hexavalent MG/KG 7196 0.2 1/30/98 1/30/98 1 U

LEVELV

OGDEN VALDATED

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9800238

Date Collected: 1/29/98 Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code:

Test Notes:

RS690

L9800238-010

Basis: Dry

Analysis Dilution Date Date Analyte Units Method PQL Factor Extracted Result Analyzed Chromium, Hexavalent MG/KG 7196 0.2 10 1/30/98 1/30/98 2 U

LEVEL V

OGDEN VALIDATED

7008

00238WET.SA2 - Sample (6) 3/16/98

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9800238 Date Collected: 1/29/98

Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code:

RS691

Test Notes:

L9800238-011

Basis: Dry

Analyte	Units	Analysis Method	PQL	Dilution Factor		Date Analyzed	Result	Result Qual Co
Chromium, Hexavalent	MG/KG	7196	0.2	25	1/30/98	1/30/98	5	Uu

LEVEL V

GDEN VALIDATED

7009

Analytical Report

Client:

Project: Sample Matrix:

Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9800238

Date Collected: 1/29/98 Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RS692

L9800238-012

Basis: Dry

Analyte

Chromium, Hexavalent

Units MG/KG Analysis Method 7196

PQL 0.2

Dilution Factor Extracted 10

Date 1/30/98

Date Analyzed Result 1/30/98 2

Notes

U

Result

LEVELV

<u>OGDEN VALIDATED</u>

7010

00238WET.SA2 - Sample (8) 3/16/98

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9800238

Date Collected: 1/29/98 Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code:

RS693

Test Notes:

L9800238-013

Basis: Dry

Analysis Date Dilution Date Resul Analyte Units Method PQL Factor Extracted Analyzed Result Notes Chromium, Hexavalent MG/KG 7196 0.2 10 1/30/98 1/30/98 2 U

LEVELV

7011

00238WET.SA2 - Sample (9) 3/16/98

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Sludge

Service Request: L9800238

Date Collected: 1/29/98 Date Received: 1/29/98

Inorganic Parameters

Sample Name:

Lab Code:

RS694

Test Notes:

L9800238-014

Basis: Dry

Analyte

Chromium, Hexavalent

Units MG/KG Analysis Method 7196

PQL 0.2

Dilution Factor Extracted 25

Date Date Analyzed 1/30/98 1/30/98

Result 5

U

LEVELV

EN VALIDATED

00238WET.SA2 - Sample (10) 3/16/98

Z.Q.12

Analytical Report

Client:

Project:

Sample Matrix:

Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9800238 Date Collected: 1/29/98

Date Received: 1/29/98

Inorganic Parameters

Sample Name:

RS696

Lab Code: Test Notes:

L9800238-017

Basis: Dry

Analyte Chromium, Hexavalent

Units MG/KG Analysis Method 7196

PQL 0.2

Dilution Date Factor Extracted 1 1/30/98

Date Analyzed

Result

1/30/98

0.2

U

EN VALIDATED

Approved By: (

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550 South W adsworth B lvd . Ste . 500 D enver, CO 80226 (803) 935-6505

Rocketdyne

ProjectM anager: D .H am brick A nalysisM ethod: G eneralM ineral

No.ofSamples:19

Date Completed: July 1, 1998 Reviewer: K. Chapman

Ref: USEPA ContractLaboratory Program National Functional Guidelines For Inorganic Data Review (Feb. 1994), Colum bia Analytical Services SO P 96-W ET-FISE-00M (Revision 1,7/26/96), Colum bia Analytical Services SO P 96-W ET-FISE-00M (Revision 1,7/26/96), and Colum bia Analytical Services SO P 96-W ET-PH S-00 (Revision 1,7/26/96).

7/26/96)

SDG: L9703698

Sam ples Reviewed: RF733, RF734, RF735, RF143, RF144, RF145, RF146, RF147, RF148, RF150, RF151, RF157, RF736, RF738, RF739, RF740, RF741, RF702, and RF160

EPA Level V-G eneral M inerals A seessm ent Form

	Problem s	Q ualifications
1. Sample Management	Holding time exceeded for pH, nibrite, and nibrate analyses.	A llaite sam ple pH results qualified as estim ated, "U." N itrate and nitrite results for sam ple RF738 qualified as estim ated, "UJ."
2. <u>Method Blanks</u>	A comptable as reviewed.	N one
3. LCS/BS	A coeptable as reviewed.	N one
4. Duplicates Perform ed on sam ples RF143, RF702, and RF750	Acceptable as reviewed. (pH only)	N one
5. MS/MSDs Perform ed on sam plesRF143 and RF750(SDG 3713)	Acceptable as reviewed.	N one
6. Field Q.C. Samples	No detects were reported in the field OC samples. Not applicable to the	N one

T400W C34 Revision 1

ER: RF810 FB: RF848	pH analysis.	
7. <u>0 the</u> r	N one	N one
8. Comments	N one	N one

T400W C34 Revision 1

Analytical Report

Client: Project:

Sample Matrix:

Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703698

Date Collected: 10/29/97

Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF143

L9703698-004

Basis: Dry

Analyte

pΗ

Units pH UNITS

Analysis Method 9045

PQL 0.1

Dilution Factor Extracted 1

Date 10/30/97

Date Analyzed Result 10/30/97 8.5

LEVEL V **OGDEN VALIDATED**

Approved By:

Ti Parl Date: 12/6/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/29/97

Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF144

L9703698-005

Basis: Dry

Analyte

pΗ

Units pH UNITS Analysis Method PQL 9045 0.1

Dilution Date Factor Extracted 10/30/97

Date Analyzed 10/30/97

Result 7.6

LEVEL V **OGDEN VALIDATED**

Approved By: _

Date: 12/6/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698

Date Collected: 10/29/97

Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF145

L9703698-006

Basis: Dry

Analyte

рΗ

Units pH UNITS Analysis Method 9045

PQL 0.1

Dilution 1

Date Factor Extracted 10/30/97

Date Analyzed 10/30/97

Result 7.7

LEVEL V <u>OGDEN</u> VALIDATED

Approved By:

Date: 12/6/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703698 Date Collected: 10/29/97

Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Sample Matrix:

RF146

Lab Code: Test Notes: L9703698-007

Basis: Dry

Analyte

Analysis Units Method

Dilution Date

Date Analyzed

Result

pН

PQL Factor Extracted pH UNITS 9045 0.1 10/30/97 10/30/97 7.5

> LEVEL V <u>ogden</u> validated

Approved By: 1544/021397p

The Date: 12/6/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698

Date Collected: 10/29/97 Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF147

L9703698-008

Basis: Dry

Analyte рΗ

Units pH UNITS Analysis Method 9045

PQL 0.1

Dilution Factor Extracted

Date Date Analyzed 10/30/97 10.30/97

Result 7.0

Notes

LEVEL V

OGDEN VALIDATED

Approved By:

Date: 12/6/97

03698WET.SA1 - Sample (8) 12/5/97

Page No

Analytical Report

Client: Project:

Ogden Environmental

Sample Matrix:

Rocketdyne/313150002

Soil

Service Request: L9703698

Date Collected: 10/29/97 Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: **RF148**

L9703698-009

Basis: Dry

Analyte рΗ

Units pH UNITS Analysis Method PQL 9045 0.1

Dilution

Date Factor Extracted 10/30/97

Date Analyzed Result 10/30/97 8.0

LEVEL V

OGDEN VALIDATED

Approved By:

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698

Date Collected: 10/30/97

Date Received: 10/30/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF150

L9703698-010

Basis: Dry

Analyte

рΗ

Units pH UNITS Analysis Method 9045

PQL 0.1

Dilution

Date Factor Extracted 10/31/97

Date Analyzed 10/31/97

Result 7.6

LEVEL V OGDEN VALIDATED

Approved By:

TeRool

Date: 12/6/97

Analytical Report

Client:

Project: Sample Matrix:

Ogden Environmental Rocketdyne/313150002

Service Request: L9703698 Date Collected: 10/30/97

Date Received: 10/30/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF151

L9703698-011

Basis: Dry

Analyte pΗ

Units pH UNITS Analysis Method **PQL** 9045 0.1

Dilution

Date Factor Extracted 10/31/97

Date Analyzed 10/31/97

Result 7.4

LEVEL V <u>ogden</u> validated

Date: 12/4/97 JeRus 7011 Approved By: 1844/021397p

03698WET SA2 - Sample 12/5/97

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703698

Date Collected: 10/30/97

Date Received: 10/30/97

Inorganic Parameters

Sample Name:

Lab Code:

RF157

L9703698-012

Basis: Dry

Analyte рΗ

Test Notes:

Units pH UNITS

PQL 0.1

Analysis

Method

9045

Dilution Date Factor Extracted 1 10/31/97

Date Analyzed 10/31/97

Notes Result 8.3

LEVEL V **OGDEN VALIDATED**

Approved By:

Date: 12/4/47

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703698

Date Collected: 10/31/97 Date Received: 10/31/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF160

L9703698-020

Basis: Dry

Analyte рΗ

Units pH UNITS

PQL 0.1

Analysis

Method

9045

Dilution

Factor Extracted 10/31/97

Date

Date Analyzed 10/31.97

Result 6.4

LEVEL V **OGDEN VALIDATED**

Te Rook Date: 12/6/97 Approved By:

7019

03698WET.SA2 - Sample (9) 12/5/97

Analytical Report

Client: Project: Ogden Environmental

Sample Matrix:

Rocketdyne/313150002

Sludge

Service Request: L9703698

Date Collected: 10/27/97 Date Received: 10/27/97

Inorganic Parameters

Sample Name: Lab Code:

RF702

Test Notes:

L9703698-019

Basis: Dry

Analysis Dilution Date Date Analyte Units Method **PQL** Factor Extracted Analyzed Result рΗ pH UNITS 9045 0.1 1 10/31/97 10/31/97 7.5

LEVEL V

OGDEN VALIDATED

7018

03698WET SA2 - Sample (8) 2/6/98

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703698 Date Collected: 10/29/97

Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF733

L9703698-001

Basis: Dry

Analyte

pΗ

Units **H UNITS**

Method 9045

Analysis

PQL 0.1

Dilution Factor Extracted

Date 10/30/97

Date Analyzed 10/30/97

Result 7.5

Notes

LEVEL V

OGDEN VALIDATED

Approved By:

Je Parl Date: 12/6/97

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703698

Date Collected: 10/29/97

Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF734

L9703698-002

Basis: Dry

Analyte pΗ

Units pH UNITS Analysis Method 9045

PQL 0.1

Dilution Date Factor Extracted 1 10/30/97

Date Analyzed 10/30/97

Result 6.6

Notes

LEVEL V <u>OGDEN</u> VALIDATED

Approved By: 1544/021397p

Date: 12/6/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698

Date Collected: 10/29/97

Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF735

L9703698-003

Basis: Dry

Analyte pН

Units pH UNITS Method

Analysis

9045

PQL 0.1

Dilution

Factor Extracted 10/30/97

Date

Date Analyzed 10/30/97

Result 7.2

Notes

LEVEL V

<u>OGDEN</u> VALIDATED

Approved By: 1544/021397p

Date: 12/6/97

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698

Date Collected: 10/30/97 Date Received: 10/30/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF736

L9703698-013

Basis: Dry

Analyte

Units

Analysis Method PQL Dilution Date Factor Extracted

Date Analyzed

Result 7.1

pН

pH UNITS 9045 0.1

10/31/97

10/31/97

LEVEL V

OGDEN VALIDATED

Approved By:

Mark. Date: 12/6/17

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698

Date Collected: 10/30/97 Date Received: 10/30/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF738

L9703698-014

Basis: Dry

Analyte	Units	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Result
pH Chloride Nitrate as Nitrate Nitrite as Nitrite Fluoride	pH UNITS MG/KG MG/KG MG/KG MG/KG	9045 300.0 300.0 300.0 340.2	0.1 11 11 11 2.0	1 1 1 1	10/31/97 11/4/97 11/4/97 11/4/97 11/4/97	10/31/97 11/5.97 11/5.97 11/5.97 11/6.97	7.0 11 11 11 2.0	まれることとといっている。

LEVEL V **OGDEN VALIDATED**

Approved By: 1544/021397p

7 Par (Date: 12/6/97

7014

03698WET.SA2 - Sample (4) 12/5/97

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703698

Date Collected: 10/30/97 Date Received: 10/30/97

Inorganic Parameters

Sample Name:

RF739

Lab Code: Test Notes:

L9703698-015

Basis: Dry

Analyte рΗ

Units pH UNITS

Method 9045

Analysis

PQL 0.1

Dilution Factor Extracted

10/31/97

Date

Date Analyzed 10 31/97

Result 7.7

Notes

LEVELV

OGDEN VALIDATED

7015

Approved By: 1544/021397p

Date: 12 /6/97

03698WET SA2 - Sample (5) 12/5/97

Page No

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703698

Date Collected: 10/30/97 Date Received: 10/30/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF740

L9703698-016

Basis: Dry

Analyte рΗ

Units pH UNITS Analysis Method 9045

PQL 0.1

Dilution Factor Extracted 1

10/31/97

Date

Date Analyzed 10/31.97

Result 8.0

Notes

LEVEL V

OGDEN VALIDATED

Approved By:

TCR-12 Date: 12-/6/97

Analytical Report

Client: Project: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703698
Date Collected: 10/30/97
Date Received: 10/30/97

Inorganic Parameters

Sample Name:

Sample Matrix:

RF741

Lab Code: Test Notes: L9703698-017

Basis: Dry

Analysis Dilution Date Date Analyte Units Method PQL Factor Extracted Analyzed Result pH UNITS 9045 0.1 pН 1 10/31/97 10/31/97 7.2

LEVEL VOGDEN VALIDATED

63608'UFT 542 , Camela (**) 12/5/67

Dane No

 \cap

550 South W adsworth B lvd . Ste . 500 D enver, CO 80226 (803) 935-6505

Rocketdyne

ProjectM anager: D .H am brick A nalysisM ethod: G eneralM ineral

No.ofSamples:11

Date Completed: June 26,1998

Reviewer: K.Chapman

Ref: USEPA ContractLaboratory Program National Functional Guidelines For Inorganic Data Review (Feb. 1994), Colum bia Analytical Services SO P 96-W ET-H S-00 (Revision 1,7/26/96), Colum bia Analytical Services SO P 96-W ET-IC-00M (Revision 1,7/26/96), Colum bia Analytical Services SO P 96-W ET-FISE-00M (Revision 1,7/26/96), and Colum bia Analytical Services SO P 96-W ET-Cr6S-00M (Revision 1,7/26/96)

SDG: L9703679

Samples Reviewed: RF713, RF714, RF715, RF716, RF717, RF718, RF719, RF720, RF728, RF731, and RF732

EPA Levely-GeneralM inerals A seeson entForm

	Problem s	Q ualifications
1. Sample Management	H olding tim e exceeded forpH analysis.	All site sam ple pH results qualified as estimated, "J."
2. Method Blanks	A comptable as reviewed.	N one
3. LCS/BS	A coeptable as reviewed.	N one
4. Duplicates Perform ed on sam ples RF713 and RF728	Acceptable as reviewed. (pH only)	N one
5. MSMSDs Perform ed on sam plesRF715	A coeptable as reviewed.	N one
6. Field QC Samples ER: RF810 and RF724 FB: RF848	No detects were reported for the field QC samples.	N one

T400W C17 Revision 1

7. <u>0 the</u> r	N one	N one
8. Comments	N one	N one

T400W C17 Revision 1

Analytical Report

Client: Project: Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703679 Date Collected: 10/28/97

Date Received: 10/28/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: L9703679-001

RF713

Basis: Dry

Analyte

рΗ

Units pH UNITS Analysis Method 9045

PQL 0.1

Dilution

Date Factor Extracted 10/29/97

Date Analyzed 10/29/97

Result 7.4

LEVEL V

OGDEN VALIDATED

7001

03679WET.SA1 - Sample 12/8/97

Analytical Report

Client:

Ogden Environmental Project:

Sample Matrix:

Rocketdyne/313150002

Soil

Service Request: L9703679

Date Collected: 10/28/97 Date Received: 10/28/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF714

L9703679-002

Basis: Dry

Analyte

рΗ

Units pH UNITS Analysis Method 9045

PQL 0.1

Dilution Date Factor Extracted 10/29/97

Date Analyzed 10/29/97

Result 6.7

LEVEL V

N VALIDATED

Date:

03677WET SA1 - Sample (2) 12/8/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Sludge

Service Request: L9703679

Date Collected: 10/18/97 Date Received: 10/28/97

Inorganic Parameters

Sample Name:

Lab Code:

RF715

Test Notes:

L9703679-003

Basis: Dry

Analyte	Units	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result S
pH Chloride Fluoride Nitrate as Nitrate Nitrite as Nitrite	pH UNITS MG/KG MG/KG MG/KG MG/KG	9045 300.0 340.2 300.0 300.0	0.1 39 4.0 39 39	1 1 1 1	10/29/97 10/30/97 10/30/97 10/30/97 10/30/97	10/29/97 10/30/97 10/30/97 10/30/97 10/30/97	7.2 380 24 39 39	T W

LEVEL V

OGDEN VALIDATED

Analytical Report

Client: Project:

Ogden Environmental

Sample Matrix:

Rocketdyne/313150002

Sludge

Service Request: L9703679

Date Collected: 10/28/97 Date Received: 10/28/97

Inorganic Parameters

Sample Name:

Lab Code:

RF716

Test Notes:

L9703679-004

Basis: Dry

Analyte	Units	Analysis Method	PQL		Date stracted	Date Analyzed	Result	Result Notes	_
Chromium, Hexavalent	MG/KG	7196	0.5	1 10	0/29/97	10/30/97	0.5	UN	

LEVEL V

OGDEN VALIDATED

Analytical Report

Client: Project:

Ogden Environmental

Sample Matrix:

Rocketdyne/313150002

Soil

Service Request: L9703679

Date Collected: 10/28/97 Date Received: 10/28/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF717

L9703679-005

Basis: Dry

Analyte	Units	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result &
pH	pH UNITS	9045	0.1	I	10/29/97	10/29/97	7.0	UAH
Chromium, Hexavalent	MG/KG	7196	1.0	5	10/29/97	10/30/97	1.0	

LEVEL V

OGDEN VALIDATED

03679WET SA1 - Sample (5) 12/8/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703679

Date Collected: 10/28/97

Date Received: 10/28/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF718

L9703679-006

Basis: Dry

sult	Result Notes _	2	(lode
.0		1	Ħ

Analyte	Units	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result F Notes
pH	pH UNITS	9045	0.1	I	10/29/97	10/29.97	7.0	U U
Chromium. Hexavalent	MG/KG	7196	0.5	5	10/29/97	10/30/97	0.5	

LEVEL V

OGDEN VALIDATED

7006

63679WET 5A1 - Sample (6) 12/8/97

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703679

Date Collected: 10/28/97 Date Received: 10/28/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF719

L9703679-007

Basis: Dry

Analyte	Units	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3 Result
pH Chromium, Hexavalent	pH UNITS MG/KG	9045 7196	0.1 0.2	1 2	10/29/97 10/29/97	10/29/97 10/30/97	7.1 0.2	TH U U

LEVEL V

CLUEN VALIDATED

7007

03679WET.SA1 - Sample (7) 12/8/97

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703679 Date Collected: 10/28/97

Date Received: 10/28/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF720

L9703679-008

Basis: Dry

Analyte	Units	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Result
pH	pH UNITS	9045	0.1	1	10/29/97	10/29/97	6.3	U N H
Chromium. Hexavalent	MG/KG	7196	1.0	5	10/29-30/9	10/30/97	1.0	

OGDEN VALIDATED

KEC 18/30/98

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Sludge

Service Request: L9703679

Date Collected: 10/29/97 Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF728

L9703679-017

Basis: Dry

Analyte	Units	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Land
pH Chloride Fluoride Nitrate as Nitrate Nitrite as Nitrite	pH UNITS MG/KG MG/KG MG/KG MG/KG	9045 300.0 300.0 300.0 300.0	0.1 13 2.0 13 13	1 1 1 1 1	10/30/97 10/30/97 10/30/97 10/30/97 10/30/97	10/30/97 10/30/97 10/30/97 10/30/97 10/30/97	7.9 29 2.0 13	U N U N U N

LEVEL V

OGDEN VALIDATED

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703679 Date Collected: 10/29/97

Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code: Test Notes: RF731

L9703679-019

Basis: Dry

Analyte

рΗ

Units pH UNITS Analysis Method 9045

PQL 1.0

Dilution

Date Factor Extracted 10/30/97

Date Analyzed 10/30/97

Result

6.9

LEVEL V

OGDEN VALIDATED

Analytical Report

Client:

Project: Sample Matrix: Ogden Environmental

Rocketdyne/313150002

Soil

Service Request: L9703679

Date Collected: 10/29/97 Date Received: 10/29/97

Inorganic Parameters

Sample Name:

Lab Code:

RF732

Test Notes:

L9703679-020

Basis: Dry

Analyte

рΗ

Units pH UNITS Analysis Method 9045

PQL 0.1

Dilution

Date Factor Extracted

Date Analyzed

Result

10/30/97 10/30/97

7.7

LEVEL V

GUEN VALIDATED



Λ

550 South W adsworth B lvd., Suite 500 D enver, CO 80226 (303) 935-6505

R ocketdyne

Analysis Method: SW 846 Method 8021A

No. of Samples: 68 Samples, 8 Dilutions, and 4 Reanalyses

Date Reviewed: 07/22/98 Reviewer: L.Calvin

Reference: O oplen D ata Validation Procedures for Habgenated Volatiles by GC and Aromatic Volatiles by GC

(DVPs-7 and -9, Rev. 2). SDG: L9703643

Sam plesReviewed: RD 111, RD 112, RD 113, RD 114, RD 115, RD 116, RD 116D L, RD 117, RD 118, RD 119, RD 120, RD 120D L, RD 124, RD 125, RD 126, RD 128, RD 129, RD 133, RD 134, RD 135, RD 136, RD 137, RD 138, RD 139, RD 140, RD 140D L, RD 143, RD 144, RD 145, RD 146, RD 147, RD 148, RD 150, RD 151, RD 152, RD 153, RD 154, RD 155, RD 155D L, RD 157, RD 159, RD 159D L, RD 160, RD 162, RD 164, RD 164RE, RD 165, RD 166, RD 167, RD 168, RD 171, RD 702, RD 703, RD 704, RD 705, RD 705D L, RD 706, RD 707, RD 708, RD 709, RD 723, RD 724, RD 726, RD 727, RD 733, RD 733D L, RD 735, RD 735D L, RD 736, RD 738, RD 739, RD 740, RD 741, RD 742, RD 750, RD 750RE, RD 751, RD 751RE, RD 754, and RD 754RE.

Matrix: Soiland Water

EPA LevelV GC Volatiles A seesan ent Form

	Problem s	Q ualifications
1. Sample Management	A coording to the case narrative and CO Cs, sam pleswere received chilled and intact. CO C sealswere not present. A ctual tem perature of sam ple receipt was not recorded. Som e corrections were scribbled rather than lined out, and som e crossouts on the CO Cs were missing dates.	N o qualifications were required.
3. Method Blanks VBLK97102701 VBLK97102801 VBLK97102901 VBLK97103001 VBLK97103101 VBLK97110301 VBLK97110401 VBLK97110701	N ine m ethod blankswere analyzed with this SDG. No target compoundswere reported in the method blanks.	N o qualifications were required.

	Problem s	Q ualifications
VBLK97110801		
4. LCS/BS VLCS97102701 VLCS97102801 VLCS97102901 VLCS97103001 VLCS97103101 VLCS97110301 VLCS97110401 VLCS97110701 VLCS97110801	N ine blank spikeswere analyzed with the sam plesofthisSDG. All percent recoverieswere within the laboratoryQC limits.	No qualifications were required.
5. Sumogates	All surrogate recoveries were within laboratory Q C lim its on the ELCD detector with the exception of the recoveries in sam ples RD 159 and RD 751RE which were above and below the laboratory Q C lim its of 60% -140%, respectively.	There were no reportable detects in sam plesRD 159 or RD 751RE to qualify. Nondetects in RD 159 required no qualification for a high sunrogate recovery. Nondetects for allELCD compounds in sample RD 751RE were qualified as estimated, "UJ."
	A Il sumogate recoveries were within laboratory Q C lim its on the PID detector with the exception of the recoveries in sam ples RD 115 and RD 723, which were above and below the Q C lim its of 57% - 143%, respectively.	Detects reported from the PID in sam ple RD 115 were qualified as estimated, "J." There were no detects in sam ple RD 723. Nondetects for all PID compounds in sam ple RD 723 were qualified as estimated, "UJ."
6. M.S./M.SD.s Penform ed on RD 111, RD 125, RD 160, RD 166, and RD 739	Five M S/M SD swere analyzed with this SDG. All recoveries and RPD swere within the laboratory QC limits.	No qualifications were required.
7. Field Q C Samples ER: RD 138 RD 249 (SDG L9703803) RD 724 RD 801 (SDG L9703719)	There were no target com pounds reported in the equipm entrinsates or the field blank. Field duplicates RD 702 and RD 671 were analyzed at 5 and 1 dilutions	No qualifications were required.
FB: RD 856 (SDG L9703803) FD: RD 702 and RD 671 (SDG L9703563) RD 703 and RF662 (SDG L9703578)	respectively, with no target analyte detects (athigher reporting limits in RD 702), and were considered to be in agreement. RF662 and RF772 were not analyzed by Method 8021.	

	Problem s	Q ualifications
RD 704 and RF672 (SDG L9703578)		
8. Other	The following sam ples were analyzed at dilutions and only the dilution analyses were provided: RD 116,RD 119,RD 120, RD 140,RD 164,RD 750, and RD 754—2;RD 136,RD 137,RD 165,RD 171, RD 702, and RD 735—5;RD 703—50; RD 115—100; and RD 133,RD 134, and RD 135—1000. Reporting limits were raised accordingly.	Concentrations of target com pouds orm atrix interferences in aforem entioned dilutions were sufficient to justify the dilutions. No qualifications were assigned based on dilutions.
	Four diluted sam ples (RD 164, RD 750, RD 751, and RD 754) were reanalyzed undiluted: RD 164RE, RD 750RE, RD 751RE, and RD 754RE.	Results for RD 164, RD 750, RD 751, and RD 754 were rejected "R," in favor of the undiluted reanalyses.
	The following sam ples were dilutions analyzed for acetone detected above the linear range of the calibration in the undiluted or less diluted analyses: RD 705D L-2; RD 116D L-5; RD 155D L, RD 159D L and RD 735D L-10; and RD 120D L, RD 159D L and RD 733D L-50.	A cetone was rejected "R," in the original analyses in favor of the diluted values for acetone, and the rem aining target com pounds were rejected in the dilutions in favor of the undiluted or less diluted analyses.
	Sam ple RD 140D L (10) was a dilution analyzed for trich broethene detected above the linear range of the calibration in the undiluted analysis.	Trichloroethene was rejected "R," in the original analysis in favor of the diluted value for trichloroethene, and the remaining target compounds were rejected in the dilution in favor of the undiluted analysis.
	No confirm ation was analyzed for sam ple RD 708. The following reported target compounds were not confirmed by the confirm ation analyses: acetone in sam ples RD 114, RD 116D L, RD 120D L, RD 705D L, RD 706, and RD 740; methylene chloride in sam ples RD 136 and RD 137; tetrachloroethene, 1,1-dichloroethene, and 1,1,1-trichloroethane in sam ple RD 140; trichloroethene in sam ple RD 162; ethylbenzene and o-xylene in RD 115; m & p-xylenes in RD 115. RD 134. and RD 135; and 1.1-	Unconfirmed detects were qualified as estimated, "U," for previously characterized contaminants of concern, and tentatively identified "N J," for remaining unconfirmed detects. Raw data was not examined at Level V validation to determine the presence of those unconfirmed detects which should have been detected on both the ELCD and PID detectors in the original analysis.

	Problem s	Q ualifications
	dichloroethane and trans-1,2-dichloroethene in RD 171.	
8. Other (cont.)	The results form &p-xylenes and/oro-xylenes were incorrection the result sum maries for sam ples RD 115, RD 134, RD 135, and RD 171.	The results form &p-xylenes and/or o-xylenes were connected on the result sum m aries for sam ples RD 115, RD 134, RD 135, and RD 171 based on an initial calibration average RRF emordiscovered in the level IV validation of SD G L9704260, which affected quantitation of all of the xylenes isom ers. No qualifications were required.
	The confirm ation analysis of sample RD 165 indicated that cis-1,2-dichloroethene was present and did not confirm the presence of trichloroethene, originally reported in the sample. A review of the raw data showed that TCE was reported in emorand cis-1,2-dichloroethene should have been reported at the same concentration.	The trich broethene result in sample RD 165 was changed to a nondetect, and cis-1,2-dich broethene was reported at the correct concentration. No qualifications were required.
Comments PE Sample: RD 171	Dryweight values reported by the laboratory were less than the wetweight values obtained from the quantilation report, indicating that the laboratory incorrectly calculated the dryweight results. PE sample results are presented in the following table.	Because % moisture data was unavailable, the reviewer did not recalculate the dryweight values for sam ple RD 171.

Volatile Results: Sample RD 171

Analyte	Certified Value (1g/Kg)	AdvisoryRange (1g/Kg)	*Laboratory Results (1g/Kg)	**Reported Laboratory Results (4g/Kg)
B enzene	71.7	44.9 -100	61	56
Brom odichlorom ethane	150	72.7 -206	120	110
B rom oform	802	21.8 -118	100	95
Carbon tetrachloride	171	76.7 -247	150	140
Chbrobenzene	17.0	7.89 -23.0	16J	15J
Chlorodibrom om ethane	24 2	10.7 -33.7	NΑ	NΑ
Chloroform	502	163-693	70	65
1,2-D ich brobenzene	46.9	211-675	56	52
1,3-D ichlorobenzene	47.2	15 <i>8</i> -68 <i>9</i>	52	49
1,4-D ich brobenzene	120	481-170	110	100
1,1-D ich broethane	100	71.3 -135	110	100
1,2-D ich broethane	177	61.5 -250	230	210
E thylbenzene	52.5	19.6 -74.5	42	39
M ethylene chloride	362	7.52 -54.6	ND	ND
4-M ethyl-2-pentanone	2.08	41.8 -133	NA	NΑ
T etrach broethylene	94.5	28.7 -136	75	69
Toluene	301	143-403	22J	20J
1,1,1-Trichlbroethane	70 <i>.</i> 7	25.6 -98.3	74	68
1,1,2-Trichlbroethane	61.4	39.5 -85.4	53	49
Trichloroethylene	105	28.4 -142	120	110
X ylenes, total	104	641-150	72	65

^{*} W etweight values from raw data.

 ${\rm N\,A} = {\rm N\,otA\,pp}$ licable (Spiked PE analytes which were not included on clients analyte list.)

ND = N otdetected

^{**} Dryweight values reported by laboratory. Appear to have been incorrectly calculated; dryweight values should be greater than wetweight values.)

 $J = E \sin ated$ value reported below the reporting $\lim it$

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

L9703643-006

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result S
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	UU
Chloromethane	EPA 5030	8021A	12	i	10/27/97	10/27/97	12	υï
Vinyl Chloride	EPA 5030	8021A	12	ī	10/27/97	10/27/97	12	ŭ
Bromomethane	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	บ /
Chloroethane	EPA 5030	8021A	12	i	10/27/97	10/27/97	12	ŭ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	ī	10/27/97	10/27/97	6	υ
1,1-Dichloroethene	EPA 5030	8021A	6	ĩ	10/27/97	10/27/97	6	υ
Methylene Chloride	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	Ü
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	υ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	ĩ	10/27/97	10/27/97	6	Ŭ
1,1-Dichloroethane	EPA 5030	8021A	6	ī	10/27/97	10/27/97	6	ŭ
Chloroform	EPA 5030	8021A	6	ī	10/27/97	10/27/97	6	ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	ī	10/27/97	10/27/97	6	Ŭ
Carbon Tetrachloride	EPA 5030	8021A	6	î	10/27/97	10/27/97	6	บ
Benzene	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	บ
1,2-Dichloroethane	EPA 5030	8021A	6	ī	10/27/97	10/27/97	6	U
Trichloroethene (TCE)	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	บ
1,2-Dichloropropane	EPA 5030	8021A	6	î	10/27/97	10/27/97	6	บ
Bromodichloromethane	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	บ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57	i	10/27/97	10/27/97	57	บ
Toluene	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	บ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	บ -
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ü
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	บ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	Ü
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/27/97	10/27/97	23	i l
Chlorobenzene	EPA 5030	8021A	6	î	10/27/97	10/27/97	23 6	Ü
Ethylbenzene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	
m,p-Xylenes	EPA 5030	8021A	6	1	10/27/97		6	บ บ
o-Xylene	EPA 5030	8021A	6	1	10/27/97	10/27/97	-	
Bromoform	EPA 5030	8021A	6	1		10/27/97	6	U
1,1,2,2-Tetrachioroethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U
1.3-Dichlorobenzene	EPA 5030	8021A	12	1	10/27/97	10/27/97	6	U
1,4-Dichlorobenzene	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	U
1,2-Dichlorobenzene	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	U
Chlorotrifluoroethene	EPA 5030	8021A	23	1	10/27/97	10/27/97	12	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	-	10/27/97	10/27/97	23	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23 23	1	10/27/97	10/27/97	23	U
2-Butanone (MEK)	EPA 5030	8021A	23 57	. 1	10/27/97	10/27/97	23	U
Acetone (MEK)				1	10/27/97	10/27/97	57	U
1,2,4-Trimethylbenzene	EPA 5030	8021A	57 22	1	10/27/97	10/27/97	57	U
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	1	10/27/97	10/27/97	23	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	1	10/27/97	10/27/97	23	U
	EPA 5030	8021A	23	i	10/27/97	10/27/97	23	υ √

Approved By: 1844/021397p

__ Date: __/2/23/97





Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD112 L9703643-007 Units: UG/KG Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 🖇 Notes ঽ	ATT THE REAL PROPERTY.
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	υ从	Г
Chloromethane	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	บ (`	ı
Vinyl Chloride	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	บ	i
Bromomethane	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	υ	ı
Chloroethane	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	U	i
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	υ	ı
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	ı
Methylene Chloride	EPA 5030	8021A	23	1	10/27/97	10/27/97	23	U	ı
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	ן ט	ı
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	υ	ı
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	υ	ı
Chloroform	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	ט 📗	i
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	ı
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	υ	l
Benzene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	ĺ
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	ĺ
Trichloroethene (TCE)	EPA 5030	8021A	6	ì	10/27/97	10/27/97	6	Ū	ĺ
1,2-Dichloropropane	EPA 5030	8021A	6	Ĩ	10/27/97	10/27/97	6	Ŭ	ĺ
Bromodichloromethane	EPA 5030	8021A	6	ī	10/27/97	10/27/97	6	ŭ	ĺ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	58	1	10/27/97	10/27/97	58	Ū	ĺ
Toluene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ū	Ì
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	ĺ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	ĺ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	ĺ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/27/97	10/27/97	23	U	ĺ
Chlorobenzene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	ĺ
Ethylbenzene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	ĺ
m,p-Xylenes	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U	į
o-Xylene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ū	
Bromoform	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ŭ	ĺ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	ĩ	10/27/97	10/27/97	6	Ŭ	Ĺ
1,3-Dichlorobenzene	EPA 5030	8021A	12	ī	10/27/97	10/27/97	12	Ŭ	ĺ
1,4-Dichlorobenzene	EPA 5030	8021A	12	ī	10/27/97	10/27/97	12	ŭ	ĺ
1,2-Dichlorobenzene	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	ŭ	ĺ
Chlorotrifluoroethene	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	Ŭ	ĺ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	Ŭ	ĺ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	ΰ	1
2-Butanone (MEK)	EPA 5030	8021A	58	ī	10/27/97	10/27/97	58	ŭ	l
Acetone	EPA 5030	8021A	58	ī	10/27/97	10/27/97	58	υl	l
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	î	10/27/97	10/27/97	23	ΰ	l
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	ŭ	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	υV	

Approved By: 1544/021397p

 \mathbf{V} 003013

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD113 L9703643-008 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result S
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	UU
Chloromethane	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	UI
Vinyl Chloride	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	U
Bromomethane	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	บ
Chloroethane	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	υ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	บ
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U
Methylene Chloride	EPA 5030	8021A	23	1	10/27/97	10/27/97	23	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ū
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	ט
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U
Chloroform	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ü
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ū
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	υl
Benzene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ū
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ū
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ū \
Bromodichloromethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	υl
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	58	1	10/27/97	10/27/97	58	Ū
Toluene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ū
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ū
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ü
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/27/97	10/27/97	23	Ū
Chlorobenzene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ü
Ethylbenzene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U
m,p-Xylenes	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ü
o-Xylene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	υl
Bromoform	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ŭ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	ì	10/27/97	10/27/97	6	Ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	12	1	10/27/97	10/27/97	12	ŭΙ
1,4-Dichlorobenzene	EPA 5030	8021A	12	ī	10/27/97	10/27/97	12	ΰ
1,2-Dichlorobenzene	EPA 5030	8021A	12	ī	10/27/97	10/27/97	12	ŭΙ
Chlorotrifluoroethene	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	ŭΙ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	ĩ	10/27/97	10/27/97	23	ŭ
2-Butanone (MEK)	EPA 5030	8021A	58	ī	10/27/97	10/27/97	58	ŭl
Acetone	EPA 5030	8021A	58	ī	10/27/97	10/27/97	58	ŭll
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	ŭ
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	ī	10/27/97	10/27/97	23	ŭ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	i	10/27/97	10/27/97	23	υ√

Approved By:

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/27/97 Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD114 L9703643-009

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/27/97	10/27/97	11	υU
Chloromethane	EPA 5030	8021A	11	1	10/27/97	10/27/97	ii	ΰ
Vinyl Chloride	EPA 5030	8021A	11	i	10/27/97	10/27/97	ii	ŭ
Bromomethane	EPA 5030	8021A	11	i	10/27/97	10/27/97	ii	ŭ
Chloroethane	EPA 5030	8021A	ii	i	10/27/97	10/27/97	ii	บีไ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	ŭ
1,1-Dichloroethene	EPA 5030	8021A	6	ī	10/27/97	10/27/97	6	ŭ
Methylene Chloride	EPA 5030	8021A	22	î	10/27/97	10/27/97	22	υl
trans-1,2-Dichloroethene	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	υll
cis-1.2-Dichloroethene	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	ŭ
1,1-Dichloroethane	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	υll
Chloroform	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	υ
Carbon Tetrachloride	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	Ü
Benzene	EPA 5030	8021A	6 ,	î	10/27/97	10/27/97	6	ט ו
1.2-Dichloroethane	EPA 5030	8021A	6	ī	10/27/97	10/27/97	6	Ü
Trichloroethene (TCE)	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	υ I
1,2-Dichloropropane	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	Ü
Bromodichloromethane	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	υ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	54	i	10/27/97	10/27/97	54	υ
Toluene	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	Ü
Tetrachloroethene (PCE)	EPA 5030	8021A	6	i	10/27/97	10/27/97	6	Ü
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	i	10/27/97	10/27/97	22	Ü
Chlorobenzene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ü
Ethylbenzene	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	Ü
m,p-Xylenes	EPA 5030	8021A	. 6	1	10/27/97		-	
o-Xylene	EPA 5030	8021A	6	. 1	10/27/97	10/27/97	6	U
Bromoform	EPA 5030	8021A	6	-		10/27/97	6	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/27/97	10/27/97	6	U
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	10/27/97	10/27/97	6	U
1,4-Dichlorobenzene				1	10/27/97	10/27/97	11	U
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/27/97	10/27/97	11	บ
Chlorotrifluoroethene	EPA 5030	8021A	11	1	10/27/97	10/27/97	11	บ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/27/97	10/27/97	22	U
1,1,2-Tetracmoroethane 1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/27/97	10/27/97	22	บ
2-Butanone (MEK)	EPA 5030	8021A	22	1	10/27/97	10/27/97	22	ן ט
Acetone (MEK)	EPA 5030	8021A	54	1	10/27/97	10/27/97	54	UV
1,2,4-Trimethylbenzene	EPA 5030	8021A	54	1.	10/27/97	10/27/97	120	HT X
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	10/27/97	10/27/97	22	UU
	EPA 5030	8021A	22	1	10/27/97	10/27/97	22	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	10/27/97	10/27/97	22	υ √
								* 1

Approved By:



Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/27/97 Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

RD115

Lab Code: Test Notes: L9703643-010

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	,
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	1110	100	10/30/97	10/30/97	1110		-
Chloromethane	EPA 5030	8021A	1110	100	10/30/97	10/30/97	1110	אמ	
Vinyl Chloride	EPA 5030	8021A	1110	100	10/30/97	10/30/97	1110	υl	
Bromomethane	EPA 5030	8021A	1110	100	10/30/97	10/30/97	1110	Ü	
Chloroethane	EPA 5030	8021A	1110	100	10/30/97	10/30/97	1110	Ü	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
1,1-Dichloroethene	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
Methylene Chloride	EPA 5030	8021A	2220	100	10/30/97	10/30/97	2220	Ü	
trans-1,2-Dichloroethene	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	U	
cis-1,2-Dichloroethene	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ü	
1,1-Dichloroethane	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ü	
Chloroform	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
Carbon Tetrachloride	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
Benzene	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
1,2-Dichloroethane	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	U	
Trichloroethene (TCE)	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	ŭ	
1,2-Dichloropropane	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
Bromodichloromethane	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	5560	100	10/30/97	10/30/97	5560	Ü	
Toluene	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ü	
trans-1,3-Dichloropropene	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ü	
cis-1,3-Dichloropropene	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
1,1,2-Trichloroethane	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ŭ	
Tetrachloroethene (PCE)	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ü	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	2220	100	10/30/97	10/30/97	2220	Ŭ	
Chlorobenzene	EPA 5030	8021A	556	100	10/30/97	10/30/97	556、	Ŭ 🗸	
Ethylbenzene	EPA 5030	8021A	556	100	10/30/97	10/30/97	/600		5.
m,p-Xylenes	EPA 5030	8021A	556	100	10/30/97	10/30/97	-560-190		الدين ما
o-Xylene	EPA 5030	8021A	556	100	10/30/97	10/30/97	3500-1-60C	31	5
Bromoform	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	UU	-
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	556	100	10/30/97	10/30/97	556	Ü	
1,3-Dichlorobenzene	EPA 5030	8021A	1110	100	10/30/97	10/30/97	1110	υ	
1,4-Dichlorobenzene	EPA 5030	8021A	1110	100	10/30/97	10/30/97	1110	Ŭ	
1,2-Dichlorobenzene	EPA 5030	8021A	1110	100	10/30/97	10/30/97	1110	Ŭ	
Chlorotrifluoroethene	EPA 5030	8021A	2220	100	10/30/97	10/30/97	2220	Ü	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	2220	100	10/30/97	10/30/97	2220	Ü	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	2220	100	10/30/97	10/30/97	2220	Ŭ	
2-Butanone (MEK)	. EPA 5030	8021A	5560	100	10/30/97	10/30/97	5560	Ü	
Acetone	EPA 5030	8021A	5560	100	10/30/97	10/30/97	5560	U	
1,2,4-Trimethylbenzene	EPA 5030	8021A	2220	100	10/30/97	10/30/97	2220	U	
1,3,5-Trimethylbenzene	EPA 5030	8021A	2220	100	10/30/97	10/30/97	2220	U /	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	2220	100	10/30/97	10/30/97	2220	υV	
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Approved By: 1844/021397p

b. Rebin

Date: 12/23/97





Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD116 L9703643-011 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 7
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	23	2	10/30/97	10/30/97	23	üИ
Chloromethane	EPA 5030	8021A	23	2	10/30/97	10/30/97	23	ΰ́
Vinyl Chloride	EPA 5030	8021A	23	2	10/30/97	10/30/97	23	ŭ
Bromomethane	EPA 5030	8021A	23	2	10/30/97	10/30/97	23	ŭ
Chloroethane	EPA 5030	8021A	23	2	10/30/97	10/30/97	23	υ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ΰΙ
1,1-Dichloroethene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	υ
Methylene Chloride	EPA 5030	8021A	45	2	10/30/97	10/30/97	45	ŭ
trans-1,2-Dichloroethene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
cis-1,2-Dichloroethene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
1,1-Dichloroethane	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
Chloroform	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	Ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
Carbon Tetrachloride	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
Benzene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭΙ
1,2-Dichloroethane	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
Trichloroethene (TCE)	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
1,2-Dichloropropene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
Bromodichloromethane	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	112	2	10/30/97	10/30/97	112	ŭ
Toluene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	บั
2-Chloro-1,1,1-rifluoroethane	EPA 5030	8021A	45	2	10/30/97	10/30/97	45	ŭ
Chlorobenzene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
Ethylbenzene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	บ
m,p-Xylenes	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	υ
o-Xylene	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	Ü
Bromoform	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	Ü
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	12	2	10/30/97	10/30/97	12	ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	23	2	10/30/97	10/30/97	23	υ
1,4-Dichlorobenzene	EPA 5030	8021A	23	2	10/30/97	10/30/97	23	บั
1,2-Dichlorobenzene	EPA 5030	8021A	23	2	10/30/97	10/30/97	23	υ
Chlorotrifluoroethene	EPA 5030	8021A	45	2	10/30/97	10/30/97	45	Ü
1,1,1,2-Tetrachioroethane	EPA 5030	8021A	45	2	10/30/97	10/30/97	45	υ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	45	2	10/30/97	10/30/97	45	ŭΙ/L
2-Butanone (MEK)	EPA 5030	8021A	112	2	10/30/97	10/30/97	112	
Acetone	EPA 5030	8021A	112	2	10/30/97	10/30/97	610	BHT *
1,2,4-Trimethylbenzene	EPA 5030	8021A	45	2	10/30/97	10/30/97	45	3 31
1,3,5-Trimethylbenzene	EPA 5030	8021A	45	2	10/30/97	10/30/97	45	UV
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	45	2	10/30/97	10/30/97	45	ŭ J
	2.1.5000		•••	•	10/30/71	IVIJVI7I	73	~ /

M. A. A

Approved By: 1844/021397p

Thomas & Abon

Date: 12/23/97

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LEVEL W3017

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD116DL L9703643-011DL Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	56	5	10/31/97	10/31/97	56	URKI
Chloromethane	EPA 5030	8021A	56	. 5	10/31/97	10/31/97	56	U
Vinyl Chloride	EPA 5030	8021A	56	5	10/31/97	10/31/97	56	Ū
Bromomethane	EPA 5030	8021A	56	5	10/31/97	10/31/97	56	ŭΙ
Chloroethane	EPA 5030	8021A	56	5	10/31/97	10/31/97	56	υll
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	υ
1,1-Dichloroethene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	ŪΙ
Methylene Chloride	EPA 5030	8021A	112	5	10/31/97	10/31/97	112	Ü
trans-1,2-Dichloroethene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	Ü
cis-1,2-Dichloroethene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	Ū l
1,1-Dichloroethane	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	Ü
Chloroform	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	Ü
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	Ü
Carbon Tetrachloride	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	Ū
Benzene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	Ü
1,2-Dichloroethane	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
Trichloroethene (TCE)	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	Ū
1,2-Dichloropropane	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
Bromodichloromethane	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	υl
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	278	5	10/31/97	10/31/97	278	Ü
Toluene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
trans-1,3-Dichloropropene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	Ū ·
cis-1,3-Dichloropropene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
1,1,2-Trichloroethane	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
Tetrachloroethene (PCE)	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	112	5	10/31/97	10/31/97	112	U
Chlorobenzene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
Ethylbenzene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
m,p-Xylenes	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
o-Xylene	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
Bromoform	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	ט ו
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	28	5	10/31/97	10/31/97	28	U
1,3-Dichlorobenzene	EPA 5030	8021A	56	5	10/31/97	10/31/97	56	Ü
1,4-Dichlorobenzene	EPA 5030	8021A	56	5	10/31/97	10/31/97	56	Ū
1,2-Dichlorobenzene	EPA 5030	8021A	56	5	10/31/97	10/31/97	56	Ū
Chlorotrifluoroethene	EPA 5030	8021A	112	5	10/31/97	10/31/97	112	υ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	112	5	10/31/97	10/31/97	112	Ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	112	5	10/31/97	10/31/97	112	Ŭ
2-Butanone (MEK)	EPA 5030	8021A	278	5	10/31/97	10/31/97	278	υ√
Acetone	EPA 5030	8021A	278	5	10/31/97	10/31/97	920	NJ K
1,2,4-Trimethylbenzene	EPA 5030	8021A	112	5	10/31/97	10/31/97	112	UKRI
1,3,5-Trimethylbenzene	EPA 5030	8021A	112	5	10/31/97	10/31/97	112	UTOT
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	112	5	10/31/97	10/31/97	112	ŭ $\sqrt{}$
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W.14.94

Approved By:

Thomas b. Rhing

Date: (2/23/97

ACHEN VAINATES

LEVELV

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Cellected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD117 L9703643-012

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	υų
Chloromethane	EPA 5030	8021A	11	ī	10/28/97	10/28/97	ii	υu
Vinyl Chloride	EPA 5030	8021A	11	1	10/28/97	10/28/97	ii	ŭ \
Bromomethane	EPA 5030	8021A	11	ï	10/28/97	10/28/97	ii	ŭ
Chloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ŭ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	ŭ
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	υl
Methylene Chloride	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	Ū
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ū
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ü
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	ŭ
Chloroform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	ì	10/28/97	10/28/97	6	ΰ
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	ับ I
Benzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	ŭ
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ŭ
Trichloroethene (TCE)	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
1,2-Dichloropropane	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
Bromodichloromethane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	54	ī	10/28/97	10/28/97	54	ŭ
Toluene	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	Ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ü
cis-1,3-Dichloropropene	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	Ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	ī	10/28/97	10/28/97	22	ŭ
Chlorobenzene	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	บ
Ethylbenzene	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ü
m,p-Xylenes	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	Ü
o-Xylene	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	Ü
Bromoform	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	บ
1,1,2,2-Tetrachioroethane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	บั
1,3-Dichlorobenzene	EPA 5030	8021A	ŭ	i	10/28/97	10/28/97	0 11	บ
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ü
1,2-Dichlorobenzene	EPA 5030	8021A	ii	1	10/28/97	10/28/97	11	Ü
Chlorotrifluoroethene	EPA 5030	8021A	22	1	10/28/97	10/28/97		บี
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/28/97	10/28/97	22 22	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	U U
2-Butanone (MEK)	EPA 5030	8021A	54	1	10/28/97		54	บี
Acetone	EPA 5030	8021A	54	1	10/28/97	10/28/97		
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/28/97	10/28/97	54 22	Ü
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	I 1		10/28/97	22	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	10/28/97 10/28/97	10/28/97	22	U
(DDOI)	11 1 2 JUJU	002 IA	44	I.	10/26/9/	10/28/97	22	บ √

Approved By:

Analytical Report

Client: Project:

InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/27/97 Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD118 L9703643-013

Units: UG/KG Basis: Dry

Dilution Prep Date Analysis Date Analyte Method Method PQL Notes > Factor Extracted Analyzed Result Dichlorodifluoromethane (CFC 12) **EPA 5030** 8021A 11 10/28/97 10/28/97 11 U Chloromethane **EPA 5030** 8021A 10/28/97 11 10/28/97 U 1 11 Vinyl Chloride **EPA 5030** 8021A 10/28/97 11 1 10/28/97 11 U Bromomethane **EPA 5030** 8021A 11 1 10/28/97 10/28/97 11 U Chloroethane **EPA 5030** 8021A 11 10/28/97 10/28/97 U 1 11 Trichlorofluoromethane (CFC 11) **EPA 5030** 8021A 10/28/97 10/28/97 U 6 6 1,1-Dichloroethene **EPA 5030** 8021A U 6 10/28/97 10/28/97 6 Methylene Chloride **EPA 5030** 8021A 22 10/28/97 10/28/97 22 U 1 trans-1.2-Dichloroethene 8021A 10/28/97 **EPA 5030** 6 10/28/97 6 U cis-1,2-Dichloroethene **EPA 5030** 8021A U 6 1 10/28/97 10/28/97 6 1,1-Dichloroethane **EPA 5030** U 8021A 6 1 10/28/97 10/28/97 6 Chloroform **EPA 5030** 8021A 6 10/28/97 10/28/97 U 1 6 1,1,1-Trichloroethane (TCA) **EPA 5030** 8021A 6 10/28/97 10/28/97 6 U Carbon Tetrachloride **EPA 5030** 8021A 6 1 10/28/97 10/28/97 6 U Benzene **EPA 5030** 8021A 6 10/28/97 10/28/97 6 U 1,2-Dichloroethane **EPA 5030** 8021A 10/28/97 U 6 1 10/28/97 6 Trichloroethene (TCE) **EPA 5030** 8021A 6 10/28/97 10/28/97 U 6 1,2-Dichloropropane 8021A **EPA 5030** 6 U 1 10/28/97 10/28/97 6 Bromodichloromethane **EPA 5030** 8021A 6 1 10/28/97 10/28/97 6 U 2-Chloroethyl Vinyl Ether EPA 5030 8021A 55 1 10/28/97 10/28/97 55 U Toluene **EPA 5030** 8021A 6 1 10/28/97 10/28/97 U 6 trans-1,3-Dichloropropene **EPA 5030** 8021A 6 10/28/97 10/28/97 6 U cis-1,3-Dichloropropene **EPA 5030** 8021A 6 U 10/28/97 10/28/97 6 1,1,2-Trichloroethane **EPA 5030** 8021A 6 10/28/97 10/28/97 U 6 Tetrachloroethene (PCE) EPA 5030 8021A 6 10/28/97 U 10/28/97 6 2-Chloro-1,1,1-trifluoroethane **EPA 5030** 8021A 22 10/28/97 10/28/97 22 U Chlorobenzene **EPA 5030** 8021A 6 10/28/97 10/28/97 6 U Ethylbenzene **EPA 5030** 8021A 6 U 10/28/97 10/28/97 6 m,p-Xylenes **EPA 5030** 8021A 6 U 10/28/97 10/28/97 6 o-Xylene **EPA 5030** 8021A 6 U 10/28/97 10/28/97 6 Bromoform **EPA 5030** 8021A 6 10/28/97 10/28/97 U 6 1.1.2.2-Tetrachloroethane **EPA 5030** 8021A 6 10/28/97 10/28/97 U 6 1,3-Dichlorobenzene **EPA 5030** 8021A 11 10/28/97 U 10/28/97 11 1.4-Dichlorobenzene **EPA 5030** 8021A 11 10/28/97 10/28/97 11 U 1,2-Dichlorobenzene **EPA 5030** 8021A 11 10/28/97 10/28/97 11 U Chlorotrifluoroethene **EPA 5030** 8021A 22 10/28/97 10/28/97 22 U 1,1,1,2-Tetrachloroethane **EPA 5030** 8021A 22 22 U 10/28/97 10/28/97 1,1,2-Trichlorotrifluoroethane (CFC 113) **EPA 5030** 8021A 22 10/28/97 10/28/97 22 U 1 2-Butanone (MEK) **EPA 5030** 8021A 55 10/28/97 10/28/97 55 U Acetone EPA 5030 8021A 55 U 10/28/97 10/28/97 1 55 1,2,4-Trimethylbenzene **EPA 5030** 8021A 22 10/28/97 10/28/97 22 U 1,3,5-Trimethylbenzene EPA 5030 8021A 22 10/28/97 U 10/28/97 22 1

Approved By:

1,2-Dibromo-3-chloropropane (DBCP)

EPA 5030

8021A

22

10/28/97

10/28/97

22

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

Lab Code: Test Notes: RD119 L9703643-014 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	U U
Chloromethane	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	Ü
Vinyl Chloride	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	Ū
Bromomethane	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	Ŭ
Chloroethane	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	Ŭ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	ŭ
1,1-Dichloroethene	EPA 5030	8021A	11	2	10/28/97	10/28/97	ii	ŭ
Methylene Chloride	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	บั
trans-1,2-Dichloroethene	EPA 5030	8021A	11	2	10/28/97	10/28/97	ii	ŭ
cis-1,2-Dichloroethene	EPA 5030	8021A	ii	2	10/28/97	10/28/97	11	Ü
1,1-Dichloroethane	EPA 5030	8021A	ii	2	10/28/97	10/28/97	ii	Ü
Chloroform	EPA 5030	8021A	ii	2	10/28/97	10/28/97	11	บ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	. ט
Carbon Tetrachloride	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	Ü
Benzene	EPA 5030	8021A	11	2	10/28/97			_
1.2-Dichloroethane	EPA 5030	8021A	11			10/28/97	11	Ü
Trichloroethene (TCE)	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	υ
1,2-Dichloropropane	EPA 5030	8021A	11	2	10/28/97	10/28/97	270	
Bromodichloromethane				2	10/28/97	10/28/97	11	υK
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
Toluene	EPA 5030	8021A	110	2	10/28/97	10/28/97	110	บ
	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	บ
trans-1,3-Dichloropropene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
cis-1,3-Dichloropropene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	บ
1,1,2-Trichloroethane	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
Tetrachloroethene (PCE)	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	ט
Chlorobenzene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
Ethylbenzene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
m,p-Xylenes	EPA 5030	8021A	11	2 .	10/28/97	10/28/97	11	Ü
o-Xylene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	υl
Bromoform	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	Ŭ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	11	2	10/28/97	10/28/97	ii	ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	บั
1,4-Dichlorobenzene	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	บั
1,2-Dichlorobenzene	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	ŭ
Chlorotrifluoroethene	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	Ü
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	บั
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	บี
2-Butanone (MEK)	EPA 5030	8021A	110	2	10/28/97	10/28/97	44 110	Ü
Acetone	EPA 5030	8021A	110	2	10/28/97	10/28/97	110	
1,2,4-Trimethylbenzene	EPA 5030	8021A	44	2	10/28/97	10/28/97		Ü
1,3,5-Trimethylbenzene	EPA 5030	8021A	44	2	10/28/97		44	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	44	2		10/28/97	44	ען ע
(DDOI)	LI A JUJU	9021A	-4-4	2	10/28/97	10/28/97	44	n 🔨
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Approved By:

Therman D. Rhin

Date: 12/23/97





Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/27/97 Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD120

L9703643-015

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result T
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	UXU
Chloromethane	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	บ ′ เ
Vinyl Chloride	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	U
Bromomethane	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	U /
Chloroethane	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	บ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	บ
1,1-Dichloroethene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	บ
Methylene Chloride	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	บ
trans-1,2-Dichloroethene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
cis-1,2-Dichloroethene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
1.1-Dichloroethane	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
Chloroform	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	Ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	11	2	10/28/97	10/28/97	ii	Ŭ
Carbon Tetrachloride	EPA 5030	8021A	îi	2	10/28/97	10/28/97	ii	ŭ
Benzene	EPA 5030	8021A	ii	2	10/28/97	10/28/97	ii	บั
1.2-Dichloroethane	EPA 5030	8021A	ii	2	10/28/97	10/28/97	11	ŭ
Trichloroethene (TCE)	EPA 5030	8021A	ii	2	10/28/97	10/28/97	11	ŭ
1,2-Dichloropropene	EPA 5030	8021A	ii	2	10/28/97	10/28/97	11	ΰ
Bromodichloromethane	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	Ü
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	110	2	10/28/97	10/28/97	110	บี
Toluene	EPA 5030	8021A	11	2	10/28/97	10/28/97	110	บ
trans-1,3-Dichloropropene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	Ü
cis-1,3-Dichloropropene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	บี
1,1,2-Trichloroethane	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	Ü
Tetrachloroethene (PCE)	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	บี
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	บ
Chlorobenzene	EPA 5030	8021A	11					ט
Ethylbenzene			11	2	10/28/97	10/28/97	11	- 1
•	EPA 5030	8021A		2	10/28/97	10/28/97	11	U
m,p-Xylenes	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
o-Xylene	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
Bromoform	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	11	2	10/28/97	10/28/97	11	U
1,3-Dichlorobenzene	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	U
1,4-Dichlorobenzene	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	U
1,2-Dichlorobenzene	EPA 5030	8021A	22	2	10/28/97	10/28/97	22	บ
Chlorotrifluoroethene	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	บ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	ע
2-Butanone (MEK)	EPA 5030	8021A	110	2	10/28/97	10/28/97	110	υV
Acetone	EPA 5030	8021A	110		10/28/97	10/28/97	770	K
1,2,4-Trimethylbenzene	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	υu
1,3,5-Trimethylbenzene	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	44	2	10/28/97	10/28/97	44	υ √

Approved By: 1844/021397p

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD120DL L9703643-015DL Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3	gua
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	550	50	10/30/97	10/30/97	550	UZ	~
Chloromethane	EPA 5030	8021A	550	50	10/30/97	10/30/97	550	υŢ	D
Vinyl Chloride	EPA 5030	8021A	550	50	10/30/97	10/30/97	550	ŭ	1
Bromomethane	EPA 5030	8021A	550	50	10/30/97	10/30/97	550	ŭ	1
Chloroethane	EPA 5030	8021A	550	50	10/30/97	10/30/97	550	ŭ	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	ŭ	1
1.1-Dichloroethene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	ŭ	
Methylene Chloride	EPA 5030	8021A	1100	50	10/30/97	10/30/97	1100	ŭ	1
trans-1,2-Dichloroethene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	ŭ	
cis-1,2-Dichloroethene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	υ	1
1,1-Dichloroethane	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	ŭ	
Chloroform	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	ŭ l	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	ŭ	1
Carbon Tetrachloride	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	ŭll	1
Benzene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	υ	
1.2-Dichloroethane	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	υ	1
Trichloroethene (TCE)	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	ŭ	Ì
1,2-Dichloropropane	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	υ	
Bromodichloromethane	EPA 5030	8021A	275	50	10/30/97	10/30/97	275 275	υ	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	2750	50	10/30/97	10/30/97	2750	Ü	\
Toluene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	Ü	1
trans-1,3-Dichloropropene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275 275	Ü	
cis-1,3-Dichloropropene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275 275	Ü	
1,1,2-Trichloroethane	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	Ü	
Tetrachloroethene (PCE)	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	Ü	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	1100	50	10/30/97	10/30/97	1100	υl	- 1
Chlorobenzene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	ŭ	İ
Ethylbenzene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	Ü	-
m,p-Xylenes	EPA 5030	8021A	275	50	10/30/97	10/30/97	275 275	Ü	
o-Xylene	EPA 5030	8021A	275	50	10/30/97	10/30/97	275	Ü	1
Bromoform	EPA 5030	8021A	275	50	10/30/97	10/30/97	275 275	Ü	1
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	275	50 50	10/30/97	10/30/97	275 275		1
1,3-Dichlorobenzene	EPA 5030	8021A	550	50	10/30/97		550	Ü	1
1,4-Dichlorobenzene	EPA 5030	8021A	550	50 50	10/30/97	10/30/97		Ü	1
1,2-Dichlorobenzene	EPA 5030	8021A	550	50	10/30/97	10/30/97	550	U	
Chlorotrifluoroethene	EPA 5030	8021A	1100	50	10/30/97	10/30/97	550	n	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	1100	50	10/30/97	10/30/97	1100	Ü	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	1100	50 50		10/30/97	1100	ប្	1 /
2-Butanone (MEK)	EPA 5030	8021A	2750	50 50	10/30/97	10/30/97	1100	ט 🎵	1/
Acetone	EPA 5030	8021A	2750 2750	50 50	10/30/97	10/30/97	2750	U V	407
1,2,4-Trimethylbenzene	EPA 5030	8021A	1100	50	10/30/97	10/30/97	3400	<u></u>	×8
1,3,5-Trimethylbenzene	EPA 5030	8021A 8021A	1100	50 50	10/30/97	10/30/97	1100	ñ, Κ	P
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A 8021A	1100	50 50	10/30/97	10/30/97	1100	Ü	1,
J vinotopropane (DBCF)	FLW 2020	004 IA	1100	30	10/30/97	10/30/97	1100	n 1	V



Analytical Report

Client: Project:

InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/28/97 Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD124

Pren

Analysis

Units: UG/KG

Test Notes:

L9703643-025 Basis: Dry

A 8 .	Prep	Analysis		Diminor	Date	Date	.	Kester
Analyte	Method	Method	PQL	Factor	Extracted	Analyzed	Result	Notes >
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	. 1	10/28/97	10/28/97	12	UU
Chloromethane	EPA 5030	8021A	12	ī	10/28/97	10/28/97	12	υï
Vinyl Chloride	EPA 5030	8021A	12	ī	10/28/97	10/28/97	12	υl
Bromomethane	EPA 5030	8021A	12	ī	10/28/97	10/28/97	12	υl
Chloroethane	EPA 5030	8021A	12	ī	10/28/97	10/28/97	12	υl
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	υ
1.1-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	υ
Methylene Chloride	EPA 5030	8021A	23	ī	10/28/97	10/28/97	23	υ I
trans-1,2-Dichloroethene	EPA 5030	8021A	6	ĩ	10/28/97	10/28/97	6	Ü
cis-1.2-Dichloroethene	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	Ū
1.1-Dichloroethane	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	Ŭ
Chloroform	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ŭ
Carbon Tetrachloride	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
Benzene	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
1,2-Dichloroethane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
Trichloroethene (TCE)	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
1,2-Dichloropropane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
Bromodichloromethane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57	î	10/28/97	10/28/97	57	ŭ
Toluene	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	Ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ü
cis-1,3-Dichloropropene	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	Ü
1,1,2-Trichloroethane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	Ü
Tetrachloroethene (PCE)	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	Ü
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	î	10/28/97	10/28/97	23	Ü
Chlorobenzene	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ŭ
Ethylbenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ü
m,p-Xylenes	EPA 5030	8021A	6	1	10/28/97		6	Ü
o-Xylene	EPA 5030	8021A	6	1	10/28/97	10/ 28/97 10/ 28/97	6	Ü
Bromoform		8021A	6	1			-	1 1
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	-	10/28/97	10/28/97	6	U
	EPA 5030		-	1	10/28/97	10/28/97	6	U
1,3-Dichlorobenzene	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	U
1,4-Dichlorobenzene	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	U
1,2-Dichlorobenzene	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	U
Chlorotrifluoroethene	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U
2-Butanone (MEK)	EPA 5030	8021A	57	1	10/28/97	10/28/97	57	บ
Acetone	EPA 5030	8021A	57	1	10/28/97	10/28/97	57	U
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	บ √/



Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/28/97 Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD125 L9703643-026 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 📯 Notes 😕	l
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	U U	t
Chloromethane	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	ט יע	ı
Vinyl Chloride	EPA 5030	8021A	12	i	10/28/97	10/28/97	12	U	ı
Bromomethane	EPA 5030	8021A	12	ī	10/28/97	10/28/97	12	U	١
Chloroethane	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	υİ	ı
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	ı
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	ı
Methylene Chloride	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U	ı
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	1
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	-
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	
Chloroform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U \	2
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	5
Benzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	9
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	1
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	The same
Bromodichloromethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	Sprend
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	58	1	10/28/97	10/28/97	58	U	2
Toluene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	SEC.
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	STEERING ST
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	emplicate a
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	ala de
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U	agricus.
Chlorobenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	-
Ethylbenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	No.
m,p-Xylenes	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	No.
o-Xylene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	CHARGE
Bromoform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	-
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	2000
1,3-Dichlorobenzene	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	U	
1,4-Dichlorobenzene	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	U	
1,2-Dichlorobenzene	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	U	
Chlorotrifluoroethene	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	บ	1
2-Butanone (MEK)	EPA 5030	8021A	58	1	10/28/97	10/28/97	58	U	Ì
Acetone	EPA 5030	8021A	58	1	10/28/97	10/28/97	58	U	I
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U	I
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	ַ ט	ı
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	υ 小	

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001 Soil

Service Request: L9703643

Date Collected: 10/28/97 Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD126 L9703643-027 Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	7
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/28/97	10/28/97	. 11	UL	7
Chloromethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บา๊	
Vinyl Chloride	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ü	ı
Bromomethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ	ł
Chloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ	1
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	1
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	
Methylene Chloride	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	υ	1
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	1
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	1
Chloroform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	Ĭ
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/28/97	10/28/97	-6	U	
Benzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	1
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	ប	
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	ı
Bromodichloromethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	55	1	10/28/97	10/28/97	55	บ	
Toluene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	2
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	3
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ	
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	บ	dayaga
Chlorobenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	NAME OF TAXABLE PARTY.
Ethylbenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	
m,p-Xylenes	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	
o-Xylene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ū	
Bromoform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U	To library
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ū	200
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ü	MEGSTE
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	ii	Ŭ	
Chlorotrifluoroethene	EPA 5030	8021A	22	ī	10/28/97	10/28/97	22	ŭ	Operation in the last of the l
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	ī	10/28/97	10/28/97	22	ŭΙ	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	ī	10/28/97	10/28/97	22	ŭ	
2-Butanone (MEK)	EPA 5030	8021A	55	1	10/28/97	10/28/97	55	Ŭ	
Acetone	EPA 5030	8021A	55	î	10/28/97	10/28/97	55	ŭ	
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	i	10/28/97	10/28/97	22	บั	
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	î	10/28/97	10/28/97	22	υl	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	Ĩ	10/28/97	10/28/97	22	υΨ	

Approved By:

LEVEL V 003032

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/28/97

Date Collected: 10/28/97
Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD128

L9703643-028

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result S
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	n N
Chloromethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U V
Vinyl Chloride	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	ן ט
Bromomethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U
Chloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ü
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
1,1-Dichloroethene	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	Ŭ
Methylene Chloride	EPA 5030	8021A	22	ī	10/28/97	10/28/97	22	Ŭ
trans-1,2-Dichloroethene	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	ŭ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ü
1.1-Dichloroethane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	บั
Chloroform	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
Carbon Tetrachloride	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	υ
Benzene	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ŭ
1.2-Dichloroethane	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	ŭ
Trichloroethene (TCE)	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
1,2-Dichloropropane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
Bromodichloromethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ü
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	54	1	10/28/97	10/28/97	54	Ü
Toluene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ü
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ü
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ü
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/28/97		6	Ü
2-Chloro-1,1,1-rifluoroethane	EPA 5030	8021A	22	1	10/28/97	10/28/97 10/28/97	22	Ü
Chlorobenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Ethylbenzene	EPA 5030	8021A	6	1			-	Ü
m,p-Xylenes	EPA 5030		· 6	_	10/28/97	10/28/97	6	- 1
o-Xylene		8021A	_	1	10/28/97	10/28/97	6	U
Bromoform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1.1.2.2-Tetrachloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,3-Dichlorobenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
•	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ
Chlorotrifluoroethene	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	U
2-Butanone (MEK)	EPA 5030	8021A	54	1	10/28/97	10/28/97	54	U
Acetone	EPA 5030	8021A	54	1 .	10/28/97	10/28/97	54	U
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	U
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	· 1	10/28/97	10/28/97	22	U √V

Approved By:

Thomas & Aling

Date: 12/23/97

OCDEN VALIDATEI



Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/28/97 Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD129 L9703643-029 Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result ?
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	UU
Chloromethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บัเ
Vinyl Chloride	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	י ט ו
Bromomethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	ע ו
Chloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ
Methylene Chloride	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	บ
trans-1,2-Dichloroethene	EPA 5030	8021A	6 '	1	10/28/97	10/28/97	6	บ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ \
Chloroform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Benzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	υl
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Bromodichloromethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	55	1	10/28/97	10/28/97	55	U
Toluene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6 .	ប
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	U
Chlorobenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Ethylbenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
m,p-Xylenes	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
o-Xylene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Bromoform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	υ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	ט
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	υ i
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ū
Chlorotrifluoroethene	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	Ū
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	Ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	ī	10/28/97	10/28/97	22	Ŭ
2-Butanone (MEK)	EPA 5030	8021A	55	ī	10/28/97	10/28/97	55	Ū
Acetone	EPA 5030	8021A	55	ĩ	10/28/97	10/28/97	55	ŭ
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	î	10/28/97	10/28/97	22	ŭ
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	î	10/28/97	10/28/97	22	ŭ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	i	10/28/97	10/28/97	22	υV

Approved By:

EL 0 3034

Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/28/97 Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD133 L9703643-033 Units: UG/KG

Basis: Dry

Test Notes: C2A

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	ULL
Chloromethane	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	υ'n
Vinyl Chloride	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	Ū
Bromomethane	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U
Chloroethane	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	Ū
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	υl
1,1-Dichloroethene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U
Methylene Chloride	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	Ū
trans-1,2-Dichloroethene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ū
cis-1,2-Dichloroethene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ŭ
1,1-Dichloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	ŭ
Chloroform	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	ŭΙ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	ŭΙ
Carbon Tetrachloride	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	บั
Benzene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	ŭ
1.2-Dichloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ü
Trichloroethene (TCE)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	υ
1,2-Dichloropropane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U
Bromodichloromethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ü
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57000	1000	10/30/97	10/30/97	57000	Ü
Toluene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ü
trans-1,3-Dichloropropene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700 5700	Ü
cis-1,3-Dichloropropene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700 5700	Ü
1,1,2-Trichloroethane	EPA 5030	8021A	5700 5700	1 100	10/30/97	10/30/97	5700 5700	U
Tetrachioroethene (PCE)	EPA 5030	8021A	5700 5700	1000	10/30/97	10/30/97	5700 5700	Ü
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22800	1000	10/30/97		22800	Ü
Chlorobenzene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97		
Ethylbenzene	EPA 5030	8021A	5700	1000		10/30/97	5700	U
m,p-Xylenes	EPA 5030	8021A	5700 5700		10/30/97	10/30/97	5700	U
o-Xylene	EPA 5030	8021A 8021A	5700 5700	1000	10/30/97	10/30/97	5700	U
Bromoform				1000	10/30/97	10/30/97	5700	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021A 8021A	5700 5700	1000	10/30/97	10/30/97	5700	U)
1,3-Dichlorobenzene	EPA 5030			1000	10/30/97	10/30/97	5700	U
1,4-Dichlorobenzene	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U
1,2-Dichlorobenzene	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U
Chlorotrifluoroethene	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U
	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U
2-Butanone (MEK)	EPA 5030	8021A	57000	1000	10/30/97	10/30/97	57000	U
Acetone	EPA 5030	8021A	57000	1000	10/30/97	10/30/97	57000	U
1,2,4-Trimethylbenzene	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U]
1,3,5-Trimethylbenzene	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U / 1
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	υ 🎶

C2A

MRL is elevated because of matrix interferences and because the sample required diluting.

Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/28/97 Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

RD134

Units: UG/KG

Lab Code: Test Notes: L9703643-034

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Resul Notes	12	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U	u	Γ
Chloromethane	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U	Ĭ	
Vinyl Chloride	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U		l
Bromomethane	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U	1	ı
Chloroethane	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U	1	ı
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	ı
1,1-Dichloroethene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	ı
Methylene Chloride	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U		ı
trans-1,2-Dichloroethene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U		ı
cis-1,2-Dichloroethene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	ı
1,1-Dichloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U		l
Chloroform	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U		l
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U		ı
Carbon Tetrachloride	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	l
Benzene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	l
1,2-Dichloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U		ı
Trichloroethene (TCE)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U		l
1,2-Dichloropropane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U		l
Bromodichloromethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	ı
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57000	1000	10/30/97	10/30/97	57000	U		ı
Toluene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	ı
trans-1,3-Dichloropropene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	·	ı
cis-1,3-Dichloropropene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U		ı
1,1,2-Trichloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	L
Tetrachloroethene (PCE)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	l
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	ι		l
Chlorobenzene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	12	ı
Ethylbenzene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	√	L
m,p-Xylenes	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	-8700-44	100	J	ŧ
o-Xylene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	U	ľ
Bromoform	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	ĭ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	1	ı
1,3-Dichlorobenzene	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U	1	l
1,4-Dichlorobenzene	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U	1	ı
1,2-Dichlorobenzene	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U	1	l
Chlorotrifluoroethene	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U	1	ı
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U	1	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U		ı
2-Butanone (MEK)	EPA 5030	8021A	57000	1000	10/30/97	10/30/97	57000	U	1	ı
Acetone	EPA 5030	8021A	57000	1000	10/30/97	10/30/97	57000	U	1	ı
1,2,4-Trimethylbenzene	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U	1	ı
1,3,5-Trimethylbenzene	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U	1.	1
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U	√	



Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/28/97 Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD135 L9703643-035 Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Z Notes	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	üΚ	T
Chloromethane	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	ט יי	1
Vinyl Chloride	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	υl	
Bromomethane	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U	
Chloroethane	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	U	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ü	1
1,1-Dichloroethene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	U	ı
Methylene Chloride	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	Ü	1
trans-1,2-Dichloroethene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ü	ı
cis-1,2-Dichloroethene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ū	ı
1,1-Dichloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	υ	ı
Chloroform	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	υ	ı
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ŭ	1
Carbon Tetrachloride	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ŭ	ı
Benzene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	ŭ	ı
1,2-Dichloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	บ	ı
Trichloroethene (TCE)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	υ	
1,2-Dichloropropane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	υ	
Bromodichloromethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	ŭ	ı
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57000	1000	10/30/97	10/30/97	57000	Ü	
Toluene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ü	•
trans-1,3-Dichloropropene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ü	ı
cis-1,3-Dichloropropene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	บี่	ı
1.1.2-Trichloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	ΰ	
Tetrachloroethene (PCE)	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	บี	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	Ü	1
Chlorobenzene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	Ü	
Ethylbenzene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700	ŭ√l	ı
m,p-Xylenes	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	6380 3200		\$
o-Xylene	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700 5200 5700		17
Bromoform	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700 5700		l
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	5700	1000	10/30/97	10/30/97	5700 5700	ן ט	ı
1,3-Dichlorobenzene	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	ΰ	ı
1.4-Dichlorobenzene	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	บ	l
1,2-Dichlorobenzene	EPA 5030	8021A	11400	1000	10/30/97	10/30/97	11400	บี	į
Chlorotrifluoroethene	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	ט	ł
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	บ	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22800	1000	10/30/97	10/30/97		U	i
2-Butanone (MEK)	EPA 5030	8021A	57000	1000	10/30/97	10/30/97	22800 57000	บ	1
Acetone	EPA 5030	8021A	57000	1000	10/30/97				ı
1,2,4-Trimethylbenzene	EPA 5030	8021A	22800	1000		10/30/97	57000	U	ı
1,3,5-Trimethylbenzene	EPA 5030	8021A	22800		10/30/97	10/30/97	22800	U	ı
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22800	1000	10/30/97	10/30/97	22800	U	i
	E1 V 2020	0021A	22000	1000	10/30/97	10/30/97	22800	עע	ı
			1					Į	1



Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/28/97

Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD136 L9703643-037 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	57	5	10/29/97	10/29/97	57	UU
Chloromethane	EPA 5030	8021A	57	5	10/29/97	10/29/97	57	υï
Vinyl Chloride	EPA 5030	8021A	57	5	10/29/97	10/29/97	57	υl
Bromomethane	EPA 5030	8021A	57	5	10/29/97	10/29/97	57	Ū
Chloroethane	EPA 5030	8021A	57	5	10/29/97	10/29/97	57	υ \
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ū l
1,1-Dichloroethene	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	UV
Methylene Chloride	EPA 5030	8021A	114	5	10/29/97	10/29/97	250	NT X
trans-1,2-Dichloroethene	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	UUI
cis-1,2-Dichloroethene	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	บไ
1,1-Dichloroethane	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ü
Chloroform	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ū
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	U
Carbon Tetrachloride	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	υ
Benzene	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ü
1,2-Dichloroethane	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	U I
Trichloroethene (TCE)	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	υ
1,2-Dichloropropane	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	υ
Bromodichloromethane	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ü
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	285	5	10/29/97	10/29/97	285	Ŭ
Toluene	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ū
trans-1,3-Dichloropropene	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ŭ
Tetrachioroethene (PCE)	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	114	5	10/29/97	10/29/97	114	Ŭ
Chlorobenzene	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ŭ
Ethylbenzene	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ŭ
m,p-Xylenes	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	υ
o-Xylene	EPA 5030	8021A	29	. 5	10/29/97	10/29/97	29	Ŭ
Bromoform	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	Ŭ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	29	5	10/29/97	10/29/97	29	ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	57	5	10/29/97	10/29/97	57	ŭ
1,4-Dichlorobenzene	EPA 5030	8021A	57	5	10/29/97	10/29/97	57	Ŭ
1,2-Dichlorobenzene	EPA 5030	8021A	57	5	10/29/97	10/29/97	57	ŭ
Chlorotrifluoroethene	EPA 5030	8021A	114	5	10/29/97	10/29/97	114	Ŭ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	114	5	10/29/97	10/29/97	114	ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	114	5	10/29/97	10/29/97	114	ŭ
2-Butanone (MEK)	EPA 5030	8021A	285	5	10/29/97	10/29/97	285	ŭ
Acetone	EPA 5030	8021A	285	5	10/29/97	10/29/97	285	ŭ
1,2,4-Trimethylbenzene	EPA 5030	8021A	114	5	10/29/97	10/29/97	114	υ
1,3,5-Trimethylbenzene	EPA 5030	8021A	114	5	10/29/97	10/29/97	114	υ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	114	5	10/29/97	10/29/97	114	υ√





Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/28/97

Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD137

L9703643-038

Units: UG/KG Basis: Dry

Dilution Date Prep Analysis Date Analyte Method Method **PQL** Extracted Analyzed Notes Factor Result Dichlorodifluoromethane (CFC 12) 8021A U **EPA 5030** 59 10/29/97 10/29/97 59 Chloromethane **EPA 5030** 59 U 8021A 59 5 10/29/97 10/29/97 Vinyl Chloride **EPA 5030** 8021A 10/29/97 10/29/97 U 59 59 Bromomethane 10/29/97 10/29/97 U **EPA 5030** 8021A 59 5 59 Chloroethane U **EPA 5030** 8021A 59 5 10/29/97 10/29/97 59 Trichlorofluoromethane (CFC 11) **EPA 5030** 30 U 8021A 5 10/29/97 10/29/97 30 1,1-Dichloroethene **EPA 5030** 8021A 30 5 10/29/97 10/29/97 30 U *8 Methylene Chloride **EPA 5030** 8021A 117 10/29/97 10/29/97 190 trans-1.2-Dichloroethene **EPA 5030** 5 8021A 30 10/29/97 30 U 10/29/97 cis-1,2-Dichloroethene **EPA 5030** 8021A 30 10/29/97 10/29/97 30 U 1,1-Dichloroethane **EPA 5030** 8021A U 30 5 10/29/97 10/29/97 30 Chloroform **EPA 5030** 8021A 10/29/97 10/29/97 U 30 5 30 1,1,1-Trichloroethane (TCA) **EPA 5030** 8021A 30 5 10/29/97 30 U 10/29/97 Carbon Tetrachloride U **EPA 5030** 8021A 30 5 10/29/97 10/29/97 30 Benzene **EPA 5030** 8021A 30 5 10/29/97 10/29/97 30 U 1,2-Dichloroethane **EPA 5030** 8021A 30 10/29/97 10/29/97 U 5 30 Trichloroethene (TCE) **EPA 5030** 8021A 30 10/29/97 10/29/97 30 U 1,2-Dichloropropane 5 **EPA 5030** 8021A 30 10/29/97 10/29/97 30 U Bromodichloromethane **EPA 5030** 8021A 30 10/29/97 10/29/97 30 U 2-Chloroethyl Vinyl Ether **EPA 5030** 10/29/97 8021A 291 5 291 U 10/29/97 Toluene **EPA 5030** 8021A 30 10/29/97 10/29/97 30 U trans-1,3-Dichloropropene **EPA 5030** 8021A 30 5 10/29/97 U 10/29/97 30 cis-1,3-Dichloropropene **EPA 5030** 8021A 30 U 5 10/29/97 10/29/97 30 1.1.2-Trichloroethane **EPA 5030** 8021A 5 10/29/97 U 30 10/29/97 30 Tetrachloroethene (PCE) **EPA 5030** 8021A 30 5 10/29/97 10/29/97 30 U 2-Chloro-1,1,1-trifluoroethane **EPA 5030** 8021A 117 5 10/29/97 10/29/97 117 U Chlorobenzene EPA 5030 5 8021A 30 U 10/29/97 10/29/97 30 Ethylbenzene **EPA 5030** 8021A 30 5 10/29/97 10/29/97 30 U m.p-Xylenes **EPA 5030** 8021A 30 5 10/29/97 10/29/97 30 U o-Xylene **EPA 5030** 8021A 30 5 10/29/97 10/29/97 30 U Bromoform EPA 5030 8021A 30 10/29/97 10/29/97 30 U 1.1.2.2-Tetrachloroethane **EPA 5030** 8021A 30 5 10/29/97 10/29/97 30 U 1,3-Dichlorobenzene **EPA 5030** 8021A 59 5 10/29/97 10/29/97 59 U 1.4-Dichlorobenzene **EPA 5030** 59 5 8021A 10/29/97 10/29/97 59 U 1,2-Dichlorobenzene **EPA 5030** 8021A 59 5 10/29/97 59 10/29/97 U Chlorotrifluoroethene EPA 5030 8021A 117 5 10/29/97 10/29/97 117 U 1,1,1,2-Tetrachloroethane **EPA 5030** 8021A 5 117 10/29/97 10/29/97 U 117 1,1,2-Trichlorotrifluoroethane (CFC 113) **EPA 5030** 8021A 117 5 10/29/97 10/29/97 117 U 2-Butanone (MEK) **EPA 5030** 8021A 5 291 10/29/97 10/29/97 U 291 Acetone **EPA 5030** 8021A 291 10/29/97 5 10/29/97 291 U 1,2,4-Trimethylbenzene **EPA 5030** 5 8021A 117 10/29/97 10/29/97 117 U 1,3,5-Trimethylbenzene **EPA 5030** 8021A 117 5 10/29/97 10/29/97 117 U 1,2-Dibromo-3-chloropropane (DBCP) **EPA 5030** 8021A 117 5 10/29/97 10/29/97 117

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Water

Service Request: L9703643
Date Collected: 10/28/97

Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD138

Test Notes:

Units: UG/L L9703643-039 Basis: NA

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	U U
Chloromethane	EPA 5030	8021A	10	î	10/29/97	10/29/97	10	ÜÜ
Vinyl Chloride	EPA 5030	8021A	10	i	10/29/97	10/29/97	10	บั
Bromomethane	EPA 5030	8021A	10	i	10/29/97	10/29/97	10	ŭΙ
Chloroethane	EPA 5030	8021A	10	i	10/29/97	10/29/97	10	ŭ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	5	i	10/29/97	10/29/97	5	ŭ
1,1-Dichloroethene	EPA 5030	8021A	5	î	10/29/97	10/29/97	5	ŭ
Methylene Chloride	EPA 5030	8021A	20	i	10/29/97	10/29/97	20	Ŭ
trans-1,2-Dichloroethene	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	Ū
cis-1,2-Dichloroethene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
1,1-Dichloroethane	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
Chloroform	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	U
Carbon Tetrachloride	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
Benzene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
1,2-Dichloroethane	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
Trichloroethene (TCE)	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
1,2-Dichloropropane	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	υ
Bromodichloromethane	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	50	1	10/29/97	10/29/97	50	ט
Toluene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
trans-1,3-Dichloropropene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	ט
cis-1,3-Dichloropropene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
1,1,2-Trichloroethane	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	บ
Tetrachloroethene (PCE)	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	บ
Chlorobenzene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
Ethylbenzene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	บ
m,p-Xylenes	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	บ
o-Xylene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	บ
Bromoform	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	บ
1,3-Dichlorobenzene	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	υ
1,4-Dichlorobenzene	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	U
1,2-Dichlorobenzene	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	U
Chlorotrifluoroethene	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	U
2-Butanone (MEK)	EPA 5030	8021A	50	1	10/29/97	10/29/97	50	U
Acetone	EPA 5030	8021A	50	1	10/29/97	10/29/97	50	บ
1,2,4-Trimethylbenzene	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	U
1,3,5-Trimethylbenzene	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	U)
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	บ√

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/28/97 Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD139 L9703643-036 Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	υU
Chloromethane	EPA 5030	8021A	12	ĩ	10/28/97	10/28/97	12	Ü
Vinyl Chloride	EPA 5030	8021A	12	ī	10/28/97	10/28/97	12	Ŭ
Bromomethane	EPA 5030	8021A	12	ī	10/28/97	10/28/97	12	Ü
Chloroethane	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	Ü
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	U
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ü
Methylene Chloride	EPA 5030	8021A	23	ī	10/28/97	10/28/97	23	Ŭ
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ü
cis-1.2-Dichloroethene	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
1,1-Dichloroethane	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ŭ
Chloroform	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	ŭ
Carbon Tetrachloride	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	ŭ
Benzene	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	Ü
1.2-Dichloroethane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	บ
Trichloroethene (TCE)	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	Ü
1,2-Dichloropropane	EPA 5030	8021A	6	î	10/28/97	10/28/97	6	ŭ
Bromodichloromethane	EPA 5030	8021A	6	i	10/28/97	10/28/97	6	บ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57	1	10/28/97	10/28/97	57	บ
Toluene	EPA 5030	8021A	6	1	10/28/97		6	บ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97 10/28/97	6	U
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1			-	
1,1,2-Trichloroethane	EPA 5030	8021A	6	=	10/28/97	10/28/97	6	U
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1 1	10/28/97	10/28/97	6	U
2-Chloro-1.1.1-trifluoroethane			23	-	10/28/97	10/28/97	6	U
Chlorobenzene	EPA 5030	8021A		1	10/28/97	10/28/97	23	U
	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Ethylbenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
m,p-Xylenes	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
o-Xylene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Bromoform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,1,2,2-Tetrachioroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,3-Dichlorobenzene	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	U
1,4-Dichlorobenzene	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	U)
1,2-Dichlorobenzene	EPA 5030	8021A	12	1	10/28/97	10/28/97	12	บ
Chlorotrifluoroethene	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	1	10/28/97	10/28/97	23	ט
2-Butanone (MEK)	EPA 5030	8021A	57	1	10/28/97	10/28/97	57	ן ט
Acetone	EPA 5030	8021A	57	1	10/28/97	10/28/97	57	υ
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	ī	10/28/97	10/28/97	23	υ
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	ī	10/28/97	10/28/97	23	ŭ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	ì	10/28/97	10/28/97	23	υV

Approved By:

Date: 12/23/97



Analytical Report

Client: Project:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

Sample Matrix:

RD140

Lab Code: Test Notes: L9703643-045

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	9h
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	23	2	10/29/97	10/29/97	23	บน	
Chloromethane	EPA 5030	8021A	23	2	10/29/97	10/29/97	23	υí`	
Vinyl Chloride	EPA 5030	8021A	23	2	10/29/97	10/29/97	23	Ü	
Bromomethane	EPA 5030	8021A	23	2	10/29/97	10/29/97	23	บ	
Chloroethane	EPA 5030	8021A	23	2	10/29/97	10/29/97	23	υl	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	υV	
1,1-Dichloroethene	EPA 5030	8021A	12	2	10/29/97	10/29/97	31	J	*8
Methylene Chloride	EPA 5030	8021A	45	**************************************	10/29/97	10/29/97	45	υŭ	. 0
trans-1,2-Dichloroethene	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	ָּט ט	
cis-1,2-Dichloroethene	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	U	
1,1-Dichloroethane	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	υ	
Chloroform	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	u√	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	12	2	10/29/97	10/29/97	190	TXM	*8
Carbon Tetrachloride	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	υίζ	
Benzene	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	บไ	
1,2-Dichloroethane	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	υ / /	
Trichloroethene (TCE)	EPA 5030	8021A	12	2	10/29/97	10/29/97	1100	Ŕ	\mathcal{D}
1,2-Dichloropropane	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	UU	
Bromodichloromethane	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	บ ั	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	113	2	10/29/97	10/29/97	113	וטו	
Toluene	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	U	
trans-1,3-Dichloropropene	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	U	
cis-1,3-Dichloropropene	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	U	
1,1,2-Trichloroethane	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	ι√Ι	
Tetrachloroethene (PCE)	EPA 5030	8021A	12	2	10/29/97	10/29/97	13	-	*\$
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	45	2	10/29/97	10/29/97	45	บน	1
Chlorobenzene	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	บั	
Ethylbenzene	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	U	
m,p-Xylenes	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	υ	
o-Xylene	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	U	
Bromoform	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	U	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	12	2	10/29/97	10/29/97	12	υ /	
1,3-Dichlorobenzene	EPA 5030	8021A	23	2	10/29/97	10/29/97	23	บ	
1,4-Dichlorobenzene	EPA 5030	8021A	23	2	10/29/97	10/29/97	23	บ	
1,2-Dichlorobenzene	EPA 5030	8021A	23	2	10/29/97	10/29/97	23	וט	
Chlorotrifluoroethene	EPA 5030	8021A	45	2	10/29/97	10/29/97	45	ן ט	
1,1,2-Tetrachloroethane	EPA 5030	8021A	45	2	10/29/97	10/29/97	45	ט	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	45	2	10/29/97	10/29/97	45	υ	
2-Butanone (MEK)	EPA 5030	8021A	113	2	10/29/97	10/29/97	113	บ	
Acetone	EPA 5030	8021A	113	2	10/29/97	10/29/97	113	υ	
1,2,4-Trimethylbenzene	EPA 5030	8021A	45	2	10/29/97	10/29/97	45	υ	
1,3,5-Trimethylbenzene	EPA 5030	8021A	45	2	10/29/97	10/29/97	45	ŭΙ	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	45	2	10/29/97	10/29/97	45	Ū √ ,	

Approved By: 1844/021397p

Thomas 10 Robins

Date: <u>אר (כון</u> 23 <u>| 97</u>

LEVELV

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD140DL L9703643-045DL

A --- b----t--

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 2	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	113	10	10/30/97	10/30/97	113	UR	7
Chloromethane	EPA 5030	8021A	113	10	10/30/97	10/30/97	113	Üi	
Vinyl Chloride	EPA 5030	8021A	113	10	10/30/97	10/30/97	113	ŭΙ	
Bromomethane	EPA 5030	8021A	113	10	10/30/97	10/30/97	113	ŭ	
Chloroethane	EPA 5030	8021A	113	10	10/30/97	10/30/97	113	ŭ	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	ŭ	
1,1-Dichloroethene	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	ŭ	
Methylene Chloride	EPA 5030	8021A	225	10	10/30/97	10/30/97	225	ŭ	
trans-1,2-Dichloroethene	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	ŭ	
cis-1,2-Dichloroethene	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	ŭ	
1,1-Dichloroethane	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	ŭl	
Chloroform	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	ŭll	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	57	10	10/30/97	10/30/97	94	_	
Carbon Tetrachloride	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	ט	
Benzene	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	ŭ	
1,2-Dichloroethane	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	υV	
Trichloroethene (TCE)	EPA 5030	8021A	57	10	10/30/97	10/30/97	520	• • •	
1,2-Dichloropropane	EPA 5030	8021A	57	10	10/30/97	10/30/97	5 <u>7</u>	UR	~~
Bromodichloromethane	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	υR	1
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	562	10	10/30/97	10/30/97	562	ט \	,
Toluene	EPA 5030	8021A	57	10	10/30/97	10/30/97	502 57	Ü	
trans-1,3-Dichloropropene	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	Ü	
cis-1,3-Dichloropropene	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	Ü	
1,1,2-Trichloroethane	EPA 5030	8021A	57	10	10/30/97	10/30/97	57 57	Ü	
Tetrachloroethene (PCE)	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	Ü	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	225	10	10/30/97	10/30/97	225	Ü	
Chlorobenzene	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	Ü	
Ethylbenzene	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	Ü	
m,p-Xylenes	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	Ü	
o-Xylene	EPA 5030	8021A	57	10	10/30/97	10/30/97	57 57	Ü	
Bromoform	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	υ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	57	10	10/30/97	10/30/97	57	บ	
1,3-Dichlorobenzene	EPA 5030	8021A	113	10	10/30/97	10/30/97	113	บ	
1,4-Dichlorobenzene	EPA 5030	8021A	113	10	10/30/97	10/30/97	113	Ü	
1.2-Dichlorobenzene	EPA 5030	8021A	113	10	10/30/97	10/30/97	113	- 1 1	
Chlorotrifluoroethene	EPA 5030	8021A	225	10	10/30/97	10/30/97	225	U	ļ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	225	10	10/30/97	10/30/97			l
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	225				225	U	١
2-Butanone (MEK)	EPA 5030	8021A	562	10 10	10/30/97	10/30/97	225	Ü	١
Acetone	EPA 5030	8021A	562 562		10/30/97	10/30/97	562	ט	-
1,2,4-Trimethylbenzene	EPA 5030	8021A	225	10	10/30/97	10/30/97	562	U	1
1,3,5-Trimethylbenzene	EPA 5030	8021A	225 225	10	10/30/97	10/30/97	225	U	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	225	10 10	10/30/97	10/30/97	225	Ü //	
Zame o ameropropuno (Diser)	DI A 3030	6021M	443	10	10/30/97	10/30/97	225	υ√	,



Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD143

L9703643-048

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date	Result	Result A
•			-	r actor		•	IX COURT	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/29/97	10/29/97	12	υW
Chloromethane	EPA 5030	8021A	12	1	10/29/97	10/29/97	12	ויט
Vinyl Chloride	EPA 5030	8021A	12	1	10/29/97	10/29/97	12	U
Bromomethane	EPA 5030	8021A	12	1	10/29/97	10/29/97	12	บ
Chloroethane	EPA 5030	8021A	12	1	10/29/97	10/29/97	- 12	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
Methylene Chloride	EPA 5030	8021A	23	1	10/29/97	10/29/97	23	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	ט
Chloroform	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	ע
Benzene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
Bromodichloromethane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	56	1	10/29/97	10/29/97	5 6	บ
Toluene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6 .	U
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	ט
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/29/97	10/29/97	23	U
Chlorobenzene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	Ü
Ethylbenzene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	Ŭ
m,p-Xylenes	EPA 5030	8021A	6	ī	10/29/97	10/29/97	6	Ū
o-Xylene	EPA 5030	8021A	6	ĩ	10/29/97	10/29/97	6	ŭ
Bromoform	EPA 5030	8021A	6	i	10/29/97	10/29/97	6	บั
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	î	10/29/97	10/29/97	6	ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	12	i	10/29/97	10/29/97	12	ϋ
1,4-Dichlorobenzene	EPA 5030	8021A	12	i	10/29/97	10/29/97	12	ΰ
1,2-Dichlorobenzene	EPA 5030	8021A	12	î	10/29/97	10/29/97	12	ΰ
Chlorotrifluoroethene	EPA 5030	8021A	23	i	10/29/97	10/29/97	23	υ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	î	10/29/97	10/29/97	23	บี
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	i	10/29/97	10/29/97	23	Ü
2-Butanone (MEK)	EPA 5030	8021A	56	1	10/29/97	10/29/97	23 56	ΰ
Acetone	EPA 5030	8021A	56	1	10/29/97	10/29/97	56	บั
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	1	10/29/97	10/29/97		บี
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	-			23	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	1	10/29/97	10/29/97	23	ü
Semoropropane (DDCI)	WENT JOSE	0021A	23	1	10/29/97	10/29/97	23	υV

Approved By: 1844/021397p

Thomas & Robins

Date: 12/23/97

OCDEN VALEATED

LEVEL V₀₀₃₀₄₆

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Cellected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD144 L9703643-049 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/29/97	10/29/97	12	υU
Chloromethane	EPA 5030	8021A	12	1	10/29/97	10/29/97	12	บำ
Vinyl Chloride	EPA 5030	8021A	12	1	10/29/97	10/29/97	12	U
Bromomethane	EPA 5030	8021A	12	1	10/29/97	10/29/97	12	U
Chloroethane	EPA 5030	8021A	12	1	10/29/97	10/29/97	12	บ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ่
Methylene Chloride	EPA 5030	8021A	23	1	10/29/97	10/29/97	23	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	ט ו
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ
Chloroform	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	υ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	υ
Benzene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บ
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	Ü
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	Ū
Bromodichloromethane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	Ū
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57	1	10/29/97	10/29/97	57	Ŭ
Toluene	EPA 5030	8021A	6	i	10/29/97	10/29/97	6	ŭΙ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	ī	10/29/97	10/29/97	6	υ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	ĩ	10/29/97	10/29/97	6	ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	6	i	10/29/97	10/29/97	6	ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	ī	10/29/97	10/29/97	6	Ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	ī	10/29/97	10/29/97	23	บั
Chlorobenzene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	Ŭ
Ethylbenzene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	ŭ
m,p-Xylenes	EPA 5030	8021A	6	ĩ	10/29/97	10/29/97	6	Ŭ
o-Xylene	EPA 5030	8021A	6	î	10/29/97	10/29/97	6	Ŭ
Bromoform	EPA 5030	8021A	6	î	10/29/97	10/29/97	6	ŭ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	î	10/29/97	10/29/97	6	ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	12	î	10/29/97	10/29/97	12	บั
1,4-Dichlorobenzene	EPA 5030	8021A	12	i	10/29/97	10/29/97	12	บั
1,2-Dichlorobenzene	EPA 5030	8021A	12	ī	10/29/97	10/29/97	12	Ü
Chlorotrifluoroethene	EPA 5030	8021A	23	î	10/29/97	10/29/97	23	บั
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	i	10/29/97	10/29/97	23	บั
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	i	10/29/97	10/29/97	23	บั
2-Butanone (MEK)	EPA 5030	8021A	57	i	10/29/97	10/29/97	23 57	Ü
Acetone	EPA 5030	8021A	57	1	10/29/97	10/29/97	57 57	Ü
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	1	10/29/97	10/29/97	23	ü
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	1	10/29/97	10/29/97	23 23	ŭ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	1	10/29/97	10/29/97	23 23	- ŭ 1/
· · · · · · · · · · · · · · · · · · ·	DI 13 3030	3021A	43	1	10/47/7/	10/43/3/	23	· //

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD145 L9703643-050 Units: UG/KG Basis: Dry

Test Notes:

Prep Analysis Dilution Date Date Analyte Method Method PQL Factor **Extracted Analyzed** Result Notes 8021A Dichlorodifluoromethane (CFC 12) **EPA 5030** 11 10/30/97 10/30/97 11 U Chloromethane **EPA 5030** 8021A 11 10/30/97 10/30/97 11 U 1 Vinyl Chloride **EPA 5030** 8021A 11 1 10/30/97 10/30/97 11 U **EPA 5030** Bromomethane 8021A 10/30/97 10/30/97 11 U 11 1 Chloroethane **EPA 5030** 8021A 11 10/30/97 10/30/97 11 U Trichlorofluoromethane (CFC 11) **EPA 5030** 10/30/97 U 8021A 10/30/97 6 6 1 1,1-Dichloroethene **EPA 5030** 8021A 6 10/30/97 10/30/97 6 U Methylene Chloride **EPA 5030** 8021A 22 10/30/97 10/30/97 22 U 1 trans-1,2-Dichloroethene **EPA 5030** 8021A 10/30/97 10/30/97 6 U 6 1 cis-1,2-Dichloroethene **EPA 5030** 8021A 10/30/97 10/30/97 IJ 6 1 6 1,1-Dichloroethane **EPA 5030** 10/30/97 10/30/97 8021A 6 1 6 U EPA 5030 Chloroform 8021A 6 10/30/97 1 10/30/97 6 U 1,1,1-Trichloroethane (TCA) **EPA 5030** 6 8021A 6 1 10/30/97 10/30/97 U Carbon Tetrachloride EPA 5030 8021A 10/30/97 U 6 1 10/30/97 6 Benzene EPA 5030 8021A 6 10/30/97 10/30/97 6 U 1 1,2-Dichloroethane EPA 5030 8021A 6 10/30/97 10/30/97 6 U Trichloroethene (TCE) EPA 5030 8021A 6 10/30/97 6 U 10/30/97 1 1,2-Dichloropropane EPA 5030 8021A 6 1 10/30/97 10/30/97 6 U Bromodichloromethane **EPA 5030** 10/30/97 8021A U 6 10/30/97 6 1 2-Chloroethyl Vinyl Ether **EPA 5030** 8021A 10/30/97 55 1 10/30/97 55 U EPA 5030 Toluene 8021A 6 10/30/97 10/30/97 6 U trans-1,3-Dichloropropene EPA 5030 8021A 6 10/30/97 U 1 10/30/97 6 cis-1,3-Dichloropropene EPA 5030 8021A 10/30/97 6 U 6 10/30/97 EPA 5030 1.1.2-Trichloroethane 8021A 10/30/97 6 1 10/30/97 6 U Tetrachloroethene (PCE) EPA 5030 8021A 6 10/30/97 10/30/97 6 U 2-Chloro-1.1.1-trifluoroethane 8021A **EPA 5030** 22 1 10/30/97 10/30/97 22 U Chlorobenzene **EPA 5030** 8021A 6 1 10/30/97 10/30/97 6 U Ethylbenzene **EPA 5030** 8021A 6 1 10/30/97 10/30/97 6 U m,p-Xylenes EPA 5030 8021A 10/30/97 6 10/30/97 U 1 6 o-Xylene **EPA 5030** 8021A 10/30/97 10/30/97 U 6 **Bromoform** EPA 5030 8021A 6 U 1 10/30/97 10/30/97 6 1,1,2,2-Tetrachloroethane **EPA 5030** 8021A 6 1 10/30/97 10/30/97 6 U 1.3-Dichlorobenzene **EPA 5030** 8021A 11 10/30/97 1 10/30/97 11 U 1,4-Dichlorobenzene **EPA 5030** 8021A 11 10/30/97 10/30/97 U 1 11 1.2-Dichlorobenzene **EPA 5030** 8021A 11 10/30/97 10/30/97 U 11 **EPA 5030** Chlorotrifluoroethene 8021A 22 10/30/97 U 1 10/30/97 22 1,1,1,2-Tetrachloroethane **EPA 5030** 8021A 22 1 10/30/97 10/30/97 22 U 1,1,2-Trichlorotrifluoroethane (CFC 113) **EPA 5030** 22 8021A 1 10/30/97 10/30/97 22 U 2-Butanone (MEK) **EPA 5030** 8021A 55 1 10/30/97 10/30/97 55 U Acetone 8021A **EPA 5030** 55 1 10/30/97 10/30/97 55 U 1,2,4-Trimethylbenzene **EPA 5030** 8021A 22 1 10/30/97 10/30/97 22 U 1,3,5-Trimethylbenzene **EPA 5030** 8021A 22 10/30/97 10/30/97 22 U 1,2-Dibromo-3-chloropropane (DBCP) EPA 5030 8021A 22 10/30/97 10/30/97 U 22

Approved By: 1844/021397p

Date:

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

W313130001

Service Request: L9703643

Date Collected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD146 L9703643-051

Soil

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	UU
Chloromethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U
Vinyl Chloride	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	Ŭ
Bromomethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	Ü
Chloroethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	Ü
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Methylene Chloride	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	ט
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Chloroform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ
Benzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
Bromodichloromethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	ט
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	52	1	10/30/97	10/30/97	52	υ
Toluene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υΙ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	ט
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
2-Chloro-1,1,1 trifluoroethane	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	U
Chlorobenzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Ethylbenzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
m,p-Xylenes	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
o-Xylene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Bromoform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	บ
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	υl
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	υ
Chlorotrifluoroethene	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	υ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	υ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	ΰΙ
2-Butanone (MEK)	EPA 5030	8021A	52	1	10/30/97	10/30/97	52	U
Acetone	EPA 5030	8021A	52	1	10/30/97	10/30/97	52	Ū
1,2,4-Trimethylbenzene	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	Ū
1,3,5-Trimethylbenzene	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	ט
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	υV

Approved By:

Thomas D. Arbing

Date: 12/23/97

OCDEN VALDATE

Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/29/97 Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

RD147

Prep

Units: UG/KG

Lab Code: Test Notes: L9703643-052

Basis: Dry

Analyte	Method	Method	PQL	Factor	Extracted	Analyzed	Result	Notes -
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	UU
Chloromethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U
Vinyl Chloride	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U
Bromomethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U \
Chloroethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Methylene Chloride	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6 '	1	10/30/97	10/30/97	6	บ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
1,1-Dichloroethane	EPA 5030	8021A	6	. 1	10/30/97	10/30/97	6	บ
Chloroform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Benzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Bromodichloromethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	54	$\bar{\mathbf{i}}$	10/30/97	10/30/97	54	Ü
Toluene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ū
cis-1,3-Dichloropropene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ü
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ū
Tetrachloroethene (PCE)	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	Ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	Ŭ
Chlorobenzene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
Ethylbenzene	EPA 5030	8021A	6	ĩ	10/30/97	10/30/97	6	Ū
m,p-Xylenes	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
o-Xylene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭ
Bromoform	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	บั
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	ĩ	10/30/97	10/30/97	6	ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	ŭ	î	10/30/97	10/30/97	ii	ŭ
1,4-Dichlorobenzene	EPA 5030	8021A	îî	ī	10/30/97	10/30/97	ii	ŭ
1.2-Dichlorobenzene	EPA 5030	8021A	ii	i	10/30/97	10/30/97	11	บั
Chlorotrifluoroethene	EPA 5030	8021A	22	i	10/30/97	10/30/97	22	ŭ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	i	10/30/97	10/30/97	22	บี
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	ŭ
2-Butanone (MEK)	EPA 5030	8021A	54	1	10/30/97	10/30/97	54	บี
Acetone	EPA 5030	8021A	54	1	10/30/97	10/30/97	54	Ü
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	. U
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	10/30/97	10/30/97		- 1
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	10/30/97	10/30/97	22 22	ט 🗸
.,2 2.0.01105 vinoropropane (DDCr)	TI V 2020	00217	44	1	10/30/7/	10/30/7/	22	, U V

Approved By: 1844/021397p



Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/29/97 Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD148

Prep

Analysis

Test Notes:

Units: UG/KG Basis: Dry L9703643-053

Date

Date

Dilution

Analyte	Method	Method	PQL	Factor	Extracted	Analyzed	Result	Notes	_
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	ע ט	П
Chloromethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	Ui	îΙ
Vinyl Chloride	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U	
Bromomethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U	. 1
Chloroethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U /	- 1
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Methylene Chloride	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	U	
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ	
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ	
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Chloroform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	- 1
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	U	- 1
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ	- 1
Benzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ŭ	ı
1,2-Dichloroethane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ü	
Trichloroethene (TCE)	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ	
1,2-Dichloropropane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ	- 1
Bromodichloromethane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ	1
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	54	ī	10/30/97	10/30/97	54	ŭ	- 1
Toluene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ	- 1
trans-1,3-Dichloropropene	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	ŭ	- 1
cis-1,3-Dichloropropene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ	- 1
1,1,2-Trichloroethane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭ	- 1
Tetrachloroethene (PCE)	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ	1
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	ī	10/30/97	10/30/97	22	Ŭ	- 1
Chlorobenzene	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	Ŭ	- 1
Ethylbenzene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ū	
m,p-Xylenes	EPA 5030	8021A	· 6	î	10/30/97	10/30/97	6	Ü	- 1
o-Xylene	EPA 5030	8021A	6	î	10/30/97	10/30/97	6	Ü	- 1
Bromoform	EPA 5030	8021A	6	î	10/30/97	10/30/97	6	υ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ü	
1.3-Dichlorobenzene	EPA 5030	8021A	ŭ	î	10/30/97	10/30/97	ii	Ü	
1,4-Dichlorobenzene	EPA 5030	8021A	ii	i	10/30/97	10/30/97	11	Ŭ	1
1,2-Dichlorobenzene	EPA 5030	8021A	ii	î	10/30/97	10/30/97	ii	Ŭ	
Chlorotrifluoroethene	EPA 5030	8021A	22	ī	10/30/97	10/30/97	22	Ŭ	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	î	10/30/97	10/30/97	22	บั	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	î	10/30/97	10/30/97	22	ŭ	
2-Butanone (MEK)	EPA 5030	8021A	54	î	10/30/97	10/30/97	54	บ	
Acetone	EPA 5030	8021A	54	î.	10/30/97	10/30/97	54 54	บ	
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	บ	
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	î	10/30/97	10/30/97	22	บ	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	i	10/30/97	10/30/97	22	n 1	1
-, o omoropropulo (DDOI)	WI IN 2020	002 IA	24	1	10/30/7/	10/30/7/	44	U V	/ I

Approved By: 1844/021397p



Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Sample Matrix:

Soil

Service Request: L9703643
Date Collected: 10/30/97 Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD150

L9703643-068

Units: UG/KG

Test Notes:

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 7
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	UU
Chloromethane	EPA 5030	8021A	11	ī	10/31/97	10/31/97	11	บำไ
Vinyl Chloride	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U
Bromomethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	ט
Chloroethane	EPA 5030	8021A	ii	ĩ	10/31/97	10/31/97	11	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	υl
1.1-Dichloroethene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	U
Methylene Chloride	EPA 5030	8021A	22	ì	10/31/97	10/31/97	22	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6	ĩ	10/31/97	10/31/97	6	U
cis-1.2-Dichloroethene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	U
1.1-Dichloroethane	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	U
Chloroform	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	Ü
Benzene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ū
1,2-Dichloroethane	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	Ū
Trichloroethene (TCE)	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ü
1,2-Dichloropropane	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	υll
Bromodichloromethane	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	55	i	10/31/97	10/31/97	55	ŭ
Toluene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	Ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	Ü
1,1,2-Trichloroethane	EPA 5030	8021A	6	i	10/31/97	10/31/97	. 6	ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	ΰ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	î	10/31/97	10/31/97	22	ŭ
Chlorobenzene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	ŭ
Ethylbenzene	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	ŭ
m,p-Xylenes	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	ŭ
o-Xylene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü
Bromoform		8021A	6	1			6	Ü
	EPA 5030		6	-	10/31/97	10/31/97	6	Ü
1,1,2,2-Tetrachloroethane	EPA 5030	8021A 8021A	о 11	1	10/31/97	10/31/97	0 11	Ü
1,3-Dichlorobenzene	EPA 5030		11	1	10/31/97	10/31/97		Ü
1,4-Dichlorobenzene	EPA 5030	8021A		1	10/31/97	10/31/97	11	
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	ָט
Chlorotrifluoroethene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	บ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U
2-Butanone (MEK)	EPA 5030	8021A	55	1	10/31/97	10/31/97	55	U
Acetone	EPA 5030	8021A	55	1	10/31/97	10/31/97	55	Ü
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	u /
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U J/
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	ט 🥎

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/30/97
Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD151

L9703643-069

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	<u>,</u>
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	UU	T
Chloromethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	ו ע ו	ı
Vinyl Chloride	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	
Bromomethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	1
Chloroethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	1
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	-
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	-
Methylene Chloride	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U	
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	Name of the least
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Chloroform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	100
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	200
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	STATE
Benzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	9
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Bromodichloromethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	56	1	10/31/97	10/31/97	56	U	ř
Toluene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	, de-
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	Kessage
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	KENESE
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	OT STATE OF
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	Spinor
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U	
Chlorobenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	100
Ethylbenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	Solicitos
m,p-Xylenes	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
o-Xylene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	S) SERVICE
Bromoform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	2000
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	
1,3-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	υ	
1,4-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	1
1,2-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	-
Chlorotrifluoroethene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U	1
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	ì	10/31/97	10/31/97	23	U	-
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	ī	10/31/97	10/31/97	23	Ū	ı
2-Butanone (MEK)	EPA 5030	8021A	56	ĩ	10/31/97	10/31/97	56	Ü	ı
Acetone	EPA 5030	8021A	56	î	10/31/97	10/31/97	56	Ŭ	1
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	ī	10/31/97	10/31/97	23	ŭ	
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	i	10/31/97	10/31/97	23	Ŭ	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	i	10/31/97	10/31/97	23	υ√	

Approved By:

Thomas K Abing

Date: 12/23/97

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Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001 Soil

tdyne/313150001

Service Request: L9703643
Date Collected: 10/30/97
Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD152 L9703643-070 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	<u>u</u> U	Τ
Chloromethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	1
Vinyl Chloride	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	ı
Bromomethane	EPA 5030	8021A	12	ī	10/31/97	10/31/97	12	ŭ	I
Chloroethane	EPA 5030	8021A	12	Ĩ	10/31/97	10/31/97	12	Ŭ	ı
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ū	ı
1,1-Dichloroethene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	
Methylene Chloride	EPA 5030	8021A	23	ī	10/31/97	10/31/97	23	Ü	
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	1
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ū	1
Chloroform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	ı
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	ı
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	ı
Benzene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ū	ı
1,2-Dichloroethane	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	ı
Trichloroethene (TCE)	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	l
1,2-Dichloropropane	EPA 5030	8021A	6	ĩ	10/31/97	10/31/97	6	ŭ	1
Bromodichloromethane	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	l
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57	1	10/31/97	10/31/97	57	Ŭ	ı
Toluene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	ŭ	
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	1
cis-1,3-Dichloropropene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ü	I
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ŭ	1
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	ı
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	Ŭ	
Chlorobenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	
Ethylbenzene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	ŭ	ı
m,p-Xylenes	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	บั	ı
o-Xylene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	υ	
Bromoform	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	ŭ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	ŭ	ı
1,3-Dichlorobenzene	EPA 5030	8021A	12	î	10/31/97	10/31/97	12	ŭ	1
1,4-Dichlorobenzene	EPA 5030	8021A	12	î	10/31/97	10/31/97	12	υ	l
1.2-Dichlorobenzene	EPA 5030	8021A	12	î	10/31/97	10/31/97	12	υ	ı
Chlorotrifluoroethene	EPA 5030	8021A	23	ī	10/31/97	10/31/97	23	Ŭ	ł
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	ī	10/31/97	10/31/97	23	υ	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	î	10/31/97	10/31/97	23	υ	1
2-Butanone (MEK)	EPA 5030	8021A	57	î	10/31/97	10/31/97	57	Ŭ	ı
Acetone	EPA 5030	8021A	57	î	10/31/97	10/31/97	57	υ	I
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	i	10/31/97	10/31/97	23	υ	
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	Ü	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	ů $\sqrt{}$	l

Approved By: 1844/021397p

Thomas D. Rbing

Date: 12/23 /97

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Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/30/97

Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD153 L9703643-071

Soil

Units: UG/KG

Test Notes:

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	2
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	n n	
Chloromethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	ט י	~
Vinyl Chloride	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	υ	
Bromomethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	
Chloroethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
1,1-Dichloroethene	EPA 5030	8021A ¹	6	1	10/31/97	10/31/97	6	U	
Methylene Chloride	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U	
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Chloroform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Benzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ប	ı
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Bromodichloromethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57	1	10/31/97	10/31/97	57	U	
Toluene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	ı
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	ı
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	Î
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U	ı
Chlorobenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Ethylbenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ប	
m,p-Xylenes	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	
o-Xylene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Bromoform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	ı
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	ı
1,3-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	ı
1,4-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	ı
1,2-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U	
Chlorotrifluoroethene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	i	10/31/97	10/31/97	23	U \	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U	ı
2-Butanone (MEK)	EPA 5030	8021A	57	1	10/31/97	10/31/97	57	บ	
Acetone	EPA 5030	8021A	57	1	10/31/97	10/31/97	57	บ	
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	ប	. 1
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	υ	/

Date: 12/23/97

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/30/97

Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD154

L9703643-076

Units: UG/KG

Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 5
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	UU
Chloromethane	EPA 5030	8021A	12	î	10/31/97	10/31/97	12	ΰ́́
Vinyl Chloride	EPA 5030	8021A	12	i	10/31/97	10/31/97	12	υ
Bromomethane	EPA 5030	8021A	12	î	10/31/97	10/31/97	12	υl
Chloroethane	EPA 5030	8021A	12	i	10/31/97	10/31/97	12	υ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	ŭ
1,1-Dichloroethene	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	υl
Methylene Chloride	EPA 5030	8021A	23	ī	10/31/97	10/31/97	23	Ū
trans-1,2-Dichloroethene	EPA 5030	8021A	6	ĩ	10/31/97	10/31/97	6	บ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	บ
1.1-Dichloroethane	EPA 5030	8021A	6	ĩ	10/31/97	10/31/97	6	Ū
Chloroform	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	υ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Benzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,2-Dichloropropane	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	บ
Bromodichloromethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57	1	10/31/97	10/31/97	57	U
Toluene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U
Chlorobenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
Ethylbenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
m,p-Xylenes	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
o-Xylene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
Bromoform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
1,3-Dichlorobenzene	EPA 5030	8021A	12	ı	10/31/97	10/31/97	12	U
1,4-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U
1,2-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	บ
Chlorotrifluoroethene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	บ
1,1,2-Tetrachloroethane	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U
2-Butanone (MEK)	EPA 5030	8021A	57	1	10/31/97	10/31/97	57	บ
Acetone	EPA 5030	8021A	57	1	10/31/97	10/31/97	57	บ
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	บ
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	ַ ע
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	บ √/

Approved By: 1844/021397p

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/30/97

Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: RD155 L9703643-077 Units: UG/KG Basis: Dry

Test Notes:

Dilution Date Date Prep Analysis **PQL** Notes Analyte Method Method Factor **Extracted Analyzed** Result U Dichlorodifluoromethane (CFC 12) **EPA 5030** 8021A 10/31/97 10/31/97 12 12 8021A Chloromethane **EPA 5030** 10/31/97 10/31/97 12 U 12 1 Vinyl Chloride **EPA 5030** 10/31/97 U 8021A 12 1 10/31/97 12 Bromomethane **EPA 5030** 8021A 12 1 10/31/97 10/31/97 12 U 8021A Chloroethane **EPA 5030** 12 1 10/31/97 10/31/97 12 U Trichlorofluoromethane (CFC 11) **EPA 5030** 8021A 6 10/31/97 10/31/97 6 U 1.1-Dichloroethene **EPA 5030** 10/31/97 10/31/97 U 8021A 6 1 6 Methylene Chloride **EPA 5030** 8021A 10/31/97 10/31/97 U 23 1 23 trans-1,2-Dichloroethone **EPA 5030** 8021A 6 U 1 10/31/97 10/31/97 6 cis-1,2-Dichloroethene **EPA 5030** 6 8021A 1 10/31/97 10/31/97 6 U 1,1-Dichloroethane **EPA 5030** 10/31/97 8021A 6 1 10/31/97 6 U Chloroform **EPA 5030** 8021A 6 1 10/31/97 10/31/97 U 6 1,1,1-Trichloroethane (TCA) **EPA 5030** 8021A 6 10/31/97 10/31/97 6 U Carbon Tetrachloride **EPA 5030** 8021A 6 10/31/97 U 1 10/31/97 6 Benzene **EPA 5030** 8021A 6 10/31/97 10/31/97 6 U 8021A 1.2-Dichloroethane **EPA 5030** 6 1 10/31/97 10/31/97 6 U Trichloroethene (TCE) **EPA 5030** 8021A 6 10/31/97 10/31/97 6 U 1.2-Dichloropropane **EPA 5030** 8021A 6 1 10/31/97 10/31/97 6 U Bromodichloromethane **EPA 5030** 6 8021A 1 10/31/97 10/31/97 6 U 2-Chloroethyl Vinyl Ether **EPA 5030** 8021A 57 10/31/97 1 10/31/97 57 U **EPA 5030** Toluene 8021A 6 1 10/31/97 10/31/97 U 6 trans-1,3-Dichloropropene **EPA 5030** 8021A 6 1 10/31/97 10/31/97 U cis-1,3-Dichloropropene **EPA 5030** 8021A 6 1 10/31/97 U 10/31/97 6 1,1,2-Trichloroethane **EPA 5030** 8021A 6 10/31/97 10/31/97 U 6 Tetrachloroethene (PCE) **EPA 5030** 8021A 10/31/97 U б 1 10/31/97 6 2-Chloro-1,1,1-trifluoroethane **EPA 5030** 8021A 23 10/31/97 10/31/97 23 U Chlorobenzene EPA 5030 8021A 6 10/31/97 U 1 10/31/97 6 Ethylbenzene EPA 5030 8021A 6 1 10/31/97 10/31/97 6 U m,p-Xylenes **EPA 5030** 8021A 6 10/31/97 10/31/97 6 U o-Xviene EPA 5030 8021A 10/31/97 6 1 10/31/97 6 U **Bromoform EPA 5030** 8021A 6 1 10/31/97 10/31/97 U 6 1,1,2,2-Tetrachloroethane **EPA 5030** 8021A 6 1 10/31/97 10/31/97 U 6 1.3-Dichlorobenzene **EPA 5030** 8021A 12 10/31/97 10/31/97 U 1 12 1,4-Dichlorobenzene **EPA 5030** 8021A 12 10/31/97 1 10/31/97 12 U 1,2-Dichlorobenzene **EPA 5030** 8021A 12 10/31/97 U 1 10/31/97 12 Chlorotrifluoroethene **EPA 5030** 8021A 23 1 10/31/97 10/31/97 23 U 1,1,1,2-Tetrachloroethane EPA 5030 8021A 23 23 1 10/31/97 10/31/97 U 1,1,2-Trichlorotrifluoroethane (CFC 113) **EPA 5030** 8021A 23 1 10/31/97 10/31/97 23 U 2-Butanone (MEK) **EPA 5030** 8021A 57 1 10/31/97 10/31/97 57 U \mathcal{D} Acetone **EPA 5030** 8021A 57 10/31/97 1 10/31/97 210 1,2,4-Trimethylbenzene **EPA 5030** 8021A 23 10/31/97 10/31/97 U 1 23 1,3,5-Trimethylbenzene **EPA 5030** 8021A 23 1 10/31/97 10/31/97 23 U 1,2-Dibromo-3-chloropropane (DBCP) **EPA 5030** 8021A 23 10/31/97 10/31/97 23

Approved By:

Thomas & Miny

Date: 12 23 /97

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Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Cellected: 10/30/97

Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD155DL

Test Notes:

L9703643-077DL

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	113	10	11/3/97	11/3/97	113	üR
Chloromethane	EPA 5030	8021A	113	10	11/3/97	11/3/97	113	ט ל
Vinyl Chloride	EPA 5030	8021A	113	10	11/3/97	11/3/97	113	U
Bromomethane	EPA 5030	8021A	113	10	11/3/97	11/3/97	113	U
Chloroethane	EPA 5030	8021A	113	10	11/3/97	11/3/97	113	บ /
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	υ
1,1-Dichloroethene	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	U
Methylene Chloride	EPA 5030	8021A	225	10	11/3/97	11/3/97	225	บ
trans-1,2-Dichloroethene	EPA 5030	8021A	57 ^	10	11/3/97	11/3/97	57	บ
cis-1,2-Dichloroethene	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	ט
1.1-Dichloroethane	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	U
Chloroform	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ū
Carbon Tetrachloride	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ū
Benzene	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ü
1,2-Dichloroethane	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ū
Trichloroethene (TCE)	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ū
1,2-Dichloropropane	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ū
Bromodichloromethane	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	570	10	11/3/97	11/3/97	570	ŭ
Toluene	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ŭ·
cis-1,3-Dichloropropene	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ü
1,1,2-Trichloroethane	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	225	10	11/3/97	11/3/97	225	Ŭ
Chlorobenzene	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ŭ
Ethylbenzene	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	Ŭ
m,p-Xylenes	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	ŭ
o-Xylene	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	ŭ
Bromoform	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	ŭ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	57	10	11/3/97	11/3/97	57	ŭ
1.3-Dichlorobenzene	EPA 5030	8021A	113	10	11/3/97	11/3/97	113	U
1.4-Dichlorobenzene	EPA 5030	8021A	113	10	11/3/97	11/3/97	113	U
1,2-Dichlorobenzone	EPA 5030	8021A	113	10	11/3/97	11/3/97	113	U
Chlorotrifluoroethene	EPA 5030	8021A	225	10	11/3/97	11/3/97	225	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	225	10	11/3/97	11/3/97	225	Ü
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	225 225	-				
2-Butanone (MEK)	EPA 5030 EPA 5030	8021A 8021A	570	10 10	11/3/97	11/3/97	225	ט 🇸
Acetone (MER)	EPA 5030 EPA 5030	8021A 8021A	570 570	10 10	11/3/97	11/3/97	570	UV
1,2,4-Trimethylbenzene	and the commence of the first commence and the commence of the com-	all the same and t		The commercial control of the commercial commercial and the commercial commer	11/3/97	11/3/97	1700	
1,3,5-Trimethylbenzene	EPA 5030 EPA 5030	8021A 8021A	225 225	10 10	11/3/97 11/3/97	11/3/97 11/3/97	225	UR
1,2-Dibromo-3-chloropropane (DBCP)		8021A 8021A	225 225				225	U
1,2-Diolonio-3-cinoropropune (DBCP)	EPA 5030	6021A	223	10	11/3/97	11/3/97	225	UVI

Approved By:

Thomas to phoing

Date: 12/23/97

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03643VOA.BK9 - Sample 12/18/97

Page No.

Analytical Report

Client: InterPhase Environmental
Project: Rocketdyne/313150001
Sample Matrix: Soil

Service Request: L9703643
Date Collected: 10/30/97
Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD157 L9703643-079 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result S
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	UU
Chloromethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	บำั
Vinyl Chloride	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	υ
Bromomethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	บ
Chloroethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Methylene Chloride	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Chloroform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Benzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Bromodichloromethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	55	1	10/31/97	10/31/97	55	U
Toluene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ับ
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U
Chlorobenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	υ
Ethylbenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
m,p-Xylenes	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
o-Xylene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
Bromoform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	บ
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	ט
Chlorotrifluoroethene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	บ 📗
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	บ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	บ
2-Butanone (MEK)	EPA 5030	8021A	55	1	10/31/97	10/31/97	55	บ
Acetone	EPA 5030	8021A	55	1	10/31/97	10/31/97	55	υ
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	υ \
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	ט
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	υ √

Approved By: ___

Thomas p. Mbing

Date: 12/23 (97

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03643VOA.BK9 - Sample (2) 12/18/97

Page No

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

Units: UG/KG

Basis: Dry

Lab Code: Test Notes: L9703643-080

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	אים
Chloromethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	ט יי
Vinyl Chloride	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	บ / ไ
Bromomethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	ט ו
Chloroethane	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	ט
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	υ
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ט
Methylene Chloride	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	ט
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ט
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Chloroform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ט
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/31/97	10/31/97	·6	U
Benzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ט
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ט
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ
Bromodichloromethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	. ט
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	56	1	10/31/97	10/31/97	56	U
Toluene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ט
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ט
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U
Chlorobenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
Ethylbenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
m,p-Xylenes	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
o-Xylene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ט
Bromoform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ט
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U
1,3-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	ט
1,4-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	U
1,2-Dichlorobenzene	EPA 5030	8021A	12	1	10/31/97	10/31/97	12	ט
Chlorotrifluoroethene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U /
2-Butanone (MEK)	EPA 5030	8021A	56	1	10/31/97	10/31/97	56	עע
Acetone	EPA 5030	8021A	56	1	10/31/97	10/31/97	530	$R \supset$
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	<u> </u>
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	ו ע
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	1	10/31/97	10/31/97	23	U √

Approved By: 1844/021397p

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/31/97

Date Collected: 10/31/97
Date Received: 10/31/97

Remit

Halogenated and Aromatic Volatile Organic Compounds

PQL

Dilution

Date

Factor Extracted Analyzed

Date

Sample Name: Lab Code: RD159DL L9703643-080DL

Prep

Method

Analysis

Method

Units: UG/KG Basis: Dry

Notes

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Test Notes:

Analyte

Dichlorodifluoromethane (CFC 12) \mathcal{D} **EPA 5030** 8021A 556 50 11/3/97 11/3/97 556 U Chloromethane **EPA 5030** 8021A 556 50 11/3/97 11/3/97 556 U Vinyl Chloride **EPA 5030** 8021A 556 50 11/3/97 11/3/97 556 U Bromomethane **EPA 5030** 8021A 556 50 11/3/97 11/3/97 556 U Chloroethane **EPA 5030** 8021A 556 50 11/3/97 11/3/97 556 U Trichlorofluoromethane (CFC 11) **EPA 5030** 8021A 278 50 11/3/97 11/3/97 278 U 1,1-Dichloroethene **EPA 5030** 11/3/97 U 8021A 278 50 278 11/3/97 Methylene Chloride **EPA 5030** 8021A 1110 50 11/3/97 U 11/3/97 1110 trans-1,2-Dichloroethene **EPA 5030** 8021A 50 U 278 11/3/97 11/3/97 278 cis-1,2-Dichloroethene **EPA 5030** 8021A 278 50 11/3/97 U 11/3/97 278 EPA 5030 1,1-Dichloroethane 8021A 278 50 11/3/97 278 U 11/3/97 Chloroform **EPA 5030** 8021A 278 50 11/3/97 11/3/97 278 U 1,1,1-Trichloroethane (TCA) **EPA 5030** 8021A 278 50 11/3/97 11/3/97 278 U Carbon Tetrachloride EPA 5030 278 50 278 U 8021A 11/3/97 11/3/97 Benzene **EPA 5030** 8021A 278 50 11/3/97 11/3/97 278 U 1.2-Dichloroethane **EPA 5030** 8021A 278 50 U 11/3/97 11/3/97 278 Trichloroethene (TCE) **EPA 5030** 8021A 278 50 11/3/97 11/3/97 278 U 1,2-Dichloropropane 8021A **EPA 5030** 278 50 11/3/97 11/3/97 278 U Bromodichloromethane **EPA 5030** 8021A 278 50 11/3/97 11/3/97 278 U 2-Chloroethyl Vinyl Ether **EPA 5030** 8021A 2780 50 11/3/97 11/3/97 2780 U Toluene **EPA 5030** 8021A 278 50 11/3/97 11/3/97 278 U trans-1,3-Dichloropropene **EPA 5030** 8021A 278 50 11/3/97 U 11/3/97 278 cis-1,3-Dichloropropene **EPA 5030** 278 50 8021A 11/3/97 U 11/3/97 278 1,1,2-Trichloroethane **EPA 5030** 8021A 278 50 U 11/3/97 11/3/97 278 Tetrachloroethene (PCE) **EPA 5030** U 8021A 278 50 11/3/97 11/3/97 278 2-Chloro-1,1,1-trifluoroethane **EPA 5030** 8021A 1110 50 11/3/97 11/3/97 1110 U Chlorobenzene **EPA 5030** 8021A 50 U 278 11/3/97 11/3/97 278 Ethylbenzene 11/3/97 **EPA 5030** 8021A 278 50 11/3/97 278 U m,p-Xylenes **EPA 5030** 8021A 278 50 11/3/97 11/3/97 278 U o-Xylene **EPA 5030** 8021A 278 50 11/3/97 11/3/97 278 U Bromoform **EPA 5030** 8021A 278 50 11/3/97 11/3/97 U 278 1,1,2,2-Tetrachloroethane **EPA 5030** 278 8021A 50 11/3/97 11/3/97 278 U 1,3-Dichlorobenzene **EPA 5030** 8021A 556 50 11/3/97 U 11/3/97 556 1.4-Dichlorobenzene **EPA 5030** 8021A 556 50 11/3/97 11/3/97 556 U

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Approved By: 1844/021397p

1,2-Dichlorobenzene

Chlorotrifluoroethene

2-Butanone (MEK)

1,2,4-Trimethylbenzene

1,3,5-Trimethylbenzene

Acetone

1,1,1,2-Tetrachloroethane

1,1,2-Trichlorotrifluoroethane (CFC 113)

1,2-Dibromo-3-chloropropane (DBCP)

Thomas D. Rbian

Date: 14/23/97

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Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD160 L9703643-081 Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	5
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U N	
Chloromethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U	I
Vinyl Chloride	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U	
Bromomethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U	-
Chloroethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U	Ì
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6,	1	10/31/97	10/31/97	6	U	-
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Methylene Chloride	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	ប	
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Chloroform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Benzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ับ	Ì
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	1
Bromodichloromethane	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ū	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	55	ī	10/31/97	10/31/97	55	Ŭ	
Toluene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ü	
trans-1,3-Dichloropropene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ü	
cis-1,3-Dichloropropene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	
1,1,2-Trichloroethane	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	
Tetrachloroethene (PCE)	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	i	10/31/97	10/31/97	22	Ŭ	
Chlorobenzene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	ŭ	
Ethylbenzene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	Ŭ	
m,p-Xylenes	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	ŭ	
o-Xylene	EPA 5030	8021A	6	î	10/31/97	10/31/97	6	u	
Bromoform	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	U	
1,1,2,2-Tetrachioroethane	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	Ü	į
1,3-Dichlorobenzene	EPA 5030	8021A	ĭĭ	i	10/31/97	10/31/97	11	υ	
1,4-Dichlorobenzene	EPA 5030	8021A	ii	î	10/31/97	10/31/97	11	Ü	
1,2-Dichlorobenzene	EPA 5030	8021A	îî	i	10/31/97	10/31/97	11	ŭ	
Chlorotrifluoroethene	EPA 5030	8021A	22	î	10/31/97	10/31/97	22	Ü	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	ŭ	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	î	10/31/97	10/31/97	22	Ü	
2-Butanone (MEK)	EPA 5030	8021A	55	i	10/31/97	10/31/97	55	ŭ	
Acetone	EPA 5030	8021A	55	i	10/31/97	10/31/97	55	บ	
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	Ü	
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	Ü	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	i	10/31/97	10/31/97	22	ü 🎶	4
(DECI)	LI A 3030	0021A	22	1	10/31/97	10/31/97	22	o A	

Approved By: 1844/021397p

LEVEL Vocao74

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Cellected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD162

L9703643-082

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 2	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	11/3/97	11/3/97	11	UL	
Chloromethane	EPA 5030	8021A	11	1	11/3/97	11/3/97	11	บ่ั	1
Vinyl Chloride	EPA 5030	8021A	11	1	11/3/97	11/3/97	11	U	ı
Bromomethane	EPA 5030	8021A	11	1	11/3/97	11/3/97	11	U	
Chloroethane	EPA 5030	8021A	11	1	11/3/97	11/3/97	11	U	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	ı
1,1-Dichloroethene	EPA 5030	8021A	6	ì	11/3/97	11/3/97	6	U	ı
Methylone Chloride	EPA 5030	8021A	22	1	11/3/97	11/3/97	22	υ\	
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	ı
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	١.
1,1-Dichloroethane	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	บ	
Chloroform	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	บ	•
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	
Carbon Tetrachloride	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U (
Benzene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	ı
1,2-Dichloroethane	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	υ √	į
Trichloroethene (TCE)	EPA 5030	8021A	6	1	11/3/97	11/3/97	12	7	4
1,2-Dichloropropane	EPA 5030	8021A	6		11/3/97	11/3/97	6	ן ט	
Bromodichloromethane	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U ,	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	55	1	11/3/97	11/3/97	55	U)	
Toluene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	1
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	•
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	1
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	ì	11/3/97	11/3/97	22	U	ĺ
Chlorobenzene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	υ	ı
Ethylbenzene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	i
m,p-Xylenes	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	υļ	1
o-Xylene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U	ı
Bromoform	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	υ	ı
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	υ	1
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	11/3/97	11/3/97	11	U	ı
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	11/3/97	11/3/97	11	บ	ı
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	11/3/97	11/3/97	11	U	ı
Chlorotrifluoroethene	EPA 5030	8021A	22	1	11/3/97	11/3/97	22	บ	l
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	11/3/97	11/3/97	22	U	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	11/3/97	11/3/97	. 22	U	
2-Butanone (MEK)	EPA 5030	8021A	55	1	11/3/97	11/3/97	55	บ √√	l
Acetone	EPA 5030	8021A	55	1	11/3/97	11/3/97	84	•	ı
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	11/3/97	11/3/97	22	ŭΚ	i
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	11/3/97	11/3/97	22	บ 🏗	ı
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	11/3/97	11/3/97	22	U 🎶	1
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Approved By:

Thomas to Minn

Date: 12/23/97

LEVEL V003075

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD164

L9703643-084

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	POL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	21	2	11/3/97	11/3/97	21	UKR
Chloromethane	EPA 5030	8021A	21	2	11/3/97	11/3/97	21	Ü
Vinyl Chloride	EPA 5030	8021A	21	2	11/3/97	11/3/97	21	υ
Bromomethane	EPA 5030	8021A	21	2	11/3/97	11/3/97	21	บ
Chloroethane	EPA 5030	8021A	21	2	11/3/97	11/3/97	21	Ü
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
1,1-Dichloroethene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
Methylene Chloride	EPA 5030	8021A	41	2	11/3/97	11/3/97	41	U
trans-1,2-Dichloroethene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
cis-1,2-Dichloroethene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
1,1-Dichloroethane	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
Chloroform	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
Carbon Tetrachloride	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
Benzene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
1,2-Dichloroethane	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
Trichloroethene (TCE)	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
1,2-Dichloropropane	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
Bromodichloromethane	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	103	2	11/3/97	11/3/97	103	U .
Toluene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
trans-1,3-Dichloropropene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
cis-1,3-Dichloropropene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
1,1,2-Trichloroethane	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
Tetrachioroethene (PCE)	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	41	2	11/3/97	11/3/97	41	U
Chlorobenzene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	U
Ethylbenzene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	บ
m,p-Xylenes	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	Ū
o-Xylene	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	Ü
Bromoform	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	Ü
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	11	2	11/3/97	11/3/97	11	Ū
1,3-Dichlorobenzene	EPA 5030	8021A	21	2	11/3/97	11/3/97	21	Ŭ
1,4-Dichlorobenzene	EPA 5030	8021A	21	2	11/3/97	11/3/97	21	υ
1,2-Dichlorobenzene	EPA 5030	8021A	21	2	11/3/97	11/3/97	21	Ŭ
Chlorotrifluoroethene	EPA 5030	8021A	41	2	11/3/97	11/3/97	41	Ŭ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	41	2	11/3/97	11/3/97	41	Ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	41	2	11/3/97	11/3/97	41	Ŭ
2-Butanone (MEK)	EPA 5030	8021A	103	2	11/3/97	11/3/97	103	Ū
Acetone	EPA 5030	8021A	103	2	11/3/97	11/3/97	103	Ŭ
1,2,4-Trimethylbenzene	EPA 5030	8021A	41	2	11/3/97	11/3/97	41	Ū
1,3,5-Trimethylbenzene	EPA 5030	8021A	41	2	11/3/97	11/3/97	41	Ŭ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	41	2	11/3/97	11/3/97	41	υV

Approved By: 1844/021397p





Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD164RE L9703643-084RE Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result &	١
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	11/4/97	11/4/97	11	UL	Ι
Chloromethane	EPA 5030	8021A	11	1	11/4/97	11/4/97	11	บำ้	ı
Vinyl Chloride	EPA 5030	8021A	11	1	11/4/97	11/4/97	11	บ	I
Bromomethane	EPA 5030	8021A	11	1	11/4/97	11/4/97	11	U	ı
Chloroethane	EPA 5030	8021A	11	1	11/4/97	11/4/97	11	U	ı
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	บ	ı
1,1-Dichloroethene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	υ	
Methylene Chloride	EPA 5030	8021A	21	1	11/4/97	11/4/97	21	บ	Section 1
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	SCHOOL
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	
1,1-Dichloroethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	200
Chloroform	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	ANNERS
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	200
Carbon Tetrachloride	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	1000 E
Benzene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	2
1,2-Dichloroethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	BOTON
Trichloroethene (TCE)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	(2000)
1,2-Dichloropropane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	Sac.
Bromodichloromethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	2000
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	52	1	11/4/97	11/4/97	52	U	200
Toluene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	905090
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	thistory.
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	STREET, STREET
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	Season
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	Ū	90000
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	21	1	11/4/97	11/4/97	21	U	- News
Chlorobenzene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	Ü	0000000
Ethylbenzene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	Money
m,p-Xylenes	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	Ü	20,000
o-Xylene	EPA 5030	8021A	6	ī	11/4/97	11/4/97	6	Ŭ	TORRES
Bromoform	EPA 5030	8021A	6	1	11/4/97	11/4/97	ě	Ŭ	2
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	ī	11/4/97	11/4/97	6	ŭ	10000
1,3-Dichlorobenzene	EPA 5030	8021A	11	ī	11/4/97	11/4/97	11	ŭ	
1,4-Dichlorobenzene	EPA 5030	8021A	11	ī	11/4/97	11/4/97	11	ŭ	1
1,2-Dichlorobenzene	EPA 5030	8021A	11	ĩ	11/4/97	11/4/97	ii	ŭ	ı
Chlorotrifluoroethene	EPA 5030	8021A	21	ī	11/4/97	11/4/97	21	ŭ	ı
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	21	ī	11/4/97	11/4/97	21	ŭ	1
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	21	ī	11/4/97	11/4/97	21	ŭ	
2-Butanone (MEK)	EPA 5030	8021A	52	i	11/4/97	11/4/97	52	Ü	ı
Acetone	EPA 5030	8021A	52	i	11/4/97	11/4/97	52	Ü	I
1,2,4-Trimethylbenzene	EPA 5030	8021A	21	1	11/4/97	11/4/97	21	บ	ı
1,3,5-Trimethylbenzene	EPA 5030	8021A	21	i	11/4/97	11/4/97	21	ΰ	I
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	21	1	11/4/97	11/4/97	21	บั √	1

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/31/97 Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

RD165

Lab Code: Test Notes: L9703643-085

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	- :
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	52	5	11/4/97	11/4/97	52	11 1	
Chloromethane	EPA 5030	8021A	52	5	11/4/97	11/4/97	52	U (٨.
Vinyl Chloride	EPA 5030	8021A	52	5	11/4/97	11/4/97	52	บ	
Bromomethane	EPA 5030	8021A	52	5	11/4/97	11/4/97	52 52	บ	
Chloroethane	EPA 5030	8021A	52	5	11/4/97	11/4/97	52	U	1
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	Ü	
1,1-Dichloroethene	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	บ	
Methylene Chloride	EPA 5030	8021A	103	5	11/4/97	11/4/97	103	Ü	
trans-1,2-Dichloroethene	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	ÜN	$U \perp$
cis-1,2-Dichloroethene	EPA 5030	8021A	26	5	11/4/97	11/4/97		- U -	1
1,1-Dichloroethane	EPA 5030	8021A	26	5	11/4/97	11/4/97	- 26 -160		,
Chloroform	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	UU	•
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	υl	
Carbon Tetrachloride	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	υl	
Benzene	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	ŭΙ	
1,2-Dichloroethane	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	ύ↓	/
Trichloroethene (TCE)	EPA 5030	8021A	26	5	11/4/97	11/4/97	160-116	U V	1 4
1,2-Dichloropropane	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	U	4.7
Bromodichloromethane	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	U t	시
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	256	5	11/4/97	11/4/97	256	υl	
Toluene	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	ŭ	
trans-1,3-Dichloropropene	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	บ	
cis-1,3-Dichloropropene	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	บไ	
1,1,2-Trichloroethane	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	υl	-
Tetrachloroethene (PCE)	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	บ	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	103	5	11/4/97	11/4/97	103	U	•
Chlorobenzene	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	υl	- Company
Ethylbenzene	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	υl	C. C. C. C. C. C. C. C. C. C. C. C. C. C
m,p-Xylenes	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	υ	e-di-mos
o-Xylene	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	υ	
Bromoform	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	ŭ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	26	5	11/4/97	11/4/97	26	ŭ	
1,3-Dichlorobenzene	EPA 5030	8021A	52	5	11/4/97	11/4/97	52	ŭ	
1,4-Dichlorobenzene	EPA 5030	8021A	52	5	11/4/97	11/4/97	52	ŭ	1
1,2-Dichlorobenzene	EPA 5030	8021A	52	5	11/4/97	11/4/97	52	ŭΙ	
Chlorotrifluoroethene	EPA 5030	8021A	103	5	11/4/97	11/4/97	103	υl	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	103	5	11/4/97	11/4/97	103	ŭ	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	103	5	11/4/97	11/4/97	103	υl	- Parity Control
2-Butanone (MEK)	EPA 5030	8021A	256	5	11/4/97	11/4/97	256	υl	
Acetone	EPA 5030	8021A	256	5	11/4/97	11/4/97	256	บ	
1,2,4-Trimethylbenzene	EPA 5030	8021A	103	5	11/4/97	11/4/97	103	บ	
1,3,5-Trimethylbenzene	EPA 5030	8021A	103	5	11/4/97	11/4/97	103	Ü	Ì
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	103	5	11/4/97	11/4/97	103	n 🔨	1

Approved By:

Date: 12/23/97

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/31/97 Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD166 L9703643-091 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	11/3/97	11/3/97	12	v u
Chloromethane	EPA 5030	8021A	12	1	11/3/97	11/3/97	12	บุเ
Vinyl Chloride	EPA 5030	8021A	12	1	11/3/97	11/3/97	12	ט
Bromomethane	EPA 5030	8021A	12	1	11/3/97	11/3/97	12	บ
Chloroethane	EPA 5030	8021A	12	1	11/3/97	11/3/97	12	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U
1,1-Dichloroethene	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	U
Methylene Chloride	EPA 5030	8021A	23	1	11/3/97	11/3/97	23	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	U
cis-1,2-Dichloroethene	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	Ŭ
1.1-Dichloroethane	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	Ū
Chloroform	EPA 5030	8021A	6	î	11/3/97	11/3/97	6	Ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	ŭ
Carbon Tetrachloride	EPA 5030	8021A	6	î	11/3/97	11/3/97	6	ŭ
Benzene	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	ŭ
1.2-Dichloroethane	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	ŭ
Trichloroethene (TCE)	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	ŭ
1,2-Dichloropropane	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	ŭ
Bromodichloromethane	EPA 5030	8021A	6	î	11/3/97	11/3/97	6	ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	58	î	11/3/97	11/3/97	58	ŭ
Toluene	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	Ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	î	11/3/97	11/3/97	6	ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	Ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	i	11/3/97	11/3/97	23	ŭ
Chlorobenzene	EPA 5030	8021A	. 6	î	11/3/97	11/3/97	6	Ü
Ethylbenzene	EPA 5030	8021A	6	i	11/3/97	11/3/97	6	Ü
m,p-Xylones	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	Ü
o-Xylene	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	Ü
Bromoform	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	Ü
1.1.2.2-Tetrachloroethane	EPA 5030	8021A	6	1	11/3/97	11/3/97	6	บ
1,3-Dichlorobenzene	EPA 5030	8021A 8021A	12	1	11/3/97	11/3/97	12	บ
1.4-Dichlorobenzene		8021A 8021A	12	1	11/3/97	11/3/97	12	บ
1,4-Dichlorobenzene	EPA 5030	8021A 8021A	12	1	11/3/97	11/3/97		Ü
Chlorotrifluoroethene	EPA 5030		23	1			12	Ü
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	_	11/3/97	11/3/97	23	- 1
	EPA 5030	8021A		1	11/3/97	11/3/97	23	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	1	11/3/97	11/3/97	23	U
2-Butanone (MEK)	EPA 5030	8021A	58	1	11/3/97	11/3/97	58	U
Acetone	EPA 5030	8021A	58	1	11/3/97	11/3/97	58	U
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	1	11/3/97	11/3/97	23	U
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	1	11/3/97	11/3/97	23	U
1.2-Dibromo-3-obloromonana (DBCD)	EDA SOZO	9021A	22	1	11/2/07	11/2/07	22	17 1/

8021A

Approved By: 1844/021397p

1,2-Dibromo-3-chloropropane (DBCP)

11/3/97



EPA 5030



11/3/97

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD167 L9703643-092

Units: UG/KG Basis: Dry

Test Notes:

	Prep	Analysis		Dilution	Date	Date		Result	۱,
Analyte	Method	Method	PQL	Factor	Extracted	Analyzed	Result	Notes	1
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	UK	١
Chloromethane	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	υj	1
Vinyl Chloride	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	บ	1
Bromomethane	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	U	1
Chloroethane	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	U	1
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	1
1,1-Dichloroethene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	
Methylene Chloride	EPA 5030	8021A	23	1	11/4/97	11/4/97	23	U	1
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	1
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	
1,1-Dichloroethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	
Chloroform	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	1
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	1
Carbon Tetrachloride	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	1
Benzene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	ı
1,2-Dichloroethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	ı
Trichloroethene (TCE)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	ı
1,2-Dichloropropane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	ı
Bromodichloromethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	58	1	11/4/97	11/4/97	58	U	ı
Toluene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	ı
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	ı
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	į
1,1,2-Trichloroethane	EPA 5030	8021A	6	i	11/4/97	11/4/97	6	U	
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	2
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	11/4/97	11/4/97	23	U	
Chlorobenzene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	
Ethylbenzene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	
m,p-Xylenes	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	1
o-Xylene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	1
Bromoform	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U	ı
1,3-Dichlorobenzene	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	U	1
1,4-Dichlorobenzene	EPA 5030	8021A	12	ī	11/4/97	11/4/97	12	Ü	
1,2-Dichlorobenzene	EPA 5030	8021A	12	ī	11/4/97	11/4/97	12	Ū	ı
Chlorotrifluoroethene	EPA 5030	8021A	23	ī	11/4/97	11/4/97	23	Ü	1
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	1	11/4/97	11/4/97	23	U	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	1	11/4/97	11/4/97	23	U	
2-Butanone (MEK)	. EPA 5030	8021A	58	1	11/4/97	11/4/97	58	Ū	ı
Acetone	EPA 5030	8021A	58	î	11/4/97	11/4/97	58	ŭ	
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	î	11/4/97	11/4/97	23	Ŭ	
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	î	11/4/97	11/4/97	23	Ŭ	1
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	i	11/4/97	11/4/97	23	Ŭ √	1

Approved By: 1844/021397p

VEL Woso86

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD168 L9703643-093 Units: UG/KG Basis: Dry

Dichlorodifluoromethane (CFC 12)		Method	PQL	Factor	Extracted	Analyzed	Result	Result Notes
011 .1	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	UU
Chloromethane	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	U
Vinyl Chloride	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	υl
Bromomethane	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	บ
Chloroethane	EPA 5030	8021A	12	1	11/4/97	11/4/97	12	บ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U
1,1-Dichloroethene	EPA 5030	8021A	6 .	1	11/4/97	11/4/97	6	U
Methylene Chloride	EPA 5030	8021A	23	1	11/4/97	11/4/97	23	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	บ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U
1,1-Dichloroethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U
Chloroform	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	Ū
Benzene	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	Ü
1,2-Dichloroethane	EPA 5030	8021A	6	ī	11/4/97	11/4/97	6	Ŭ
Trichloroethene (TCE)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	Ū
1,2-Dichloropropane	EPA 5030	8021A	6	ī	11/4/97	11/4/97	6	Ū
Bromodichloromethane	EPA 5030	8021A	6	ĩ	11/4/97	11/4/97	6	Ū
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	57	1	11/4/97	11/4/97	57	Ŭ
Toluene	EPA 5030	8021A	6	ì	11/4/97	11/4/97	6	Ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	ī	11/4/97	11/4/97	6	Ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	ĩ	11/4/97	11/4/97	6	ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	Ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	11/4/97	11/4/97	6	Ū
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	ĩ	11/4/97	11/4/97	23	Ŭ
Chlorobenzene	EPA 5030	8021A	6	ī	11/4/97	11/4/97	6	Ü
Ethylbenzene	EPA 5030	8021A	6	ī	11/4/97	11/4/97	6	Ŭ
m,p-Xylenes	EPA 5030	8021A	6	Ĩ	11/4/97	11/4/97	6	ŭ
o-Xylene	EPA 5030	8021A	6	ī	11/4/97	11/4/97	6	Ŭ
Bromoform	EPA 5030	8021A	6	ĩ	11/4/97	11/4/97	6	Ŭ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	ī	11/4/97	11/4/97	6	ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	12	ī	11/4/97	11/4/97	12	Ŭ
1,4-Dichlorobenzene	EPA 5030	8021A	12	ī	11/4/97	11/4/97	12	Ŭ
1,2-Dichlorobenzene	EPA 5030	8021A	12	ī	11/4/97	11/4/97	12	ŭ
Chlorotrifluoroethene	EPA 5030	8021A	23	ī	11/4/97	11/4/97	23	ŭ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	î	11/4/97	11/4/97	23	ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	î	11/4/97	11/4/97	23	บั
2-Butanone (MEK)	EPA 5030	8021A	57	î	11/4/97	11/4/97	57	υ
Acetone	EPA 5030	8021A	57	i	11/4/97	11/4/97	.140	υ¥
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	1	11/4/97	11/4/97	23	- v 1
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	i	11/4/97	11/4/97	23	υΥ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	i	11/4/97	11/4/97	23	υ√

Approved By:

Date: 12/23 197

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/31/97

Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD171

L9703643-096

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes		1
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	53	5	11/3/97	11/3/97	53	U	u	
Chioromethane	EPA 5030	8021A	53	5	11/3/97	11/3/97	53	U		ĺ
Vinyl Chloride	EPA 5030	8021A	53	5	11/3/97	11/3/97	53	Ū		l
Bromomethane	EPA 5030	8021A	53	5	11/3/97	11/3/97	53	Ū	1 1	l
Chloroethane	EPA 5030	8021A	53	5	11/3/97	11/3/97	53	Ŭ		İ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	Ŭ	1	ĺ
1.1-Dichloroethene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	Ū	L	
Methylene Chloride	EPA 5030	8021A	106	5	11/3/97	11/3/97	106	Ŭ	V ∣	
- trans-1,2-Dichloroethene	EPA 5030	8021A	27	5	11/3/97	11/3/97	76		J	×
cis-1.2-Dichloroethene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	17.	u	
1,1-Dichloroethane	EPA 5030	8021A			11/3/97	11/3/97	100	Ų,	J	¥
Chloroform	EPA 5030	8021A	27	5	11/3/97	11/3/97	65	/-		ĺ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	27	5	11/3/97	11/3/97	68		İ	ĺ
Carbon Tetrachloride	EPA 5030	8021A	27	5	11/3/97	11/3/97	140			l
Benzene	EPA 5030	8021A	27	5	11/3/97	11/3/97	56			į
1,2-Dichloroethane	EPA 5030	8021A	27	5	11/3/97	11/3/97	210			ĺ
Trichloroethene (TCE)	EPA 5030	8021A	27	5	11/3/97	11/3/97	110			ĺ
1,2-Dichloropropane	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	u	ĺ
Bromodichloromethane	EPA 5030	8021A	27	5	11/3/97	11/3/97	110	U	v.	ĺ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	270	5	11/3/97	11/3/97	270	U	u	ĺ
Toluene	EPA 5030	8021A	27	5	11/3/97	11/3/97	20			ĺ
trans-1,3-Dichloropropene	EPA 5030	8021A	27	5	11/3/97	11/3/97	20 27		ナ	ĺ
cis-1,3-Dichloropropene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	ับ	¥	ĺ
- 1,1,2-Trichloroethane	EPA 5030	8021A	27	5	11/3/97	11/3/97	49	· U	v	
Tetrachloroethene (PCE)	EPA 5030	8021A	27	5	11/3/97	11/3/97	49 69			
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	106	5	11/3/97	11/3/97	106	บ	u	ĺ
Chlorobenzene	EPA 5030	8021A	27	5	11/3/97	11/3/97	15		7	
Ethylbenzene	EPA 5030	8021A	27	5	11/3/97	11/3/97	39	J	u l	
m,p-Xylenes	EPA 5030	8021A	27	5				**		
o-Xylene		8021A 8021A	27	-	11/3/97	11/3/97	27		u	1.
Bromoform	EPA 5030	values consistent and property of the property of the second			11/3/97	11/3/97	-130-65	L		\$
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	27	-	11/3/97	11/3/97	95	••	u l	
	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	u	
1,3-Dichlorobenzene	EPA 5030	8021A	53	5	11/3/97	11/3/97	49			1
1,4-Dichlorobenzene	EPA 5030	8021A	53	5	11/3/97	11/3/97	100			l
1,2-Dichlorobenzene	EPA 5030	8021A	53	5	11/3/97	11/3/97	52			
Chlorotrifluoroethene	EPA 5030	8021A	106	5	11/3/97	11/3/97	106		u	l
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	106	5	11/3/97	11/3/97	106	U	1	İ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	106	5	11/3/97	11/3/97	106	U		İ
2-Butanone (MEK)	EPA 5030	8021A _i	270	5	11/3/97	11/3/97	270	U		ĺ
Acetone	EPA 5030	8021A	270	5	11/3/97	11/3/97	270	U		ĺ
1,2,4-Trimethylbenzene	EPA 5030	8021A	106	5	11/3/97	11/3/97	106	U		ĺ
1,3,5-Trimethylbenzene	EPA 5030	8021A	106	5	11/3/97	11/3/97	106	U	1	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	106	5	11/3/97	11/3/97	106	U	√	ĺ
										ĺ

MC .94

Approved By:

Throng & Rebion

Date: 12/23/97

OGDEN VALDATED

LEVEL V 003088

Analytical Report

Client: Project:

InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Sludge

Date Collected: 10/27/97 Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD702 L9703643-001 Units: UG/KG Basis: Dry

Test Notes: C2A

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	7 9	5	10/29/97	10/29/97	79	UU
Chloromethane	EPA 5030	8021A	79	5	10/29/97	10/29/97	79	Ū
Vinyl Chloride	EPA 5030	8021A	79	5	10/29/97	10/29/97	79	Ü
Bromomethane	EPA 5030	8021A	79	5	10/29/97	10/29/97	79	Ŭ
Chloroethane	EPA 5030	8021A	79	5	10/29/97	10/29/97	79	Ū
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	U
1,1-Dichloroethene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	U
Methylene Chloride	EPA 5030	8021A	157	5	10/29/97	10/29/97	157	ט
trans-1,2-Dichloroethene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	U
cis-1,2-Dichloroethene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	U
1,1-Dichloroethane	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	U
Chloroform	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	U
Carbon Tetrachloride	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ü
Benzene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ū
1,2-Dichloroethane	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ŭ
Trichloroethene (TCE)	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ŭ
1,2-Dichloropropane	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ū
Bromodichloromethane	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	391	5	10/29/97	10/29/97	391	Ū
Toluene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	ΰ
Tetrachloroethene (PCE)	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	157	5	10/29/97	10/29/97	157	Ŭ
Chlorobenzene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ŭ
Ethylbenzene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ŭ
m,p-Xylenes	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	ŭ
o-Xylene	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	Ŭ
Bromoform	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	ŭ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	40	5	10/29/97	10/29/97	40	ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	79	5	10/29/97	10/29/97	79	ΰ
1,4-Dichlorobenzene	EPA 5030	8021A	79	5	10/29/97	10/29/97	79	ŭ
1,2-Dichlorobenzene	EPA 5030	8021A	79	5	10/29/97	10/29/97	79	ŭ
Chlorotrifluoroethene	EPA 5030	8021A	157	5	10/29/97	10/29/97	157	ŭ
1,1,1,2-Tetrachioroethane	EPA 5030	8021A	157	5	10/29/97	10/29/97	157	ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	157	5	10/29/97	10/29/97	157	Ŭ
2-Butanone (MEK)	EPA 5030	8021A	391	5	10/29/97	10/29/97	391	Ŭ
Acetone	EPA 5030	8021A	391	Š	10/29/97	10/29/97	391	υ
1,2,4-Trimethylbenzene	EPA 5030	8021A	157	5	10/29/97	10/29/97	157	ŭ
1,3,5-Trimethylbenzene	EPA 5030	8021A	157	š	10/29/97	10/29/97	157	ŭ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	157	5	10/29/97	10/29/97	157	_ ŭ √1
1 1 (===)				~	*********	1. W. M. J. J. 1	15,	· ' '

C2A

MRL is elevated because of matrix interferences and because the sample required diluting.

Approved By:



Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Sludge

Service Request: L9703643 Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD703 L9703643-002

Units: UG/KG Basis: Dry

Test Notes: C2A

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	2
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	910	50	10/29/97	10/29/97	910	ע יט	
Chloromethane	EPA 5030	8021A	910	50	10/29/97	10/29/97	910	Ü	Ч
Vinyl Chloride	EPA 5030	8021A	910	50	10/29/97	10/29/97	910	ŭ	
Bromomethane	EPA 5030	8021A	910	50	10/29/97	10/29/97	910	ŭ	- 1
Chloroethane	EPA 5030	8021A	910	50	10/29/97	10/29/97	910	ŭ	- 1
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บั	
1,1-Dichloroethene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	ŭ	
Methylene Chloride	EPA 5030	8021A	1820	50	10/29/97	10/29/97	1820	ŭ	1
trans-1,2-Dichloroethene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บั	
cis-1,2-Dichloroethene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บั	
1,1-Dichloroethane	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บั	Ĭ
Chloroform	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	ŭ	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	ŭ	Ĭ
Carbon Tetrachloride	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	Ŭ	
Benzene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บ	
1.2-Dichloroethane	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	Ŭ	
Trichloroethene (TCE)	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บั	i
1,2-Dichloropropane	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บั	ı
Bromodichloromethane	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	Ü	ı
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	4550	50	10/29/97	10/29/97	4550	Ŭ	ł
Toluene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	Ü	
trans-1,3-Dichloropropene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บ็	
cis-1,3-Dichloropropene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บ	Į
1,1,2-Trichloroethane	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บ	
Tetrachloroethene (PCE)	EPA 5030	8021A	455	50	10/29/97	10/29/97	455 455	บ	Table 1
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	1820	50	10/29/97	10/29/97	1820	บ	•
Chlorobenzene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455	บ	
Ethylbenzene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455 455	Ü	
m,p-Xylenes	EPA 5030	8021A	455	50	10/29/97	10/29/97	455 455	บ	
o-Xylene	EPA 5030	8021A	455	50	10/29/97	10/29/97	455 455	Ü	
Bromoform '	EPA 5030	8021A	455	50	10/29/97	10/29/97	455 455	U	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	455	50 50	10/29/97	10/29/97	455 455	บ	ı
1.3-Dichlorobenzene	EPA 5030	8021A	910	50	10/29/97	10/29/97	910	Ü	ı
1,4-Dichlorobenzene	EPA 5030	8021A	910	50	10/29/97	10/29/97	910 910	บ	ı
1,2-Dichlorobenzene	EPA 5030	8021A	910	50 50	10/29/97	10/29/97	910		
Chlorotrifluoroethene	EPA 5030	8021A	1820	50	10/29/97	10/29/97	1820	บ	
1,1,2-Tetrachloroethane	EPA 5030	8021A	1820	50	10/29/97	10/29/97	1820	U	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	1820	50	10/29/97			U	1
2-Butanone (MEK)	EPA 5030	8021A	4550	50 50		10/29/97	1820	U	ŀ
Acetone	EPA 5030	8021A	4550 4550	50 50	10/29/97 10/29/97	10/29/97	4550	U	Į
1,2,4-Trimethylbenzene	EPA 5030	8021A	4330 1 82 0	50 50		10/29/97	4550	Ü	
1,3,5-Trimethylbenzene	EPA 5030	8021A 8021A	1820	50 50	10/29/97 10/29/97	10/29/97	1820	U	1
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	1820	50 50	10/29/97	10/29/97	1820	Ü	
, and a sundropropulo (DDOI)	LA PA 3030	002 IA	1020	20	10/43/3/	10/29/97	1820	υV	1

C2A

MRL is elevated because of matrix interferences and because the sample required diluting.

Approved By:

003010

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Sludge

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD704 L9703643-003 Units: UG/KG Basis: Dry

	Prep	Analysis		Dilution	Date	Date			4
Analyte	Method	Method	PQL	Factor	Extracted	Analyzed	Result	Notes	4
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	20	1	10/30/97	10/30/97	20	n K	ı
Chloromethane	EPA 5030	8021A	20	1	10/30/97	10/30/97	20	. U 1	1
Vinyl Chloride	EPA 5030	8021A	20	1	10/30/97	10/30/97	20	U)	ı
Bromomethane	EPA 5030	8021A	20	1	10/30/97	10/30/97	20	U	1
Chloroethane	EPA 5030	8021A	20	1	10/30/97	10/30/97	20	U	ı
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	١
1,1-Dichloroethene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	
Methylene Chloride	EPA 5030	8021A	40	1	10/30/97	10/30/97	40	U	ı
trans-1,2-Dichloroethene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
cis-1,2-Dichloroethene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
1,1-Dichloroethane	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
Chloroform	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	١
Carbon Tetrachloride	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
Benzene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	- 1
1,2-Dichloroethane	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
Trichloroethene (TCE)	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
1,2-Dichloropropane	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	ប	1
Bromodichloromethane	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	99	1	10/30/97	10/30/97	99	U	ı
Toluene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	١
trans-1,3-Dichloropropene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
cis-1,3-Dichloropropene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
1,1,2-Trichloroethane	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	ı
Tetrachloroethene (PCE)	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	40	*	10/30/97	10/30/97	40	U	
Chlorobenzene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	0000
Ethylbenzene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	
m,p-Xylenes	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	
o-Xylene	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	
Bromoform	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	10	1	10/30/97	10/30/97	10	U	200
1,3-Dichlorobenzene	EPA 5030	8021A	20	1	10/30/97	10/30/97	20	บ	200
1,4-Dichlorobenzene	EPA 5030	8021A	20	1	10/30/97	10/30/97	20	Ū	
1,2-Dichlorobenzene	EPA 5030	8021A	20	ī	10/30/97	10/30/97	20	Ü	
Chlorotrifluoroethene	EPA 5030	8021A	40	ĩ	10/30/97	10/30/97	40	Ŭ	î
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	40	ī	10/30/97	10/30/97	40	Ŭ	I
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	40	ī	10/30/97	10/30/97	40	ŭ	C. C.
2-Butanone (MEK)	EPA 5030	8021A	99	î	10/30/97	10/30/97	99	ŭ	
Acetone	EPA 5030	8021A	99	î	10/30/97	10/30/97	99	ŭ	
1,2,4-Trimethylbenzene	EPA 5030	8021A	40	i	10/30/97	10/30/97	40	ŭ	ı
1,3,5-Trimethylbenzene	EPA 5030	8021A	40	i	10/30/97	10/30/97	40	υl	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	40	i	10/30/97	10/30/97	40	ŭ 🎶	/ 1

Approved By: 1844/021397p

Throng D. Mon

Date: 12/23/97

OCDEN VALDATED

LEVELV

Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/27/97

Sample Matrix:

Soil

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD705 L9703643-016 Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 9	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	19	1	10/28/97	10/28/97	19	υ从	Г
Chloromethane	EPA 5030	8021A	19	1	10/28/97	10/28/97	19	บ่า	ı
Vinyl Chloride	EPA 5030	8021A	19	1	10/28/97	10/28/97	19	υ	1
Bromomethane	EPA 5030	8021A	19	1	10/28/97	10/28/97	19	U	ı
Chloroethane	EPA 5030	8021A	19	1	10/28/97	10/28/97	19	ט ו	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	ן ט	ı
1,1-Dichloroethene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	บ	ı
Methylene Chloride	EPA 5030	8021A	38	1	10/28/97	10/28/97	38	ט ו	1
trans-1,2-Dichloroethene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U \	
cis-1,2-Dichloroethene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	υ	
1,1-Dichloroethane	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	
Chloroform	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	i
Carbon Tetrachloride	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	j
Benzene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	ט	
1,2-Dichloroethane	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	
Trichloroethene (TCE)	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	υ	1
1,2-Dichloropropane	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	
Bromodichloromethane	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	95	1	10/28/97	10/28/97	95	บ .	į
Toluene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	ับ	ĺ
trans-1,3-Dichloropropene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	υ	l
cis-1,3-Dichloropropene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	i
1,1,2-Trichloroethane	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	į
Tetrachloroethene (PCE)	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	υ	Į
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	38	1	10/28/97	10/28/97	38	U	į
Chlorobenzene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	,
Ethylbenzene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	υ	
m,p-Xylenes	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	
o-Xylene	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	ט	
Bromoform	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	υ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	10	1	10/28/97	10/28/97	10	U	
1,3-Dichlorobenzene	EPA 5030	8021A	19	1	10/28/97	10/28/97	19	U	
1,4-Dichlorobenzene	EPA 5030	8021A	19	1	10/28/97	10/28/97	19	บ /	
1,2-Dichlorobenzene	EPA 5030	8021A	19	1	10/28/97	10/28/97	19	U	
Chlorotrifluoroethene	EPA 5030	8021A	38	1	10/28/97	10/28/97	38	υ	
1,1,1,2-Tetrachioroethane	EPA 5030	8021A	38	1	10/28/97	10/28/97	38	U	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	38	1	10/28/97	10/28/97	38	U	
2-Butanone (MEK)	EPA 5030	8021A	95	1	10/28/97	10/28/97	95	บ√∜ไ	
Acetone	EPA 5030	8021A	95	i	10/28/97	10/28/97	490	R	I
1,2,4-Trimethylbenzene	EPA 5030	8021A	38	1	10/28/97	10/28/97	38	可以	-
1,3,5-Trimethylbenzene	EPA 5030	8021A	38	1	10/28/97	10/28/97	38	ט ו	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	38	1	10/28/97	10/28/97	38	u √	

Approved By:

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD705DL L9703643-016DL Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	25
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	38	2	10/29/97	10/29/97	38	υR	P
Chloromethane	EPA 5030	8021A	38	2	10/29/97	10/29/97	38	υï	
Vinyl Chloride	EPA 5030	8021A	38	2	10/29/97	10/29/97	38	Ŭ \	
Bromomethane	EPA 5030	8021A	38	2	10/29/97	10/29/97	38	Ū ·	
Chloroethane	EPA 5030	8021A	38	2	10/29/97	10/29/97	38	ŭ	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ū \	
1,1-Dichloroethene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ü	
Methylene Chloride	EPA 5030	8021A	76	2	10/29/97	10/29/97	76	Ŭ	
trans-1,2-Dichloroethene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	υ	
cis-1,2-Dichloroethene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ū \	
1,1-Dichloroethane	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	ŭ	§ \
Chloroform	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ŭ	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ŭ	
Carbon Tetrachloride	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ū	
Benzene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ü	
1,2-Dichloroethane	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ü	
Trichloroethene (TCE)	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ü	
1,2-Dichloropropane	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ü	
Bromodichloromethane	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ū	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	190	2	10/29/97	10/29/97	190	Ü	
Toluene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	U	
trans-1,3-Dichloropropene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ü	
cis-1,3-Dichloropropene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	U	
1,1,2-Trichloroethane	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	U	
Tetrachloroethene (PCE)	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	U	
2-Chloro-1,1,1-rifluoroethane	EPA 5030	8021A	76	2	10/29/97	10/29/97	76	U	
Chlorobenzene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	U	
Ethylbenzene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	U	
m,p-Xylenes	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ŭ	
o-Xylene	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ŭ	
Bromoform	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	Ŭ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	19	2	10/29/97	10/29/97	19	ŭ	
1,3-Dichlorobenzene	EPA 5030	8021A	38	2	10/29/97	10/29/97	38	บั	
1,4-Dichlorobenzene	EPA 5030	8021A	38	2	10/29/97	10/29/97	38	Ŭ	
1,2-Dichlorobenzene	EPA 5030	8021A	38	2	10/29/97	10/29/97	38	ŭ	
Chlorotrifluoroethene	EPA 5030	8021A	76	2	10/29/97	10/29/97	76	ŭ	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	76	2	10/29/97	10/29/97	76	Ŭ	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	76	2	10/29/97	10/29/97	76	υ	
2-Butanone (MEK)	EPA 5030	8021A	190	2	10/29/97	10/29/97	190	ŭ	\mathbf{V}
Acetone	EPA 5030	8021A	190	2	10/29/97	10/29/97	280	ΓN	X8
1,2,4-Trimethylbenzene	EPA 5030	8021A	76	2	10/29/97	10/29/97	76	UR	P
1,3,5-Trimethylbenzene	EPA 5030	8021A	76	2	10/29/97	10/29/97	76	ŭ l	1
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	76	2	10/29/97	10/29/97	76	**	
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Approved By:

Thomas & Mon

Date: 12/23/97

OCDEN VALIDATED

EVELV

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD706

L9703643-017

Units: UG/KG

Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3	440
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	UL	-
Chloromethane	EPA 5030	8021A	21	ĩ	10/28/97	10/28/97	21	υ'n	
Vinyl Chloride	EPA 5030	8021A	21	ī	10/28/97	10/28/97	21	Ū	
Bromomethane	EPA 5030	8021A	21	ī	10/28/97	10/28/97	21	Ŭ	
Chloroethane	EPA 5030	8021A	21	ī	10/28/97	10/28/97	21	Ŭ	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	11	ī	10/28/97	10/28/97	11	Ū	
1,1-Dichloroethene	EPA 5030	8021A	11	ī	10/28/97	10/28/97	11	Ū	
Methylene Chloride	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	U	
trans-1,2-Dichloroethene	EPA 5030	8021A	11	1	10/28/97	10/28/97	ii	U	
cis-1,2-Dichloroethene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	
1,1-Dichloroethane	EPA 5030	8021A	11	ī	10/28/97	10/28/97	11	Ü	
Chloroform	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	11	ī	10/28/97	10/28/97	ii	Ŭ	
Carbon Tetrachloride	EPA 5030	8021A	11	ī	10/28/97	10/28/97	11	Ū	
Benzene	EPA 5030	8021A	11	ī	10/28/97	10/28/97	11	Ü	
1.2-Dichloroethane	EPA 5030	8021A	11	ī	10/28/97	10/28/97	ii	Ŭ	
Trichloroethene (TCE)	EPA 5030	8021A	11	ĩ	10/28/97	10/28/97	ii	Ŭ	
1,2-Dichloropropane	EPA 5030	8021A	11	ĭ	10/28/97	10/28/97	11	Ū	
Bromodichloromethane	EPA 5030	8021A	11	ĩ	10/28/97	10/28/97	ii	Ŭ	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	105	1	10/28/97	10/28/97	105	Ū	
Toluene	EPA 5030	8021A	11	i	10/28/97	10/28/97	11	Ŭ	
trans-1,3-Dichloropropene	EPA 5030	8021A	11	ĩ	10/28/97	10/28/97	ii	ŭ	
cis-1,3-Dichloropropene	EPA 5030	8021A	11	ī	10/28/97	10/28/97	ii	Ü	
1,1,2-Trichloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ū	
Tetrachloroethene (PCE)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ū	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	42	ì	10/28/97	10/28/97	42	Ū	
Chlorobenzene	EPA 5030	8021A	11	ĺ	10/28/97	10/28/97	11	Ū	
Ethylbenzene	EPA 5030	8021A	11	ĩ	10/28/97	10/28/97	ii	Ŭ	
m,p-Xylenes	EPA 5030	8021A	ii	î	10/28/97	10/28/97	ii	ŭ	
o-Xylene	EPA 5030	8021A	ii	ī	10/28/97	10/28/97	ii	Ŭ	
Bromoform	EPA 5030	8021A	îi	î	10/28/97	10/28/97	11	Ü	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	ii	i	10/28/97	10/28/97	11	Ü	
1.3-Dichlorobenzene	EPA 5030	8021A	21	î	10/28/97	10/28/97	21	Ŭ	
1,4-Dichlorobenzene	EPA 5030	8021A	21	î	10/28/97	10/28/97	21	Ü	
1,2-Dichlorobenzene	EPA 5030	8021A	21	i	10/28/97	10/28/97	21	Ü	
Chlorotrifluoroethene	EPA 5030	8021A	42	i	10/28/97	10/28/97	42	Ü	
1,1,2-Tetrachloroethane	EPA 5030	8021A	42	i	10/28/97	10/28/97	42	Ü	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	42	i	10/28/97	10/28/97	42	Ü	
2-Butanone (MEK)	EPA 5030	8021A	105	i	10/28/97	10/28/97	105	υV	
Acetone	EPA 5030	8021A	105	i	10/28/97	10/28/97	140	τĭ	×
1,2,4-Trimethylbenzene	EPA 5030	8021A	42		10/28/97	10/28/97	42	บ นิโ	
1,3,5-Trimethylbenzene	EPA 5030	8021A	42	i	10/28/97	10/28/97	42	υί	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	42	i	10/28/97	10/28/97	42	ŭ 1/1	
			72		~ ~ ~ ~ ~ /	. VI AUI 7 (74	U 1/ #	

Approved By:

V 003026

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD707 L9703643-018

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 7 Notes 2
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	UU
Chloromethane	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	ט י
Vinyl Chloride	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	บ 📗
Bromomethane	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	υ \ l
Chloroethane	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	ן ט
1,1-Dichloroethene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	υl
Methylene Chloride	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	U
trans-1,2-Dichloroethene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U
cis-1,2-Dichloroethene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ
1,1-Dichloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ
Chloroform	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	υ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ
Carbon Tetrachloride	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U
Benzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	υ
1,2-Dichloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U
Trichloroethene (TCE)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U
1,2-Dichloropropane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	Ü
Bromodichloromethane	EPA 5030	8021A	ii	ī	10/28/97	10/28/97	ii	ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	105	i	10/28/97	10/28/97	105	ŭ
Toluene	EPA 5030	8021A	11	ĩ	10/28/97	10/28/97	11	Ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	ii	ī	10/28/97	10/28/97	îî	ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	11	ī	10/28/97	10/28/97	ii	ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	11	ī	10/28/97	10/28/97	ii	Ü
Tetrachloroethene (PCE)	EPA 5030	8021A	11.	ī	10/28/97	10/28/97	ii	ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	42	ī	10/28/97	10/28/97	42	Ŭ
Chlorobenzene	EPA 5030	8021A	11	i	10/28/97	10/28/97	ii	υ
Ethylbenzene	EPA 5030	8021A	11	- 1	10/28/97	10/28/97	ii	Ū
m,p-Xylenes	EPA 5030	8021A	11	ī	10/28/97	10/28/97	ii	ŭ
o-Xylene	EPA 5030	8021A	ii	i	10/28/97	10/28/97	ii	ŭ
Bromoform	EPA 5030	8021A	ii	î	10/28/97	10/28/97	11	ŭ
1,1,2,2-Tetrachioroethane	EPA 5030	8021A	ii	i	10/28/97	10/28/97	11	Ü
1,3-Dichlorobenzene	EPA 5030	8021A	21	î	10/28/97	10/28/97	21	υ
1.4-Dichlorobenzene	EPA 5030	8021A	21	i	10/28/97	10/28/97	21	υ
1,2-Dichlorobenzene	EPA 5030	8021A	21	i	10/28/97	10/28/97	21	บั
Chlorotrifluoroethene	EPA 5030	8021A	42	i	10/28/97	10/28/97	42	Ü
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	42	i	10/28/97	10/28/97	42	ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	42	i	10/28/97	10/28/97	42	Ü
2-Butanone (MEK)	EPA 5030	8021A	105	i	10/28/97	10/28/97	105	Ŭ
Acetone	EPA 5030	8021A	105	i	10/28/97	10/28/97	105	_ ซี
1,2,4-Trimethylbenzene	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	ี ยี
1,3,5-Trimethylbenzene	EPA 5030	8021A	42	i	10/28/97	10/28/97	42	ម
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	42 42	1	10/28/97	10/28/97	42	_ ŭ √/
(DOI)	PI W 2020	30217	-7.L		10/40/7/	10/40/7/	44	υ γ

Approved By:

Date: 12/33/97



Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/27/97

Date Received: 10/27/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

RD708 L9703643-019 Units: UG/KG

Basis: Dry

Lab Code: Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	UU	Г
Chloromethane	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	וֹ ט	ı
Vinyl Chloride	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	U	ĺ
Bromomethane	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	U	ı
Chloroethane	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	U	ľ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	ı
1,1-Dichloroethene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	ט	ı
Methylene Chloride	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	บ	
trans-1,2-Dichloroethene	EPA 5030	8021A	11	<i>"</i> 1	10/28/97	10/28/97	11	ט	ĺ
cis-1,2-Dichloroethene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ	
1,1-Dichloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ	
Chloroform	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	
Carbon Tetrachloride	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	
Benzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	ĺ
1,2-Dichloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	
Trichloroethene (TCE)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	
1,2-Dichloropropane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	ĺ
Bromodichloromethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	ĺ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	105	1	10/28/97	10/28/97	105	U	
Toluene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	ĺ
trans-1,3-Dichloropropene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11 .	υ	
cis-1,3-Dichloropropene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ	
1,1,2-Trichloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	ĺ
Tetrachloroethene (PCE)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	υ	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	ιΙ	
Chlorobenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	υ	
Ethylbenzene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	
m,p-Xylenes	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	U	
o-Xylene	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	ט	ı
Bromoform	EPA 5030	8021A	11	1 .	10/28/97	10/28/97	11	U	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	υ	
1,3-Dichlorobenzene	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	υ [
1,4-Dichlorobenzene	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	U	
1,2-Dichlorobenzene	EPA 5030	8021A	21	1	10/28/97	10/28/97	21	U	
Chlorotrifluoroethene	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	U	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	ט	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	ע ∫∠	
2-Butanone (MEK)	. EPA 5030	8021A	105	1	10/28/97	10/28/97	105	υVI	
Acetone	EPA 5030	8021A	105	1	10/28/97	10/28/97	240	NJ	*
1,2,4-Trimethylbenzene	EPA 5030	8021A	42		10/28/97	10/28/97	42	UU	
1,3,5-Trimethylbenzene	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	υΥ	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	42	1	10/28/97	10/28/97	42	υV	

Approved By:

Date: 12/23/97

LEVEL V₀₀₃₀₂₈

Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001 Soil

Date Received: 10/27/97

Service Request: L9703643 Date Collected: 10/27/97

Sample Matrix:

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

Lab Code: Test Notes: **RD709**

L9703643-020

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor		Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	n n
Chloromethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	ט יכ
Vinyl Chloride	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	u }
Bromomethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ
Chloroethane	EPA 5030	8021A	11	1	10/28/97	10/28/97	11	บ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U \
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ \
Methylene Chloride	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	ע
Chloroform	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	ט
Benzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ
1,2-Dichloroethane	EPA 5030	8021A	6 '	1	10/28/97	10/28/97	6	U
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
Bromodichloromethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	54	1	10/28/97	10/28/97	54	Ü
Toluene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ū
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ū
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	1	10/28/97	10/28/97	22	υ
Chlorobenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	บ
Ethylbenzene	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	U
m,p-Xylenes	EPA 5030	8021A	6	1	10/28/97	10/28/97	6	Ū
o-Xylene	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
Bromoform	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	ī	10/28/97	10/28/97	6	ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	11	ī	10/28/97	10/28/97	11	ŭ
1,4-Dichlorobenzene	EPA 5030	8021A	ii	i	10/28/97	10/28/97	ii	ΰ
1,2-Dichlorobenzene	EPA 5030	8021A	11	î	10/28/97	10/28/97	ii	ŭ
Chlorotrifluoroethene	EPA 5030	8021A	22	ī	10/28/97	10/28/97	22	υ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	ī	10/28/97	10/28/97	22	ΰ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	î	10/28/97	10/28/97	22	ΰ
2-Butanone (MEK)	EPA 5030	8021A	54	î	10/28/97	10/28/97	54	υ
Acetone	EPA 5030	8021A	54	î	10/28/97	10/28/97	. 54	ΰ
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	î	10/28/97	10/28/97	22	υl
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	ī	10/28/97	10/28/97	22	υ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	ì	10/28/97	10/28/97	22	ŭ √/
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				-	10.20,7.	10,20,7,		o v





Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/28/97

Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name:

Lab Code: Test Notes: **RD723**

L9703643-040

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result D	20
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/29/97	10/29/97	11	UU	1
Chloromethane	EPA 5030	8021A	11	. 1	10/29/97	10/29/97	11	υŢ	ı
Vinyl Chloride	EPA 5030	8021A	11	1	10/29/97	10/29/97	11	UUST	12
Bromomethane	EPA 5030	8021A	11	1	10/29/97	10/29/97	<u> </u>	UA	1-
Chloroethane	EPA 5030	8021A	11	ī	10/29/97	10/29/97	11	UÍ	1
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	ī	10/29/97	10/29/97	6	υ↓	1
1,1-Dichloroethene	EPA 5030	8021A	6	ī	10/29/97	10/29/97	6	uut	5
Methylene Chloride	EPA 5030	8021A	21	**************************************	10/29/97	10/29/97	21	บัน	P-
trans-1,2-Dichloroethene	EPA 5030	8021A	6	î	10/29/97	10/29/97	6	- 1	1
cis-1,2-Dichloroethene	EPA 5030	8021A	6	î	10/29/97	10/29/97	6		_
1.1-Dichloroethane	EPA 5030	8021A	<u> </u>	······································	10/29/97	10/29/97	6	บนวั บ น	15
Chioroform	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	υμ υι	1
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/29/97	10/29/97	-	บั	1
Carbon Tetrachloride	EPA 5030	8021A	6	1			6	- 1	1
Benzene	EPA 5030	8021A	6		10/29/97	10/29/97	6	n 🔨	١.
1.2-Dichloroethane	EPA 5030	deeds to a fine and the belief of the second or an arrange of the second	6	Norman VIII de la constitución d	10/29/97	10/29/97	6	ULT	15
Trichloroethene (TCE)		8021A	-	1	10/29/97	10/29/97	6	υŭ	١.
1,2-Dichloropropage	EPA 5030	8021A			10/29/97	10/29/97	6	UKU	5
Bromodichloromethane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	υü	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	U 1/_	١.
The state of the s	EPA 5030	8021A	52		10/29/97	10/29/97	52	UUJ	5 5
Tolucne	EPA 5030	8021A	6		10/29/97	10/29/97		UUT	5
trans-1,3-Dichloropropene	EPA 5030	8021A	6	i di tanan naga tantan nga sana salagaya na ana tanan di dida salaga sana sana sa	10/29/97	10/29/97	6	U W	5
cis-1,3-Dichloropropene	EPA 5030	8021A	6	agant state to the state of the	10/29/97	10/29/97	6	UU	5
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	บน	
Tetrachloroethene (PCE)	EPA 5030	8021A	6	<u> </u>	10/29/97	10/29/97	6	บนปั	5
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	21	1	10/29/97	10/29/97	21	υd	
Chlorobenzene	EPA 5030	8021A	6		10/29/97	10/29/97	6		5
Ethylbenzene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	UI	\prod
m,p-Xylenes	EPA 5030	8021A	6		10/29/97	10/29/97	6	Ū	$\prod_{i=1}^{n}$
o-Xylene	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	υV	11/
Bromoform	EPA 5030	8021A	6	1	10/29/97	10/29/97	6	υŲ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	î	10/29/97	10/29/97	6	U	l
1,3-Dichlorobenzene	EPA 5030	8021A	11	î	10/29/97	10/29/97	11	V 1	1
1,4-Dichlorobenzene	EPA 5030	8021A	11		10/29/97	10/29/97		U W	5
1.2-Dichlorobenzene	EPA 5030	8021A	11	t til film til som til skripet til av greken til sk ripet program.	10/29/97	10/29/97			
Chlorotrifluoroethene	EPA 5030	8021A	21	rterturen til et ertetallt i er i samme til malle and seguennen og g				u V	W
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	21	1	10/29/97	10/29/97	21	йи	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A		1	10/29/97	10/29/97	21	υj	ĺ
2-Butanone (MEK)			21	Ţ	10/29/97	10/29/97	21	U V	İ
Acetone	EPA 5030	8021A	52	The section of the feet of the feet of the section	10/29/97	10/29/97	52	U LUT	5
1,2,4-Trimethylbenzene	EPA 5030	8021A	52		10/29/97	10/29/97	52		
1,3,5-Trimethylbenzene	EPA 5030	8021A		time to the transfer against a second and the second against a second agai	10/29/97	10/29/97	21	· · · · · · · · ·	-
1,3,3-1 rimethylocalzene 1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	21		10/29/97	10/29/97	21	UV	$\bot \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$
1,4-121010mo-3-chioropropane (DBCP)	EPA 5030	8021A	21	1	10/29/97	10/29/97	21	υú	-

Approved By:

LEVEL \mathbf{V} 003042

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Water

Service Request: L9703643

Date Collected: 10/28/97
Date Received: 10/28/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD724 L9703643-043 Units: UG/L

Basis: NA

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 2 Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	u U
Chloromethane	EPA 5030	8021A	10	1	10/29/97	10/29/97	- 10	ט יי
Vinyl Chloride	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	บ
Bromomethane	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	Ü
Chloroethane	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	υ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	Ü
1.1-Dichloroethene	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	บ
Methylene Chloride	EPA 5030	8021A	20	ī	10/29/97	10/29/97	20	ŭ
trans-1.2-Dichloroethene	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	Ŭ
cis-1.2-Dichloroethene	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	ŭ
1.1-Dichloroethane	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	ŭ
Chloroform	EPA 5030	8021A	5	î	10/29/97	10/29/97	5	ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	Ŭ
Carbon Tetrachloride	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	ŭ
Benzene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	ŭ
1.2-Dichloroethane	EPA 5030	8021A	5	i	10/29/97	10/29/97	5	Ŭ
Trichloroethene (TCE)	EPA 5030	8021A	5	ī	10/29/97	10/29/97	5	ŭ
1,2-Dichloropropane	EPA 5030	8021A	5	î	10/29/97	10/29/97	5	ΰ
Bromodichloromethane	EPA 5030	8021A	5	î	10/29/97	10/29/97	5	ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	50	i	10/29/97	10/29/97	50	ŭ
Toluene	EPA 5030	8021A	5	î	10/29/97	10/29/97	5	ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	5	i	10/29/97	10/29/97	5	ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	5	î	10/29/97	10/29/97	5	ŭ
1.1.2-Trichloroethane	EPA 5030	8021A	5	î	10/29/97	10/29/97	5	ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	5	î	10/29/97	10/29/97	5	บั
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	20	î	10/29/97	10/29/97	20	ŭ
Chlorobenzene	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	ŭ
Ethylbenzene	EPA 5030	8021A	5	i	10/29/97	10/29/97	5	Ŭ
m,p-Xylenes	EPA 5030	8021A	5	î	10/29/97	10/29/97	5	บ
o-Xylene	EPA 5030	8021A	5	i	10/29/97	10/29/97	5	υ
Bromoform	EPA 5030	8021A	5	î	10/29/97	10/29/97	. 5	Ü
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	5	1	10/29/97	10/29/97	5	บ
1.3-Dichlorobenzene	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	บ
1,4-Dichlorobenzene	EPA 5030	8021A	10	1	10/29/97	10/29/97	10	Ü
1,2-Dichlorobenzene	EPA 5030	8021A	10	1 1	10/29/97	10/29/97	10	Ü
Chlorotrifluoroethene	EPA 5030	8021A	20	1				_
1,1,1,2-Tetrachioroethane	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A 8021A	20	-	10/29/97	10/29/97	20	Ü
2-Butanone (MEK)				1	10/29/97	10/29/97	20	U
Acetone (MEK)	EPA 5030	8021A	50	1	10/29/97	10/29/97	50	ប្
1,2,4-Trimethylbenzene	EPA 5030	8021A	50	1	10/29/97	10/29/97	50	U
1,3,5-Trimethylbenzene	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	U
1,3,3-1 rimethyloenzene 1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	U \
1,2-Dioromo-3-chioropropane (DBCP)	EPA 5030	8021A	20	1	10/29/97	10/29/97	20	υV

Approved By: 1844/021397p

Thomas & Abian

Date: 12/23/97

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Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643
Date Collected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD726 L9703643-054

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result]
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	
Chloromethane	EPA 5030	8021A	11	ī	10/31/97	10/31/97	11	
Vinyl Chloride	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	
Bromomethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	
Chloroethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	
Methylene Chloride	EPA 5030	8021A	21	1	10/31/97	10/31/97	21	
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	

Vinyl Chloride	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U	
Bromomethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U	
Chloroethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U	ı
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Methylene Chloride	EPA 5030	8021A	21	1	10/31/97	10/31/97	21	บ	
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	1
Chloroform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	บ	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	ı
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	- 1
Benzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	ı
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ū	ı
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ū	
Bromodichloromethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	52	1	10/31/97	10/31/97	52	Ü	ı
Toluene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	- 1
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6.	U	
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	ı
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	21	i	10/31/97	10/31/97	21	U I	ı
Chlorobenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	
Ethylbenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ŭ	- 1
m,p-Xylenes	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ŭ	- 1
o-Xylene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	ŭ	
Bromoform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ŭ	ı
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	ŭ	- 1
1,3-Dichlorobenzene	EPA 5030	8021A	11	ī	10/31/97	10/31/97	11	ŭ	- 1
1,4-Dichlorobenzene	EPA 5030	8021A	11	ī	10/31/97	10/31/97	ii	ŭ	1
1,2-Dichlorobenzene	EPA 5030	8021A	ii	î	10/31/97	10/31/97	11	ŭ	ı
Chlorotrifluoroethene	EPA 5030	8021A	21	î	10/31/97	10/31/97	21	ŭ	ı
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	21	i	10/31/97	10/31/97	21	ŭ	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	21	î	10/31/97	10/31/97	21	ŭ	- 1
2-Butanone (MEK)	EPA 5030	8021A	52	i	10/31/97	10/31/97	52	ŭ	ı
Acetone	EPA 5030	8021A	52	ī	10/31/97	10/31/97	52	ŭ	- 1
1,2,4-Trimethylbenzene	EPA 5030	8021A	21	î	10/31/97	10/31/97	21	บั	Į
1,3,5-Trimethylbenzene	EPA 5030	8021A	21	i	10/31/97	10/31/97	21	ΰ	1
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	21	i	10/31/97	10/31/97	21	υJ	/
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Approved By:

Date: 12/23/97

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001 Soil

/nc/313150001

Service Request: L9703643 Date Collected: 10/29/97

Date Collected: 10/29/97
Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: RD727 L9703643-055 Units: UG/KG Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result y
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	υU
Chloromethane	EPA 5030	8021A	ii	ī	10/30/97	10/30/97	ii	ΰΥ
Vinyl Chloride	EPA 5030	8021A	11	i	10/30/97	10/30/97	ii	ŭΙ
Bromomethane	EPA 5030	8021A	11	î	10/30/97	10/30/97	ii	ŭ
Chloroethane	EPA 5030	8021A	ii	ī	10/30/97	10/30/97	11	ŭ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
1.1-Dichloroethene	EPA 5030	8021A	6	ĩ	10/30/97	10/30/97	6	ŭ
Methylene Chloride	EPA 5030	8021A	22	ī	10/30/97	10/30/97	22	Ŭ
trans-1,2-Dichloroethene	EPA 5030	8021A	6	ĩ	10/30/97	10/30/97	6	Ŭ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	ŭΙ
1,1-Dichloroethane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ū
Chloroform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ū
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ü
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Benzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υΙ
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
Bromodichloromethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	ט
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	55	1	10/30/97	10/30/97	55	บ
Toluene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	ט
Tetrachloroethene (PCE)	EPA 5030	8021A	6	ì	10/30/97	10/30/97	6	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	υ
Chlorobenzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Ethylbenzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
m,p-Xylenes	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	ט
o-Xylene	EPA 5030	8021A	6	I	10/30/97	10/30/97	6	υ
Bromoform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ \
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	บ
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U
Chlorotrifluoroethene	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	U
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	U
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	U
2-Butanone (MEK)	EPA 5030	8021A	55	1	10/30/97	10/30/97	55	บ
Acetone	EPA 5030	8021A	55	1	10/30/97	10/30/97	.55	U
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	U
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	บ ∜ บ

Approved By:

Thomas D. Rebing

Date: 12/23 (9)

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LEVEL V 003053

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD733 L9703643-060 Units: UG/KG Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	3
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	. 1	10/30/97	10/30/97	11	ŭΝ	
Chloromethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	ט יי	
Vinyl Chloride	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U	
Bromomethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U	
Chloroethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Methylene Chloride	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	U	
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	1
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Chloroform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Benzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ !	
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Bromodichloromethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	53	1	10/30/97	10/30/97	53	บ	
Toluene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ	
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	U	
Chlorobenzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Ethylbenzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
m,p-Xylenes	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
o-Xylene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
Bromoform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U	
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	υ	
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	บ	
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	υ	
Chlorotrifluoroethene	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	ט	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	ט ו	
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	Ü	
2-Butanone (MEK)	EPA 5030	8021A	53	1	10/30/97	10/30/97	53	υΨ	
Acetone	EPA 5030	8021A	53	1	10/30/97	10/30/97	2700	R	\mathcal{D}
1,2,4-Trimethylbenzene	EPA 5030	8021A	21	nt to a contraction and community and distributions and the community of the contraction and the contracti	10/30/97	10/30/97	21	U U	
1,3,5-Trimethylbenzene	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	υν	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	21	1	10/30/97	10/30/97	21	Ŭ	



Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD733DL L9703643-060DL Units: UG/KG Basis: Dry

Test Notes:

Prep Analysis Dilution Date Date Method Method Notes Analyte PQL Factor Extracted Analyzed Remit U Dichlorodifluoromethane (CFC 12) **EPA 5030** 8021A 520 50 11/3/97 11/3/97 520 Chloromethane **EPA 5030** 8021A 520 50 11/3/97 11/3/97 520 U Vinyl Chloride **EPA 5030** 520 50 11/3/97 11/3/97 520 U 8021A Bromomethane **EPA 5030** 8021A 520 50 11/3/97 11/3/97 520 U Chloroethane 520 50 11/3/97 11/3/97 520 U **EPA 5030** 8021A Trichlorofluoromethane (CFC 11) **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 U U 1,1-Dichloroethene **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 1040 50 11/3/97 11/3/97 1040 U Methylene Chloride **EPA 5030** 8021A 11/3/97 U trans-1,2-Dichloroethene 260 50 11/3/97 260 **EPA 5030** 8021A 50 U cis-1.2-Dichloroethene **EPA 5030** 8021A 260 11/3/97 11/3/97 260 50 11/3/97 U 1,1-Dichloroethane **EPA 5030** 8021A 260 11/3/97 260 Chloroform **EPA 5030** 260 50 11/3/97 11/3/97 260 U 8021A 1,1,1-Trichloroethane (TCA) **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 U Carbon Tetrachloride U EPA 5030 260 50 11/3/97 260 8021A 11/3/97 Benzene **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 U U 1,2-Dichloroethane 260 50 11/3/97 11/3/97 260 **EPA 5030** 8021A Trichloroethene (TCE) **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 U 1,2-Dichloropropane **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 U U Bromodichloromethane **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 2-Chloroethyl Vinyl Ether **EPA 5030** 8021A 2600 50 11/3/97 11/3/97 2600 U U **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 Toluene trans-1,3-Dichloropropene **EPA 5030** 50 U 8021A 260 11/3/97 11/3/97 260 EPA 5030 U cis-1,3-Dichloropropene 8021A 260 50 11/3/97 11/3/97 260 U 1,1,2-Trichloroethane **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 Tetrachloroethene (PCE) U **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 2-Chloro-1,1,1-trifluoroethane **EPA 5030** 8021A 1040 50 11/3/97 11/3/97 1040 U Chlorobenzene U EPA 5030 8021A 260 50 11/3/97 11/3/97 260 Ethylbenzene **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 U m,p-Xylenes **EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 U o-Xylene EPA 5030 8021A 260 50 11/3/97 11/3/97 260 U **Bromoform EPA 5030** 8021A 260 50 11/3/97 11/3/97 260 U 1,1,2,2-Tetrachloroethane EPA 5030 8021A 260 50 11/3/97 11/3/97 260 U 1.3-Dichlorobenzene **EPA 5030** 50 U 8021A 520 520 11/3/97 11/3/97 1.4-Dichlorobenzene **EPA 5030** 8021A 520 50 U 11/3/97 11/3/97 520 1,2-Dichlorobenzene **EPA 5030** U 8021A 50 520 11/3/97 11/3/97 520 Chlorotrifluoroethene **EPA 5030** 8021A 1040 50 11/3/97 11/3/97 1040 U 1,1,1,2-Tetrachioroethane **EPA 5030** 50 U 8021A 1040 11/3/97 11/3/97 1040 1,1,2-Trichlorotrifluoroethane (CFC 113) **EPA 5030** 8021A 1040 50 11/3/97 11/3/97 1040 U 2-Butanone (MEK) **EPA 5030** 8021A 2600 50 11/3/97 11/3/97 2600 U 2500

Approved By: 1844/021397p

Date: 12 23 97

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11/3/97

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1040

Acetone

1,2,4-Trimethylbenzene

1,3,5-Trimethylbenzene

1,2-Dibromo-3-chloropropane (DBCP)

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Analytical Report

Halogenated and Aromatic Volatile Organic Compounds

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001 Soil

Date Received: 10/29/97

Service Request: L9703643
Date Collected: 10/29/97

Sample Name: Lab Code:

Test Notes:

RD735 L9703643-062 Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	ana
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	54	5	10/30/97	10/30/97	54	υ从	
Chloromethane	EPA 5030	8021A	54	5	10/30/97	10/30/97	54	Ü	
Vinyl Chloride	EPA 5030	8021A	54	5	10/30/97	10/30/97	54	ŭ	ł
Bromomethane	EPA 5030	8021A	54	5	10/30/97	10/30/97	54	υl	l
Chloroethane	EPA 5030	8021A	54	5	10/30/97	10/30/97	54	Ŭ	1
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ū	l
1,1-Dichloroethene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ū	1
Methylene Chloride	EPA 5030	8021A	107	5	10/30/97	10/30/97	107	υl	
trans-1,2-Dichloroethene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ū	l
cis-1,2-Dichloroethene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	ŭ	i i
1,1-Dichloroethane	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	ŭ	1
Chloroform	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ü	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	ŭ	ì
Carbon Tetrachloride	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	ŭ	
Benzene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	ŭ	1
1,2-Dichloroethane	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	ŭ	ŀ
Trichloroethene (TCE)	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	ŭ	
1,2-Dichloropropane	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	ŭ	l
Bromodichloromethane	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	ŭ	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	266	5	10/30/97	10/30/97	266	บ	
Toluene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ü	
trans-1,3-Dichloropropene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ü	
cis-1,3-Dichloropropene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ü	ļ
1,1,2-Trichloroethane	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	υ	ĺ
Tetrachloroethene (PCE)	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ü	Ī
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	107	5	10/30/97	10/30/97	107	Ü	Ì
Chlorobenzene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ü	
Ethylbenzene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ü	
m,p-Xylenes	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ü	
o-Xylene	EPA 5030	8021A	27	5	10/30/97	10/30/97	27	Ü	
Bromoform	EPA 5030	8021A	27	5				- 1	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	27		10/30/97	10/30/97	27	U	
1,3-Dichlorobenzene	EPA 5030	8021A	54	5	10/30/97	10/30/97	27	U	l
1,4-Dichlorobenzene	EPA 5030	8021A 8021A	54 54		10/30/97	10/30/97	54	U	ſ
1.2-Dichlorobenzene		8021A 8021A		5	10/30/97	10/30/97	54	U	
Chlorotrifluoroethene	EPA 5030 EPA 5030	8021A 8021A	54	5	10/30/97	10/30/97	54	υl	1
1,1,1,2-Tetrachloroethane			107	5	10/30/97	10/30/97	107	U	i
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	107	5	10/30/97	10/30/97	107	U	
2-Butanone (MEK)	EPA 5030	8021A	107	5	10/30/97	10/30/97	107	U J	
• •	EPA 5030	8021A	266	5	10/30/97	10/30/97	266	υΨ	-
Acetone	EPA 5030	8021A	266	5	10/30/97	10/30/97	790	R	$\overline{\mathcal{D}}$
1,2,4-Trimethylbenzene	EPA 5030	8021A	107	5	10/30/97	10/30/97	107	UK	I
1,3,5-Trimethylbenzene	EPA 5030	8021A	107	5	10/30/97	10/30/97	107	υı	l
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	107	5	10/30/97	10/30/97	107	u √	

Approved By:



Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/29/97

Date Received: 10/29/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD735DL

L9703643-062DL

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 3	17.00
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	107	10	10/31/97	10/31/97	107	UR	$\overline{\mathcal{D}}$
Chloromethane	EPA 5030	8021A	107	10	10/31/97	10/31/97	107	Ü	1
Vinyl Chloride	EPA 5030	8021A	107	10	10/31/97	10/31/97	107	ŭ	
Bromomethane	EPA 5030	8021A	107	10	10/31/97	10/31/97	107	ŭ	1
Chloroethane	EPA 5030	8021A	107	10	10/31/97	10/31/97	107	Ŭ	
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	
1,1-Dichloroethene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	
Methylene Chloride	EPA 5030	8021A	213	10	10/31/97	10/31/97	213	Ŭ	
trans-1,2-Dichloroethene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	
cis-1,2-Dichloroethene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ü	
1,1-Dichloroethane	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	
Chloroform	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	
Carbon Tetrachloride	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	
Benzene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	1
1.2-Dichloroethane	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	
Trichloroethene (TCE)	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	
1,2-Dichloropropane	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	
Bromodichloromethane	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	540	10	10/31/97	10/31/97	540	Ŭ	
Toluene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	1
trans-1,3-Dichloropropene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ŭ	
cis-1,3-Dichloropropene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	
1,1,2-Trichloroethane	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	1
Tetrachloroethene (PCE)	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	213	10	10/31/97	10/31/97	213	ŭ	
Chlorobenzene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	
Ethylbenzene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	
m,p-Xylenes	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	
o-Xylene	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	Ü	
Bromoform	EPA 5030	8021A	54	10	10/31/97	10/31/97	54 54	υ	Ì
1,1,2,2-Tetrachioroethane	EPA 5030	8021A	54	10	10/31/97	10/31/97	54	ŭ	
1,3-Dichlorobenzene	EPA 5030	8021A	107	10	10/31/97	10/31/97	107	Ü	
1,4-Dichlorobenzene	EPA 5030	8021A	107	10	10/31/97	10/31/97	107	Ü	
1.2-Dichlorobenzene	EPA 5030	8021A	107	10	10/31/97	10/31/97	107	บ	
Chlorotrifluoroethene	EPA 5030	8021A	213	10	10/31/97	10/31/97	213	ŭ	
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	213	10	10/31/97	10/31/97	213	Ü	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	213	10	10/31/97	10/31/97	213	Ü	
2-Butanone (MEK)	EPA 5030	8021A	540	10	10/31/97	10/31/97	540	1/ 2	.1/
Acetone	EPA 5030	8021A	540	10	10/31/97	10/31/97	760	UV	V
1,2,4-Trimethylbenzene	EPA 5030	8021A	213	10	10/31/97	10/31/97	213	URY	
1,3,5-Trimethylbenzene	EPA 5030	8021A	213	10	10/31/97	10/31/97	213		P
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	213	10	10/31/97	10/31/97	213	U	1
	E1 W 3030	0021A	213	10	10/31/97	10/31/9/	215	U W	4

Approved By:

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Analytical Report

Client: Project:

InterPhase Environmental Rocketdyne/313150001

Sample Matrix: Soil Service Request: L9703643
Date Cellected: 10/30/97

Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD736 L9703643-063 Units: UG/KG Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result \(\frac{1}{2} \)
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	. 1	10/30/97	10/30/97	11 -	üИ
Chloromethane	EPA 5030	8021A	11	ĩ	10/30/97	10/30/97	11	Ü
Vinyl Chloride	EPA 5030	8021A	11	<u></u>	10/30/97	10/30/97	ii	Ŭ
Bromomethane	EPA 5030	8021A	11	$\bar{1}$	10/30/97	10/30/97	ii	Ü
Chloroethane	EPA 5030	8021A	11	ĩ	10/30/97	10/30/97	11	Ü
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ū
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Methylene Chloride	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	บ \
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Chloroform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υ
Benzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
1,2-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υl
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	ט
1,2-Dichloropropane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
Bromodichloromethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	54	1	10/30/97	10/30/97	54	υ
Toluene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
trans-1,3-Dichloropropene	EPA 5030	8021A	6	ĩ	10/30/97	10/30/97	6	Ü
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ü
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ü
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	U
Chlorobenzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ū
Ethylbenzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ü
m,p-Xylenes	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
o-Xylene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
Bromoform	EPA 5030	8021A	6	î	10/30/97	10/30/97	6	Ŭ
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
1,3-Dichlorobenzene	EPA 5030	8021A	ŭ	î	10/30/97	10/30/97	11	Ŭ
1,4-Dichlorobenzene	EPA 5030	8021A	ii	i	10/30/97	10/30/97	ii	Ŭ
1,2-Dichlorobenzene	EPA 5030	8021A	ii	î	10/30/97	10/30/97	ii	Ŭ
Chlorotrifluoroethene	EPA 5030	8021A	22	ī	10/30/97	10/30/97	22	ŭΙ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	ī	10/30/97	10/30/97	22	ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	î	10/30/97	10/30/97	22	ŭ
2-Butanone (MEK)	EPA 5030	8021A	54	ĩ	10/30/97	10/30/97	54	ŭ
Acetone	EPA 5030	8021A	54	î	10/30/97	10/30/97	54	ŭ
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	i	10/30/97	10/30/97	22	ŭΙ
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	î	10/30/97	10/30/97	22	ŭΙ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	i	10/30/97	10/30/97	22	ŭ√

Approved By: 1844/021397p

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/30/97

Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: RD738 L9703643-065 Units: UG/KG Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Rosult Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	ñΥ
Chloromethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	ΰΥ
Vinyl Chloride	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U I
Bromomethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	ii	Ü
Chloroethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ü
Methylene Chloride	EPA 5030	8021A	22	ī	10/30/97	10/30/97	22	Ü
trans-1,2-Dichloroethene	EPA 5030	8021A	6	ĩ	10/30/97	10/30/97	6	Ŭ
cis-1,2-Dichloroethene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
1,1-Dichloroethane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭ
Chloroform	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭΙ
Carbon Tetrachloride	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	ŭ
Benzene	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	Ŭ
1,2-Dichloroethane	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	ŭ
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	υl
1,2-Dichloropropane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ŭ
Bromodichloromethane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭΙ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	55	î	10/30/97	10/30/97	55	บั
Toluene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	ΰ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭ
cis-1,3-Dichloropropene	EPA 5030	8021A	6	î	10/30/97	10/30/97	6	Ŭ
1,1,2-Trichloroethane	EPA 5030	8021A	6	î	10/30/97	10/30/97	6	ŭ
Tetrachloroethene (PCE)	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭ
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	ī	10/30/97	10/30/97	22	ii l
Chlorobenzene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	U
Ethylbenzene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭ
m,p-Xylenes	EPA 5030	8021A	6	î	10/30/97	10/30/97	6	ŭ
o-Xylene	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	ŭ
Bromoform	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	Ü
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ü
1,3-Dichlorobenzene	EPA 5030	8021A	11	î	10/30/97	10/30/97	ŭ	Ŭ
1,4-Dichlorobenzene	EPA 5030	8021A	ii	î	10/30/97	10/30/97	11	Ü
1,2-Dichlorobenzene	EPA 5030	8021A	ii	î	10/30/97	10/30/97	11	ŭ
Chlorotrifluoroethene	EPA 5030	8021A	22	î	10/30/97	10/30/97	22	Ü
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	î	10/30/97	10/30/97	22	Ŭ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	i	10/30/97	10/30/97	22	ŭ
2-Butanone (MEK)	EPA 5030	8021A	55	i	10/30/97	10/30/97	55	Ü
Acetone	EPA 5030	8021A	55	1	10/30/97	10/30/97	55	Ü
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	ü
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	ŭ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	10/30/97		22	ŭ √ l
, propule (DDOI)	DI 11 2020	00% IV	**	1	10/30/9/	10/30/97	24	υV

Approved By:

Thomas to Rowing

Date: 12/23/97

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EVEL V 0030<u>5</u>9

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/30/97 Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD739 L9703643-066 Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result S
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	UU
Chloromethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	บั่
Vinyl Chloride	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	U
Bromomethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	Ū
Chloroethane	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	บ
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ \
1,1-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ
Methylene Chloride	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	บ
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	U
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ
Chloroform	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ū
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ū
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ū
Benzene	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	Ū
1,2-Dichloroethane	EPA 5030	8021A	6	ĩ	10/30/97	10/30/97	6	ŭ
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	ŭ
1,2-Dichloropropane	EPA 5030	8021A	6	ĩ	10/30/97	10/30/97	6	υ
Bromodichloromethane	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭ
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	54	î	10/30/97	10/30/97	54	ŭ
Toluene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	ŭ
trans-1,3-Dichloropropene	EPA 5030	8021A	6	ī	10/30/97	10/30/97	6	Ü
cis-1,3-Dichloropropene	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	Ü
1,1,2-Trichloroethane	EPA 5030	8021A	6	î	10/30/97	10/30/97	6	Ü
Tetrachloroethene (PCE)	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	Ü
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	i	10/30/97	10/30/97	22	บ
Chlorobenzene	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	Ü
Ethylbenzene	EPA 5030	8021A	6	i	10/30/97	10/30/97	6	Ü
m.p-Xylenes	EPA 5030	8021A	6	1	10/30/97	10/30/97	6	บ
o-Xylene	EPA 5030	8021A	6	1	10/30/97		6	บี
Bromoform	EPA 5030	8021A	6	1		10/30/97	_	- 1
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/30/97 10/30/97	10/30/97	6	U
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	6	U
1,4-Dichlorobenzene	EPA 5030	8021A	11	1		10/30/97	11	U
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	10/30/97	10/30/97	11	บ
Chlorotrifluoroethene	EPA 5030	8021A	22	_	10/30/97	10/30/97	11	<u>u</u>
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	บ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	U
2-Butanone (MEK)	EPA 5030	8021A	54	1	10/30/97	10/30/97	22	U
Acetone	EPA 5030	8021A 8021A	54 54	1	10/30/97	10/30/97	54	บ
1,2,4-Trimethylbenzene	EPA 5030	8021A 8021A	34 22	1	10/30/97	10/30/97	54	<u>u</u> \
1,3,5-Trimethylbenzene	EPA 5030	8021A 8021A	22	1	10/30/97	10/30/97	22	U \
1,2-Dibromo-3-chloropropane (DBCP)		8021A 8021A		1	10/30/97	10/30/97	22	U
1,2-Diolomo-5-cmoropropane (DBCF)	EPA 5030	8021A	22	1	10/30/97	10/30/97	22	υV

Approved By:

EN VALDATED

Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/30/97

Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: RD740 L9703643-067 Units: UG/KG Basis: Dry

Test Notes:

Dilution Date Date Prep Analysis Method Analyte Method POL Factor **Extracted Analyzed** Result Notes Q Dichlorodifluoromethane (CFC 12) **EPA 5030** 8021A 11 10/30/97 10/30/97 11 U 8021A Chloromethane 10/30/97 U **EPA 5030** 10/30/97 11 1 11 Vinyl Chloride **EPA 5030** 8021A 11 1 10/30/97 10/30/97 11 U **EPA 5030** Bromomethane 8021A 11 1 10/30/97 10/30/97 11 U Chloroethane **EPA 5030** 8021A 11 1 10/30/97 10/30/97 11 U Trichlorofluoromethane (CFC 11) **EPA 5030** 8021A 6 1 10/30/97 10/30/97 U 6 10/30/97 1.1-Dichloroethene **EPA 5030** 8021A 10/30/97 U 6 1 6 Methylene Chloride **EPA 5030** 8021A 22 10/30/97 10/30/97 U 22 trans-1,2-Dichloroethene **EPA 5030** 10/30/97 8021A 6 10/30/97 U 1 6 cis-1,2-Dichloroethene **EPA 5030** 8021A 6 10/30/97 10/30/97 U 6 1,1-Dichloroethane **EPA 5030** 8021A 10/30/97 10/30/97 U 6 1 6 Chloroform **EPA 5030** 8021A 6 1 10/30/97 10/30/97 6 U 1,1,1-Trichloroethane (TCA) **EPA 5030** 8021A 6 10/30/97 10/30/97 U 1 6 Carbon Tetrachloride **EPA 5030** 8021A 6 1 10/30/97 10/30/97 6 U Benzene **EPA 5030** 8021A 6 10/30/97 10/30/97 6 U 1,2-Dichloroethane **EPA 5030** 8021A 6 1 10/30/97 10/30/97 6 U Trichloroethene (TCE) **EPA 5030** 8021A 6 10/30/97 10/30/97 U 6 1.2-Dichloropropane **EPA 5030** 8021A 10/30/97 6 1 10/30/97 6 U Bromodichloromethane **EPA 5030** 8021A 10/30/97 6 10/30/97 6 U 2-Chloroethyl Vinyl Ether **EPA 5030** 8021A 55 1 10/30/97 10/30/97 55 U Toluene **EPA 5030** 8021A 6 10/30/97 10/30/97 U 1 6 trans-1,3-Dichloropropene EPA 5030 8021A 6 10/30/97 10/30/97 6 U cis-1,3-Dichloropropene **EPA 5030** 8021A 6 1 10/30/97 10/30/97 6 U 1,1,2-Trichloroethane **EPA 5030** 8021A 6 10/30/97 10/30/97 U ĺ 6 Tetrachloroethene (PCE) **EPA 5030** 8021A 10/30/97 10/30/97 6 1 IJ 6 2-Chloro-1,1,1-trifluoroethane **EPA 5030** 8021A 22 1 10/30/97 10/30/97 22 U Chlorobenzene **EPA 5030** 8021A 6 10/30/97 1 10/30/97 6 U Ethylbenzene **EPA 5030** 8021A 6 1 10/30/97 10/30/97 U 6 m,p-Xylenes EPA 5030 8021A 6 1 10/30/97 10/30/97 6 U o-Xylene **EPA 5030** 8021A 6 10/30/97 1 10/30/97 U 6 Bromoform **EPA 5030** 8021A 6 10/30/97 10/30/97 i U 6 1,1,2,2-Tetrachloroethane **EPA 5030** 8021A 6 10/30/97 1 10/30/97 6 U 1,3-Dichlorobenzene **EPA 5030** 8021A 11 1 10/30/97 10/30/97 11 U 1.4-Dichlorobenzene **EPA 5030** 8021A 11 10/30/97 10/30/97 U 11 1,2-Dichlorobenzene **EPA 5030** 8021A 11 1 10/30/97 10/30/97 U 11 Chlorotrifluoroethene **EPA 5030** 8021A 22 10/30/97 10/30/97 22 U 1,1,1,2-Tetrachloroethane **EPA 5030** 8021A 22 1 10/30/97 10/30/97 22 U 1,1,2-Trichlorotrifluoroethane (CFC 113) **EPA 5030** 8021A 22 10/30/97 10/30/97 22 U 2-Butanone (MEK) **EPA 5030** 8021A 55 10/30/97 10/30/97 55 U Acetone **EPA 5030** 8021A 55 10/30/97 10/30/97 91 1.2.4-Trimethylbenzene 8021A 22 **EPA 5030** 1 10/30/97 10/30/97 22 U 1,3,5-Trimethylbenzene **EPA 5030** 8021A 22 10/30/97 22 1 10/30/97 U 1,2-Dibromo-3-chloropropane (DBCP) EPA 5030 8021A 22 10/30/97 10/30/97 22

Approved By:

Thomas to Rebing

Date: 12 23 197





Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001 Soil

etdyne/313150001

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD741 L9703643-072 Units: UG/KG Basis: Dry

Service Request: L9703643

Date Collected: 10/30/97

Date Received: 10/30/97

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	7
•		8021A	11	1	10/31/97	10/31/97	11	υU	+
Dichlorodifluoromethane (CFC 12) Chloromethane	EPA 5030 EPA 5030	8021A	11	i	10/31/97	10/31/97	11	U ,	
Vinyl Chloride	EPA 5030	8021A	11	i	10/31/97	10/31/97	11	ŭΙ	
Bromomethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	ŭ	
Chloroethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	Ü	44,44
Trichlorofluoromethane (CFC 11)		8021A	6	1	10/31/97	10/31/97	6	ŭ	
1,1-Dichloroethene	EPA 5030 EPA 5030	8021A	6	1	10/31/97	10/31/97	6	υ	9
Methylene Chloride	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	ŭ	1
trans-1,2-Dichloroethene	EPA 5030	8021A	6 '	1	10/31/97	10/31/97	6	ŭ	1
cis-1,2-Dichloroethene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	ŭ	
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ŭ	I
Chloroform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	υ	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ŭ	
Carbon Tetrachloride	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	
Benzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ŭ	Ä
1,2-Dichloroethane	EPA 5030	8021A 8021A	6	1	10/31/97	10/31/97	6	Ü	
Trichloroethene (TCE)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	υ	
1,2-Dichloropropane		8021A	6	1	10/31/97	10/31/97	6	ŭ	
Bromodichloromethane	EPA 5030 EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	
2-Chloroethyl Vinyl Ether		8021A 8021A	54	1	10/31/97	10/31/97	54	ŭ	H
Toluene	EPA 5030 EPA 5030	8021A	6	1	10/31/97	10/31/97	6	ŭ	
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	
cis-1,3-Dichloropropene		8021A 8021A	6	1	10/31/97	10/31/97	6	υ	
1,1,2-Trichloroethane	EPA 5030 EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	H
Tetrachloroethene (PCE)		8021A 8021A	6	1	10/31/97	10/31/97	6	Ü	1
2-Chloro-1,1,1-trifluoroethane	EPA 5030 EPA 5030	8021A	22	1	10/31/97	10/31/97	22	Ü	ı
Chlorobenzene		8021A	6	1	10/31/97	10/31/97	6	U	1000
Ethylbenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	
•	EPA 5030		6	1		10/31/97	6	บ	
m,p-Xylenes	EPA 5030	8021A 8021A	0 6	-	10/31/97	10/31/97	6	บ	8
o-Xylene	EPA 5030		6	1	10/31/97	10/31/97	6	บ	
Bromoform	EPA 5030	8021A	-	1	10/31/97		6	บ	
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	0 11	Ü	
1,3-Dichlorobenzene 1,4-Dichlorobenzene	EPA 5030	8021A	11	1	10/31/97	10/31/97		บ	ı
1,4-Dichlorobenzene	EPA 5030	8021A	11 11	1	10/31/97	10/31/97	11 11	Ü	1
Chlorotrifluoroethene	EPA 5030	8021A		1	10/31/97	10/31/97		Ü	1
	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	บ	1
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U	1
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/31/97	10/31/97	22		ı
2-Butanone (MEK)	EPA 5030	8021A	54	1	10/31/97	10/31/97	54	U	
Acetone	EPA 5030	8021A	54	1	10/31/97	10/31/97	54	U	ı
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U	1
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U /	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U √	1

Approved By:

7 homes & Rebing

Date: 12/23/97





Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001 Soil

Service Request: L9703643 Date Collected: 10/30/97

Date Received: 10/30/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

L9703643-073

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	υ从	T
Chloromethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	UI	1
Vinyl Chloride	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	Ū	1
Bromomethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	Ü	ı
Chloroethane	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U	1
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	U	ı
1,1-Dichloroethene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	Ü	1
Methylene Chloride	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U	1
trans-1,2-Dichloroethene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ü	ı
cis-1,2-Dichloroethene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	ı
1,1-Dichloroethane	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	
Chloroform	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	บั	ı
Carbon Tetrachloride	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	Ŭ	1
Benzene	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	ŭ	1
1,2-Dichloroethane	EPA 5030	8021A	6	ĩ	10/31/97	10/31/97	6	ŭ	1
Trichloroethene (TCE)	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	ŭ	ı
1,2-Dichloropropane	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	ŭ	1
Bromodichloromethane	EPA 5030	8021A	6	ī	10/31/97	10/31/97	6	ŭ	I
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	53	i	10/31/97	10/31/97	53	ŭ	
Toluene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	Ü	
trans-1,3-Dichloropropene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	Ü	
cis-1,3-Dichloropropene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	U \	
1.1.2-Trichloroethane	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	U \	1
Tetrachloroethene (PCE)	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	υl	1
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	i	10/31/97	10/31/97	22	Ü	
Chlorobenzene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	Ü	
Ethylbenzene	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	1
m,p-Xylenes	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	Ü	
o-Xylene	EPA 5030	8021A	6	i	10/31/97	10/31/97	6	υ	
Bromoform	EPA 5030	8021A	6	1	10/31/97	10/31/97	6	υ	1
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	10/31/97		6	Ü	1
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	10/31/97	10/31/97	-	- 1	ı
1,4-Dichlorobenzene	EPA 5030	8021A	11	1		10/31/97	11	U	1
1.2-Dichlorobenzene	EPA 5030	8021A	11	1	10/31/97	10/31/97	11	U	ı
Chlorotrifluoroethene	EPA 5030	8021A	22	1	10/31/97	10/31/97	11	U	•
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	_	10/31/97	10/31/97	22	U	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U	
2-Butanone (MEK)	EPA 5030 EPA 5030	8021A 8021A	53	1.	10/31/97	10/31/97	22	U	
Acetone	EPA 5030 EPA 5030	8021A 8021A	53 53	1	10/31/97	10/3.1/97	53	n	1
1,2,4-Trimethylbenzene	EPA 5030	8021A 8021A	33 22	1	10/31/97	10/31/97	53	រូប	
1,3,5-Trimethylbenzene				1	10/31/97	10/31/97	22	Ü	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	Ü	I
1,4 Diolonio 3 Chioropropane (DBCP)	EPA 5030	8021A	22	1	10/31/97	10/31/97	22	U $$	1
								Y	ı

Approved By:

LEVEL V 003067

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: RD750 L9703643-088 Units: UG/KG Basis: Dry

Test Notes:

Prep Analysis **Dilution** Date Date Analyte Method Method **PQL** Notes Factor Extracted Analyzed Result Dichlorodifluoromethane (CFC 12) **EPA 5030** 8021A 22 11/3/97 11/3/97 22 U ${\cal D}$ R 8021A Chloromethane **EPA 5030** 2 11/3/97 22 U 22 11/3/97 Vinyl Chloride **EPA 5030** 8021A 22 2 11/3/97 11/3/97 22 U Bromomethane **EPA 5030** 8021A 22 2 22 U 11/3/97 11/3/97 Chloroethane **EPA 5030** 2 8021A 22 11/3/97 11/3/97 22 U Trichlorofluoromethane (CFC 11) **EPA 5030** 8021A 11 2 11/3/97 11/3/97 11 U 1,1-Dichloroethene **EPA 5030** 8021A 2 U 11 11/3/97 11/3/97 11 Methylene Chloride EPA 5030 8021A 43 2 11/3/97 11/3/97 U 43 trans-1,2-Dichloroethene **EPA 5030** 8021A 11 2 U 11/3/97 11/3/97 11 cis-1,2-Dichloroethene **EPA 5030** 8021A 2 11/3/97 U 11 11/3/97 11 1,1-Dichloroethane **EPA 5030** 8021A 2 11/3/97 11/3/97 U 11 11 Chloroform **EPA 5030** 8021A 2 11 11/3/97 11/3/97 U 11 1,1,1-Trichloroethane (TCA) **EPA 5030** 8021A 11 2 11/3/97 11/3/97 11 U Carbon Tetrachloride **EPA 5030** 8021A 11 2 11/3/97 11/3/97 U 11 Benzene **EPA 5030** 8021A 11 2 11/3/97 11/3/97 11 U 1,2-Dichloroethane **EPA 5030** 8021A 11 2 11/3/97 11/3/97 U 11 Trichloroethene (TCE) 8021A **EPA 5030** 11 2 11/3/97 11/3/97 11 U 1,2-Dichloropropane **EPA 5030** 8021A 2 11 11/3/97 U 11/3/97 11 Bromodichloromethane **EPA 5030** 8021A 11 2 11/3/97 U 11/3/97 11 2-Chloroethyl Vinyl Ether **EPA 5030** 8021A 107 2 11/3/97 11/3/97 107 U Toluene **EPA 5030** 8021A 11 2 11/3/97 11/3/97 U 11 trans-1,3-Dichloropropene **EPA 5030** 8021A 11 2 11/3/97 11/3/97 U 11 cis-1,3-Dichloropropene **EPA 5030** 8021A 2 11 11/3/97 11/3/97 11 U 1,1,2-Trichloroethane **EPA 5030** 8021A 11 2 11/3/97 11/3/97 11 U 8021A Tetrachloroethene (PCE) **EPA 5030** 11 2 11/3/97 11/3/97 11 U 2-Chloro-1,1,1-trifluoroethane **EPA 5030** 8021A 43 2 11/3/97 11/3/97 U 43 Chlorobenzene **EPA 5030** 8021A 11 2 11/3/97 11/3/97 11 U Ethylbenzene **EPA 5030** 8021A 11 2 11/3/97 11/3/97 11 U m.p-Xylenes **EPA 5030** 8021A 11 2 11/3/97 11/3/97 11 U o-Xylene **EPA 5030** 11/3/97 8021A 11 2 11/3/97 U 11 Bromoform **EPA 5030** 2 8021A 11 11/3/97 11/3/97 11 U 1,1,2,2-Tetrachloroethane **EPA 5030** 8021A 2 11 11/3/97 U 11/3/97 11 1.3-Dichlorobenzene **EPA 5030** 8021A 22 2 11/3/97 11/3/97 22 U 1,4-Dichlorobenzene **EPA 5030** 8021A 22 2 11/3/97 11/3/97 22 U 1,2-Dichlorobenzene **EPA 5030** 8021A 11/3/97 22 2 U 11/3/97 22 Chlorotrifluoroethene **EPA 5030** 8021A 2 43 11/3/97 11/3/97 43 U 1,1,1,2-Tetrachloroethane **EPA 5030** 8021A 43 2 11/3/97 U 11/3/97 43 1,1,2-Trichlorotrifluoroethane (CFC 113) **EPA 5030** 8021A 43 2 11/3/97 11/3/97 43 U 2-Butanone (MEK) **EPA 5030** 8021A 107 2 11/3/97 11/3/97 107 U Acetone **EPA 5030** 8021A 107 2 11/3/97 11/3/97 107 U 1,2,4-Trimethylbenzene **EPA 5030** 8021A 43 2 11/3/97 11/3/97 43 U 1,3,5-Trimethylbenzene **EPA 5030** 8021A 43 2 11/3/97 11/3/97 43 U 1,2-Dibromo-3-chloropropane (DBCP) EPA 5030 8021A 43 2 11/3/97 11/3/97 43

Approved By:

Thomas D. Robins

Date: /2/23/9)



Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/31/97 Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

RD750RE L9703643-088RE

Test Notes:

Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	11/8/97	11/8/97	11	υU
Chloromethane	EPA 5030	8021A	11	1	11/8/97	11/8/97	11	ט וֹ
Vinyl Chloride	EPA 5030	8021A	11	1	11/8/97	11/8/97	11	บ
Bromomethane	EPA 5030	8021A	11	1	11/8/97	11/8/97	11	บ
Chloroethane	EPA 5030	8021A	11	1	11/8/97	11/8/97	11	U
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
1,1-Dichloroethene	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	υ
Methylene Chloride	EPA 5030	8021A	22	1	11/8/97	11/8/97	22	U
trans-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
cis-1,2-Dichloroethene	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
1,1-Dichloroethane	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
Chloroform	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	บ
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
Carbon Tetrachloride	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
Benzene	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
1,2-Dichloroethane	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
Trichloroethene (TCE)	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	บ
1,2-Dichloropropane	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	บ
Bromodichloromethane	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	54	1	11/8/97	11/8/97	54	U
Toluene	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
1,1,2-Trichloro:thane	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	1	11/8/97	11/8/97	22	U
Chlorobenzene	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
Ethylbenzene	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
m,p-Xylenes	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
o-Xylene .	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
Bromoform	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	11/8/97	11/8/97	6	U
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	11/8/97	11/8/97	11	υ
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	11/8/97	11/8/97	11	บ
1,2-Dichlorobenzene	EPA 5030	8021A	11	1	11/8/97	11/8/97	11	υ
Chlorotrifluoroethene	EPA 5030	8021A	22	1	11/8/97	11/8/97	22	บ
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	11/8/97	11/8/97	22	บ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	1	11/8/97	11/8/97	22	U
2-Butanone (MEK)	EPA 5030	8021A	54	1	11/8/97	11/8/97	54	บ
Acetone	EPA 5030	8021A	54	1	11/8/97	11/8/97	54	บ
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	11/8/97	11/8/97	22	υ
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	11/8/97	11/8/97	22	U
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1	11/8/97	11/8/97	22	υV

Approved By: 1844/021397p



Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

L9703643-089

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	7
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	54	5	11/3/97	11/3/97	54	UR	1
Chloromethane	EPA 5030	8021A	54	5	11/3/97	11/3/97	54	U	` 1
Vinyl Chloride	EPA 5030	8021A	54	5	11/3/97	11/3/97	54	υl	- 1
Bromomethane	EPA 5030	8021A	54	5	11/3/97	11/3/97	54	υ	ı
Chloroethane	EPA 5030	8021A	54	5	11/3/97	11/3/97	54	บ /	ı
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	1
1,1-Dichloroethene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	บ	1
Methylene Chloride	EPA 5030	8021A	108	5	11/3/97	11/3/97	108	U	
trans-1,2-Dichloroethene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	
cis-1,2-Dichloroethene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	บ	
1,1-Dichloroethane	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	1
Chloroform	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	บ	1
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	บ	ı
Carbon Tetrachloride	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	
Benzene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	บ	
1,2-Dichloroethane	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	i
Trichloroethene (TCE)	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	υ	
1,2-Dichloropropane	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	
Bromodichloromethane	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	270	5	11/3/97	11/3/97	270	ប	- 1
Toluene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	
trans-1,3-Dichloropropene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	- 1
cis-1,3-Dichloropropene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	- 1
1,1,2-Trichloroethane	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	บ	- 1
Tetrachloroethene (PCE)	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	- [
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	108	5	11/3/97	11/3/97	108	U	- 1
Chlorobenzene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	บ \	- 1
Ethylbenzene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	υl	- 1
m,p-Xylcnes	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	U	- 1
o-Xylene	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	Ū \	•
Bromoform	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	υl	I
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	27	5	11/3/97	11/3/97	27	υl	ı
1,3-Dichlorobenzene	EPA 5030	8021A	54	5	11/3/97	11/3/97	54	ŭΙ	ı
1,4-Dichlorobenzene	EPA 5030	8021A	54	5	11/3/97	11/3/97	54	ŭΙ	ł
1,2-Dichlorobenzene	EPA 5030	8021A	54	5	11/3/97	11/3/97	54	υ	
Chlorotrifluoroethene	EPA 5030	8021A	108	5	11/3/97	11/3/97	108	ŭ	ł
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	108	5	11/3/97	11/3/97	108	Ü	ļ
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	108	5	11/3/97	11/3/97	108	υ	ı
2-Butanone (MEK)	EPA 5030	8021A	270	5	11/3/97	11/3/97	270	υ	
Acetone	EPA 5030	8021A	270	š	11/3/97	11/3/97	270	Ü	
1,2,4-Trimethylbenzene	EPA 5030	8021A	108	5	11/3/97	11/3/97	108	บั	
1,3,5-Trimethylbenzene	EPA 5030	8021A	108	5	11/3/97	11/3/97	108	บ	
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	108	5	11/3/97	11/3/97	108	υ	1





Analytical Report

Client: Project: Sample Matrix:

InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643 Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code:

Test Notes:

RD751RE

L9703643-089RE

Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 2	gu
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	11	1	11/7/97	11/7/97	11	י דאו ט	5
Chloromethane	EPA 5030	8021A	11	1	11/7/97	11/7/97	11	UUT	5.
Vinyl Chloride	EPA 5030	8021A	11	1	11/7/97	11/7/97	11	Ū W	
Bromomethane	EPA 5030	8021A	11	1	11/7/97	11/7/97	11	Từ U	5
Chloroethane	EPA 5030	8021A	11	1	11/7/97	11/7/97	11	י דאי ט	5
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6 .	1	11/7/97	11/7/97	6		
1,1-Dichloroethene	EPA 5030	8021A	6	······································	11/7/97	11/7/97	6	υ iii	5
Methylene Chloride	EPA 5030	8021A	22	ī	11/7/97	11/7/97	22	- 0	5
trans-1,2-Dichloroethene	EPA 5030	8021A	6	indicate the contract of the c	11/7/97	11/7/97	6		<u>3</u> -
cis-1,2-Dichloroethene	EPA 5030	8021A	6	***************************************	11/7/97	11/7/97	6	υ'n	
1.1-Dichloroethane	EPA 5030	8021A	6	i	11/7/97	11/7/97	6		_
Chloroform	EPA 5030	8021A	6	1	11/7/97	11/7/97	<u>-</u>	HAN G	5
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6		11/7/97	11/7/97	6	U 197	> —
Carbon Tetrachloride	EPA 5030	8021A	6	rest to traver to the color and the state and the state of the state o	11/7/97	11/7/97	6		
Benzene	EPA 5030	8021A	6		11/7/97	CONTRACTOR STREET	6		5_
1.2-Dichloroethane	EPA 5030	8021A	6	1		11/7/97	-		_
Trichloroethene (TCE)	EPA 5030	8021A	6	* * * * * * * * * * * * * * * * *	11/7/97	11/7/97	6		5_
1,2-Dichloropropane	EPA 5030	8021A	6	_	11/7/97	11/7/97	6	UU	,
Bromodichloromethane	EPA 5030	8021A	6		11/7/97	11/7/97	6	Thr	2
2-Chloroethyl Vinyl Ether	ment per commence per de mandate de ribbante mandate de la decimiente de la commence de la comme	The book of the post of the Day of the State	Commence and the second commence of the second		11/7/97	11/7/97	. 6		5_
Toluene Toluene	EPA 5030	8021A	54	1	11/7/97	11/7/97	54	UU	
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	U	
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	U	
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	U	
	EPA 5030	8021A	6	-1 to a mart on the contract of the contract processing groups and contract of the contract of	11/7/97	11/7/97	6		5_
Tetrachloroethene (PCE)	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	υü	
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	22	· American and American Americ	11/7/97	11/7/97	22	UUJ	5
Chlorobenzeno	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	UU	
Ethylbenzene	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	Ui	
m,p-Xylenes	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	υl	
o-Xylene	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	ע ע √	
Bromoform	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	ULU	5
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	1	11/7/97	11/7/97	6	UUJ	3
1,3-Dichlorobenzene	EPA 5030	8021A	11	1	11/7/97	11/7/97	11	บน	
1,4-Dichlorobenzene	EPA 5030	8021A	11	1	11/7/97	11/7/97	11	υÎ	
1,2-Dichlorobenzene	EPA 5030	8021A	11	ī	11/7/97	11/7/97	ii	ŭ	
Chlorotrifluoroethene	EPA 5030	8021A	22	ī	11/7/97	11/7/97	22	UUT	5_
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	22	1	11/7/97	11/7/97	22	บนับ	5_
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	22	and the angles of the state of the second second	11/7/97	11/7/97	22		<u> </u>
2-Butanone (MEK)	EPA 5030	8021A	54	· · · · · · · · · · · · · · · · · · ·	11/7/97	11/7/97	54		
Acetone	EPA 5030	8021A	54	1	11/7/97	11/7/97	54 54	n K	
1,2,4-Trimethylbenzene	EPA 5030	8021A	22	1	11/7/97	11/7/97	22	Ü	
1,3,5-Trimethylbenzene	EPA 5030	8021A	22	1	11/7/97				
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	22	1		11/7/97	22	U \	2
ant control of the state of the	LIA 3030	W41A			11/7/97	11/7/97	22	UUTE	2

Approved By: 1844/021397p







Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001 Soil Date Collected: 10/31/97
Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes: RD754 L9703643-090 Units: UG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	23	2	11/3/97	11/3/97	23	υR	I
Chloromethane	EPA 5030	8021A	23	2	11/3/97	11/3/97	23	υ 🟋	ı
Vinyl Chloride	EPA 5030	8021A	23	2	11/3/97	11/3/97	23	U \	ı
Bromomethane	EPA 5030	8021A	23	2	11/3/97	11/3/97	23	U	ı
Chloroethane	EPA 5030	8021A	23	2	11/3/97	11/3/97	23	U	ı
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
1,1-Dichloroethene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
Methylene Chloride	EPA 5030	8021A	45	2	11/3/97	11/3/97	45	U	ı
trans-1,2-Dichloroethene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U /	I
cis-1,2-Dichloroethene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	บ /	1
1,1-Dichloroethane	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	บ /	l
Chloroform	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	บ /	ı
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	บ /	ı
Carbon Tetrachloride	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
Benzene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	บ	ı
1,2-Dichloroethane	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	บ	ı
Trichloroethene (TCE)	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
1,2-Dichloropropane	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
Bromodichloromethane	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	112	2	11/3/97	11/3/97	112	U	ı
Toluene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ł
trans-1,3-Dichloropropene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
cis-1,3-Dichloropropene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	• บ	ł
1,1,2-Trichloroethane	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	บ	ı
Tetrachloroethene (PCE)	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	บ \	ı
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	45	2	11/3/97	11/3/97	45	; J	۱
Chlorobenzene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
Ethylbenzene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
m,p-Xylenes	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ł
o-Xylene	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
Bromoform	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ı
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	12	2	11/3/97	11/3/97	12	U	ł
1,3-Dichlorobenzene	EPA 5030	8021A	23	2	11/3/97	11/3/97	23	υl	ı
1,4-Dichlorobenzene	EPA 5030	8021A	23	2	11/3/97	11/3/97	23	υ	ı
1,2-Dichlorobenzene	EPA 5030	8021A	23	2	11/3/97	11/3/97	23	υl	ı
Chlorotrifluoroethene	EPA 5030	8021A	45	2	11/3/97	11/3/97	45	υ	ı
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	45	2	11/3/97	11/3/97	45	U	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	45	2	11/3/97	11/3/97	45	U \	ı
2-Butanone (MEK)	EPA 5030	8021A	112	2	11/3/97	11/3/97	112	U - \	۱
Acetone	EPA 5030	8021A	112	2	11/3/97	11/3/97	112	U \	ı
1,2,4-Trimethylbenzene	EPA 5030	8021A	45	2	11/3/97	11/3/97	45	U	1
1,3,5-Trimethylbenzene	EPA 5030	8021A	45	2	11/3/97	11/3/97	45	U 1/	۱
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	45	2	11/3/97	11/3/97	45	υ √	

Approved By:

Thomas & robins

Date: 12/23/97





003083

Page No.:

Analytical Report

Client: Project: Sample Matrix: InterPhase Environmental Rocketdyne/313150001

Soil

Service Request: L9703643

Date Collected: 10/31/97

Date Received: 10/31/97

Halogenated and Aromatic Volatile Organic Compounds

Sample Name: Lab Code: Test Notes:

RD754RE L9703643-090RE Units: UG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result 2	
Dichlorodifluoromethane (CFC 12)	EPA 5030	8021A	12	1	11/5/97	11/5/97	12	UU	T
Chloromethane	EPA 5030	8021A	12	ĩ	11/5/97	11/5/97	12	υĭ	ı
Vinyl Chloride	EPA 5030	8021A	12	ī	11/5/97	11/5/97	12	ŭ	ł
Bromomethane	EPA 5030	8021A	12	ī	11/5/97	11/5/97	12	ŭ	ı
Chloroethane	EPA 5030	8021A	12	ī	11/5/97	11/5/97	12	Ü	ł
Trichlorofluoromethane (CFC 11)	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	ŭ	ı
1,1-Dichloroethene	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	ı
Methylene Chloride	EPA 5030	8021A	23	1	11/5/97	11/5/97	23	Ŭ	1
trans-1,2-Dichloroethene	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	ŭ	I
cis-1,2-Dichloroethene	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	Ŭ	ı
1,1-Dichloroethane	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	ŭ	1
Chloroform	EPA 5030	8021A	6	$\bar{1}$	11/5/97	11/5/97	6	บั	ı
1,1,1-Trichloroethane (TCA)	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	ŭ	ı
Carbon Tetrachloride	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	ŭ	
Benzene	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	ŭ	1
1,2-Dichloroethane	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	1
Trichloroethene (TCE)	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	1
1,2-Dichloropropene	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	ŭ	ı
Bromodichloromethane	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	Ŭ	ı
2-Chloroethyl Vinyl Ether	EPA 5030	8021A	56	i	11/5/97	11/5/97	56	บั	ı
Toluene	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	ŭ	
trans-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	
cis-1,3-Dichloropropene	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	
1,1,2-Trichloroethane	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	
Tetrachloroethene (PCE)	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	ŭ	ı
2-Chloro-1,1,1-trifluoroethane	EPA 5030	8021A	23	1	11/5/97	11/5/97	23	Ŭ	ı
Chlorobenzene	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	3
Ethylbenzene	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	บั	1
m,p-Xylenes	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	ı
o-Xylene	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	ı
Bromoform	EPA 5030	8021A	6	1	11/5/97	11/5/97	6	Ŭ	ı
1,1,2,2-Tetrachloroethane	EPA 5030	8021A	6	ī	11/5/97	11/5/97	6	ŭ	•
1,3-Dichlorobenzene	EPA 5030	8021A	12	ī	11/5/97	11/5/97	12	Ŭ	ł
1,4-Dichlorobenzene	EPA 5030	8021A	12	1	11/5/97	11/5/97	12	Ŭ	
1,2-Dichlorobenzene	EPA 5030	8021A	12	ī	11/5/97	11/5/97	12	บั	ı
Chlorotrifluoroethene	EPA 5030	8021A	23	ī	11/5/97	11/5/97	23	ŭ	1
1,1,1,2-Tetrachloroethane	EPA 5030	8021A	23	ĩ	11/5/97	11/5/97	23	บั	ı
1,1,2-Trichlorotrifluoroethane (CFC 113)	EPA 5030	8021A	23	ī	11/5/97	11/5/97	23	ŭ	i
2-Butanone (MEK)	EPA 5030	8021A	56	ī	11/5/97	11/5/97	56	υ	ı
Acetone	EPA 5030	8021A	56	ī	11/5/97	11/5/97	56	Ü	ı
1,2,4-Trimethylbenzene	EPA 5030	8021A	23	i	11/5/97	11/5/97	23	υ	ı
1,3,5-Trimethylbenzene	EPA 5030	8021A	23	î	11/5/97	11/5/97	23	Ü	ĺ
1,2-Dibromo-3-chloropropane (DBCP)	EPA 5030	8021A	23	ī	11/5/97	11/5/97	23	ŭ√	ı

Approved By:

Thomas & Rebing

Date: 12 23 97







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550 South W adsworth B lvd. Suite 500 Denver, CO 80226 (303) 935-6505

R ocketdyne

Analysis/M ethod: EPA M ethod 8015M No.ofSamples: 85 samples and 3 dilutions

Date Reviewed: 8/12/98 Reviewer: M. Pokomy

Reference: USEPA ContractLaboratory Program National Functional Guidelines For Organic Data Review (Feb.

1994); Colum bia A nalytical Services, SO P N um ber: SO H D IES, Revision 12, 12/18/97

SDG: L9703643

Sam ples Reviewed: RD 109, RD 110, RD 111, RD 112, RD 113, RD 114, RD 115, RD 116, RD 117, RD 118, RD 119, RD 120, RD 121, RD 122, RD 123, RD 124, RD 125, RD 126, RD 128, RD 129, RD 130, RD 131, RD 132, RD 133, RD 133D L, RD 134, RD 134D L, RD 135, RD 135D L, RD 138, RD 140, RD 141, RD 142, RD 143, RD 144, RD 145, RD 146, RD 147, RD 148, RD 150, RD 151, RD 152, RD 153, RD 154, RD 155, RD 156, RD 157, RD 159, RD 160, RD 166, RD 167, RD 168, RD 169, RD 170, RD 702, RD 703, RD 704, RD 705, RD 706, RD 707, RD 708, RD 709, RD 710, RD 723, RD 725, RD 726, RD 727, RD 728, RD 730, RD 731, RD 732, RD 733, RD 734, RD 735, RD 736, RD 737, RD 738, RD 739, RD 740, RD 741, RD 742, RD 743, RD 744, RD 745, RD 747, RD 750, RD 751, RD 754 M atrix: Soil water

EPA Levely-Total Petroleum Hydrocarbons Assessment Form

	Problem s	Q ualifications
1. Sample Management	A coording to the case narrative and COCs, sam pleswere received chilled and intact. COC sealswere not present. A ctual tem perature of sam ple receipt was not recorded.	No qualifications were required. The sample was collected by 0 gden personnel, placed in coolers containing ice, and hand delivered to the mobile Columbia laboratory. No custody seaks were present on the coolers, but because they were transported directly to the laboratory by field personnel, this was acceptable.
2. <u>Method Blanks</u>	Five m ethod blankswere analyzed with this SDG. No target compoundswere detected in the method blanks.	No qualifications were required.
3. LCS/BS	Five blank spikeswere analyzed with the	No qualifications were required.

	Problem s	Q ualifications
	sam ples in this SDG. The recovery of the spiked compounds were within the QC limits of 41% -136%.	
4. Surrogates	A Il surrogate recoveries were within the Q C lim its of 50% 140% except for sam ple RD 726 which had a high recovery of p-terphenyl. H owever, it was determined during the Level IV data validation of another TFH data package that some of the laboratory surrogate results could not be reproduced from the raw data. This SDG was determined to be one of the data packages from which the surrogate recoveries could not be verified.	Alsite sample nondetects were qualified as estinated nondetects, "UJ," and all detects were qualified as estimated, "U." No other qualifications were required.
5. MS/MSDS RD 709 RD 701 RD 141 RD 738 RD 168	The recoveries of the spiked com pound were within the Q C lim its of 41% -136% for all of the M S and M SD sam ples.	N o qualifications were required.
6. Field QC Samples ER: RD 138	The equipm entrinsate did nothave any Method 8015M target compounds detected.	No qualifications were required.
FB: RD 856	Field blank RD 856 was not analyzed for M ethod 8015M target com pounds.	No qualifications were required.
Field Duplicates: RD 124/RD 125 RD 128/RD 129	N one of the sam ples from either field duplicate pair had any target com pounds detected.	No qualifications were required since the duplicate pairs were considered to be in agreem ent.
7. <u>O ther</u>	During a Level IV validation of another TFH package, it was noted that sam ple quantilation was not acceptable for sam ples analyzed at the mobile Columbia Analytical Services Laboratory. The sam ples of this SDG were analyzed at the mobile laboratory.	All site sample nondetects were qualified as estinated nondetects, "UJ," and all detects were qualified as estimated, "U."

	Problem s	Q ualifications
	Sam plesRD 115, RD 133D L, RD 134D L, and RD 135D L were analyzed at 10X dilutions and sam plesRD 726, RD 728, and RD 735 were analyzed at 5 dilutions due to high concentrations of target com pounds.	Reporting limits were adjusted accordingly.
	Sam ples RD 133, RD 134, and RD 135 had detects for the gasoline, kerosene, and diesel ranges above the linear range of the instrum ent. Sam ple RD 170 was identified as a Perform ance Evaluation (PE) sam ple. The results of the PE are listed in the table on the following page.	Sam ples RD 133, RD 134, and RD 135 had the gasoline, kerosene, and diesel ranges rejected, 'R;" these ranges were reported from the dilutions of these sam ples, RD 133D L, RD 134D L, and RD 135D L. The lubricating oil range nondetects for sam ples RD 133D L, RD 134D L, and RD 135D L were rejected, 'R," in favor of the original analyses of these sam ples.
Comments	N one	N one

RD 170 - Perform ance Evaluation Sample Results Table

Compound	Sam ple Recovery (m.g/K.g)	Penformance Limits (mg/Kg)
DieselNo.2	1600	721 -1820

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix: **Batch Number:**

Soil

GC12102897S

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD109

Lab Code:

L9703643-004

Units: MG/KG

Basis: Dry

Test Notes:

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Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	Rev Qual	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	UJ	s *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	しょ	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	17		T	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	65		.T	1 1

OGDEN VALIDATED

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** X Quantified with diesel fuel

LEVELV

Approved By:	Thomas	b	Moin	Date:	12/23/97

03643SOH.BK1 - Sample (4) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Date Collected: 10/27/97

Service Request: L9703643

Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD110

Units: MG/KG

Lab Code:

L9703643-005

Basis: Dry

Test Notes:

 \mathbf{X}

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	UJ	< *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	U5	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	76		7	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	280		J	1 1
									, in	i

OGDEN VALIDATED

GRO **Gasoline Range Organics** KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** X Quantified with diesel fuel

LEVELV

Approved By:	Thomas	b	Romin	Date:	12/23/97

1S22/020597p

03643SOH.BK1 - Sample (5) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Service Request: L9703643 Date Collected: 10/27/97

Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD111

Units: MG/KG

Lab Code:

L9703643-006

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	GUAL
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/28/97	10/30/97	12	U	UJ	5. *7
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/28/97	10/30/97	12	U	1	1
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/28/97	10/30/97	12	· U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/28/97	10/30/97	12	U	₩	1 1

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO **Kerosene Range Organics** DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: 12/23 97 Approved By:

1S22/020597p

03643SOH.BK1 - Sample (6) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix: **Batch Number:**

Soil GC12102897S Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD112

Lab Code:

L9703643-007

Units: MG/KG

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/28/97	10/30/97	12	U	UJ	5 , X
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/28/97	10/30/97	12	U	$U\mathcal{F}$	
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/28/97	10/30/97	28		エ	
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/28/97	10/30/97	110		J	4 4

OGDEN VALIDATED

LEVEL V

CDO	
GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p

03643SOH.BK1 - Sample (7) 12/19/97

Analytical Report

Client: Project: InterPhase Environmental

Rocketdyne/313150001

Sample Matrix: **Batch Number:** Soil

Date Collected: 10/27/97

Service Request: L9703643

Date Received: 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD113

Lab Code:

L9703643-008

GC12102897S

Units: MG/KG

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	ල්බන ද
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/28/97	10/29/97	12	U	UF	5 #
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/28/97	10/29/97	12	U	Ì	11')
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/28/97	10/29/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/28/97	10/29/97	12	U	lack lack	1 1

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO **Kerosene Range Organics** DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

bornes b. Rowing Date: 12/23/97 Approved By:

1S22/020597p 03643SOH.BK1 - Sample (8) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD114

Units: MG/KG

Lab Code:

L9703643-009

Test Notes:

Х

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/28/97	10/30/97	11	U	UJ	s. *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/28/97	10/30/97	11	U	$U\mathcal{F}$	
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/28/97	10/30/97	11	U	O_{2}	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/28/97	10/30/97	67		J	1

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO **Kerosene Range Organics** DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

1S22/020597p

03643SOH.BK1 - Sample (9) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD115

Units: MG/KG

Lab Code:

L9703643-010

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	Vass	GUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	112	10	10/28/97	10/30/97	320		T	5 411
C11 - C14 KRO	EPA 3550M	8015M	112	10	10/28/97	10/30/97	420)	1
C14 - C20 DRO	EPA 3550M	8015M	112	10	10/28/97	10/30/97	640			1
C20 - C30 LORO	EPA 3550M	8015M	112	10	10/28/97	10/30/97	990		\downarrow	1 +

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: 12/23 (97 Approved By:

1S22/020597p 03643SOH.BK1 - Sample (10) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Date Collected: 10/27/97

Service Request: L9703643

Sample Matrix:

Soil

Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD116

Units: MG/KG

Lab Code:

L9703643-011

Basis: Dry

Test Notes:

 \mathbf{x}

Prep Analysis **Dilution** Date Date Result REV GUAL Analyte Method Method **PQL** Factor Extracted Analyzed Result Notes QUAL CODE C8 - C11 GRO 8015M EPA 3550M 12 10/28/97 10/29/97 12 U UJ C11 - C14 KRO EPA 3550M 8015M 12 1 10/28/97 10/29/97 12 U C14 - C20 DRO EPA 3550M 8015M 1 10/29/97 12 U 12 10/28/97 C20 - C30 LORO EPA 3550M 8015M 12 12 U 1 10/28/97 10/29/97

OGDEN VALIDATED

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** \mathbf{X} Quantified with diesel fuel

LEWELV

Approved By:	Throng) 0.	Mobile	Date:	12/	23/97	,
			,		,		

1S22/020597p

03643SOH.BK2 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Service Request: L9703643 Date Collected: 10/27/97

Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD117

Lab Code:

L9703643-012

Units: MG/KG

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	1 .	SQS
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	1.17	<	*7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	1	[[1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U			
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	V	I 🇸	V

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO **Kerosene Range Organics** DRO **Diesel Range Organics Lubricating Oil Range Organics** LRO X Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p 03643SOH.BK2 - Sample (2) 12/19/97

1016

Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project:

Rocketdyne/313150001

Date Collected: 10/27/97

Sample Matrix:

Soil

Date Collected: 10/2//97

Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD118

Units: MG/KG

Lab Code:

L9703643-013

Basis: Dry

Test Notes:

Х

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	UJ	5, *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	}	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	4	1 1

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics
KRO Kerosene Range Organics
DRO Diesel Range Organics
LRO Lubricating Oil Range Organics
X Quantified with diesel fuel

Approved By: Date: 12/23/97

1S22/020597p

03643SOH.BK2 - Sample (3) 12/19/97

Page No

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/27/97 Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD119

Units: MG/KG

Lab Code:

L9703643-014

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes		Çc	DC.
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	UJ	5	* 7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	Ī	1	i
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	1		-
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	V	V	V

OGDEN VALIDATED

LEVEL V

GRO **Gasoline Range Organics** KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p 03643SOH.BK2 - Sample (4) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/27/97

Sample Matrix:

Soil

Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD120

Units: MG/KG

Lab Code:

L9703643-015

Test Notes:

 \mathbf{X}

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/28/97	10/31/97	11	U	ŊŦ	s .*
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/28/97	10/31/97	11	U	UЪ	
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/28/97	10/31/97	69		J	11 (
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/28/97	10/31/97	220		J	11 1
									İ	

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

_)a_ Date: $\frac{12/23/97}{}$ Approved By:

03643SOH.BK2 - Sample (5) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 **Date Collected:** 10/28/97

Sample Matrix:

Soil

Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD121

Units: MG/KG

Lab Code:

L9703643-022

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	(کون) رحای	
C8 - C11 GRO	EPA 3550M	8015M	13	1	10/29/97	10/31/97	13	U	UJ	s, 3	t7
C11 - C14 KRO	EPA 3550M	8015M	13	1	10/29/97	10/31/97	110		7	j	1
C14 - C20 DRO	EPA 3550M	8015M	13	1	10/29/97	10/31/97	370		J		Ш
C20 - C30 LORO	EPA 3550M	8015M	13	1	10/29/97	10/31/97	1300		J	V	4

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

Approved By:	 limez	þ	Moin	Date:	12	134	97

1S22/020597p

03643SOH.BK3 - Sample (2) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

GC12102997S

Sample Matrix: **Batch Number:**

Soil

Service Request: L9703643

Date Collected: 10/28/97

Date Received: 10/28/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD122

Lab Code:

L9703643-023

Units: MG/KG

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	QUA! CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	12	U	UJ	5 +
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	12	U	UJ	111
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	2 6		J	
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	130		ゴ	4 1

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Date: 12/23/97 Approved By:

03643SOH.BK3 - Sample (3) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Batch Number:

Soil

GC12102997S

Service Request: L9703643

Date Collected: 10/28/97

Date Received: 10/28/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD123

Lab Code:

L9703643-024

Test Notes:

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	ල් දැ දුරුව
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	UT	s, * -
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	1	1')
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	₩	1 1

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:	home	do	Moin)	Date:	/2	123/	97
_								

1S22/020597p 03643SOH.BK3 - Sample (4) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Date Collected: 10/28/97

Sample Matrix:

Soil

Date Collected: 10/28/97
Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD124

Units: MG/KG

Lab Code:

L9703643-025

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	(QU)	DE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	12	U	UΣ	5 1	* 7
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	12	U	Ī	1	١
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	12	U		1 /	
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	12	U	₩	V	4

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics
KRO Kerosene Range Organics
DRO Diesel Range Organics
LRO Lubricating Oil Range Organics
X Quantified with diesel fuel

Approved By: Date: 12/23/97

1S22/020597p

03643SOH.BK3 - Sample (5) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Service Request: L9703643 Date Collected: 10/28/97

Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD125

Lab Code: Test Notes:

L9703643-026

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	UJ	S, *7
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U)	1 1
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	1	
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	V	1 4

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Ouantified with diesel fuel

Date: 12/23/97 · Approved By:

1S22/020597p 03643SOH.BK3 - Sample (6) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Batch Number:

GC12102997S

Service Request: L9703643

Date Collected: 10/28/97

Date Received: 10/28/97

10/29/97

10/31/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD126

Lab Code:

L9703643-027

Prep

Method

EPA 3550M

EPA 3550M

EPA 3550M

EPA 3550M 8015M

Analysis

Method

8015M

8015M

8015M

PQL

11

11

11

11

Units: MG/KG

Basis: Dry

Test Notes:

Analyte

C8 - C11 GRO

C11 - C14 KRO

C14 - C20 DRO

C20 - C30 LORO

X

Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	Rev Qual	CODE CODE
1	10/29/97	10/31/97	11	บ	UJ.	5. *7
1	10/29/97	10/31/97	11	U	1	1
1	10/29/97	10/31/97	11	U		

11

OGDEN VALIDATED

LEVELV

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p

03643SOH.BK3 - Sample (7) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Date Collected: 10/28/97

Service Request: L9703643

Sample Matrix:

Soil

Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD128

Units: MG/KG

Lab Code:

L9703643-028

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	rev Qual		UAL ODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	UT	<	*7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	Ĩ	1	ί
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U			}
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	\downarrow	l ↓	1

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** X Quantified with diesel fuel

Approved By: Date: 12/23 97

1S22/020597p

03643SOH.BK3 - Sample (8) 12/19/97

1000

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/28/97 Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD129

Units: MG/KG

Lab Code:

L9703643-029

Basis: Dry

Test Notes:

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Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	16 (=V	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	UJ.	5 +7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	١	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	↓	1 1
										1

OGDEN VALIDATED

LEVEL V

GRO **Gasoline Range Organics** KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** \mathbf{X} Quantified with diesel fuel

Date: 12/03/97 home & Minn Approved By:

1S22/020597p 03643SOH.BK3 - Sample (9) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Service Request: L9703643

Date Collected: 10/28/97

Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD130

Lab Code:

L9703643-030

Units: MG/KG

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/29/97	10/31/97	11	บ .	172	5,47
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/29/97	10/31/97	11	U	Ĭ	i
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/29/97	10/31/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/29/97	10/31/97	11	U	\downarrow	1 1

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p

03643SOH.BK3 - Sample (10) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/28/97

Sample Matrix:

Soil

Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD131

Lab Code:

L9703643-031

Units: MG/KG

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	l	10/29/97	10/31/97	12	U	UI	5. 47
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	12	U	UJ	1' 1
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	34		7	
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/29/97	10/31/97	12	U	UJ	1 1

<u>OGDEN VALIDATED</u>

LEVEL V

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: / A/23/97 Approved By: 1S22/020597p

03643SOH.BK4 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project:

Rocketdyne/313150001

Date Collected: 10/28/97

Sample Matrix:

Soil

Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD132

Units: MG/KG

Lab Code:

L9703643-032

Basis: Dry

Test Notes:

Х

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	(SEV	GUA!
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	UJ	5, *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	1	il
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	}	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/29/97	10/30/97	11	U	$\mathbf{\Psi}$	₩ ₩

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

			`			
Approved By:	Johnson	b	Mon	Date:	12/23/97	,
• • • • • • • • • • • • • • • • • • • •			1			

1S22/020597p

03643SOH.BK4 - Sample (2) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Batch Number:

GC12102997S

Service Request: L9703643

Date Collected: 10/28/97

Date Received: 10/28/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD133

Lab Code:

L9703643-033

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		BEV QUAL	GUAL CODE
C8 - C11 GRO C11 - C14 KRO	EPA 3550M EPA 3550M	8015M 8015M	12 12	1 1	10/29/97 10/29/97	10/30/97 10/30/97	170 2500		r R	00
C14 - C20 DRO C20 - C30 LORO	EPA 3550M EPA 3550M	8015M 8015M	12 12	1	10/29/97 10/29/97	10/30/97 10/30/97	8500 12	U	NJ-	D 5, *7



LEVELV

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:	 homes !	X 0	Mbin	1	Date:	12/	ا 3 د	19>	
	 								_

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Batch Number:

GC12102997S

Service Request: L9703643

Date Collected: 10/28/97

Date Received: 10/28/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD133DL

Lab Code:

L9703643-033DL

Test Notes:

X

Units: MG/KG

Basis: Dry

	Prep	Analysis		Dilution	Date	Date		Result	REV	QUAL
Analyte	Method	Method	PQL	Factor	Extracted	Analyzed	Result	Notes		Cade
C8 - C11 GRO	EPA 3550M	8015M	114	10	10/29/97	10/31/97	250		5	* د ک
C11 - C14 KRO	EPA 3550M	8015M	114	10	10/29/97	10/31/97	2500		1	
C14 - C20 DRO	EPA 3550M	8015M	114	10	10/29/97	10/31/97	9700		4	1 1
C20 - C30 LORO	EPA 3550M	8015M	114	10	10/29/97	10/31/97	114	U	R	0

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

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Approved By:)	1		/ /	Date:	/ 1 /	1. ~ 1	40	
approved by.			Λ		 Date.	141	151	7)	
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1S22/020597p 03643SOH.BK4 - Sample (4) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project: Sample Matrix:

Rocketdyne/313150001 Soil Date Collected: 10/28/97
Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD134

Units: MG/KG

Lab Code:

L9703643-034

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	Qual Copê
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	730		12	D
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	4700		R	D
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	15000		R	D
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	UJ	s,*7

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Ouantified with diesel fuel

Approved By:	Throng	b	Moin	Date:	12	دد/	197	

1S22/020597p 03643SOH.BK4 - Sample (5) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/28/97

Sample Matrix:

Soil

Batch Number:

GC12102997S

Date Received: 10/28/97

Hydrocarbon Scan / Fue! Characterization

Sample Name:

RD134DL

Units: MG/KG

Lab Code:

L9703643-034DL

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	114	10	10/29/97	10/31/97	800			< Y:
C11 - C14 KRO	EPA 3550M	8015M	114	10	10/29/97	10/31/97	1600			11'\
C14 - C20 DRO	EPA 3550M	8015M	114	10	10/29/97	10/31/97	18000		1	1 1
C20 - C30 LORO	EPA 3550M	8015M	114	10	10/29/97	10/31/97	114	U	E _	D

<u>OGDEN VALIDATED</u>

GRO **Gasoline Range Organics** KRO **Kerosene Range Organics** DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** X Quantified with diesel fuel

LEVEL V

Approved By:	Thomas	b	Robins	Date:	12/12/9	2
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1S22/020597p

03643SOH.BK4 - Sample (6) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Batch Number:

GC12102997S

Service Request: L9703643

Date Collected: 10/28/97

Date Received: 10/28/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD135

Lab Code:

L9703643-035

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	GUAI CODÉ
C8 - C11 GRO	EPA 3550M	8015M	13	1	10/29/97	10/30/97	560		12	D
C11 - C14 KRO	EPA 3550M	8015M	13	1	10/29/97	10/30/97	3900		R	Ò
C14 - C20 DRO	EPA 3550M	8015M	13	1	10/29/97	10/30/97	13000		R	D
C20 - C30 LORO	EPA 3550M	8015M	13	1	10/29/97	10/30/97	13	U	UJ	s, *7

OGDEN VALIDATED

LEVELV

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p 03643SOH.BK4 - Sample (7) 12/19/97

1011

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix: **Batch Number:** Soil

GC12102997S

Service Request: L9703643

Date Collected: 10/28/97

Date Received: 10/28/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD135DL

Lab Code:

L9703643-035DL

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	GUAI CODE
C8 - C11 GRO	EPA 3550M	8015M	122	10	10/29/97	10/31/97	660		5	< *
C11 - C14 KRO	EPA 3550M	8015M	122	10	10/29/97	10/31/97	4400		Ĵ	1,
C14 - C20 DRO	EPA 3550M	8015M	122	10	10/29/97	10/31/97	17000		J	1
C20 - C30 LORO	EPA 3550M	8015M	122	10	10/29/97	10/31/97	122	U	12	D

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
K	Quantified with diesel fuel

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Approved By:	1	urms	% ,	/hb-~)]	Date:	121	23	17
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1S22/020597p

03643SOH.BK4 - Sample (8) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project: Sample Matrix:

Rocketdyne/313150001

Date Collected: 10/28/97 Date Received: 10/28/97

Batch Number:

GC12102997S

Water

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD138

Units: MG/L

Lab Code:

L9703643-039

Basis: NA

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	10	1	10/29/97	11/1/97	10	U	U	
C11 - C14 KRO	EPA 3550M	8015M	10	1	10/29/97	11/1/97	10	U	Ĭ	
C14 - C20 DRO	EPA 3550M	8015M	10	1	10/29/97	11/1/97	10	U		
C20 - C30 LORO	EPA 3550M	8015M	10	1	10/29/97	11/1/97	10	U	√	

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By: 7hm x phing	Date:	12	23	192	
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1S22/020597p 03643SOH.BK4 - Sample (9) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

GC12103097S

Service Request: L9703643

Date Collected: 10/29/97

Sample Matrix: Batch Number: Soil

Date Received: 10/29/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD140

Units: MG/KG

Lab Code:

L9703643-045

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/30/97	10/30/97	12	U	UJ	s,*:
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/30/97	10/30/97	12	U	1	1)'
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/30/97	10/30/97	12	Ū		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/30/97	10/30/97	12	U	₩	1 4

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Ouantified with diesel fuel

Approved By:	Thomas	d	Morion	Date:	/2	/23	197	

1S22/020597₁

03643SOH.BK5 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project:

Rocketdyne/313150001

Date Collected: 10/29/97

Sample Matrix:

Soil

Date Received: 10/29/97

Batch Number:

GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD141

Units: MG/KG

Lab Code:

L9703643-046

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	GUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	UJ	S . ¥
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	Ĭ	1'
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	Ψ	* 1

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:	my	\ 0.	Monnin	4	Date:	12	123	197	
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1S22/020597p 03643SOH.BK5 - Sample (2) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project:

Rocketdyne/313150001

Date Collected: 10/29/97 Date Received: 10/29/97

Sample Matrix:

Soil

Batch Number:

GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD142

Units: MG/KG

Lab Code:

L9703643-047

Basis: Dry

Test Notes:

Х

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV QUAL	CODE
C8 - C11 GRO C11 - C14 KRO C14 - C20 DRO C20 - C30 LORO	EPA 3550M EPA 3550M EPA 3550M EPA 3550M	8015M 8015M 8015M 8015M	11 11 11 11	1 1 1	10/30/97 10/30/97 10/30/97 10/30/97	10/31/97 10/31/97 10/31/97 10/31/97	11 11 11 11	บ บ บ บ	UJ	S, *7

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

Date: $\frac{12/23/47}{}$ Approved By:

1S22/020597p 03643SOH.BK5 - Sample (3) 12/19/97

Page 10.048

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 **Date Collected:** 10/29/97

Sample Matrix:

Soil

Batch Number: S

GC12103097S

Date Received: 10/29/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD143

Lab Code:

L9703643-048

Units: MG/KG

Test Notes:

X

Basis: Dry

Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result			CODE
EPA 3550M	8015M	12	1	10/30/97	11/1/97	12	U	UJ	5 *7
EPA 3550M	8015M	12	1	10/30/97	11/1/97	12	U	1	۱ ۱
EPA 3550M	8015M	12	1	10/30/97	11/1/97	12	U		
EPA 3550M	8015M	12	1	10/30/97	11/1/97	12	U	V	1 1
	Method EPA 3550M EPA 3550M EPA 3550M	MethodMethodEPA 3550M8015MEPA 3550M8015MEPA 3550M8015M	Method Method PQL EPA 3550M 8015M 12 EPA 3550M 8015M 12 EPA 3550M 8015M 12	Method Method PQL Factor EPA 3550M 8015M 12 1 EPA 3550M 8015M 12 1 EPA 3550M 8015M 12 1	Method Method PQL Factor Extracted EPA 3550M 8015M 12 1 10/30/97 EPA 3550M 8015M 12 1 10/30/97 EPA 3550M 8015M 12 1 10/30/97	Method Method PQL Factor Extracted Analyzed EPA 3550M 8015M 12 1 10/30/97 11/1/97 EPA 3550M 8015M 12 1 10/30/97 11/1/97 EPA 3550M 8015M 12 1 10/30/97 11/1/97	Method Method PQL Factor Extracted Analyzed Result EPA 3550M 8015M 12 1 10/30/97 11/1/97 12 EPA 3550M 8015M 12 1 10/30/97 11/1/97 12 EPA 3550M 8015M 12 1 10/30/97 11/1/97 12	Method Method PQL Factor Extracted Analyzed Result Notes EPA 3550M 8015M 12 1 10/30/97 11/1/97 12 U EPA 3550M 8015M 12 1 10/30/97 11/1/97 12 U EPA 3550M 8015M 12 1 10/30/97 11/1/97 12 U	Method Method PQL Factor Extracted Analyzed Result Notes QUAL EPA 3550M 8015M 12 1 10/30/97 11/1/97 12 U UJ EPA 3550M 8015M 12 1 10/30/97 11/1/97 12 U EPA 3550M 8015M 12 1 10/30/97 11/1/97 12 U

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

Approved By:	Thoma b.	Mbon	Date:	12/2	23/9)

1S22/020597p 03643SOH.BK5 - Sample (4) 12/19/97

Page 1.049

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Service Request: L9703643

Date Collected: 10/29/97

Date Received: 10/29/97

Batch Number: GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD144

L9703643-049

Units: MG/KG

Basis: Dry

Lab Code: Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	GUAL
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/30/97	10/31/97	12	υ	UJ	5. 77
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/30/97	10/31/97	12	U	1	1
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/30/97	10/31/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/30/97	10/31/97	12	U	∀	1 1

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
ORO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
K	Quantified with diesel fuel

Approved By:	Throng	Jo.	rbin	Date:	12	123/	197
		-					

1S22/020597p

03643SOH.BK5 - Sample (5) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix: **Batch Number:**

Soil GC12103097S Service Request: L9703643 Date Collected: 10/29/97

Date Received: 10/29/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD145

Units: MG/KG

Lab Code:

L9703643-050

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	UJ	5, * 7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	1	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	¥	1 4

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:

& Mon

Date: /+/23/97

Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Date Collected: 10/29/97 Date Received: 10/29/97

Batch Number:

GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD146

Lab Code:

L9703643-051

Test Notes:

X

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	ŢŢ	1/3	s *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	Ū	J.	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	Ì	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	IJ		↓ ₩

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:	Thomas	Þ	Moin	Date:	12/23/97	
				Dutc.		

1052

1S22/020597p 03643SOH.BK5 - Sample (7) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/29/97

Batch Number:

GC12103097S

Date Received: 10/29/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD147

Units: MG/KG

Lab Code:

L9703643-052

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes		GUAL
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	ロエ	S. *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	1	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	1	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	4	1 1

OGDEN VALIDATED

EVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Ouantified with diesel fuel

Date: 12/23/97Thomas & Robins Approved By:

1S22/020597p 03643SOH.BK5 - Sample (8) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Date Collected: 10/29/97

Service Request: L9703643

Sample Matrix:

Soil

Date Received: 10/29/97

Batch Number:

GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD148

Units: MG/KG

Lab Code:

L9703643-053

Basis: Dry

Test Notes:

X

Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result			GUAI CODE
EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	บ	UJ	5. *=
EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	1	5 1
EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U		1 ()
EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	\downarrow	* *
	Method EPA 3550M EPA 3550M EPA 3550M	Method Method EPA 3550M 8015M EPA 3550M 8015M EPA 3550M 8015M	Method Method PQL EPA 3550M 8015M 11 EPA 3550M 8015M 11 EPA 3550M 8015M 11	Method Method PQL Factor EPA 3550M 8015M 11 1 EPA 3550M 8015M 11 1 EPA 3550M 8015M 11 1	Method Method PQL Factor Extracted EPA 3550M 8015M 11 1 10/30/97 EPA 3550M 8015M 11 1 10/30/97 EPA 3550M 8015M 11 1 10/30/97	Method Method PQL Factor Extracted Analyzed EPA 3550M 8015M 11 1 10/30/97 10/31/97 EPA 3550M 8015M 11 1 10/30/97 10/31/97 EPA 3550M 8015M 11 1 10/30/97 10/31/97	Method Method PQL Factor Extracted Analyzed Result EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 EPA 3550M 8015M 11 1 10/30/97 10/31/97 11	Method Method PQL Factor Extracted Analyzed Result Notes EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U	Method Method PQL Factor Extracted Analyzed Result Notes Apal EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U U EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U



LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X.	Quantified with diesel fuel

Approved By: _______ Date: 12/23/97

1S22/020597p

03643SOH.BK5 - Sample (9) 12/19/97

1054

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/30/97

Sample Matrix: **Batch Number:**

Soil GC12103197S Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD150

Lab Code:

L9703643-068

Units: MG/KG

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	Sev Oval	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	ប	UJ	5, *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	1	in
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	V	V V

OGDEN VALIDATED



GRO **Gasoline Range Organics** KRO **Kerosene Range Organics** DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** \mathbf{X} Quantified with diesel fuel

Date: /2/23/97 Approved By:

1S22/020597p

03643SOH.BK7 - Sample (6) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Date Collected: 10/30/97

Sample Matrix:

Soil

Date Received: 10/30/97

Batch Number:

GC12103197S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD151

Units: MG/KG

Lab Code:

L9703643-069

Basis: Dry

Test Notes:

X

Date Result Rev Que

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	NES	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	ÛΤ	5, * 7
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U		i
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	· U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	4	11

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics
KRO Kerosene Range Organics
DRO Diesel Range Organics
LRO Lubricating Oil Range Organics
X Quantified with diesel fuel

Approved By: ______ Date: _/2 / 23 /97

1S22/020597p

03643SOH.BK7 - Sample (7) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Batch Number:

Soil GC12103197S Service Request: L9703643

Date Collected: 10/30/97

Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD152

Lab Code:

L9703643-070

Units: MG/KG

Basis: Dry

Test Notes:

Х

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	UJ	5.4
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	1	1 1
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	1	↓ 1

OGDEN VALIDATED



GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

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Approved By:	Thomas	þ	wan	Date:	12/23/97
C22/020502-			7		

1S22/020597p 03643SOH.BK7 - Sample (8) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Batch Number:

Soil GC12103197S Service Request: L9703643

Date Collected: 10/30/97 Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD153

X

Lab Code:

L9703643-071

Test Notes:

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	UT	5, *=
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	Ū	1	1)
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	- 1	
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	Ū	¥	4 1

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:

Date: 123/97

03643SOH.BK7 - Sample (9) 12/19/97

Analytical Report

Client:

InterPhase Environmental Rocketdyne/313150001

Project: Sample Matrix:

Batch Number:

Soil

GC12103197S

Service Request: L9703643

Date Collected: 10/30/97

Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD154

Lab Code:

L9703643-076

Test Notes:

X

Units: MG/KG

Basis: Dry

Prep Analysis **Dilution** Date Date Result REV GUAL Analyte Method Method POL Factor Extracted Analyzed Result Notes QUAL CODE UJ C8 - C11 GRO EPA 3550M 8015M 1 12 10/31/97 11/5/97 12 U UJ C11 - C14 KRO EPA 3550M 8015M 12 1 10/31/97 11/5/97 12 U T C14 - C20 DRO EPA 3550M 8015M 12 1 10/31/97 11/5/97 60 C20 - C30 LORO EPA 3550M 8015M 12 1 10/31/97 11/5/97 360

GDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

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Approved By:	/homy &	Robins	Date:	12/23/97

1S22/020597p

03643SOH.BK8 - Sample (4) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/30/97

Sample Matrix:

Soil

Date Received: 10/30/97

Batch Number:

GC12103197S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD155

Units: MG/KG

Lab Code:

L9703643-077

Prep

Method

EPA 3550M

EPA 3550M 8015M

EPA 3550M 8015M

EPA 3550M 8015M

Analysis

Method

8015M

12

1

10/31/97

Basis: Dry

Test Notes:

Analyte

C8 - C11 GRO

C11 - C14 KRO

C14 - C20 DRO

C20 - C30 LORO

X

PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	QUA) CODE
12	1	10/31/97	11/1/97	12	U	UJ	5, *7
12	1	10/31/97	11/1/97	12	U		
12	1	10/31/97	11/1/97	12	U		

11/1/97

DEN VALIDATED

12

U

LEVELV

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:	Throng	.	Min	Date:	12/23/97	
1S22/020597p			,		,	

03643SOH.BK8 - Sample (5) 12/19/97

Analytical Report

Client: Project: InterPhase Environmental Rocketdyne/313150001

Sample Matrix:

Soil

Batch Number:

GC12103197S

Service Request: L9703643 Date Collected: 10/30/97

Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD156

Lab Code:

L9703643-078

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	QUAI CCDE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	UJ	5, *
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U)	1 \
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	₩	V V

OGDEN VALIDATED

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

LEVEL W

Approved By:	Thomas	X a	Roin	Date:	12	ر د د ا	197	
			,					_

1S22/020597p

03643SOH.BK8 - Sample (6) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/30/97

Sample Matrix:

Soil

Date Received: 10/30/97

Batch Number:

GC12110397S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD157

Units: MG/KG

Lab Code:

L9703643-079

Prep

Method

EPA 3550M

EPA 3550M 8015M

EPA 3550M 8015M

EPA 3550M 8015M

Analysis

Method

8015M

11

11

1

1

11/3/97

11/3/97

Basis: Dry

Test Notes:

Analyte

C8 - C11 GRO

C11 - C14 KRO

C14 - C20 DRO

C20 - C30 LORO

X

PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	Rev Gunl	QUAL CODE
11	1	11/3/97	11/4/97	11	U	Uゴ Uゴ	5,*
11	1	11/3/97	11/4/97	11	U	US)

11/4/97

11/4/97

OGDEN VALIDATED

42

140



GRO **Gasoline Range Organics** KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p

03643SOH.BK9 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/31/97

Sample Matrix:

Soil

Date Received: 10/31/97

Batch Number:

GC12110397S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD159

Units: MG/KG

Lab Code:

L9703643-080

Basis: Dry

Test Notes:

Х

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U	UJ	5, *7
C11 - C14 KRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U)	i 1
C14 - C20 DRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U	∀	↓ ↓

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p 03643SOH.BK9 - Sample (2) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Date Collected: 10/31/97

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/31/97

Date Received: 10/31/97

Batch Number:

GC12110397S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD160

Units: MG/KG

Lab Code:

L9703643-081

Basis: Dry

Test Notes:

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Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		Rev Gual	GUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	UJ	5, *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	1	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	¥	I * *

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

1S22/020597p 03643SOH.BK9 - Sample (3) 12/19/97

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Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project:

Rocketdyne/313150001

Date Collected: 10/31/97

Sample Matrix:

Soil

Date Received: 10/31/97

Batch Number:

GC12110397S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD166

Units: MG/KG

Lab Code:

L9703643-091

Basis: Dry

Test Notes:

Х

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	QUA CODI
C8 - C11 GRO	EPA 3550M	8015M	12	1	11/3/97	11/4/97	12	U	U^{2}	5 , *
C11 - C14 KRO	EPA 3550M	8015M	12	1	11/3/97	11/4/97	12	U	U ₂	1'1
C14 - C20 DRO	EPA 3550M	8015M	12	1	11/3/97	11/4/97	29		J	
C20 - C30 LORO	EPA 3550M	8015M	12	1	11/3/97	11/4/97	130		J	4 1

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:

Date: 12/23 97

1088

1S22/020597p 03643SOH.BK9 - Sample (9) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/31/97

Sample Matrix:

Soil

Batch Number:

GC12110397S

Date Received: 10/31/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD167

Units: MG/KG

Lab Code:

L9703643-092

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	QUAI COST
C8 - C11 GRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	บ	LU	5, *
C11 - C14 KRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U	1	, 1
C14 - C20 DRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U	₩	1

OGDEN VALIDATED

LEVEL V

Gasoline Range Organics
Kerosene Range Organics
Diesel Range Organics
Lubricating Oil Range Organic
Quantified with diesel fuel

Date: / 4/23/97 Approved By:

1S22/020597p

03643SOH.BK9 - Sample (10) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Batch Number:

Soil

GC12110397S

Service Request: L9703643

Date Collected: 10/31/97

Date Received: 10/31/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD168

Lab Code:

L9703643-093

Test Notes:

Х

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV GUAL	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	บ	UJ	5, *7
C11 - C14 KRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U	1	()
C14 - C20 DRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U	I.	
C20 - C30 LORO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U	¥	Į Ψ

OGDEN VALIDATED

LEVELV GRO **Gasoline Range Organics** KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO

Date: 12/23 /97 Thomas X Robins Approved By:

Lubricating Oil Range Organics

Quantified with diesel fuel

1S22/020597p

X

03643SOH.B10 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/31/97

Sample Matrix:

Soil

Date Received: 10/31/97

Batch Number:

GC12110397S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD169

Units: MG/KG

Lab Code:

L9703643-094

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	GUAL COSE
C8 - C11 GRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	U5	< ¥7
C11 - C14 KRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	1	7 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	- 1	
C20 - C30 LORO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	∀	↓ ↓

EN VALIDATED

LEVELV

GRO **Gasoline Range Organics** KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** \mathbf{X} Quantified with diesel fuel

Johns K Mon Date: /2/2)/97Approved By:

1S22/020597p

03643SOH.B10 - Sample (2) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/31/97

Sample Matrix:

Soil

Batch Number:

GC12110397S

Date Received: 10/31/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD170

Units: MG/KG

Lab Code:

L9703643-095

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result REV	CEDE
C8 - C11 GRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	47	7	5.47
C11 - C14 KRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	300	Ĭ	()
C14 - C20 DRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	1600		
C20 - C30 LORO	EPA 3550M	8015M	11	,	11/3/97	11/3/97	460	\checkmark	Ψ

OGDEN VALIDATED

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

LEVEL V

Approved By:	7	limos	x	phin)	Date:	12	23	197)

03643SOH.B10 - Sample (3) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Sludge

Batch Number:

GC12102897S

Service Request: L9703643

Date Collected: 10/27/97 Date Received: 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD702

Lab Code:

L9703643-001

Units: MG/KG

Test Notes:

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV QUAL	QUA) CEDE
C8 - C11 GRO	EPA 3550M	8015M	16	1	10/28/97	10/29/97	16	U	Uъ	< *
C11 - C14 KRO	EPA 3550M	8015M	16	1	10/28/97	10/29/97	17		J	11
C14 - C20 DRO	EPA 3550M	8015M	16	1	10/28/97	10/29/97	140		J	
C20 - C30 LORO	EPA 3550M	8015M	16	1	10/28/97	10/29/97	160		J	1 1

OGDEN VALIDATED

GRO **Gasoline Range Organics** KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** X Quantified with diesel fuel

LEVEL V

Approved By:	Throng	X).	Moring	Date:	12/	197 دد	
1522/020405			,		,		

1S22/020597p 03643SOH.BK1 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Sludge

Batch Number:

GC12102897S

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD703

Units: MG/KG

Lab Code:

L9703643-002

Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	19	1	10/28/97	10/29/97	19	U	UJ	5 4
C11 - C14 KRO	EPA 3550M	8015M	19	1	10/28/97	10/29/97	64		7.	1
C14 - C20 DRO	EPA 3550M	8015M	19	1	10/28/97	10/29/97	910		\mathcal{T}	
C20 - C30 LORO	EPA 3550M	8015M	19	1	10/28/97	10/29/97	95		J	1

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:	<u></u>	mut	j o,	No		Date:	12	231	197	
					•					

1S22/020597p 03643SOH.BK1 - Sample (2) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Batch Number:

Sludge

GC12102897S

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD704

Lab Code:

L9703643-003

Units: MG/KG Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes		QUA.
C8 - C11 GRO	EPA 3550M	8015M	20	1	10/28/97	10/29/97	20	U	UT	5 t.
C11 - C14 KRO	EPA 3550M	8015M	20	1	10/28/97	10/29/97	20	Ū	Ĭ	,)
C14 - C20 DRO	EPA 3550M	8015M	20	1	10/28/97	10/29/97	20	U		1 /
C20 - C30 LORO	EPA 3550M	8015M	20	1	10/28/97	10/29/97	20	TT	V	↓ ↓

OGDEN VALIDATED

LEVEL V **GRO Gasoline Range Organics** KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics**

Quantified with diesel fuel

Date: /1/33 /97 Approved By:

X

03643SOH.BK1 - Sample (3) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Sludge

Batch Number:

GC12102897S

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD705

Lab Code:

L9703643-016

Test Notes:

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	1 .	JAL DE
C8 - C11 GRO	EPA 3550M	8015M	19	1	10/28/97	10/29/97	19	U	UJ	3.	*-
C11 - C14 KRO	EPA 3550M	8015M	19	1	10/28/97	10/29/97	19	U	1	ĺí)
C14 - C20 DRO	EPA 3550M	8015M	19	1	10/28/97	10/29/97	19	U			
C20 - C30 LORO	EPA 3550M	8015M	19	1	10/28/97	10/29/97	19	U	Ψ] ∤	1

OGDEN VALIDATED

GRO **Gasoline Range Organics** KRO Kerosene Range Organics **Diesel Range Organics** DRO LRO **Lubricating Oil Range Organics** Quantified with diesel fuel X

LEVELV

Approved By:	Throng	ø(Allin	Date:	12/23/	197
••						

1S22/020597p

03643SOH.BK2 - Sample (6) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix: Batch Number: Sludge

GC12102897S

D

Service Request: L9703643

Date Collected: 10/27/97

Date Received: 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD706

Lab Code:

L9703643-017

Units: MG/KG

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		rev Qual	CODE
C8 - C11 GRO	EPA 3550M	8015M	21	1	10/28/97	10/29/97	21	U	UJ.	5, 47
C11 - C14 KRO	EPA 3550M	8015M	21	1	10/28/97	10/29/97	21	U	1	1 1
C14 - C20 DRO	EPA 3550M	8015M	21	1	10/28/97	10/29/97	21	U	- 1	
C20 - C30 LORO	EPA 3550M	8015M	21	1	10/28/97	10/29/97	21	U	V	* *

OGDEN VALIDATED

LEVELV

GRO Gasoline Range Organics
KRO Kerosene Range Organics
DRO Diesel Range Organics
LRO Lubricating Oil Range Organics
X Quantified with diesel fuel

Approved By: _______ Date: _/2/23/97

1S22/020597p 03643SOH.BK2 - Sample (7) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Soil

Batch Number:

GC12102897S

Service Request: L9703643

Date Collected: 10/27/97 **Date Received:** 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD707

Lab Code:

L9703643-018

Test Notes:

X

Units: MG/KG

Basis: Dry

Result Rev Prep Analysis **Dilution** Date Date CUAL Analyte Method Method **PQL** Factor Extracted Analyzed Result C8 - C11 GRO EPA 3550M 8015M 11 1 10/28/97 10/29/97 11 U C11 - C14 KRO EPA 3550M 8015M 11 1 10/28/97 10/29/97 11 U C14 - C20 DRO EPA 3550M 8015M 11 1 10/28/97 U 10/29/97 11 C20 - C30 LORO EPA 3550M 8015M 11 1 10/28/97 10/29/97 11

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics
KRO Kerosene Range Organics
DRO Diesel Range Organics
LRO Lubricating Oil Range Organics
X Quantified with diesel fuel

Approved By: 7 homes & Rbing Date: 12/23/97

03643SOH.BK2 - Sample (8) 12/19/97

Page No.:

1022

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix: Batch Number:

Sludge GC12102897S Service Request: L9703643

Date Collected: 10/27/97 **Date Received:** 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD708

Lab Code:

L9703643-019

Units: MG/KG Basis: Dry

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	18	1	10/28/97	10/29/97	18	U	UI	< +-
C11 - C14 KRO	EPA 3550M	8015M	18	1	10/28/97	10/29/97	18	U	Ĭ	\ \ \ \ \
C14 - C20 DRO	EPA 3550M	8015M	18	1	10/28/97	10/29/97	18	U		
C20 - C30 LORO	EPA 3550M	8015M	18	1	10/28/97	10/29/97	18	U	₩	1

OGDEN VALIDATED

LEVELV

GRO Gasoline Range Organics
KRO Kerosene Range Organics
DRO Diesel Range Organics
LRO Lubricating Oil Range Organics
X Quantified with diesel fuel

Approved By: 7 homes & Norman

Date: 12/23/47

1S22/020597p

03643SOH.BK2 - Sample (9) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Date Collected: 10/27/97

Service Request: L9703643

Sample Matrix:

Soil

Date Received: 10/27/97

Batch Number:

GC12102897S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD709

L9703643-020

Units: MG/KG

Lab Code: Test Notes:

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	QUA(CCDE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	UT	< *
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	Ĭ	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/28/97	10/29/97	11	U	\downarrow	↓ .

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO **Kerosene Range Organics** DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: 12/23/97 Approved By:

03643SOH.BK2 - Sample (10) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

GC12102997S

Service Request: L9703643 Date Collected: 10/27/97

Sample Matrix: **Batch Number:** Soil

Date Received: 10/27/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD710

Units: MG/KG

Lab Code: Test Notes:

L9703643-021

Basis: Dry

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	GUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	UJ	< *7
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	Ī	17 1
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/29/97	10/30/97	12	U	V	1 1

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
ζ	Quantified with diesel fuel

Approved By: _	Thomas	×	Morion	Date:	la	123	19	7

1S22/020597p 03643SOH.BK3 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/28/97

Sample Matrix:

Soil

Date Received: 10/28/97

Batch Number:

GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD723

Units: MG/KG

Lab Code:

L9703643-040

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	GUAL
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/29/97	10/31/97	11	U	UJ	5 4
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/29/97	10/31/97	11	Ū	UJ	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/29/97	10/31/97	52		J	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/29/97	10/31/97	150		\mathcal{T}	↓ ↓

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

Approved By:

1S22/020597p 03643SOH.BK4 - Sample (10) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/28/97

Sample Matrix:

Water

Date Received: 10/28/97

Batch Number: GC12102997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD725

Units: MG/L

Lab Code:

L9703643-044

Basis: NA

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	GUNZ CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/29/97	11/1/97	11	U	U	
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/29/97	11/1/97	11	U	1	
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/29/97	11/1/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/29/97	11/1/97	11	U	4	

OGDEN VALIDATED

LEVEL V

GRO **Gasoline Range Organics** KRO Kerosene Range Organics DRO **Diesel Range Organics LRO Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p

03643SOH.BK4 - Sample (11) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix: **Batch Number:** Soil

GC12103097S

Service Request: L9703643

Date Collected: 10/29/97

Date Received: 10/29/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD726

Lab Code:

L9703643-054

Units: MG/KG

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor		Date Analyzed	Result	Result Notes	REV	QUA! CODE
C8 - C11 GRO	EPA 3550M	8015M	52	5	10/30/97	11/1/97	52	U	Uπ	< *
C11 - C14 KRO	EPA 3550M	8015M	52	5	10/30/97	11/1/97	52	U	UJ	1
C14 - C20 DRO	EPA 3550M	8015M	52	5	10/30/97	11/1/97	200		J	1 1
C20 - C30 LORO	EPA 3550M	8015M	52	5	10/30/97	11/1/97	650		J	↓ ↓

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Ouantified with diesel fuel

Approved By:	Thomas	1 0.	Rhim	Date:	12/	123/9	77
				,			

1S22/020597p 03643SOH.BK5 - Sample (10) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/29/97 Date Received: 10/29/97

Batch Number:

GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD727

Lab Code:

L9703643-055

Units: MG/KG

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV	COE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	UJ	< #7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	Ū)	,
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	IJ	. ↓	₩ 1

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** \mathbf{X} Quantified with diesel fuel

Date: 12/23/97 Approved By: 1S22/020597p

03643SOH.BK6 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental Rocketdyne/313150001

Project:

Sample Matrix:

Batch Number:

Sludge

GC12103097S

Service Request: L9703643

Date Collected: 10/29/97

Date Received: 10/29/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD728

Lab Code:

L9703643-056

Test Notes:

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	GUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	58	5	10/30/97	11/1/97	58	U	UJ	< *
C11 - C14 KRO	EPA 3550M	8015M	58	5	10/30/97	11/1/97	58	U	ひず	17, 1
C14 - C20 DRO	EPA 3550M	8015M	58	5	10/30/97	11/1/97	210		J	
C20 - C30 LORO	EPA 3550M	8015M	58	5	10/30/97	11/1/97	920		J	4

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:	Thomas	1 0.	Min	Date:	12	123/	97
\$22/020\$07m			,	f		•	

020597p 03643SOH.BK6 - Sample (2) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix:

Batch Number:

Soil

GC12103097S

Service Request: L9703643

Date Collected: 10/29/97

Date Received: 10/29/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD730

Lab Code:

L9703643-057

Test Notes:

Х

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/30/97	10/31/97	12	U	07	5, *:
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/30/97	10/31/97	12	U	1	1
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/30/97	10/31/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/30/97	10/31/97	12	U	V	1 4

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:

Date: 12/23/97

1S22/020597p

03643SOH.BK6 - Sample (3) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 **Date Collected:** 10/29/97

Sample Matrix:

Soil

Date Received: 10/29/97

Batch Number:

GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD731

Units: MG/KG

Lab Code:

L9703643-058

Basis: Dry

Test Notes:

X

Dasis. Diy

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	UJ-	5, *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	}	1 i 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	- 1	1 / 1
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	₩	1 +

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
x	Quantified with diesel fuel

Approved By:

Thomas is pubing

Date: 12/23/97

1S22/020597p

03643SOH.BK6 - Sample (4) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Date Collected: 10/29/97

Sample Matrix:

Soil

Date Received: 10/29/97

Batch Number:

GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD732

Units: MG/KG

Lab Code:

L9703643-059

Test Notes:

X

Basis: Dry

Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		,	GUAL CEDE
EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	UJ	5.*7
EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	}	',' \
EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U		
EPA 3550M	8015M	11	1	10/30/97	10/31/97	11	U	V	1
	Method EPA 3550M EPA 3550M EPA 3550M	MethodMethodEPA 3550M8015MEPA 3550M8015MEPA 3550M8015M	Method Method PQL EPA 3550M 8015M 11 EPA 3550M 8015M 11 EPA 3550M 8015M 11	Method Method PQL Factor EPA 3550M 8015M 11 1 EPA 3550M 8015M 11 1 EPA 3550M 8015M 11 1	Method Method PQL Factor Extracted EPA 3550M 8015M 11 1 10/30/97 EPA 3550M 8015M 11 1 10/30/97 EPA 3550M 8015M 11 1 10/30/97	Method Method PQL Factor Extracted Analyzed EPA 3550M 8015M 11 1 10/30/97 10/31/97 EPA 3550M 8015M 11 1 10/30/97 10/31/97 EPA 3550M 8015M 11 1 10/30/97 10/31/97	Method Method PQL Factor Extracted Analyzed Result EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 EPA 3550M 8015M 11 1 10/30/97 10/31/97 11	Method Method PQL Factor Extracted Analyzed Result Notes EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U	Method Method PQL Factor Extracted Analyzed Result Notes QUAL EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U U EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U EPA 3550M 8015M 11 1 10/30/97 10/31/97 11 U

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

1S22/020597

03643SOH.BK6 - Sample (5) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/29/97

Sample Matrix:

Soil

Date Received: 10/29/97

Batch Number:

GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

C20 - C30 LORO

RD733

Units: MG/KG

U

Lab Code:

L9703643-060

EPA 3550M 8015M

11

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	raud Cand	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	UJ	5, *:
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U)	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U		

10/30/97

11/1/97

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

Date: 12/23/97 Approved By:

1S22/020597p

03643SOH.BK6 - Sample (6) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/29/97

Sample Matrix:

Soil

Batch Number:

GC12103097S

Date Received: 10/29/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD734

Units: MG/KG

Lab Code:

L9703643-061

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	ZEV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	UI	5, *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	1	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/30/97	11/1/97	11	U	¥	V V

OGDEN VALIDATED

LEVELV

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

Approved By:

Date: 12/23/97

1S22/020597p 03643SOH.BK6 - Sample (7) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 **Date Collected:** 10/29/97

Sample Matrix:

Soil

Date Received: 10/29/97

Batch Number:

GC12103097S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

C20 - C30 LORO

RD735

Units: MG/KG

Lab Code:

L9703643-062

EPA 3550M 8015M

54

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	GUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	54	5	10/30/97	11/1/97	54	U	UJ	5, *
C11 - C14 KRO	EPA 3550M	8015M	54	5	10/30/97	11/1/97	54	บ	U J	۱΄)
C14 - C20 DRO	EPA 3550M	8015M	54	5	10/30/97	11/1/97	180		7	1.1.1

5

10/30/97

OGDEN VALIDATED

820

11/1/97

LEVELV

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Ouantified with diesel fuel

Approved By:	Themas	b	Min) Dat	e: /2	123	197
· · · · · · · · · · · · · · · · · · ·				·			<u></u>

1S22/020597p

03643SOH.BK6 - Sample (8) 12/19/97

Page No.:

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/30/97

Sample Matrix: **Batch Number:**

Soil GC12103197S Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD736

Units: MG/KG

Lab Code:

L9703643-063

Basis: Dry

Test Notes:

Х

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes		QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/31/97	10/31/97	11	U	UJ	5, *
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/31/97	10/31/97	11	U)	. \
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/31/97	10/31/97	11	· U	1	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/31/97	10/31/97	11	U	Ψ	

OGDEN VALIDATED

LEVEL V

GRO **Gasoline Range Organics KRO** Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** X Quantified with diesel fuel

Date: /2/23/97Approved By:

1S22/020597p

03643SOH.BK7 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

NOCACI

Sample Matrix: Batch Number:

Sludge GC12103197S Service Request: L9703643

Date Collected: 10/30/97

Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD737

Units: MG/KG

Lab Code:

L9703643-064

Basis: Dry

Test Notes:

X

Regult Proc. o

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	BEV	GUAL
C8 - C11 GRO	EPA 3550M	8015M	15	1	10/31/97	10/31/97	15	U	UJ-	5 X
C11 - C14 KRO	EPA 3550M	8015M	15	1	10/31/97	10/31/97	15	U	1	1
C14 - C20 DRO	EPA 3550M	8015M	15	1	10/31/97	10/31/97	15	U	- 1	
C20 - C30 LORO	EPA 3550M	8015M	15	1	10/31/97	10/31/97	15	U	₩	↓ ₩

OGDEN VALIDATED



GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organic
X	Quantified with diesel fuel

Approved By: 7 hms 1/2 pbing Date: 12/23/97

1S22/020597p

03643SOH.BK7 - Sample (2) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Sample Matrix:

Soil

Date Collected: 10/30/97

Batch Number:

GC12103197S

Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD738

Units: MG/KG

Lab Code:

L9703643-065

Test Notes:

Х

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	GUA! CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/31/97	10/31/97	11	U	UJ	s * ∃
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/31/97	10/31/97	11	U	ī	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/31/97	10/31/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/31/97	10/31/97	11	U	₩	1 1

EN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:	7 hmg x pain) Date:	121	123/	197

1S22/020597p 03643SOH.BK7 - Sample (3) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix: Batch Number:

Soil

GC12103197S

Service Request: L9703643

Date Collected: 10/30/97 **Date Received:** 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD739

Lab Code:

L9703643-066

Test Notes:

Y

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	(JUA) CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	UJ	5, **:
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U		1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	₩	√ 1

OGDEN VALIDATED

LEVELV

GRO Gasoline Range Organics
KRO Kerosene Range Organics
DRO Diesel Range Organics
LRO Lubricating Oil Range Organics
X Quantified with diesel fuel

Approved By: ______ Date: _/2/23/97

1S22/020597p

03643SOH.BK7 - Sample (4) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/30/97

Sample Matrix:

Soil

Date Received: 10/30/97

Batch Number:

GC12103197S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD740

Lab Code:

L9703643-067

Test Notes:

Х

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	_	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	ប	UJ	5, 47
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	1	iΝ
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	- 1	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	V	1 1

OGDEN VAL DATED

LEVELV

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Ouantified with diesel fuel

Approved By:	Thomas	x .	Min	Date	: <u>/</u> a	123/9	· 7
1000/00000			,				

1S22/020597p 03643SOH.BK7 - Sample (5) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Date Collected: 10/30/97

Service Request: L9703643

Sample Matrix: **Batch Number:** Soil

GC12103197S

Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD741

Units: MG/KG

Lab Code:

L9703643-072

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	RBV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	$O_{\mathcal{I}}$	5 * 7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	Ū	ī	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	₩	1 1

OGDEN VALIDATED

LEVELV

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By:	Thems	Jt.	Mi)	Date:	12/2	3/9	7.

1S22/020597p

03643SOH.BK7 - Sample (10) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Date Collected: 10/30/97

Sample Matrix:

Soil

Date Collected: 10/30/97 **Date Received:** 10/30/97

Batch Number:

GC12103197S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD742

Lab Code:

L9703643-073

Units: MG/KG

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	UJ	5 *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	1	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	1	
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	4	1 1

OGDEN VALIDATED



GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Approved By: Thums b. About

Date: 12/23/97

1S22/020597p

03643SOH.BK8 - Sample 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 Date Collected: 10/30/97

Sample Matrix: **Batch Number:** Soil

GC12103197S

Date Received: 10/30/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD743

Units: MG/KG

Lab Code:

L9703643-074

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	UJ	5,*7
C11 - C14 KRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	1	
C14 - C20 DRO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	10/31/97	11/1/97	12	U	¥	' '

OGDEN VALIDATED

LEVELV

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Date: 12/23 /97 Approved By:

03643SOH.BK8 - Sample (2) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643 **Date Collected:** 10/30/97

Sample Matrix:

Soil

Soi

Date Received: 10/30/97

Batch Number:

GC12103197S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD744

L9703643-075

Units: MG/KG

Lab Code: Test Notes:

Х

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	UT	S. *:
C11 - C14 KRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U)	,
C14 - C20 DRO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	10/31/97	11/1/97	11	U	V	1 1

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics
KRO Kerosene Range Organics
DRO Diesel Range Organics
LRO Lubricating Oil Range Organics
X Quantified with diesel fuel

1S22/020597p

03643SOH.BK8 - Sample (3) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project:

Rocketdyne/313150001

Date Collected: 10/31/97 Date Received: 10/31/97

Sample Matrix:

Soil

Batch Number:

GC12110397S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD745

Units: MG/KG

Lab Code:

L9703643-086

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV QUAL	QUAI CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	บ .	U3	5, 77
C11 - C14 KRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	1	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	٧	$\Psi \Psi$

OGDEN VALIDATED

LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Date: <u>/ك/ك/ 197</u> Approved By:

1S22/020597p 03643SOH.BK9 - Sample (4) 12/19/97

 $\underset{\text{Page No.:}}{1083}$

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

GC12110397S

Service Request: L9703643 Date Collected: 10/31/97

Sample Matrix: **Batch Number:**

Soil

Date Received: 10/31/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD747

Units: MG/KG

Lab Code:

L9703643-087

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV	QUAL
C8 - C11 GRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	UJ	S. *:
C11 - C14 KRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	1	, ,
C14 - C20 DRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	1	
C20 - C30 LORO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	V	1

OGDEN VALIDATED

LEVEL V

GRO Gasoline Range Organics KRO Kerosene Range Organics DRO **Diesel Range Organics** LRO **Lubricating Oil Range Organics** \mathbf{X} Quantified with diesel fuel

Date: <u>/2 נג</u> Thurs & ph Approved By:

1S22/020597p

03643SOH.BK9 - Sample (5) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Sample Matrix: **Batch Number:**

Soil

GC12110397S

Date Collected: 10/31/97

Service Request: L9703643

Date Received: 10/31/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD750

Units: MG/KG

Lab Code:

L9703643-088

Basis: Dry

Test Notes:

Х

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result		REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	υJ	5 *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	1	
C14 - C20 DRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	4	V V



LEVEL V

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Quantified with diesel fuel

Date: 12 23 97 Approved By:

1S22/020597p 03643SOH.BK9 - Sample (6) 12/19/97

Analytical Report

Client:

InterPhase Environmental

Service Request: L9703643

Project:

Rocketdyne/313150001

Date Collected: 10/31/97
Date Received: 10/31/97

Sample Matrix:

Soil

Batch Number:

GC12110397S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD751

Units: MG/KG

Lab Code:

L9703643-089

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	GUAZ GGD E
C8 - C11 GRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	UJ	5, *:
C11 - C14 KRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U	1	ί Ι
C14 - C20 DRO	EPA 3550M	8015M	11	1	11/3/97	11/3/97	11	U		
C20 - C30 LORO	FPA 3550M	8015M	11	1	11/3/97	11/3/97	11	ŢŢ	V	√ √

OGDEN VALIDATED

LEVELV

GRO	Gasoline Range Organics
KRO	Kerosene Range Organics
DRO	Diesel Range Organics
LRO	Lubricating Oil Range Organics
X	Ouantified with diesel fuel

1S22/020597p 03643SOH.BK9 - Sample (7) 12/19/97

Page No.1 A Q C

Analytical Report

Client:

InterPhase Environmental

Project:

Rocketdyne/313150001

Service Request: L9703643

Date Collected: 10/31/97

Date Received: 10/31/97

Sample Matrix:

Soil

Batch Number: G

GC12110397S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RD754

Lab Code:

L9703643-090

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV GUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	Ŭ	UJ	5, *7
C11 - C14 KRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U)	i \
C14 - C20 DRO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	11/3/97	11/3/97	12	U	A	1 4

OGDEN VALDATED

LEVEL V

asoline Range Organics
erosene Range Organics
esel Range Organics
bricating Oil Range Organic
uantified with diesel fuel

-	~ 1					,
Approved By:	1 homes) 0	Mm	Date:	12/23/97	

1S22/020597p

03643SOH.BK9 - Sample (8) 12/19/97

550 South Wadsworth Blvd. Suite 500 Denver, CO 80226 (303) 935-6505

Rocketdyne

Analysis/Method: EPA Method 8015M

No. of Samples: 6

Date Reviewed: 12/16/98 Reviewer: M. Pokorny

Reference: USEPA Contract Laboratory Program National Functional Guidelines For Organic Data Review

(Feb. 1994); Columbia Analytical Services, SOP Number: SOH-DIES, Revision1.2, 12/18/97

SDG: L9704359

Samples Reviewed: RS602, RS603, RS606, RS607, RS608, RS609

Matrix: Soil

EPA Level V-Total Petroleum Hydrocarbons Assessment Form

	Problems	Qualifications
1. Sample Management	According to the case narrative and COCs, samples were received chilled and intact. COC seals were not present. Actual cooler temperatures were listed on the COCs as 6EC and 11EC.	No qualifications were required. The samples were collected by Ogden personnel, placed in coolers containing ice, and hand delivered to the mobile Columbia laboratory. No custody seals were present on the coolers, but because they were transported directly to the laboratory by field personnel, this was acceptable.
2. Method Blanks	One method blank was analyzed with this SDG. No target compounds were detected in the method blank.	No qualifications were required.
3. LCS/BS	One blank spike was analyzed with the samples in this SDG. The recovery of the spiked compounds were within the QC limits of 41%-136%.	No qualifications were required.

	Problems	Qualifications
4. Surrogates	According to the laboratory surrogate report, the sample surrogate recoveries were within the QC limits of 50%-140%. However, it was determined during the Level IV data validation of another TFH data package that some of the laboratory surrogate results could not be reproduced from the raw data. This SDG was determined to be one of the data packages from which the surrogate recoveries could not be verified.	All nondetects were qualified as estimated nondetects, "UJ," and all detects were qualified as estimated, "J." No other qualifications were required.
	On January 15, 1999, the laboratory resubmitted the surrogate summary report and reported in the attached narrative that the surrogate recoveries had been recalculated.	Since the laboratory did not provide the raw data for the revised surrogate summary, the qualification of the data did not change as verification was not possible.
5. MS/MSDs RF607 (L9704359)	The recoveries of the spiked compounds were within the QC limits of 41%-136% in both the MS and MSD.	No qualifications were required.
6. Field QC Samples ER: RS610 (L9704311) FB: RS682 (19800210) Field Duplicates: none	No target compounds were detected in the field blank or in the equipment rinsate.	No qualifications were required.
7. Other	During a Level IV validation of another TFH package, it was noted that sample quantitation was not acceptable for samples analyzed at the mobile Columbia Analytical Services Laboratory. The samples of this SDG were analyzed at the mobile laboratory.	All nondetects were qualified as estimated nondetects, "UJ," and all detects were qualified as estimated, "J." No other qualifications were required.
Comments	None	None

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704359

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS602

Lab Code:

L9704359-001

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	UJ	< +7
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U)	[])
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\checkmark	\downarrow

OGDEN VALIDATED

GRO KRO DRO

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

LRO X

Lubricating Oil Range Organics Quantified with diesel fuel

LEVEL V

Approved By

1S22/020597p (\)
04359SOLLBK1 - Sample 3/10/98

Date: 3/10/98

3002

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704359

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS603

Lab Code:

L9704359-002

Units: MG/KG

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	UT	5. *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1	()
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\checkmark	↓ ↓

OGDEN VALIDATED

GRO KRO

 \mathbf{X}

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

DRO LRO

Lubricating Oil Range Organics

Quantified with diesel fuel

LEVEL V

Approved By:

04359SOH.BK1 - Sample (2) 3/10/98

Date: 3/10/

3003

Page No.:

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Sludge

Batch Number: GC12121997S

Service Request: L9704359

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS606

Lab Code:

L9704359-004

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	18	1	12/19/97	12/19/97	18	U	115	S *7
C11 - C14 KRO	EPA 3550M	8015M	18	1	12/19/97	12/19/97	18	U	1	1
C14 - C20 DRO	EPA 3550M	8015M	18	1	12/19/97	12/19/97	18	Ü		
C20 - C30 LORO	EPA 3550M	8015M	18	1	12/19/97	12/19/97	18	U	↓	\downarrow

OGDEN VALIDATED

GRO KRO DRO LRO X Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

Lubricating Oil Range Organics
Quantified with diesel fuel

LEVEL V

Approved By:

22/020597p 04359SOH.BK1 - Sample (3) 3/10/9 ***--

Date: 3/10/98

3004

Page No.

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704359

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS607

Lab Code:

L9704359-005

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	711	< *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	ı	11
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1	↓ ↓

OGDEN VALIDATED

GRO KRO DRO

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

LRO X

Lubricating Oil Range Organics Quantified with diesel fuel LEVEL V

Approved By:

S22/020597p 04359SOH.BK1 - Sample (4) 3/10/98 Date: 3/10/98

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704359

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS608

Lab Code:

L9704359-006

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor		Date Analyzed	Result	Result Notes	REV QUAL	CODE
C8 - C11 GRO	EPA 3550M	8015M	12	1	12/19/97	12/19/97	12	IJ	UJ	C *
C11 - C14 KRO	EPA 3550M	8015M	12	1	12/19/97	12/19/97	12	U	1	711
C14 - C20 DRO	EPA 3550M	8015M	12	1	12/19/97	12/19/97	12	U		
C20 - C30 LORO	EPA 3550M	8015M	12	1	12/19/97	12/19/97	12	U	\downarrow	1 1

GDEN VALIDATED

GRO KRO DRO LRO \mathbf{X}

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics Lubricating Oil Range Organics

Quantified with diesel fuel

LEVEL V

1S22/020597p 04359SOH.BK1 - Sample (5) 3/1/2/98

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Batch Number:

GC12121997S

Service Request: L9704359

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS609

Lab Code:

L9704359-007

Units: MG/KG

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	QUAL
C8 - C11 GRO	EPA 3550M	8015M	13	1	12/19/97	12/19/97	13	U	UT	5 *7
C11 - C14 KRO	EPA 3550M	8015M	13	1	12/19/97	12/19/97	13	U	1	1)
C14 - C20 DRO	EPA 3550M	8015M	13	1	12/19/97	12/19/97	13	U]	
C20 - C30 LORO	EPA 3550M	8015M	13	1	12/19/97	12/19/97	13	U	1	\bigvee

<u>OGDEN</u> VALIDATED

GRO KRO DRO LRO

X

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics Lubricating Oil Range Organics

Quantified with diesel fuel

LEVEL V

3007



550 South Wadsworth Blvd. Suite 500 Denver, CO 80226 (303) 935-6505

Rocketdyne

Analysis/Method: EPA Method 8015M

No. of Samples: 10 Date Reviewed: 12/16/98 Reviewer: M. Pokorny

Reference: USEPA Contract Laboratory Program National Functional Guidelines For Organic Data Review (Feb.

1994); Columbia Analytical Services, SOP Number: SOH-DIES, Revision1.2, 12/18/97

SDG: L9704338

Samples Reviewed: RS060, RS061, RS064, RS065, RS066, RS067, RS068, RS069, RS070, RS601

Matrix: Soil

EPA Level V-Total Petroleum Hydrocarbons Assessment Form

		Problems	Qualifications
1.	Sample Management	According to the case narrative and COCs, samples were received chilled and intact. COC seals were not present. Actual cooler temperatures were listed on the COCs as 4 C and 11 C.	No qualifications were required. The samples were collected by Ogden personnel, placed in coolers containing ice, and hand delivered to the mobile Columbia laboratory. No custody seals were present on the coolers, but because they were transported directly to the laboratory by field personnel, this was acceptable.
2.	Method Blanks	One method blank was analyzed with this SDG. No target compounds were detected in the method blank.	No qualifications were required.
3.	LCS/BS	One blank spike was analyzed with the samples in this SDG. The recovery of the spiked compounds were within the QC limits of 41%-136%.	No qualifications were required.
4.	Surrogates	According to the laboratory surrogate	All nondetects were qualified as

	Problems	Qualifications
	report, the sample surrogate recoveries were within the QC limits of 50%-140%. However, it was determined during the Level IV data validation of another TFH data package that some of the laboratory surrogate results could not be reproduced from the raw data. This SDG was determined to be one of the data packages from which the surrogate recoveries could not be verified.	estimated nondetects, "UJ," and all detects were qualified as estimated, "J." No other qualifications were required.
	On January 15, 1999, the laboratory resubmitted the surrogate summary report and reported in the attached narrative that the surrogate recoveries had been recalculated.	Since the laboratory did not provide the raw data for the revised surrogate summary, the qualification of the data did not change as verification was not possible.
5. MS/MSDs RF607 (L9704359)	The recoveries of the spiked compounds were within the QC limits of 41%-136% in both the MS and MSD.	No qualifications were required.
6. Field QC Samples ER: RS610 (L9704311)	No target compounds were detected in the field blank or in the equipment rinsates.	No qualifications were required.
7. Other	During a Level IV validation of another TFH package, it was noted that sample quantitation was not acceptable for samples analyzed at the mobile Columbia Analytical Services Laboratory. The samples of this SDG were analyzed at the mobile laboratory.	All nondetects were qualified as estimated nondetects, "UJ," and all detects were qualified as estimated, "J." No other qualifications were required.
Comments	None	None

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704338 Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS060

Lab Code:

L9704338-011

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	GUAL
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	UT	5 *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\bigvee	1 1

<u>OGDEN</u> VALIDATED

GRO KRO DRO **LRO** X

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

Lubricating Oil Range Organics Quantified with diesel fuel

LEVEL V

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704338

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS061

Lab Code: Test Notes: L9704338-012

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	115	5 *:
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1	1 , 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\checkmark	

OGDEN VALIDATED

GRO KRO DRO LRO X

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

Lubricating Oil Range Organics

Quantified with diesel fuel

LEVEL V

Approved By

04338SOH.BK1 - Sample (2) 3/10/98

Date:

3003

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704338

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS064

Lab Code:

L9704338-013

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV QUAL	GUAL
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	UJ	5 .*
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	١	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1	
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\checkmark	1 1

<u>OGDEN</u> VALIDATED

GRO KRO DRO LRO X

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics Lubricating Oil Range Organics

Quantified with diesel fuel

LEVEL V

Approved By:

1S22/020597p 04338SOH.BK1 - Sample (3) 3/10/98 Data

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704338

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS065

Lab Code:

L9704338-014

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor		Date Analyzed	Result	Result Notes	REV	QUAL
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	UJ	< +7
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	$\cdot \mathbf{u}$	1	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	- 1	
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\checkmark	\downarrow

OGDEN VALIDATED

GRO KRO DRO LRO X

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

Lubricating Oil Range Organics

Quantified with diesel fuel

LEVEL V

Approved By: 1S22/020597p

04338SOH.BK1 - Sample (4) 3/10/98

Date: 3/10/98

3005

Analytical Report

Client: Project: Ogden Environmental

Rocketdyne/313150002

Service Request: L9704338 Date Collected: 12/18/97 Date Received: 12/18/97

Sample Matrix:

Soil

Batch Number:

GC12121997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS066

Lab Code:

L9704338-015

Test Notes:

X

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	QUAL CODE
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1) T	5 .*7
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1	1 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\checkmark	↓ ↓

OGDEN VALIDATED

GRO KRO DRO LRO

X

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

Lubricating Oil Range Organics

Quantified with diesel fuel

LEVEL V

1S22/020597p

04338SOH.BK1 - Sample (5) 3/10/98

3006

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704338

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS067

Lab Code:

L9704338-016

Units: MG/KG

Test Notes:

X

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	QUAL
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	UJ	5,*
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\checkmark	₩ 1

OGDEN VALIDATED

GRO KRO DRO

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

LRO X

Lubricating Oil Range Organics

Quantified with diesel fuel

1S22/020597p 04338SOH.BK1 - Sample (6) 3/10/98

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704338

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS068

Lab Code:

L9704338-017

Test Notes:

X

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	QUAL
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	UJ	S ,*7
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U)	1
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1	
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\checkmark	

OGDEN VALIDATED

GRO KRO

Gasoline Range Organics Kerosene Range Organics

DRO LRO

Diesel Range Organics Lubricating Oil Range Organics

X

Quantified with diesel fuel

LEVEL V

Approved By:

1S22/020597p 04338SOH.BK1 - Sample (7) 3/10/98

3008

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704338

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS069

Lab Code:

L9704338-018

Test Notes:

X

Units: MG/KG

Basis: Dry

Prep Analysis Dilution Date Date Result REV. QUAL Analyte Method Method **PQL** Factor Extracted Analyzed Result Notes QUAL CODE C8 - C11 GRO EPA 3550M 8015M 11 1 12/19/97 UJ 12/19/97 11 U C11 - C14 KRO EPA 3550M 8015M 1 11 12/19/97 12/19/97 11 U C14 - C20 DRO EPA 3550M 8015M 1 11 12/19/97 12/19/97 11 U C20 - C30 LORO EPA 3550M 8015M 11 1 12/19/97 12/19/97 U 11

OGDEN VALIDATED

GRO KRO DRO

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

LRO \mathbf{X}

Lubricating Oil Range Organics

Quantified with diesel fuel

LEVEL V

Approved By:

1S22/020597p 04338SOH.BK1 - Sample (8) 3/10/98

3009

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Soil

Batch Number:

GC12121997S

Service Request: L9704338

Date Collected: 12/18/97

Date Received: 12/18/97

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS070

Lab Code:

L9704338-019

Units: MG/KG

Basis: Dry

Test Notes:

X

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes	REV	QUAL
C8 - C11 GRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	UT	< *7
C11 - C14 KRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	1	7 1
C14 - C20 DRO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U		
C20 - C30 LORO	EPA 3550M	8015M	11	1	12/19/97	12/19/97	11	U	\bigvee	1 1

OGDEN VALIDATED

GRO KRO Gasoline Range Organics Kerosene Range Organics

DRO

Diesel Range Organics Lubricating Oil Range Organics

LRO X

Quantified with diesel fuel

LEVEL V

Approved By:

1S22/020597p 04338SOH.BK1 - Sample (9) 3/10/98

3010

Analytical Report

Client: Project: Ogden Environmental Rocketdyne/313150002 Service Request: L9704338 Date Collected: 12/18/97

Sample Matrix:

Soil

Date Received: 12/18/97

Batch Number:

GC12121997S

Hydrocarbon Scan / Fuel Characterization

Sample Name:

RS601

Units: MG/KG

Lab Code:

L9704338-020

Basis: Dry

Test Notes:

Χ

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor		Date Analyzed	Result	Result Notes	REV	QUAL COSE
C8 - C11 GRO	EPA 3550M	8015M	14	1	12/19/97	12/19/97	14	U	して	< *=
C11 - C14 KRO	EPA 3550M	8015M	14	1	12/19/97	12/19/97	14	U)	1 1
C14 - C20 DRO	EPA 3550M	8015M	14	1	12/19/97	12/19/97	14	U	- 1	
C20 - C30 LORO	EPA 3550M	8015M	14	1	12/19/97	12/19/97	14	U	ψ	\downarrow

OGDEN VALIDATED

GRO KRO DRO LRO X

Gasoline Range Organics Kerosene Range Organics Diesel Range Organics

Lubricating Oil Range Organics Quantified with diesel fuel

LEVEL V

Approved By: (

1S22/020597p // 04338SOH.BK1 - Sample (10) 3/10/98



550 South Wadsworth Blvd. Ste. 500 Denver, CO 80226 (303) 935-6505

Rocketdyne

Analysis/Method: 6010/7000

No. of Samples: 3 (1 Method 1312 leachate sample/ 2 soil samples for copper only)

Date Completed: September 12, 1998

Reviewer: K. Okonzak-Lowry

Ref: USEPA Contract Laboratory Program National Functional Guidelines For Inorganic Data Review (Feb. 1994), Columbia Analytical Services, Inc. - Canoga Park, Determination of Trace Elements by Inductively Coupled Plasma, Optical Emission Spectrometry SOP ICP-OES, Revision 1.0 (8/96), Furnace Atomic Absorption Spectrometry SOP GFA-GFAA, Revision 1.0 (8/96), Columbia Analytical Services, Inc. - Canoga Park, Mercury in Liquid by Cold Vapor Atomic Absorption Spectroscopy SOP CVA-Hg, Revision 1.0 (8/96), USEPA SW-846 Method 1312 Synthetic Precipitation Leaching Procedure, Revision 0 (9/94).

SDG: L9801054

Samples Reviewed: RS749, RS232, RS230

EPA Level V- Metals Assessment Form

		Problems	Qualifications
1.	Sample		
	Management	The cooler temperature was noted at 7°C which is outside the specified control limits of 4°C 2°C. Sample condition questions were answered on the COCs. Samples were collected by Ogden personnel, placed in coolers containing ice, and hand delivered to the laboratory; therefore, the cooler temperatures did not have time to equilibrate. The COC for sample RS749 was not signed by the laboratory personnel, and custody seals were not present on the coolers. No sample preservation or handling problems were noted.	Due to the nonvolatile nature of the analytes, the samples were not qualified for the cooler temperature.
2.	Method Blanks		
		None. All method blank results were below laboratory determined PQLs. The leachate method blank results for zinc and barium were reported as less than 0.02 mg/L which is twice as high as the laboratory stated	None

T400MT61 1 Revision 1

	Problems	Qualifications
	PQL for zinc and barium of 0.01 mg/L. The raw data was validated to determine that the method blank results for zinc and barium were actually not detected at 0.01 mg/L.	
3. LCS	The LCS results were all within the laboratory established control limits of 75-125%R.	None
4. Duplicates	None performed.	None
5. MS/MSDs Performed on leachate sample RS749 and soil sample RS230	All the MS/MSD results were within the 75-125%R control limit.	None
6. Furnace Atomic Absorption OC Performed only for leachate sample RS749	The post digestion spike recoveries for the arsenic, antimony, selenium, and thallium analyses were within the 85-115%R control limit. The validator determined the post spike results by reviewing the GFAA raw data. The soil samples were not validated for this criteria.	None
7. ICP Serial Dilution Performed only for leachate sample RS749	All the serial dilution results were within control limits. There was no ICP serial dilution form in the report. The validator determined the serial dilution results by reviewing the ICP raw data. The soil samples were not validated for this criteria.	None
8. Field QC Samples ER sample: RS262 FB sample: RS682 Field Duplicates: None identified for this SDG 9. Other	The field QC samples applied to the two soil samples only. There were no detects in the field QC samples for the analytes reported in this data package. The leachate sample was not validated for field QC criteria.	None

	Problems	Qualifications
	The barium and zinc results for the leachate sample in this SDG were reported at higher PQLs than the laboratory's stated PQLs for this project.	The reported barium and zinc PQLs for leachate sample RS749 were corrected on the Form I for this sample. The reported detects for these two analytes in sample RS749 were not affected, and no sample qualifications were required.
10. <u>Comments</u>	None	None

Analytical Report

Client:

Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9801054 Date Collected: 4/8/98

Date Received: 4/8/98

Metals

Sample Name:

RS230

Lab Code: Test Notes: L9801054-019

Units: MG/KG

Basis: Dry

Analyte

Prep Method Analysis Method

PQL

Dilution Factor

Date Date Digested Analyzed

Result

Result Rev Que Notes Qual Code

Copper

EPA 3050

6010

2

1

4/13/98

4/13/98

12

OGDEN VALIDATED

LEVELV

Analytical Report

Client:

Ogden Environmental

Project: Sample Matrix:

Rocketdyne/313150002

Soil

Service Request: L9801054 Date Collected: 4/8/98

Date Received: 4/8/98

Metals

Sample Name:

Lab Code: Test Notes: RS232

L9801054-004

Units: MG/KG

Basis: Dry

Analyte

Prep Method Analysis Method

PQL

Dilution Factor 1

Date Date Digested Analyzed

Result

Result lev Qual Notes Qual Code

Copper

EPA 3050

6010

2

4/13/98

4/13/98

450

OGDEN VALIDATE

LEVELV

7007

01054ICP.JE1 - Sample 5/19/98

Page No.:

Analytical Report

Client: Project:

Ogden Environmental

Sample Matrix:

Soil

Rocketdyne/313150002

Service Request: L9801054 Date Collected: 4/8/98

Date Received: 4/8/98

0.03

4/23/98

Metals

Sample Name:

Lab Code: Test Notes:

Zinc, SPLP

RS749

L9801054-003

EPA 3010

Units: MG/L Basis: NA

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes		Qual
Antimony, SPLP	EPA 3020	7041	0.005	1	4/21/98	4/22/98	0.005		u	
Arsenic, SPLP	EPA 3020	7060	0.005	1	4/21/98	4/21/98	0.005	U	- 1	
Barium, SPLP	EPA 3010	6010	2020.01	î	4/22/98	4/23/98		U	u	
Beryllium, SPLP	EPA 3010	6010	0.005	1	4/22/98		0.07			
Cadmium, SPLP	EPA 3010	6010	0.005	1	4/22/98	4/23/98	0.005	U	u	
Chromium, SPLP	EPA 3010	6010	0.01	1		4/23/98	0.005	U	u	
Cobalt, SPLP	EPA 3010	6010	0.01	1	4/22/98	4/23/98	0.01	U	u	
Copper, SPLP	EPA 3010	6010	0.01	1	4/22/98	4/23/98	0.01	U	ul	
Lead, SPLP	EPA 3010	6010	0.05	1	4/22/98	4/23/98	0.01	U	u	
Mercury, SPLP	METHOD	7470	0.001	1	4/22/98	4/23/98	0.05	U	ul	
Molybdenum, SPLP	EPA 3010	6010		1	4/20/98	4/21/98	0.001	U	ul	
Nickel, SPLP	EPA 3010	6010	0.02	1	4/22/98	4/23/98	0.02	U	ul	
Selenium, SPLP	EPA 3020	7740	0.04	1	4/22/98	4/23/98	0.04	U	ul	
Silver, SPLP	EPA 3010		0.005	1	4/21/98	4/21/98	0.005		ū	
Thallium, SPLP	EPA 3020	6010	0.01	1	4/22/98	4/23/98	0.01		u	
Vanadium, SPLP	EPA 3020 EPA 3010	7841	0.005	1	4/21/98	4/21/98	0.005		u	
Zinc. SPLP	EPA 3010	6010	0.01	1	4/22/98	4/23/98	0.01	Ŭ	4	

2.02 0.0 1

4/22/98

EVEL V

6010

10/05/98



550 South Wadsworth Blvd. Ste. 500 Denver, CO 80226 (303) 935-6505

Rocketdyne

Analysis/Method: 6010/7000

No. of Samples: 19

Date Completed: August 20, 1998 Reviewer: K. Okonzak-Lowry

Ref: USEPA Contract Laboratory Program National Functional Guidelines For Inorganic Data Review (Feb. 1994), Columbia Analytical Services, Inc. - Canoga Park, Determination of Trace Elements by Inductively Coupled Plasma, Optical Emission Spectrometry SOP ICP-OES, Revision 1.0 (8/96). Columbia Analytical Services, Inc. - Canoga Park, Graphite Furnace Atomic Absorption Spectrometry SOP GFA-GFAA, Revision 1.0 (8/96). Columbia Analytical Services, Inc. - Canoga Park, Mercury in Solid or Semisolid Waste SOP MET-7471, Revision 2.0 (3/98).

SDG: L9703698

Samples Reviewed: RF733, RF734, RF735, RF143, RF144, RF145, RF146, RF147, RF148, RF150, RF151,

RF157, RF736, RF738, RF739, RF740, RF741, RF702, RF160

EPA Level V- Metals Assessment Form

	Problems	Qualifications
Sample Management	The sample condition questions were answered on the applicable COCs. The sample cooler temperatures upon receipt were noted on the COCs at 14°C and 3°C. Some of the COCs were not signed by the laboratory personnel. No cooler custody seals were present.	Due to the nonvolatile nature of the analytes, the samples were not qualified for the temperature blanks.
2. Method Blanks	None. All method blank results were below laboratory determined PQLs.	None
3. LCS	The LCS results were all within the laboratory established control limits of 75-125%R.	None
4. Duplicates	None performed.	None
5. MS/MSDs Performed on soil sample RF739	Antimony: MS at 58%R/MSD at 60%R.	Antimony nondetects qualified "UJ" for the MS/MSD %Rs.

T400MT26 1 Revision 2

	Problems	Qualifications
	Chromium: MS at 132%/MSD at 92%R, and precision between MS/MSD aliquot results is high at 36%RPD Nickel: MS at 184%R/MSD at 89%R, and precision between MS/MSD aliquot results is high at 70%RPD The MS/MSD %Rs for arsenic, beryllium, and cadmium were calculated incorrectly on the MS/MSD reporting form.	Chromium and nickel detects qualified "J" for the high MS %Rs and for the precision between the MS/MSD aliquots
6. Furnace Atomic Absorption QC Post digestion spikes performed on samples RF147 and RF733	The post digestion spike recoveries for the arsenic, selenium, and thallium analyses were within the 85-115%R control limit. The validator determined the post spike results by reviewing the GFAA raw data.	None
7. ICP Serial Dilution Performed on sample RF741	All serial dilution results greater than 10 the PQL were within the 10%D control limit with the exception of zinc with a 12.2%D. There was no ICP serial dilution form in the report. The validator determined the serial dilution results by reviewing the ICP raw data.	Zinc detected in the samples was qualified "J."
8. Field QC Samples ER samples: RF803 and RF149 FB sample: RS682 Field Duplicates: None identified for this SDG	Zinc was detected in equipment rinsate RF149 at 0.16 mg/L.	Zinc detected in site samples RF143, RF144, RF145, RF146, RF147, RF148, RF150, RF151, RF157, and RF160 was qualified "J."
9. Other	None	None
10. <u>Comments</u>	None	None

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/29/97 Date Received: 10/29/97

Metals

Sample Name: Lab Code:

RF143

Units: MG/KG

Test Notes:

L9703698-004

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	t Rev	Qual
Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Mercury Molybdenum	EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 METHOD EPA 3050	6010 7060 6010 6010 6010 6010 6010 6010	111 5 1 0.5 1 2 2 2 5 0.2 11	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11/10/97 11/10/97 11/10/97 11/10/97 11/10/97 11/10/97 11/10/97 11/10/97 11/10/97	11/11/97 11/11/97 11/11/97 11/11/97 11/11/97 11/11/97 11/11/97 11/11/97 11/11/97	11 5 71 0.5 1 12 5 6 8 0.2	Notes U U U U	What UT IL IL IT IL	Code
Nickel Selenium Silver Thallium Vanadium Zinc	EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050	6010 7740 6010 7841 6010 6010	5 5 1 5 2	1 1 1 1 1	11/10/97 11/10/97 11/10/97 11/10/97 11/10/97 11/10/97 11/10/97	11/11/97 11/11/97 11/11/97 11/11/97 11/11/97 11/11/97 11/11/97	11 8 5 1 5 25 43	U U U U	NJUNU J	a,e A,F

OGDEN VALIDATED

LEVEL V

Approved By: _

Te Parl Date: 12/6/17

Analytical Report

Client:

Ogden Environmental Rocketdyne/313150002

Project: Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/29/97

Date Received: 10/29/97

Metals

Sample Name:

Test Notes:

Lab Code:

RF144

L9703698-005

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resu Note	It Rev s Qual	Qual
Antimony	EPA 3050	6010	11	l	11/10/97	11/11/97	11	U	uJ	Q
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ŭ	u	_
Barium	EPA 3050	6010	1	1	11/10/97	11/11/97	130	·		
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.9			
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	U	u	
Chromium	EPA 3050	6010	2	1	11/10/97	11/11/97	22	·	J	₽,E
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	11			
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	16			
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	13			
Mercury	METHOD	7471	0.2	l	11/10/97	11/10/97	0.2	U	u	
Molybdenum	EPA 3050	6010	11	1	11/10/97	11/11/97	11	Ü	ũ	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	18	O		QE
Selenium	EPA 3050	7740	5	1	11/10/97	11/11/97	5	U	ü	A
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ŭ	ũ	
Thallium	EPA 3050	7841	5	1	11/10/97	11/11/97	5	Ŭ	u	
Vanadium	EPA 3050	6010	2	Ī	11/10/97	11/11/97	43	O	-	
Zinc	EPA 3050	6010	1	1	11/10/97	11/11/97	69		ェ	A,F

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LEVEL V

Date: 12/6/97 Approved By: 1544/021397p

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03698ICP.JE1 - Sample (5) 12/5/97

Page No :

Analytical Report

Client:

Ogden Environmental Rocketdyne/313150002

Project: Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/29/97

Date Received: 10/29/97

Metals

Sample Name: Lab Code:

Test Notes:

RF145

L9703698-006

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	t Rev Qual	Qual Code
Antimony	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	uJ	Q
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ü	u	`
Barium	EPA 3050	6010	1	ī	11/10/97	11/11/97	55	O	-	
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.5	U	u	
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ü	u	1
Chromium	EPA 3050	6010	2	1	11/10/97	11/11/97	8	O	エ	Q,E
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	4			
Copper	EPA 3050	6010	2	Ī	11/10/97	11/11/97	4			
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	5	U	u	l
Mercury	METHOD	7471	0.2	1	11/10/97	11/10/97	0.2	Ŭ	ũ	
Molybdenum	EPA 3050	6010	10	1	11/10/97	11/11/97	10	Ū	L.	
Nickel	EPA 3050	6010	5	ī	11/10/97	11/11/97	5	Ü	u	ĺ
Selenium	EPA 3050	7740	5		11/10/97	11/11/97	5	U	u	
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ü	ũ	
Thallium	EPA 3050	7841	5	1	11/10/97	11/11/97	5	Ŭ	II.	ĺ
Vanadium	EPA 3050	6010	2	Î	11/10/97	11/11/97	20	O	-	
Zinc	EPA 3050	6010	1	1	11/10/97	11/11/97	50		J	AF

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LEVEL V

Approved By: 1844/021397p

7 Pinh Date: 12/11/97

Analytical Report

Client:

Ogden Environmental

Project: Sample Matrix:

Rocketdyne/313150002 Soil

Service Request: L9703698 Date Collected: 10/29/97 Date Received: 10/29/97

Metals

Sample Name:

RF146

Lab Code:

L9703698-007

Units: MG/KG Basis: Dry

Test Notes:	13703076-007						Basis: L	Угу		
Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes	Rev	Qual Code
Antimony	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	uJ	0
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ŭ	u	
Barium	EPA 3050	6010	1	1	11/10/97	11/11/97	100	~	ļ	
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.6		1	j /
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	U	u	
Chromium	EPA 3050	6010	2	1	11/10/97	11/11/97	18	-		Q,E
Cobalt	EPA 3050	6010	2	I	11/10/97	11/11/97	8			
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	11		,	
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	10		,	[
Mercury	METHOD	7471	0.2	1	11/10/97	11/10/97	0.2	U	u	(!
Molybdenum	EPA 3050	6010	10	1	11/10/97	11/11/97	10	Ŭ	u	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	13	_		QE
Selenium	EPA 3050	7740	5	The state of the s	11/10/97	11/11/97	5	U	ū	- JC
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ŭ	n.	'
Thallium	EPA 3050	7841	5	1	11/10/97	11/11/97	5	Ŭ	u	
Vanadium	EPA 3050	6010	2	I	11/10/97	11/11/97	36	J	,	-
Zine	EPA 3050	6010	1	1	11/10/97	11/11/97	51		」	AF

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LEVEL V

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Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Service Request: L9703698 Date Collected: 10/29/97

Date Received: 10/29/97

Metals

Sample Name: Lab Code:

RF147

L9703698-008

Units: MG/KG Basis: Dry

Test Notes:	15703050-000						Basis: L)ry		
Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes	Rev	Qual Code
Antimony	EPA 3050	6010	11	1	11/10/97	11/11/97	11	U	WJ	Q
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ŭ	ũ.	٦,
Barium	EPA 3050	6010	1	1	11/10/97	11/11/97	110	Ü		
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.6			
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	U	u	
Chromium	EPA 3050	6010	2	1	11/10/97	11/11/97	18	Ŭ	J	QE
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	7			
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	13			
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	10			
Mercury	METHOD	7471	0.2	1	11/10/97	11/10/97	0.2	U	u	
Molybdenum	EPA 3050	6010	11	1	11/10/97	11/11/97	11	Ŭ	ũ	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	12	0	J	a,E
Selenium	EPA 3050	7740	5	1	11/10/97	11/11/97	5	U	ū	1015
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ū	u	
Thallium	EPA 3050	7841	5	1	11/10/97	11/11/97	5	Ŭ	Ū	
Vanadium	EPA 3050	6010	2	1	11/10/97	11/11/97	35	C		
Zinc	EPA 3050	6010	1	1	11/10/97	11/11/97	48		J	A.F



LEVEL V

Approved	Ву:
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72 Pres Date: 12/6/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698

Date Collected: 10/29/97

Date Received: 10/29/97

Metals

Sample Name:

Vanadium

Zinc

RF148

Lab Code: Test Notes:

L9703698-009

EPA 3050

EPA 3050

6010

6010

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	t Rev Qual	Qua Code
Antimony	EPA 3050	6010	11	1	11/10/97	11/11/97	11			
Arsenic	EPA 3050	7060	5	1	11/10/97			Ü	uJ	Q
Barium	EPA 3050	6010	ī	1	11/10/97	11/11/97	5	Ū	u	
Beryllium	EPA 3050	6010	0.5	1		11/11/97	69			
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	0.5	U	u	
Chromium	EPA 3050	6010	2	1	11/10/97	11/11/97	1	U	Ľ.	
Cobalt	EPA 3050	6010	~~~~~ ~		11/10/97	11/11/97	9		7	W,E
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	5			
Lead	- EPA 3050	6010	2	1	11/10/97	11/11/97	5			
Mercury	METHOD	7471	0.2	1	11/10/97	11/11/97	8			
Molybdenum	EPA 3050		0.2	I	11/10/97	11/10/97	0.2	U	u	
Nickel		6010	11	1	11/10/97	11/11/97	11	U	4	
	EPA 3050	6010			11/10/97	11/11/97	6		J	WE
Selenium	EPA 3050	7740	5	1	11/10/97	11/11/97	5	U	u	-
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ū	u	
Thallium	EPA 3050	7841	5	1	11/10/97	11/11/97	5	Ŭ	14	
Vanadium	DD 4 2010	***					-	U	1/- 1	

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11/10/97

11/10/97

11/11/97

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LEVEL V

Approved	Ву:
1S44/021397p	-

Date: 12/6/91

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/30/97

Date Received: 10/30/97

Metals

Sample Name: Lab Code:

RF150

L9703698-010

Units: MG/KG Basis: Dry

Test Notes:

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resu <u>Note</u>	lt Rev s Qual	Qua
Antimony	EPA 3050	6010	11	1	11/10/97	11/11/97	11	U	WJ	0
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	U	u_	4
Barium	EPA 3050	6010	1	ĺ	11/10/97	11/11/97	64	U		
Beryllium	EPA 3050	6010	0.5	ī	11/10/97	11/11/97	0.5	U		
Cadmium	EPA 3050	6010	1	ī	11/10/97	11/11/97	0.5	Ü	u	
Chromium	EPA 3050	6010	2	i	11/10/97	11/11/97	9	U	宁	a, E
Cobalt	EPA 3050	6010	2	**************************************	11/10/97	11/11/97	4		J_	W, C
Copper	EPA 3050	6010	2	ī	11/10/97	11/11/97	5			
Lead	EPA 3050	6010	5	i	11/10/97	11/11/97	<i>7</i>			
Mercury	METHOD	7471	0.2	i	11/10/97	11/10/97	0.2			ı
Molybdenum	EPA 3050	6010	11	1	11/10/97	11/11/97	11	U	u	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97		U		5
Selenium	EPA 3050	7740	5	and a second second second second second second second second second second second second second second second	11/10/97	11/11/97	<u>6</u> 5	7.7		Q,E
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	1	U	u	
Thallium	EPA 3050	7841	5	1	11/10/97	11/11/97	1	Ü	u	
Vanadium	EPA 3050	6010	2	1	11/10/97	11/11/97	5	U	u	
Zinc	EPA 3050	6010	1	Ī	11/10/97		21			
			•	1	11/10/97	11/11/97	58		J	A,

OGDEN VALIDATED LEVEL V

Approved	Ву:
1S44/021397n	_

Date: 12/6/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/30/97

Date Received: 10/30/97

Metals

Sample Name:

RF151

Lab Code: Test Notes: L9703698-011

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	· 🖍]	Qua Cod
Antimony	EPA 3050	6010	11	l	11/10/97	11/11/97	11	U	μт	KQ
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ŭ	a.	P. ~
Barium	EPA 3050	6010	1	1	11/10/97	11/11/97	76	J	· · ·	
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.5	U	u	
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ü	u	
Chromium	EPA 3050	6010	2	1	11/10/97	11/11/97	17	J	Ţ	Ø,E
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	6			4,5
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	11			
Lead	EPA 3050	6010	5	I	11/10/97	11/11/97	8			
Mercury	METHOD	7471	0.2	1	11/10/97	11/10/97	0.2	U	u	
Molybdenum	EPA 3050	6010	11	$\bar{1}$	11/10/97	11/11/97	11	U	u	
Vickel	EPA 3050	6010	5	1	11/10/97	11/11/97	11	U		QE
elenium	EPA 3050	7740	5	1	11/10/97	11/11/97	5	U	ū	ے رحد
ilver	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ü	ũ	
'hallium	EPA 3050	7841	5	1	11/10/97	11/11/97	ŝ	Ü		
⁷ anadium	EPA 3050	6010	2	1	11/10/97	11/11/97	33	O	u	
ine	EPA 3050	6010	1	1	11/10/97	11/11/97	56		丁	^ r
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LEVEL V

Approved By:	7 Prol-	Date:	12/6/97	5013
544/02139/p				

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/30/97

Date Received: 10/30/97

Metals

Sample Name: Lab Code:

Test Notes:

RF157

L9703698-012

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	t Rev Qual	Qual Code
Antimony	EPA 3050	6010	11	1	11/10/97	11/11/97	11	U	uJ	
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ü	u	-4
Barium	EPA 3050	6010	1	1	11/10/97	11/11/97	54	U	_	
Beryllium	EPA 3050	6010	0.5	ì	11/10/97	11/11/97	0.5	Y 1		
Cadmium	EPA 3050	6010	1	i	11/10/97	11/11/97	0.5	U	u	
Chromium	EPA 3050	6010	2	i	11/10/97	11/11/97	1 1	U	4	0.55
Cobalt	EPA 3050	6010	2	#100 m/100 m 100 m	11/10/97	11/11/97	5			O,E
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	-			1
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	6	* *	1.	
Mercury	METHOD	7471	0.2	1	11/10/97		3	Ü	u	l
Molybdenum	EPA 3050	6010	11	1	11/10/97	11/10/97	0.2	U	u	
Nickel	EPA 3050	6010	5	1		11/11/97	11	U	宁	la-
Selenium	EPA 3050	7740		~~~	11/10/97	11/11/97	<u> 8</u>			QE_
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	5	U	u	
Thallium	EPA 3050	7841	1 e	i	11/10/97	11/11/97	1	U	u	l
Vanadium	EPA 3050		3	1	11/10/97	11/11/97	5	U	u	1
Zinc	EPA 3050	6010	2	I	11/10/97	11/11/97	25			
Zmv	EFA 3030	6010	4	1	11/10/97	11/11/97	46		J	A,F

OGDEN VALDATED

LEVEL V

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Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698

Date Collected: 10/31/97 Date Received: 10/31/97

Metals

Sample Name:

RF160

Lab Code: Test Notes: L9703698-020

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Note:	It Rev s Qual	aval
Antimony	EPA 3050	6010	11	1	11/10/97	11/11/97	11	U	uJ	0
Arsenic	EPA 3050	7060	5	I	11/10/97	11/11/97	5	Ü	u	Q
Barium	EPA 3050	6010	1	1	11/10/97	11/11/97	35	C		
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.5	U	u	
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ū	u	
Chromium	EPA 3050	6010	2	1	11/10/97	11/11/97	13	U		Q,E
Cobalt	EPA 3050	6010	2		11/10/97	11/11/97	5			0,2
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	5			
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	6			
Mercury	METHOD	7471	0.2	1	11/10/97	11/11/97	0.2	т т		
Molybdenum	EPA 3050	6010	11	ī	11/10/97	11/11/97	11	U U	u	
Nickel	EPA 3050	6010	5	i	11/10/97	11/11/97	6	U	5	\ \ \ \
Selenium	EPA 3050	7740	5		11/10/97	11/11/97	<u>0</u> 5	T T		,Q,E
Silver	EPA 3050	6010	Ī	1	11/10/97	11/11/97		U	u	
Thallium	EPA 3050	7841	5	1	11/10/97	11/11/97	1	Ü	и	
Vanadium	EPA 3050	6010	2	1	11/10/97	11/11/97)):	U	u	
Zinc	EPA 3050	6010	ī	1	11/10/97		25			
					11/10/97	11/11/97	42		J	A.F
										,

ODEN VALIDATED

LEVEL V

5022

Approved By:

J. Raci ______ Date: 12/6/97

Analytical Report

Client: **Project:**

Ogden Environmental

Sample Matrix:

Rocketdyne/313150002 Sludge

Service Request: L9703698 Date Collected: 10/27/97

Date Received: 10/27/97

Metals

Sample Name: Lab Code:

Test Notes:

RF702

L9703698-019

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Result /		In at Cocs
Antimony	EPA 3050	6010	18	1	11/10/97	11/11/97	18	U	WJ	a
Arsenic	EPA 3050	7060	9	1	11/10/97	11/11/97	9	Ŭ	w	
Barium	EPA 3050	6010	2	1	11/10/97	11/11/97	57	Ü		
Beryllium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	U	u	
Cadmium	EPA 3050	6010	2	i	11/10/97	11/11/97	2	Ŭ	u	
Chromium	EPA 3050	6010	4	i	11/10/97	11/11/97	13	O	7	a,E
Cobalt	EPA 3050	6010	4		11/10/97	11/11/97	4	U	W	00,
Copper	EPA 3050	6010	4	1	11/10/97	11/11/97	13	O	w	
Lead	EPA 3050	6010	9	i	11/10/97	11/11/97	14			
Mercury	METHOD	7471	0.4	i	11/10/97	11/10/97	0.4	U		
Molybdenum	EPA 3050	6010	18	i	11/10/97	11/11/97	18	U	W	
Nickel	EPA 3050	6010	9	i	11/10/97	11/11/97	9	U		
Selenium	EPA 3050	7740	ģ		11/10/97	11/11/97	9		u	
Silver	EPA 3050	6010	2		11/10/97	11/11/97	5	U	ω	
Thallium	EPA 3050	7841	9	1	11/10/97	11/11/97	9	U	w	
Vanadium	EPA 3050	6010	4	1	11/10/97	11/11/97	15	U	~	
Zinc	EPA 3050	6010	2	Į.	11/10/97	11/11/97			<u>_</u>	A
	2171 3030	5510	4	1	11/10/97	11/11/9/	56			r i



Revision # / Ac 1/21/99

______Date: 9/17/92

5020-R

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Sludge

Service Request: L9703698 Date Collected: 10/27/97

Date Received: 10/27/97

Metals

Sample Name: Lab Code:

RF702

Test Notes:

L9703698-019

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes	in lu	iak
Aluminum Boron	EPA 3050 EPA 3050	6010 6010	18 18	1	11/10/97 11/10/97	11/11/97 11/11/97	5200 18	U į	u	

OGDEN VALIDATED

LEVELV

Revision # 1

5021-

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/29/97

Date Received: 10/29/97

Metals

Sample Name:

Test Notes:

Lab Code:

RF733

L9703698-001

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resu Note:	It Rev s Qual	Qual
Antimony	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	uJ	Q
Arsenie	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ŭ	u	•
Barium	EPA 3050	6010	1	1	11/10/97	11/11/97	69	U		
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.5	U	u	
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ü	u	
Chromium	EPA 3050	6010	2	1	11/10/97	11/11/97	13	J		Q,E
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	5			-/-
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	8			
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	11			
Mercury	METHOD	7471	0.2	1	11/10/97	11/10/97	0.2	U	u	
Molybdenum	EPA 3050	6010	10	1	11/10/97	11/11/97	10	Ü	ū	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	9	O		Q,E
Selenium	EPA 3050	7740	5	1	11/10/97	11/11/97	5	U	ü	-
Silver	EPA 3050	6010	1	Ī	11/10/97	11/11/97	1	Ŭ	ũ	
Thallium	EPA 3050	7841	5	1	11/10/97	11/11/97	5	Ŭ	u	
Vanadium	EPA 3050	6010	2	1	11/10/97	11/11/97	26	O	-	
Zinc	EPA 3050	6010	1	1	11/10/97	11/11/97	99		丁	į

GODEN VALIDATED

LEVEL V

Approved By: 1544/021397p

Jeful Date: 12/11/97

5003

03698ICP.JE1 - Sample 12/5/97

Page No.:

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/29/97

Date Received: 10/29/97

Metals

Sample Name: Lab Code:

Test Notes:

RF734

L9703698-002

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Note:	It Rev s Qual	Qua Code
Antimony	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	uJ	Ø
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	IJ	u	_
Barium	EPA 3050	6010	l	1	11/10/97	11/11/97	88	U		
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.5	U	и	
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	Ŭ	u	
Chromium	EPA 3050	6010	2	î	11/10/97	11/11/97	15	U		Q,E
Cobalt	EPA 3050	6010	2		11/10/97	11/11/97	6			ے رک
Copper	EPA 3050	6010	2	ī	11/10/97	11/11/97	8			1
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	11			
Mercury	METHOD	7471	0.2	i	11/10/97	11/11/97	0.2	U	и	l
Molybdenum	EPA 3050	6010	10	î	11/10/97	11/11/97	10	U	u	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	10	U		Ø,E
Selenium	EPA 3050	7740	5	i della ettera et et et et et et et et et et et et et	11/10/97	11/11/97	<u> </u>	U	u	WIE
Silver	EPA 3050	6010	1	ì	11/10/97	11/11/97	1	U	u	
Thallium	EPA 3050	7841	5	1	11/10/97	11/11/97	5	U	ū	
Vanadium	EPA 3050	6010	2	1	11/10/97	11/11/97	33	U		
Zine	EPA 3050	6010	-	1	11/10/97	11/11/97	52		7	

OGDEN VALIDATED LEVEL V

Approved By: 1544/021397p

Je Pyrl

_ Date: _ / 7 / 6 / 6; 7

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/29/97

Date Received: 10/29/97

Metals

Sample Name:

RF735

Lab Code:

Test Notes:

L9703698-003

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	t Rev and	Qua Code
Antimony	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	иJ	0
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ŭ	u	
Barium	EPA 3050	6010	1	1	11/10/97	11/11/97	57	U	-	
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.5	U	u	
Cadmium	EPA 3050	6010	1	i	11/10/97	11/11/97	1	U	u	
Chromium	EPA 3050	6010	2	î	11/10/97	11/11/97	12	U		05
Cobalt	EPA 3050	6010	2		11/10/97	11/11/97	6		<u>J</u>	Q,E
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	8			
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	7			
Mercury	METHOD	7471	0.2	1	11/10/97	11/10/97	0.2	7.7		
Molybdenum	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	u	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	10	U		0.5
Selenium	EPA 3050	7740	5	1	11/10/97	11/11/97	5	T T		Ø,E
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	3	U	u	
Thallium	EPA 3050	7841	5	1	11/10/97		i	Ŭ	L	
Vanadium	EPA 3050	6010	2	1		11/11/97	5	U	u	
Zinc	EPA 3050	6010	1	1	11/10/97	11/11/97	27			
•	21113030	0010	Ţ	1	11/10/97	11/11/97	46		J	lΑ

OGDEN VALIDATED

LEVEL V

5005

Approved By:

Je Proc

Date: 12/6/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/30/97

Date Received: 10/30/97

Metals

Sample Name:

RF736

Lab Code: Test Notes:

L9703698-013

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	It Rev s Qual	ana
Antimony	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	WJ	Q
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ü	u	
Barium	EPA 3050	6010	1	ī	11/10/97	11/11/97	77	U	-0	1
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.5	U	u	1
Cadmium	EPA 3050	6010	1	ī	11/10/97	11/11/97	0.5	Ü		1
Chromium	EPA 3050	6010	2	i	11/10/97	11/11/97	16	U	J	Q,E
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	5	***************************************		AYE
Copper	EPA 3050	6010	2	i	11/10/97	11/11/97	11			ĺ
Lead	EPA 3050	6010	5	i	11/10/97	11/11/97	22		'	1
Mercury	METHOD	7471	0.2	1	11/10/97	11/11/97				1
Molybdenum	EPA 3050	6010	10	1	11/10/97		0.2	U	u	1
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	10	U	u	
Selenium	EPA 3050	7740	5		and a second second second second second second second second second second second second second second second	11/11/97	11			Q,E
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	5	U	u	1
Thallium	EPA 3050	7841	1 5	i	11/10/97	11/11/97	1	U	u	1
Vanadium	EPA 3050	6010	2	1	11/10/97	11/11/97	5	U	u	1
Zinc	EPA 3050		2	1	11/10/97	11/11/97	29		,	
Zilic	EFA 3030	6010	i	1	11/10/97	11/11/97	72		丁	A

OGDEN VALIDATED

LEVEL V

Approved By: 1844/021397p

Te Ryd Date: 12/6/97

Analytical Report

Client:

Ogden Environmental Rocketdyne/313150002

Project: Sample Matrix:

Soil

Service Request: L9703698

Date Collected: 10/30/97 Date Received: 10/30/97

Metals

Sample Name: Lab Code:

Test Notes:

RF738

L9703698-014

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Notes	Rev	Qua
Antimony	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	иJ	0
Arsenic	EPA 3050	7060	5	ī	11/10/97	11/11/97	5	Ū	u	اعر
Barium	EPA 3050	6010	1	ī	11/10/97	11/11/97	90	O	-	1
Beryllium	EPA 3050	6010	0.5	i	11/10/97	11/11/97	0.5	U		
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	0.5	U	u	
Chromium	EPA 3050	6010	2	i	11/10/97	11/11/97	13	U		0
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	5		ــــــــــــــــــــــــــــــــــــــ	$Q_j \in$
Copper	EPA 3050	6010	$\bar{2}$	1	11/10/97	11/11/97	10			
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	16			
Mercury	METHOD	7471	0.2	1	11/10/97	11/11/97	0.2	7.7		
Molybdenum	EPA 3050	6010	10	1	11/10/97	11/10/97		U	u	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	10	U	μ	
Selenium	EPA 3050	7740	5		11/10/97	11/11/97	11	Y 7	_ <u>J</u>	O,E
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	5	U	u_	
Thallium	EPA 3050	7841	5	1			4			
Vanadium	EPA 3050	6010	2	1	11/10/97	11/11/97	5	U	u	
Zine	EPA 3050	6010	1	1	11/10/97	11/11/97	27			
	21113030	0010	1	1	11/10/97	11/11/97	57		丁	A

GODEN VALIDATED LEVEL V

Approved By:

That Date: 12/6/97

Analytical Report

Client:

Ogden Environmental Rocketdyne/313150002

Project: Sample Matrix:

Service Request: L9703698 Date Collected: 10/30/97

Date Received: 10/30/97

Metals

Sample Name: Lab Code:

Test Notes:

RF739

L9703698-015

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resu Note	it Rev S Qual	Qua
Antimony	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	иJ	Q
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	U	Ц	14
Barium	EPA 3050	6010	1	1	11/10/97	11/11/97	36	U		1
Beryllium	EPA 3050	6010	0.5	1	11/10/97	11/11/97	0.5	U	u	
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	1	U	u	1
Chromium	EPA 3050	6010	2	i	11/10/97	11/11/97	9	U	Ť	Q,E
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	5	***************************************		13/5
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	9			l
Lead	EPA 3050	6010	5	i	11/10/97	11/11/97	19			
Mercury	METHOD	7471	0.2	ī	11/10/97	11/10/97	0.2	U	u	
Molybdenum	EPA 3050	6010	10	î	11/10/97	11/11/97	10	U	ü	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	7	U		QE
Selenium	EPA 3050	7740	5	the second control of the second control of	11/10/97	11/11/97	5	U	u	O'C
Silver	EPA 3050	6010	1	i	11/10/97	11/11/97	1	U	u	
Thallium	EPA 3050	7841	5	Î	11/10/97	11/11/97	5	Ŭ		
Vanadium	EPA 3050	6010	2	ī	11/10/97	11/11/97	15	U	u	
Zinc	EPA 3050	6010	1	ì	11/10/97	11/11/97	46		-	TO STATE OF THE ST
			-	1	11/10/97	11/11/97	40		J	A

OGDEN VALDATED **LEVEL V**

Approved By:

Te Roal Date: 12/6/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/30/97

Date Received: 10/30/97

Metals

Sample Name: Lab Code:

Test Notes:

RF740

L9703698-016

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	t Rev Qual	Qua
Antimony	EPA 3050	6010	11	1	11/10/97	11/11/97	11	U	uJ	(1)
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	Ü	и	٦
Barium	EPA 3050	6010	I	1	11/10/97	11/11/97	88	U		ļ
Beryllium	EPA 3050	6010	0.5	i	11/10/97	11/11/97	0.6			
Cadmium	EPA 3050	6010	1	î	11/10/97	11/11/97	0.0	U	u	
Chromium	EPA 3050	6010	2	î	11/10/97	11/11/97	23	U	~	0.5
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	<u> </u>		<u></u>	QE
Copper	EPA 3050	6010	2	1	11/10/97	11/11/97	9			
Lead	EPA 3050	6010	5	1	11/10/97	11/11/97	10			
Mercury	METHOD	7471	0.2	1	11/10/97	11/11/97	0.2	7.7		i
Molybdenum	EPA 3050	6010	11	1	11/10/97	11/10/97	11	U	u	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97		U		^ -
Selenium	EPA 3050	7740	5	erent de la marie	11/10/97	11/11/97	16	Y 7	u	Q,E
Silver	EPA 3050	6010	1	1	11/10/97	11/11/97	3	Ū	u	
Thallium	EPA 3050	7841	÷	1	11/10/97	11/11/97	5	U		
Vanadium	EPA 3050	6010	2	1	11/10/97		-	U	u	
Zinc	EPA 3050	6010	1	1	11/10/97	11/11/97	37			
		5515		1	11/10/97	11/11/97	51		J	Α



LEVEL V

Approved By:

Date: 12/6/97

Analytical Report

Client:

Ogden Environmental Rocketdyne/313150002

Project: Sample Matrix:

Soil

Service Request: L9703698 Date Collected: 10/30/97

Date Received: 10/30/97

Metals

Sample Name: Lab Code:

RF741

Test Notes:

L9703698-017

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resu Note	It Rev s Qual	Qua
Antimony	EPA 3050	6010	10	1	11/10/97	11/11/97	10	U	иJ	0
Arsenic	EPA 3050	7060	5	1	11/10/97	11/11/97	5	IJ	u.	4
Barium	EPA 3050	6010	1	ĩ	11/10/97	11/11/97	44	U		Ì
Beryllium	EPA 3050	6010	0.5	î	11/10/97	11/11/97	0.5	**		
Cadmium	EPA 3050	6010	1	1	11/10/97	11/11/97	3	U	u	
Chromium	EPA 3050	6010	2	1	11/10/97	11/11/97	_		7	<u>ا</u> ا
Cobalt	EPA 3050	6010	2	1	11/10/97	11/11/97	55			Q,E
Copper	EPA 3050	6010	2	1	11/10/97		4			
Lead	- EPA 3050	6010	÷	1	11/10/97	11/11/97	71			
Mercury	METHOD	7471	0.2	1		11/11/97	180			l
Molybdenum	EPA 3050	6010	10	1	11/10/97	11/10/97	0.2	U	u	
Nickel	EPA 3050	6010	5	1	11/10/97	11/11/97	10	U	u_	
Selenium	EPA 3050	7740			11/10/97	11/11/97	10		J	Q,E
Silver	EPA 3050	6010	1	l ,	11/10/97	11/11/97	5	U	и	
Thallium	EPA 3050		1	1	11/10/97	11/11/97	1	U	L	
Vanadium	EPA 3050	7841)	1	11/10/97	11/11/97	5	Ū	u	
Zinc		6010	2	1	11/10/97	11/11/97	17			
CITIC	EPA 3050	6010	1	1	11/10/97	11/11/97	220		丁	A

ODEN VALIDATED **LEVEL V**

Approved By: 1844/021397p

Date: 12/6/97

5019

03698ICP.JE2 - Sample (7) 12/5/97

Page No.:



550 South Wadsworth Blvd. Ste. 500 Denver, CO 80226 (303) 935-6505

Rocketdyne

Analysis/Method: 6010/7000

No. of Samples: 12

Date Completed: August 19, 1998 Reviewer: K. Okonzak-Lowry

Ref: USEPA Contract Laboratory Program National Functional Guidelines For Inorganic Data Review (Feb. 1994), Columbia Analytical Services, Inc. - Canoga Park, Determination of Trace Elements by Inductively Coupled Plasma, Optical Emission Spectrometry SOP ICP-OES, Revision 1.0 (8/96). Columbia Analytical Services, Inc. - Canoga Park, Graphite Furnace Atomic Absorption Spectrometry SOP GFA-GFAA, Revision 1.0 (8/96). Columbia Analytical Services, Inc. - Canoga Park, Mercury in Solid or Semisolid Waste SOP MET-7471, Revision 2.0 (3/98).

SDG: L9703679

Samples Reviewed: RF713, RF714, RF715, RF717, RF718, RF719, RF720, RF721, RF723, RF728, RF731,

RF732

EPA Level V- Metals Assessment Form

	Problems	Qualifications
Sample Management	The sample condition questions were answered on the applicable COCs. The sample cooler temperatures upon receipt were noted on the COCs at 14°C and 3°C. The COCs were signed by the field and laboratory personnel. No cooler custody seals were present.	Due to the nonvolatile nature of the analytes, the samples were not qualified for the temperature blanks.
2. Method Blanks	None. All method blank results were below laboratory determined PQLs.	None
3. LCS	The LCS results were all within the laboratory established control limits of 75-125%R.	None
4. Duplicates	None performed.	None
5. MS/MSDs Performed on soil samples	Antimony: MS at 49%R/MSD at 46%R.	Antimony nondetects qualified "UJ" for the MS/MSD %Rs.

T400MT16 1 Revision 1

	Problems	Qualifications
RF731(no AI or B) and RF458, SDG 4204,(AI and B only)	The aluminum and boron only	
350 4204, (All and 5 only)	results for RF458 were within the 75-125%R control limits.	
6. Furnace Atomic Absorption QC	The post digestion spike recoveries for the arsenic, selenium, and	None
Post digestion spikes performed on sample RF715	thallium analyses were within the 85-115%R control limit.	
	The validator determined the post spike results by reviewing the GFAA raw data.	
7. ICP Serial Dilution		
Performed on sample RF714	All serial dilution results greater than 10 the PQL were within the 10%D control limit with the exception of zinc with a 15.3%D.	Zinc detected in the samples was qualified "J."
	There was no ICP serial dilution form in the report. The validator determined the serial dilution results by reviewing the ICP raw data.	
8. Field QC Samples	There were detects in the field QC	None
ER sample: RF803 FB sample: RS682 Field Duplicates: None identified for this SDG	samples but none at high enough levels to require sample qualifications.	
9. Other	None	None
10. <u>Comments</u>	None	None

Analytical Report

Client:

Ogden Environmental Project:

Sample Matrix:

Rocketdyne/313150002

Soil

Service Request: L9703679 Date Collected: 10/28/97

Date Received: 10/28/97

Metals

Sample Name:

Lab Code:

RF713

L9703679-001 Test Notes:

Units: MG/KG Basis: Dry

Antimony	•	Result Rev la ult <u>Notes</u> Qual	Result	Date Analyzed	Date Digested	Dilution Factor	PQL	Analysis Method	Prep Method	Analyte
Selenium EPA 3050 7740 5 1 11/6/97 11/6/97 11 Silver EPA 3050 6010 1 1 11/6/97 150 Thallium EPA 3050 7841 5 1 11/6/97 11/6/97 150	Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium	U u u u u u u u u u u u u u u u u u u u	5 970 0.5 1 29 6 27 77 0.2 10 11 5 150 5 24	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !	5 1 0.5 1 2 2 2 2 5 0.2 10 5 5 1	7060 6010 6010 6010 6010 6010 6010 6010	EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050	Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium

OGDEN VALIDATED

LEVEL V

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703679 Date Collected: 10/28/97

Date Received: 10/28/97

Metals

Sample Name:

Lab Code:

RF714

Test Notes:

L9703679-002

Units: MG/KG Basis: Dry

Antimony EPA 3050 6010 10 1 11/6/97 11/6/97 10 U Arsenic EPA 3050 7060 5 1 11/6/97 11/6/97 5 U Barium EPA 3050 6010 1 1 11/6/97 11/6/97 1000 Beryllium EPA 3050 6010 0.5 1 11/6/97 11/6/97 0.5 U Cadmium EPA 3050 6010 1 1 11/6/97 11/6/97 1 U Chromium EPA 3050 6010 2 1 11/6/97 11/6/97 1 U Cobalt EPA 3050 6010 2 1 11/6/97 11/6/97 16 C Copper EPA 3050 6010 2 1 11/6/97 11/6/97 17 Lead EPA 3050 6010 5 1 11/6/97 11/6/97 40 Mercury METHOD 7471 0.2 1 11/6/97 11/6/97 0.2<	•	Code
Silver EPA 3050 6010 1 1 11/6/97 11/6/97 110 Thallium EPA 3050 7841 5 1 11/6/97 11/6/97 5 U Vanadium EPA 3050 6010 2 1 11/6/97 11/6/97 28 Zinc EPA 3050 6010 1 1 11/6/97 11/6/97 3200 J	Barium Beryllium Cadmium Chromium Cobalt Copper Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium	Q

OGDEN VALIDATED

LEVEL V

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Sludge

Service Request: L9703679

Date Collected: 10/28/97 Date Received: 10/28/97

Metals

Sample Name: Lab Code:

Test Notes:

RF715

L9703679-003

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resu Note	It Rev s Qual	Qua Codi
Antimony	EPA 3050	6010	39	1	11/6/97	11/6/97	3 9	U	ИJ	
Arsenic	EPA 3050	7060	20	I	11/6/97	11/6/97	20	Ü	u	Q
Barium	EPA 3050	6010	4	1	11/6/97	11/6/97	68	U	-	1
Beryllium	EPA 3050	6010	2	1	11/6/97	11/6/97	2	U	Ц	l
Cadmium	EPA 3050	6010	4	1	11/6/97	11/6/97	27	O		
Chromium	EPA 3050	6010	8	1	11/6/97	11/6/97	32			}
Cobalt	EPA 3050	6010	8	ī	11/6/97	11/6/97	8	IJ	u	ł
Copper	EPA 3050	6010	8	I	11/6/97	11/6/97	68	U		
Lead	EPA 3050	6010	20	l	11/6/97	11/6/97	200			
Mercury	METHOD	7471	0.8	4	11/6/97	11/6/97	5.3			
Molybdenum	EPA 3050	6010	39	1	11/6/97	11/6/97	3.9	U	u	
Nickel	EPA 3050	6010	20	1	11/6/97	11/6/97	30	Ü	00	Ì
Selenium	EPA 3050	7740	20	ī	11/6/97	11/6/97	20	U	u	
Silver	EPA 3050	6010	4	1	11/6/97	11/6/97	4	U	u	
Thallium	EPA 3050	7841	20	1	11/6/97	11/6/97	20	U		i
Vanadium	EPA 3050	6010	8	1	11/6/97	11/6/97	10	Ų	u	ļ
Zinc	EPA 3050	6010	4	ì	11/6/97	11/6/97	1200		J	A

OGDEN VALIDATED

LEVEL V

Approved By: (

5003

Page No.:

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

0.31

Service Request: L9703679

Date Collected: 10/28/97 Date Received: 10/28/97

Metals

Sample Name:

Lab Code: Test Notes: RF717

L9703679-005

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resu <u>Note</u>	It Rev s Qual	Qua Code
Antimony	EPA 3050	6010	10	1	11/6/97	11/6/97	10	U		
Arsenic	EPA 3050	7060	5	1	11/6/97	11/6/97	5	_	UJ	Q
Barium	EPA 3050	6010	1	í	11/6/97	11/6/97	340	U	00	
Beryllium	EPA 3050	6010	0.5	i	11/6/97	11/6/97				
Cadmium	EPA 3050	6010	1	1	11/6/97	11/6/97	0.5	U	u	Ì
Chromium	EPA 3050	6010	2	1	11/6/97	11/6/97	1	U	u	
Cobalt	EPA 3050	6010	2	1	11/6/97		13			
Copper	EPA 3050	6010	2	1	11/6/97	11/6/97	5			1
Lead	EPA 3050	6010	5	1		11/6/97	12			
Mercury	METHOD	7471	0.2	1	11/6/97	11/6/97	35			1
Molybdenum	EPA 3050	6010	10	1	11/6/97	11/6/97	0.2	U	u	i
Nickel	EPA 3050	6010	5	1	11/6/97	11/6/97	10	U	u	
Selenium	EPA 3050	7740	5	1	11/6/97	11/6/97	9			1
Silver	EPA 3050	6010	3	1	11/6/97	11/6/97	5	U	u	1
Thallium	EPA 3050		i ~	I	11/6/97	11/6/97	35			
Vanadium		7841	5	1	11/6/97	11/6/97	5	U	и	
Zinc	EPA 3050	6010	2	1	11/6/97	11/6/97	21			
Zino	EPA 3050	6010	1	1	11/6/97	11/6/97	250		J	A

OGDEN VALIDATED

LEVEL V

Approved By

Eydie Schuzit

Date: <u>2/5/98/</u>

5004

Page No.:

03679ICP.JE1 - Sample (4) 12/3/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Service Request: L9703679 Date Collected: 10/28/97

Date Received: 10/28/97

Metals

Sample Name:

Lab Code: Test Notes: RF718

L9703679-006

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result		ilt Rev	
Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium Zine	EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050	6010 7060 6010 6010 6010 6010 6010 6010	10 5 1 0.5 1 2 2 2 5 0.2 10 5 5 1 5 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	10 5 150 0.5 1 18 6 10 12 0.2 10 14 5 6 5 32	U U U U U U	www uu uu u J	Q
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OGDEN VALIDATED

LEVEL V

5005

03679ICPJE1 - Sample (5) 12/8/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703679 Date Collected: 10/28/97

Date Received: 10/28/97

Metals

Sample Name: Lab Code:

Test Notes:

RF719

L9703679-007

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resu <u>Note</u>	lt Rev s Qual	Qua Codi
Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium Zinc	EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 METHOD EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050	6010 7060 6010 6010 6010 6010 6010 6010	10 5 1 0.5 1 2 2 2 5 0.2 10 5 5 1 5 2	1 1 1 1 1 1 1 1 1 1 1	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	10 5 140 0.5 1 11 5 9 12 0.2 10 9 5 7 5 21 73	U U U U U	WH WH WH W H J	Q

OGDEN VALIDATED

LEVEL V

5006

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703679 Date Collected: 10/28/97

Date Received: 10/28/97

Metals

Sample Name:

RF720

Lab Code:

Test Notes:

L9703679-008

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resu _Note	It Rev	Qual
Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium Zinc	EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050 EPA 3050	6010 7060 6010 6010 6010 6010 6010 6010	10 5 1 0.5 1 2 2 2 5 0.2 10 5 5 1 5	1 1 1 1 1 1 1 1 1 1 1	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	10 5 110 0.5 1 14 5 17 24 0.2 10 13 5 5 5 5 25 130	υ υ υ υ	un un un u T	Q
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OGDEN VALIDATED

LEVEL V

03679ICP.JE1 - Sample (7) 12/8/97

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703679 Date Collected: 10/28/97

Date Received: 10/28/97

Metals

Sample Name:

Lab Code:

Test Notes:

RF721

L9703679-009

Units: MG/KG

Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Result Rev Notes Qual	
Aluminum Boron	EPA 3050 EPA 3050	6010 6010	10 10	1	11/6/97 11/6/97	11/6/97 11/6/97	9300 18		

COUNTY VALIDATED

LEVEL V

5008

03679ICP.JE2 - Sample 12/8/97

Page No.:

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Sludge

Service Request: L9703679 Date Collected: 10/29/97

Date Received: 10/29/97

Metals

Sample Name: Lab Code:

Test Notes:

RF728

L9703679-017

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	t Rev Qual	Qual Code
Antimony	EPA 3050	6010	12	1	11/6/97	11/6/97	12	U	uJ	Q
Arsenic	EPA 3050	7060	6	1	11/6/97	11/6/97	6	Ŭ	u	ω _ζ
Barium	EPA 3050	6010	1	Ī	11/6/97	11/6/97	97	O		
Beryllium	EPA 3050	6010	0.6	1	11/6/97	11/6/97	0.6	U	u	
Cadmium	EPA 3050	6010	1	Ī	11/6/97	11/6/97	2	O	•	
Chromium	EPA 3050	6010	2	1	11/6/97	11/6/97	17			
Cobalt	EPA 3050	6010	2	ī	11/6/97	11/6/97	6			
Copper	EPA 3050	6010	2	1	11/6/97	11/6/97	21			
Lead	EPA 3050	6010	6	1	11/6/97	11/6/97	22			
Mercury	METHOD	7471	0.2	1	11/6/97	11/6/97	0.2	U	u	
Molybdenum	EPA 3050	6010	12	1	11/6/97	11/6/97	12	U	и	
Nickel	EPA 3050	6010	6	1	11/6/97	11/6/97	24	U		
Selenium	EPA 3050	7740	6	1	11/6/97	11/6/97	6	U	и	
Silver	EPA 3050	6010	1	1	11/6/97	11/6/97	3	U	u	
Thallium	EPA 3050	7841	6	1	11/6/97	11/6/97	<i>5</i>	7.7		
Vanadium	EPA 3050	6010	2	1	11/6/97		-	U	u	
Zinc	EPA 3050	6010	1	1		11/6/97	28			
	21113030	0010	1	1	11/6/97	11/6/97	110		J	А

ODEN MIDATED

LEVEL V

5009

03679ICP.JE1 - Sample (8) 2/5/98

Page No.:

Analytical Report

Client: Project:

Ogden Environmental Rocketdyne/313150002

Sample Matrix:

Soil

Service Request: L9703679

Date Collected: 10/29/97 Date Received: 10/29/97

Metals

Sample Name:

RF731

Lab Code:

Test Notes:

L9703679-019

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Notes	t Rev	Qua
Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Copper Lead Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium Zinc	EPA 3050 EPA 3050	6010 7060 6010 6010 6010 6010 6010 6010	10 5 1 0.5 1 2 2 2 5 0.2 10 5 5 1 5 1	1 1 1 1 1 1 1 1 1 1 1 1	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97 11/6/97	10 5 60 0.5 1 11 5 7 23 0.2 10 7 5 1 5 1	U U U U U U	un un un un T	1

ODEN VALDATED

LEVEL V

5010

Page No :

Analytical Report

Client:

Ogden Environmental

Project:

Rocketdyne/313150002

Sample Matrix:

Service Request: L9703679

Date Collected: 10/29/97

Date Received: 10/29/97

Metals

Sample Name: Lab Code:

Test Notes:

RF732

L9703679-020

Units: MG/KG Basis: Dry

Analyte	Prep Method	Analysis Method	PQL	Dilution Factor	Date Digested	Date Analyzed	Result	Resul Note:	It Rev s Qual	Qual Code
Antimony	EPA 3050	6010	10	1	11/6/97	11/6/97	10	U	uJ	~
Arsenic	EPA 3050	7060	5	1	11/6/97	11/6/97	5	U	u	Q
Barium	EPA 3050	6010	1	1	11/6/97	11/6/97	94	U	٠.	
Beryllium	EPA 3050	6010	0.5	Ī	11/6/97	11/6/97	0.6			
Cadmium	EPA 3050	6010	1	i	11/6/97	11/6/97	1	U	u	
Chromium	EPA 3050	6010	2	i	11/6/97	11/6/97	18	U	<i>-</i>	
Cobalt	EPA 3050	6010	2	1	11/6/97	11/6/97	7			
Copper	EPA 3050	6010	2	i	11/6/97	11/6/97	9			
Lead	EPA 3050	6010	5	i	11/6/97	11/6/97	8			
Mercury	METHOD	7471	0.2	i	11/6/97	11/6/97	0.2	U	и	
Molybdenum	EPA 3050	6010	10	1	11/6/97	11/6/97	10		u	
Nickel	EPA 3050	6010	5	i	11/6/97	11/6/97	12	U	1/4	
Selenium	EPA 3050	7740	5	1	11/6/97	11/6/97	5	* 1	u	
Silver	EPA 3050	6010	1	i	11/6/97	11/6/97	J	U		
Thallium	EPA 3050	7841	5	i	11/6/97	11/6/97	5	U U	u	
Vanadium	EPA 3050	6010	2	i	11/6/97	11/6/97	36	U	u	
Zinc	EPA 3050	6010	ī	1	11/6/97	11/6/97	62			
			-		1110171	11/0/9/	02		J	Α

GGDEN VALIDAT

LEVEL V

Result Rev | Qual Notes and Code

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Project: Sample Matrix: Ogden Environmental Rocketdyne/313150002

Soil

Service Request: L9703679 Date Collected: 10/28/97

Date Received: 10/28/97

Metals

Sample Name:

Lab Code: Test Notes: RF723

L9703679-011

Units: MC/KG

Basis: Dry

Analyte

Aluminum

Boron

Analysis Prep Method PQL Method 10 6010 **EPA 3050** 10 6010 EPA 3050

Date Date Dilution Result Analyzed Digested Factor 12000 12/26/97 12/19/97 10 12/19/97 12/26/97 1

OCDEN VALIDA

LEVEL V

Approved By: Eyolis Schwart

550 South Wadsworth Blvd. Ste. 500 Denver, CO 80226 (303) 935-6505

Rocketdyne

Analysis/Method: 6010/9045/7470 (with 1312 prep method)

No. of Samples: 20

Date Completed: February 26, 1997

Reviewer: H. White

Ref: USEPA Contract Laboratory Program National Functional Guidelines For Inorganic Data Review (Feb.

1994)

 $\frac{Samples\ Reviewed:}{S03S01}, BGSS03S01, BGSS03S01, BGSS03S02, ELSS01S01, CFSS01S01, BGSS04S01, SNSS01S01, BASS02S01, BASS02S02, R2SS01S01, ECSS01S01, ECSS01S02, ECSS02S01, BASS02S02, R2SS01S01, ECSS01S02, ECSS02S01, BASS02S02, R2SS01S02, ECSS02S01, BASS02S02, R2SS01S01, ECSS01S02, ECSS02S01, BASS02S02, R2SS01S01, ECSS01S02, ECSS02S01, BASS02S02, ELSS01S01, ECSS01S02, ECSS02S01, ECSS02S01, ECSS02S02, ELSS01S01, ECSS01S02, ECSS02S01, ECSS02S02, ELSS01S02, ECSS02S01, ECSS02S02, ELSS01S02, ECSS02S01, ECSS02S02, ECSS02S01, ECSS02S02,$

ECSS02D01, ECSS02S02, BLSS01S01, BLSS01S02, BGSS05S01, BGSS06S01

EPA Level V- Metals Assessment Form

		Problems	Qualifications
1.	Sample Management	Cooler temperature acceptable. The holding times for pH were exceeded prior to arrival at the laboratory.	All pH analysis results were qualified as estimated, "J."
		The client ID for sample #38 was incorrectly identified on the Form I as BLSS02S01.	The client ID was changed to BLSS01S02, to match the COC.
2.	Method Blanks	Ba: 0.0012 mg/L Cr: 0.0039 mg/L Pb: 0.0011 mg/L Tl: 0.0029 mg/L	Samples with barium, chromium, lead, and/or thallium detects reported below 5H the blank value were qualified "UJ."
3.	LCS/BS	Acceptable as reviewed.	None
	Duplicates formed on sample BGSS03S01 BGSS06S01 (pH only)	Arsenic exceeded 35% RPD, but was within 2H the CRDL.	None

T200MT4 1 Revision 3

5. MS/MSDs Performed on sample BGSS03S01	Al: 199% recovery	Aluminum detects were qualified "J." No qualifications were assigned to nondetects.
6. ICP Serial Dilution	No forms were provided; therefore, no evaluation was given.	None
7. Field QC Samples Field Duplicates: BGSS03S01/BGSS03D01 and ECSS02S01/ECSS02D01	Molybdenum and antimony were detected in ECSS02S01 only.	None
8. Other	None	None
9. Comments	According to the COCs, pH analysis was not requested. Since pH results were provided, the analysis was validated.	None

Client : OGDEN ENVIRONMENTAL SERVICES
Project # : 313150002
Project Name: ROCKETDYNE Ceimic I.D.: 605179

Sample Client ID #	Matrix	Date Sampled	Date Received
21 PPSS03S01/SPLP 01 22 BGSS03S01/SPLP 02 23 BGSS03D01/SPLP 03 24 BGSS03S02/SPLP 04 25 ELSS01S01/SPLP 05	SPLP EXTRACT SPLP EXTRACT SPLP EXTRACT SPLP EXTRACT SPLP EXTRACT	22-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96	23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96
Parameter	Units 21 Rev Gual 22 Gual Code	3 Rev Carl 24 Julies	25 Rev (4)
SILVER ALUMINUM ARSENIC BARIUM BERYLLIUM CADMIUM COBALT CHROMIUM COPPER MERCURY MOLYBDENUM NICKEL LEAD ANTIMONY SELENIUM THALLIUM VANADIUM ZINC	MG/L 2.71N 5 0.0050B MG/L 0.0054B MG/L 0.285 MG/L <0.0007 u <0.0007 u <0.0003 u <0.0089B MG/L 0.0167B MG/L <0.0039 u <0.0089B MG/L <0.001 u <0.001 u <0.0089B MG/L <0.0039 u <0.0089B MG/L <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.001 u <0.00	3.16N 3 0.0016B 0.0016B 0.0007 u 0.0003 u 0.0003 u 0.0059B 0.0045B u 0.0045B u 0.0004 u 0.0003 u 0.0004 u 0.0001 u 0.00039 u 0.00066B	<0.0037 L 19.0N J 0.124 0.635 0.0009B <0.0003 L 0.0112B 0.0217 0.0147B <0.001 L <0.0039 L 0.0127B 0.0144 <0.0086 L <0.0023 L 0.0025 BLAST B 0.0446B 0.129



Ceimic I.D.: 605179

Client : OGDEN ENVIRONMENTAL SERVICES
Project # : 313150002
Project Name: ROCKETDYNE

		. 																		
Sample Clie	nt ID			Matr	ix								at Sam	e pled				Date Rece		ed
26 CFSS	01S01/SPLP	06		SPLP	EXT	RA(CT					2	23-	 MAY-96	 5			 23-N	 1AY-	96
27 BGSS	04S01/SPLP	07		SPLP	EXT	RAC	CT					2	23-	MAY-96	5			23-N	AY-	96
28 SNSS	01S01/SPLP	08		SPLP	EXT	RAC	CT					2	23-	MAY-96	5			23-N	AY-	96
29 BASS	02S01/SPLP	09		SPLP	EXT	RAC	CT					2	23-	MAY-96	5			23-N	AY-	96
30 BASS	02S02/SPLP	10		SPLP	EXT	RAC	CT					2	23-	MAY-96	5			23-N	IAY-	96
Parameter			Units	26	TEV QUAI	1 Que	·27	T	(CV 11	Que	28	THEY !	QUA	29	TIEN/ Qua	, jQua	130		JEN .	QUA.
						T				ومنا		1				[<u> </u>		CAM	Cap
SILVER			MG/L	<0.00				0037			<0.0037			<0.003				.003		
ALUMINUM			MG/L	58.0N		0				0.	0.514N		CA.	7.40N	2	Ø.	15	.8N	1	G.
ARSENIC	100		MG/L	0.018				0015	u		0.0027B			0.0068	BB			0102	2	
BARIUM			MG/L	0.856				76B			0.180B	ě		0.427				522		
BERYLLIUM			MG/L	0.001		Transport Co.		0007			<0.0007	. 8		<0.000	-	1	Ο.	0012	2B	
CADMIUM			MG/L	0.000		1000	0.6	30B			<0.0003			<0.000)3 U	T-CANADA	<0	.000)3 U	
COBALT			MG/L	0.014	3B	Para Bella		0033			<0.0033			0.0074		West Course	0.	0097	7B	
CHROMIUM			MG/L	0.066	5		0.0	088B	w	B	<0.0034	u	B	0.0104	w	6	0.	0237	7	
COPPER			MG/L	0.053	9	-		044B	ì		<0.0024			0.0102		and a second		0194		
MERCURY			MG/L	<0.00	1 u		<0.	001	ч		<0.001	u		<0.001	· U		<0	.001	Lu	
MOLYBDENUM			MG/L	0.004	8B		<0.	0039	u		0.0048B	. !		<0.003	39 K		<0	.003	39u	
NICKEL			MG/L	0.053	4		0.0	182B			0.0148B	-		0.0055	В		0.	0119	ЭВ	
LEAD			MG/L	0.022	5		0.0	062			0.0029B	เนซ	В	0.0063	}		0.	0153	3	
ANTIMONY			MG/L	0.154			<0.	0086	u.		<0.0086	u		<0.008	16 U.		0.	0090	В	
SELENIUM			MG/L	<0.00	234	open and the second	<0.	0023	h.		<0.0023	ul		<0.002	23 u		<0	.002	23u	
THALLIUM			MG/L	<0.00	20 u	mpadapasado.	<0.	0020	u		<0.0020	u		0.0028	Bus	18	<0	.002	20u	
VANADIUM			MG/L	0.091	1	Sample and Sample and	0.0	174B			0.0038B	· · · · · · · · · · · · · · · · · · ·		0.0202	2B	en-contract	0.	0350	В	
ZINC			MG/L	0.222		Amonton	0.1	.23			0.0706	anning and		0.0740)	E000400	0.	181	Kanadaan	
						•			ì			į								



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Ceimic I.D.: 605179

Client : OGDEN ENVIRONMENTAL SERVICES

Project # : 313150002 Project Name: ROCKETDYNE

BERYLLIUM CADMIUM COBALT CHROMIUM COPPER MERCURY MOLYBDENUM NICKEL LEAD ANTIMONY SELENTUM THALLIUM VANADIUM ZINC

______ Date Sample Client ID Date Matrix Received # Sampled _____ R2SS01S01/SPLP 11 ECSS01S01/SPLP 12 ECSS01S02/SPLP 13 23-MAY-96 SPLP EXTRACT 23-MAY-96 31 23-MAY-96 SPLP EXTRACT 23-MAY-96 32 23-MAY-96 SPLP EXTRACT 23-MAY-96 33 23-MAY-96 23-MAY-96 23-MAY-96 SPLP EXTRACT 34 ECSS02S01/SPLP 14 35 ECSS02D01/SPLP 15 SPLP EXTRACT 23-MAY-96 Parameter Units 31 Rev Our 32 Rev Our 33 Rev Our 35 Rev Our Code Our Code Our Code Our Code Our Code Our Code MG/L <0.0037 4 <0.0037 4 <0.0037 4 <0.0037 4 <0.0037 4
 MG/L
 3.86N
 J
 0.15.7N
 J
 0.0087B
 0.0130
 0.0060B
 0.0085B
 0.0085B
 0.00085B
 0.00085B
 0.00085B
 0.00085B
 0.0009B
 0.0009B
 0.0009B
 0.0009B
 0.0009B
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 0.00012B
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 0.00012B
 0.00012B
 0.00012B
 0.00115B
 0.0115B
 0.0115B
 0.0115B
 0.0115B
 0.0115B
 0.0253
 0.0311
 0.0253
 0.0311
 0.0253
 0.0311
 0.0205B
 0.0263
 0.0263
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 0.001B
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 0.001B
 0.001B
 0.001B
 0.001B
 0.00248B
 0.0194B
 0.0248B
 0.0194B
 0.0024BB
 0.0117
 0.0117
 0.0024BB
 0.0023 u
 0.0023 u
 0.0023 u
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 0.0023 u
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 0.0022B u
 0.0022B u
 0.0022B u
 0.0022B u
 0.0022B u
 0.0022B u
 < MG/L 3.86N J & 15.7N J & 24.4N J & 16.7N J & 23.1N J & ALUMINUM ARSENIC BARIUM

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Client : OGDEN ENVIRONMENTAL SERVICES
Project # : 313150002 Ceimic I.D.: 605179

Project Name: ROCKETDYNE

Sample Client ID #		Matrix		Date Sampled	Date Received
36 ECSS02S02/SPLP 37 BLSS01S01/SPLP 38 BLSS02S01/SPLP 39 BGSS05S01/SPLP 40 BGSS06S01/SPLP	17 18 BLSSO1502 19	SPLP EXTRACT SPLP EXTRACT SPLP EXTRACT SPLP EXTRACT		23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96	23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96
Parameter	Units	36 REV QUA)3	37 Revious 38 Trev	Duni39 Pul 6	140 5 162
SILVER ALUMINUM ARSENIC BARIUM BERYLLIUM CADMIUM COBALT CHROMIUM COPPER MERCURY MOLYBDENUM NICKEL LEAD ANTIMONY SELENIUM THALLIUM VANADIUM ZINC	MG/L MG/L MG/L MG/L MG/L MG/L MG/L MG/L	28.2N	CO.0037 W CO.0037 W CO.0037 W CO.0034 CO.0003 W CO.0003 W CO.0003 W CO.0003 W CO.0039 W CO.0039 W CO.0023 W CO.0	<pre><0.0037 k 15.0N 3 0.0099B 0.455 <0.0007 k <0.0003 k 0.0117 0.0188 ks 0.0136 <0.001 k <0.0039 k 0.0213B 0.0116 <0.0086 k <0.0023 k</pre>	0.0046B 0.355 <0.0007 u <0.0003 u 0.0114B 0.0104 us B 0.0044B <0.001 u <0.0039 u 0.0130B 0.0117 <0.0086 u <0.0023 u

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Revision I # 5/12/97

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Client : OGDEN ENVIRONMENTAL SERVICES
Project # : 313150002

Project Name: ROCKETDYNE

Ceimic I.D.: 605179

Samp #	le Client ID	Matrix	Date Sampled	Date Received
1 2 3 4 5	PPSS03S01 BGSS03S01 BGSS03D01 BGSS03S02 ELSS01S01	SOIL SOIL SOIL SOIL	22-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96	23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96
	meter ISTURE	Units 1 Rev Qual 2 Qual 2 Qual Code 2 2.6 UNITS 7.5 5 H 5.7	Rev Qual 3 Rev Qual 4 Rev Qual 6 Qual Code 9 Qua	5 Rev Gual 2.9 6.9 J H

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Client : OGDEN ENVIRONMENTAL SERVICES
Project # : 313150002 Ceimic I.D.: 605179

Project Name: ROCKETDYNE

Sampl #	e Client ID	Matrix			Date Sampled	Date Received
6 7 8 9 10	CFSS01S01 BGSS04S01 SNSS01S01 BASS02S01 BASS02S02	SOIL SOIL SOIL SOIL SOIL			23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96	23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96
Param % MOI pH	eter 	% 2.8	2001 7 BUY 0 2006 7 GUAI C 4.0 H 5.6 J H	27.2 7.2	Rev Qual 9 Rev Qual Co	10.1 7.9 J H

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Client : OGDEN ENVIRONMENTAL SERVICES
Project # : 313150002 Ceimic I.D.: 605179

Project Name: ROCKETDYNE

Sample #	e Client ID	Matrix	Date Sampled	Date Received
11 12 13 14 15	R2SS01S01 ECSS01S01 ECSS01S02 ECSS02S01 ECSS02D01	SOIL SOIL SOIL SOIL SOIL	23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96	23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96 23-MAY-96
Parame % MOIS		Units 11 Qual 12 Qual	4.3 3.9 TH 6.9 5 H 6.5 5 H	4.9 6.6 J H

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Client : OGDEN ENVIRONMENTAL SERVICES
Project # : 313150002 Ceimic I.D.: 605179

Project Name: ROCKETDYNE

Samp] #	le Client ID	Matri	.x			Da Sa	te mpled		Dat Rec	eived
16 17 18 19 20	ECSS02S02 BLSS01S01 BLSS02S01 BGSS05S01 BGSS06S01	SOIL SOIL SOIL SOIL SOIL				23 23 23	- MAY - - MAY - - MAY - - MAY - - MAY -	96 96 96	 23 - 23 - 23 -	MAY-96 MAY-96 MAY-96 MAY-96 MAY-96
	neter 	* 5.7	Qual 17 And Code 2.5 T H 6.0	REN QUA QUAN Cod	4.5	REVIOUAL CODE	19 7.5 6.0	REV QUAL	2.7	2 H

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550 South Wadsworth Blvd. Ste. 500 Denver, CO 80226 (303) 935-6505

Rocketdyne

Analysis/Method: 6010/7471

No. of Samples: 20

Date Completed: February 25, 1997

Reviewer: H. White

Ref: USEPA Contract Laboratory Program National Functional Guidelines For Inorganic Data Review (Feb.

0

1994)

Samples Reviewed: BA2S01, BA2S02, BG3S01, BG3S01, BG3S02, BG4S02, BG5S01, BG6S01, BL1S01,

BL2S01, CF1S01, EC1S01, EC1S02, EC2S01, EC2S02, EL1S01, PP3S01, R21S01, SN1S01

EPA Level II- Metals Assessment Form

		Problems	Qualifications
1.	Sample Management	Cooler temperature acceptable. Holding times met.	No qualifications assigned to the data.
2.	Method Blanks	Al: 14.046 mg/kg Mo: 0.8180 mg/kg V: 0.4900 mg/kg	Samples with molybdenum detects reported below 5× the blank value (4.09 mg/kg) were qualified "UJ." No qualifications were assigned for aluminum or vanadium.
3.	LCS/BS	Acceptable as reviewed.	None
4. Perfori BG3S0	Duplicates med on sample	Acceptable as reviewed.	None
5.	MS/MSDs	Sb: 55.4% recovery – post digestion spike at 102% Al: -88.8% recovery	Antimony detects were qualified "J" in all samples. The sample value was greater than 4×the spike amount for aluminum; therefore, no qualifications were assigned.

T200MT3 1 Revision 2

6. <u>ICP Serial</u> <u>Dilution</u>	No forms were provided; therefore, no evaluation was given.	None
7. Field QC Samples Field duplicates: BG3S01/BG3D01 EC2S01/EC2D01	Selenium was detected in field duplicate pair BG3S01/BG3D01. The pair was considered to be in agreement.	None
8. <u>Other</u>	None	None
9. <u>Comments</u>	Due to software limitations, the sample IDs were shortened to fit in the EPA box. The full sample ID is present in the comment section of the Form Is.	None

		INORGANIC ANALYSES DATA SHEET					EPA SAMPLE NO.		
Lab Name: CEIM	IIC CORPORAT	ION	Contract: S	W84	. 6		BA2	501	
						l			
Lab Code: CCSD	Ca	se No.:	SAS No.	: _		SI	DG No.	: ROCKO2	
Matrix (soil/w	ater): SOIL			La	b Samp	le :	ID: 60	517909	
Level (low/med	LOW_			Da	te Rec	eive	ed: 05,	/23/96	
% Solids:	_90.	8							
Co	ncentration	Units (ug	/L or mg/kg dr	y w	eight)	: MC	G/KG		
				П					
	CAS No.	Analyte	Concentration	C	Q	М	"REV Qual	Code	
	7429-90-5	Aluminum_	9540			P	***************************************		
	7440-36-0	Antimony_	5.0		N	P_	2.	a	
	7440-38-2	Arsenic_	2.5			P			
	7440-39-3	Barium	92.6			P_		TANK TO THE TANK T	
	7440-41-7	Beryllium	0.27	• • •		P_		e de la companya de l	
	7440-43-9	Cadmium_	0.06	U		P_	L.A.	i de la companya de l	
	7440-70-2	Calcium_		 _ .		NR		r constant	
	7440-47-3	Chromium_	13.0	_ .		P_		The Control of the Co	
	7440-48-4	Cobalt	6.5	\overline{B}		P_		0.000	
	7440-50-8	Copper	7.9			P_		CONTRACTOR CONTRACTOR	
	7439-89-6	Iron		_ .		NR			
	7439-92-1	Lead	3.3	- .		P_			
		Magnesium		_ .		NR			
	7439-96-5	Manganese	- 0 05	.		NR			
	7439-97-6	Mercury	0.05			CV	表表。	f 2	
	7439-98-7	Molybdenu	1.0	$ _{\mathrm{B}} $		P_	wa.	ಟ	
		Nickel	8.9			P_			
		Selenium_ Silver				P_	u		
	7440-22-4	Thallium	0.72	U.		P_	Ĺs		
	7440-62-2	Vanadium_		ַ ט		P_	ix		
	7440-66-6	Zinc	26.7 50.2			P_			
	7440 00 0	21110		- -		P_			
•				- -					
Color Before:	BROWN	Clarit	y Before:			Tex	ture:	COARSE	
Color After:	YELLOW	. Clarit	y After:			Art	ifacts	:	
Comments:									

FORM I - IN

BA2S01_=_BASS02S01___

COPY VALDATED

LEVEL V

EPA	SA	MPI	Æ	NO.
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Lab Name: CEIM	IIC_CORPORAT	ION	Contract: S	W84	46		BA2	S02
Lab Code: CCSI) Ca	se No.:	SAS No.	: _		S	DG No.	: ROCKO:
Matrix (soil/w	ater): SOIL			La	ab Samp	le	ID: 60	517910
Level (low/med	l): LOW_	marriery.		Da	ate Rec	eiv	red: 05	/23/96
% Solids:	_89.	9						
Co	ncentration	Units (ug	/L or mg/kg dr	y v	weight)	: M	IG/KG	
	CAS No.	Analyte	Concentration	С	Q	М	REV	Ourl Code
	7429-90-5	Aluminum_	12500	_		P_		in the second se
	7440-36-0	Antimony_	8.3	В	N	P_	3	(9)
	7440-38-2	Arsenic_	4.1	_		P_		
	7440-39-3	Barium	60.0			P	.	
	7440-41-7	Beryllium	0.67			P_		
	7440-43-9	Cadmium_	0.06	U		P_	. L	
	7440-70-2	Calcium_		_		NR		
	7440-47-3	Chromium_	18.6	_		P_		
	7440-48-4	Cobalt	4.5	\overline{B}		P_		
	7440-50-8	Copper	8.8			P	.	date.
	7439-89-6	Iron		_		NR		
	7439-92-1	Lead	8.1	_		P_		
	7439-95-4	Magnesium				NR		
	7439-96-5	Manganese		_		NR		
	7439-97-6	Mercury	The state of the s			CV	u,	
	7439-98-7	Molybdenu	1.1	В		P_	14.65	6
	7440-02-0	Nickel	11.4			P_		
	7782-49-2	Selenium_	0.66			P_		
	7440-22-4	Silver		U		P_	t _A .	
	7440-28-0	Thallium_	0.42	U		P_	L,	
	7440-62-2	Vanadium_	27.6			P_		
	7440-66-6	Zinc	60.4	_		P_		

		***************************************		-				
Color Before:	BROWN	- Clarit	y Before:			Te	ture:	FINE
Color After:	YELLOW	Clarit	y After:		_	Ar	tifacts	
Comments: BA2S02 = BA	SS02S02							

OGDEN VALIDATED

EPA SAMPLE NO.

Lab Name: CEIN	MIC_CORPORAT	ION	_ Contract: SW846				BG3S01		
Lab Code: CCSI	O Ca	se No.:	SAS No.	: _		SI	DG No.	: ROCKO:	
Matrix (soil/v	water): SOIL			La	ıb Samp	ole :	ID: 60	517902	
Level (low/med	d): LOW_			Da	ite Rec	ceive	ed: 05	/23/96	
% Solids:	_97.	4							
Co	oncentration	Units (ug	/L or mg/kg dr	λM	eight)	: MC	G/KG		
	CAS No.	Analyte	Concentration	C	Q	М	REV Qual	Ount Cecté	
	7429-90-5	Aluminum	11800	-	***************************************	$ {P}$	TO The management of	The second secon	
	7440-36-0	Antimony	7.0		N	P-	2-	Q	
	7440-38-2	Arsenic_	2.1			P_			
	7440-39-3	Barium	96.6			P			
	7440-41-7	Beryllium	0.45			P_			
	7440-43-9	Cadmium_	0.06	U		P_	lt		
	7440-70-2	Calcium_		_		NR			
	7440-47-3	Chromium_	15.5			P_			
	7440-48-4	Cobalt	6.4	В		P_		and a more and a more	
	7440-50-8	Copper	8.1			P_		de commence de commence de commence de commence de commence de commence de commence de commence de commence de	
	7439-89-6	Iron		_		NR		A Designation of the Control of the	
	7439-92-1	Lead	7.3	_		P_		grammatics:	
	7439-95-4	Magnesium		_		NR			
	7439-96-5	Manganese				NR		n. deserting the state of the s	
	7439-97-6	Mercury	0.05			CV	la.	300 P	
	7439-98-7	Molybdenu	0.82	В		P P	D.J.	j is	
	7440-02-0	Nickel	11.0	_		P_		not realized	
	7782-49-2	Selenium_ Silver	0.59			P P		Personal Control of the Control of t	
	7440-28-0	Thallium	0.74		·	P-	l.s.	The state of the s	
	7440-28-0	Vanadium_	0.40 25.5			P P	u.	100 m	
	7440-66-6	Zinc		-		<u> </u>		nave appear	
	7440 00 0	21110	61.3			P_		CFC	
					····	-			
				_				- 1777777 - 1879777 - 1879777 - 1879777 - 1879777 - 1879777 - 1879777 - 1879777 - 1879777 - 1879777 - 1879777	
Color Before:	BROWN	Clarit	y Before:			Тех	ture:	FINE_	
Color After:	YELLOW	Clarit	y After:			Art	ifact	s:	
Comments: BG3S01_=_BG	SS03S01								

FORM I - IN

OCOEN VALDATED

EPA SAMPLE NO.

Lab Name: CEI	MIC_CORPORAT	ION	Contract: SW846				BG3D01		
Lab Code: CCS	D Ca	se No.:	SAS No.	: _		S	DG No.	: ROCKO	
Matrix (soil/	water): SOIL			La	b Samp	le	ID: 60	517903	
Level (low/me	d): LOW_			Da	ite Rec	eiv	ed: 05	/23/96	
% Solids:	_97.	5							
С	oncentration	Units (ug	/L or mg/kg dr	Y W	eight)	: M	G/KG		
	CAS No.	Analyte	Concentration	С	Q	М	REV Qual	Qual Codé	
	7429-90-5	Aluminum_	12200			P	PRINCIPAL SECTION AND ADDRESS.	and the Control of th	
	7440-36-0	Antimony_	7.4	B	N	P_	2,	a	
	7440-38-2	Arsenic_	2.4			P_			
	7440-39-3	Barium_	91.8			P			
	7440-41-7	Beryllium			**************************************	P_			
	7440-43-9	Cadmium_	0.06	١٧١		P_	u.		
	7440-70-2 7440-47-3	Calcium	37 3	-		NR			
	7440-47-3	Chromium_Cobalt	17.3 5.8	-		P_			
	7440-48-4			B		P_			
	7439-89-6	Copper	8.7			P NR		Out.	
	7439-89-6	Lead	7.5	-					
	7439-95-4	Magnesium		-		P NR			
	7439-96-5	Manganese				NR	1	The state of the s	
	7439-97-6	Mercury	0.05	ਹ		CV		To the mandatory	
	7439-98-7	Molybdenu	0.95			P	i	-	
	7440-02-0	Nickel	12.1			P-	ug.	<i>Z</i> -	
	7782-49-2	Selenium	0.72	ㅠ		P-		A principle of	
	7440-22-4	Silver	0.75			P-	M,		
,	7440-28-0	Thallium	0.41			P-	la.	acoust the second that the sec	
	7440-62-2	Vanadium	27.3			P	W. C.	To propose the second s	
	7440-66-6	Zinc	63.6	-	····	P_		non-page-page	
							•		
				-1					
Color Before:	BROWN_	Clarit	y Before:			Tex	kture:	FINE_	
Color After:	YELLOW	Clarit	y After:			Art	tifact	s:	
Comments: BG3D01_=_B0	GSS03D01								
	**************************************				· · · · · · · · · · · · · · · · · · ·				
									
	· · · · · · · · · · · · · · · · · · ·						**************************************		

FORM I - IN

SW846

LEVEL V

EPA SAMPLE NO.

Lab Name: CEII	MIC_CORPORAT	NOI	Contract: S	_	BG3S02			
Lab Code: CCSI	Ca	se No.:	SAS No.	: _		s	DG No.	: ROCKO
Matrix (soil/v	water): SOII			Lā	ab Samp	le	ID: 60	517904
Level (low/med	d): LOW_			Da	ate Rec	eiv	ed: 05	5/23/96
% Solids:	_97.	2						
Co	oncentration	Units (ug	/L or mg/kg dr	y w	veight)	: M	G/KG	
				П			1	
	CAS No.	Analyte	Concentration	С	Q	M	REV Qual	Qual Code
	7429-90-5	Aluminum	12400	-		P		
	7440-36-0	Antimony	6.5		N	P P	2.	G.
	7440-38-2	Arsenic	2.5			P-		
	7440-39-3	Barium	93.2			P-		
	7440-41-7	Beryllium				P_		
	7440-43-9	Cadmium	0.06			P-		
	7440-70-2	Calcium	0.08	١٧١			ii,	
	7440-70-2	Chromium	17 4			NR		
		1	17.4	=		P P		
	7440-48-4	Cobalt	5.5	$ _{\mathbf{R}} $				
	7440-50-8	Copper	9.2	_		P_		
	7439-89-6	Iron		_		NR		
	7439-92-1	Lead	5.6			P_		
	7439-95-4	Magnesium				NR		The same same same same same same same sam
	7439-96-5	Manganese				NR		
	7439-97-6	Mercury	0.05	B		CV		
	7439-98-7	Molybdenu	0.78	U		P	u.	
	7440-02-0	Nickel	11.8			P		
	7782-49-2	Selenium	0.53	\overline{R}		P-		
	7440-22-4	Silver	0.74	Ū		P-	L.L	
	7440-28-0	Thallium	0.40	U		P_		
	7440-62-2	Vanadium	28.1			P-	L.	
	7440-66-6	Zinc	62.8					
	1,110,00	21.10	02.0			P_		
			***************************************	- -				
	-				-			
Color Before:	BROWN	- Clarit	y Before:			Tex	cture:	FINE
Color After:	YELLOW	Clarit	cy After:			Art	ifact	s:
Comments: BG3S02_=_BG	SS03S02							
					· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	
**************************************							·	
		म ्	ORM I - IN					SW846
		10	TTA					OW846 /

SW846

LEVELV

EPA SAMPLE NO.

Lab Name: CEII	MIC_CORPORAT	ION	Contract: S	W84	46		BG4S01		
Lab Code: CCSI	D Ca	se No.:	SAS No.	: _		S	DG No.	: ROCK02	
Matrix (soil/	water): SOIL	<u>-</u>		Lā	ab Samp	ole	ID: 60	517907	
Level (low/med	d): LOW_			Da	ate Rec	eiv	ed: 05	/23/96	
% Solids:	_96.	0							
Co	oncentration	Units (ug	/L or mg/kg dr	у м	veight)	: M	G/KG		
	CAS No.	Analyte	Concentration	С	Q	М	REV Qual	Bun/ Codis	
	7429-90-5	Aluminum	12200	-		P	CXVAI	to a graph of the state of the	
	7440-36-0	Antimony	6.7		N	P	2.	a	
	7440-38-2	Arsenic	3.2			P-	m)	l Link	
	7440-39-3	Barium	44.2			$ _{\mathbf{P}}^{-}$	İ	SECOND CONTRACTOR CONT	
	7440-41-7	Beryllium				P ⁻		The state of the s	
	7440-43-9	Cadmium	0.06	1 1		P-	u.	11.0	
	7440-70-2	Calcium	The state of the s			NR		THE COLUMN TWO IS NOT THE COLUMN TWO IS NOT	
	7440-47-3	Chromium	36.8	-		P			
	7440-48-4	Cobalt	5.3	\overline{B}		P -			
	7440-50-8	Copper	3.8	В		P			
	7439-89-6	Iron				NR			
	7439-92-1	Lead	15.4	-	**	P			
	7439-95-4	Magnesium		-		NR			
	7439-96-5	Manganese		-		NR			
	7439-97-6	Mercury	0.05	Ū		CV	u		
	7439-98-7	Molybdenu	0.81	U		P	IX,		
	7440-02-0	Nickel	9.8		····	P_P	1		
	7782-49-2	Selenium_	0.48	ប	**************************************	P_	L		
	7440-22-4	Silver	0.77	U		P_	LA .		
	7440-28-0	Thallium_	0.42	U		P_	L		
	7440-62-2	Vanadium_	57.1			P			
	7440-66-6	Zinc	47.3			P_			
				_			1. Commonweal		
Color Before:	BROWN	Clarit	y Before:	1		Tex	ture:	FINE	
Color After:	YELLOW	Clarit	y After:		•		ifact		
Comments: BG4S01_=_BG	SS04S01				**				
		FO	PRM I - IN				(SW846	

LEVELV

EPA SAMPLE NO.

cer): SOIL LOW92.9	 5	SAS No.	La Da	ab Samp ate Rec	le l	ID: 609	517919
22.9 22.9 22.9 2429-90-5 2440-36-0	Units (ug,		Da y w	ate Rec	eive	e d: 05,	
_92.9 centration CAS No. 7429-90-5 7440-36-0	Units (ug,		y w				/23/96
CAS No. 7429-90-5	Units (ug,			veight)	: MC	G/KG	
CAS No. 7429-90-5 7440-36-0	Analyte			veight)	: MC	G/KG	
7429-90-5 7440-36-0		Concentration		·····	т-,	ı	
7440-36-0	Aluminum			Q	М	Rev Dunt	Qual Codii
7440-36-0	ratumithum l	22600	-		$ \overline{P} $	**************************************	Laddelf 63
7440-38-2	Antimony -	9.2		N	P_	T.	c a
	Arsenic	11.9			$ P^- $		
7440-39-3	Barium —	The state of the s	I 1	***************************************		:	
					$ P^- $		
	Cadmium_	0.06	Ū		P	ų	
	Calcium_				NR		
	!				P		
			_				
		25.0	_				
			_				
		14.3	_		P_		
			-				
			_				
					1 1		
			۱۷۱		$ \tilde{\mathbf{p}}^{-} $	U	
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		**************************************				u,	
	l ;		-				
	B1110	70.7	-		F-		
			-				
			_				
BROWN	Clarit	y Before:			Tex	ture:	FINE
TELLOW	Clarit	y After:	-		Art	ifacts	S: YES_
05S01							
	7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-92-1 7439-95-4 7439-96-5 7439-98-7 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-66-6		150 150	150 150			

SW846

FORM I - IN

LEVELV

EPA SAMPLE NO.

Lab Name: CEII	MIC_CORPORAT	ION	Contract: S	W84	16		BG6	S01
Lab Code: CCSI	Ca	se No.:	SAS No.	: _		s	DG No.	: ROCKO
Matrix (soil/	water): SOIL	·		Lä	ab Samp			
Level (low/med	d): LOW_			Da	ate Rec	eiv	ed: 05	/23/96
% Solids:	_97.	3						
Co	oncentration	Units (ug	/L or mg/kg dr	у м	eight)	: M	G/KG	
	CAS No.	Analyte	Concentration	С	Q	M	Rev Qual	Qual Code
	7429-90-5	Aluminum	9960	-		$\frac{1}{P}$	entercolono haberer sono servicio delle en	Service of the control of the contro
	7440-36-0	Antimony -	6.7		N	P-	3	a
	7440-38-2	Arsenic	4.0		·······	p_		
	7440-39-3	Barium	62.7	_		P_		
	7440-41-7	Beryllium	0.54			P		
	7440-43-9	Cadmium_	0.06	U		P_	le,	
	7440-70-2	Calcium_		_		NR		
	7440-47-3	Chromium_	16.0			P_		
	7440-48-4	Cobalt	4.4	В		P_		
	7440-50-8	Copper	6.2	_		P_		
	7439-89-6 7439-92-1	Iron	7.9	_		NR		
	7439-92-1	Lead Magnesium	7.9			P_		
	7439-96-5	Manganese		-		NR		
	7439-97-6	Mercury	0.04	77		NR CV		
,	7439-98-7	Molybdenu	0.76				I,	
	7440-02-0	Nickel	10.4	١		P_	l.t.	
	7782-49-2	Selenium	0.45	TT		P_ P	1	
	7440-22-4	Silver	0.72			P-	Ц !	
	7440-28-0	Thallium		U		\hat{P}^-	ti ti	
	7440-62-2	Vanadium -	26.6	-		P	L'ay	
	7440-66-6	Zinc -	56.9	-		P_	1	
				- -		-	La produce de la constante de	
				-1			in challenger.	
							женеме	
Color Before:	BROWN	Clarit	y Before:			Тех	ture:	FINE_
Color After:	YELLOW	Clarit	y After:			Art	ifacts	: YES_
Comments: BG6S01 = BG ARTIFACTS =					à			

FORM I - IN

5W846

EPA SAMPLE NO.

Lab Name: CEIM	MIC_CORPORATION Contract: SW846							BL1S01		
Lab Code: CCSI	Ca	se No.:	SAS No.	: _	· · · · · · · · · · · · · · · · · · ·	s	DG No.	: ROCK02		
Matrix (soil/w	vater): SOIL			La	ıb Samp	le	ID: 60	517917		
Level (low/med	l): LOW_			Da	ite Rec	eiv	ed: 05	/23/96		
% Solids:	_97.	5								
Co	ncentration	Units (ug	/L or mg/kg dry	y w	eight)	: M	G/KG			
	CAS No.	Analyte	Concentration	С	Q	М	Res Oval			
	7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-95-4 7439-95-4 7439-95-7 7440-02-0 7782-49-2 7440-28-0 7440-62-2	Aluminum_ Antimony_ Arsenic_ Barium Beryllium Cadmium_ Calcium Chromium Cobalt_ Copper_ Iron Lead Magnesium Manganese Mercury Molybdenu Nickel Selenium Silver Thallium_ Vanadium	0.06 20.8 6.3 7.4 5.5 0.05 1.1 13.0 0.64 0.71	- B U - B U B - U B B	N	P P P P NR P NR CV P P P P P P P P P P P P P P P P P P	u u	8		
Color Before:	7440-66-6	Zinc	55.8 Sy Before:			P	kture:	FINE		
Color After:	YELLOW		y After:					s: YES		
Comments: BL1S01 = BL ARTIFACTS =	SS01S01				4					

EPA SAMPLE NO.

Lab Name: CEIM	ab Name: CEIMIC_CORPORATION			Contract: SW846				BL2S01			
Lab Code: CCSI	Ca	se No.:	SAS No.	: _		SI	OG No.	: ROCK02			
Matrix (soil/w	water): SOII	·		La	b Samp	le :	ID: 60	517918			
Level (low/med	d): LOW_			Da	te Rec	eive	ed: 05	/23/96			
% Solids:	_95.	5									
Co	oncentration	Units (ug	/L or mg/kg dr	y w	eight)	: MC	G/KG				
				Π							
	CAS No.	Analyte	Concentration		Q	M	REV' QUAL	Qual Code			
	7429-90-5	Aluminum_	17700			P	The Control of the Co	and the second s			
	7440-36-0	Antimony_	7.2	B	N	p	2.	O.			
	7440-38-2	Arsenic_	2.2			P-					
	7440-39-3	Barium	70.0			P_					
	7440-41-7	Beryllium				P					
	7440-43-9	Cadmium_	0.04	[ט		P_	u				
	7440-70-2	Calcium_				NR					
	7440-47-3	Chromium_	20.9			P					
	7440-48-4	Cobalt	5.5			P_					
	7440-50-8	Copper	6.6	$ _ $		P_	1				
	7439-89-6	Iron				NR					
	7439-92-1	Lead	4.1			P_					
	7439-95-4	Magnesium		_ .		NR					
	7439-96-5	Manganese		_ .		NR	1				
	7439-97-6	Mercury	0.07			CV	The state of the s				
	7439-98-7	Molybdenu	0.57			P_	L				
	7440-02-0	Nickel	10.4			P_					
	7782-49-2	Selenium_	0.34			P_	la				
	7440-22-4	Silver	0.54	1 1-		P_	l.				
	7440-28-0	Thallium_	0.29	U.		P_	4				
	7440-62-2	Vanadium_	41.0			P_					
	7440-66-6	Zinc	50.2	_ .		P_	100				
				_ .			Squadhr co que				
				_ .							
		l	,								
Color Before:	BROWN	Clarit	y Before:			Tex	ture:	FINE_			
Color After:	YELLOW	Clarit	y After:			Art	ifacts	S: YES			
Comments: BL2S01_=_BL ARTIFACTS =											
-											
		FC	ORM I - IN				5	SW846			
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LEVELY

EPA SAMPLE NO.

Lab Name: CEIM	IIC CORPORAT	ION	Contract: Si	W84	6		CF1	501
			SAS No.			SDG	No.	: ROCKO2
Matrix (soil/w					b Sampi			
Level (low/med	l): LOW_	***		Da	te Rece	eived	: 05	/23/96
% Solids:	_97.2	2						
Co	oncentration	Units (ug,	/L or mg/kg dry	y w	eight):	MG/	KG	
	CAS No.	Analyte	Concentration	С	Q	М	RAV QUAI	Qual Codes
	7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-98-6 7439-95-4 7439-95-4 7439-96-5 7439-98-7 7440-02-0 7782-49-2 7440-28-0 7440-62-2 7440-66-6	Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenu Nickel Selenium Silver Thallium Vanadium Zinc	14800 10.1 5.1 75.0 0.73 1.3 32.0 6.0 14.0 9.1 0.05 0.78 25.2 0.46 0.74 0.40 32.7 86.7	B - B	N	P P P P NR P NR CV P P P P P P P P P P P P P P P P P P	1. I. I. I. I. I. I. I. I. I. I. I. I. I.	G.
Color Before:	BROWN	Clarit	y Before:		'	Text	ure:	COARSE
Color After:	YELLOW	Clarit	cy After:			Arti	facts	s: YES
Comments: CF1S01 = CF ARTIFACTS =								

OGOGN VALIDATED

EPA SAMPLE NO.

Lab Name: CEIM	IC_CORPORAT	ION	Contract: Si	W84	16		EC1	S01
			SAS No.			SE	G No.	: ROCKO2
Matrix (soil/wa	ater): SOIL	_		La	ab Samp	le I	D: 60	517912
Level (low/med)): LOW_	_		Da	ate Rec	eive	d: 05	/23/96
Solids:	_96.	2						
Cor	ncentration	Units (ug,	/L or mg/kg dry	y w	eight)	: MG	KG	
	CAS No.	Analyte	Concentration	С	Q	М	Rev Qual	Qual Code
	7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-95-4 7439-95-4 7439-96-5 7439-97-6 7439-98-7 7440-02-0 7782-49-2 7440-22-4 7440-62-2 7440-66-6	Aluminum_ Antimony_ Arsenic_ Barium_ Beryllium Cadmium_ Calcium_ Chromium_ Cobalt_ Copper_ Iron_ Lead_ Magnesium Manganese Mercury_ Molybdenu Nickel_ Selenium_ Silver_ Thallium_ Vanadium_ Zinc_	12500 8.5 5.5 105 0.76 0.06 22.8 6.1 12.5 8.2 0.05 1.3 15.9 0.55 0.71 0.38 31.3 70.6			PPPPNRPNR NR CPPPPPPPPPPPPPPPPPPPPPPPPPP	u u u	B
olor Before:	BROWN	Clarit				Tev	ture:	FINE
olor After:	YELLOW		cy After:				ifacts	*****
omments: EC1S01_=_ECS	and the design of the second							
		FC	ORM I - IN		e e e e e e e			SW846

EPA SAMPLE NO.

			Contract: S			i		
Lab Code: CCSD	Ca	se No.:	SAS No.	: _		SI	OG No.	ROCKO:
Matrix (soil/w	ater): SOIL	_		La	ab Samp	le I	D: 60	517913
Level (low/med): LOW_	_		Da	ate Rec	eive	ed: 05,	/23/96
% Solids:	_95.	7						
Co	ncentration	Units (ug,	/L or mg/kg dr	γw	veight)	: MC	G/KG	
	CAS No.	Analyte	Concentration	С	Q	М	REV Qual	Qual Cale
	7429-90-5	Aluminum	14300		***************************************	P	en Perkir San maa seganjaransii SP	
	7440-36-0	Antimony	6.7	$\frac{1}{B}$	N	$ P^- $	3.	a.
	7440-38-2	Arsenic	6.1			$ \mathbf{\hat{P}}^{-} $	1	En j. Onco
	7440-39-3	Barium —	109	-		P_		
	7440-41-7	Beryllium	0.74			P		
	7440-43-9	Cadmium	0.06			$ P^- $	L.	
	7440-70-2	Calcium				NR		
	7440-47-3	Chromium	24.0	-		P		
	7440-48-4	Cobalt	6.9	\overline{B}		P-		
	7440-50-8	Copper	12.7			P^-		
	7439-89-6	Iron		-		NR	1	
	7439-92-1	Lead	7.6			P		
	7439-95-4	Magnesium	**************************************	-		NR		
	7439-96-5	Manganese	**************************************			NR		
	7439-97-6	Mercury	0.04	ប		CV	и	
	7439-98-7	Molybdenu	0.79	ט			u	
	7440-02-0	Nickel	16.9			P_ P	-	
	7782-49-2	Selenium	0.46	Ū	***************************************	P P	la 1	
	7440-22-4	Silver -	0.75		***************************************	$ \mathbf{p}^{-} $	h.	
	7440-28-0	Thallium	0.40			\mathbf{P}^{-}	h	
	7440-62-2	Vanadium -	33.3			P^-		
	7440-66-6	Zinc	68.7	-		P_		
				-	***************************************	-		
				-				
Color Before:	BROWN	Clarit	cy Before:		-	Tex	ture:	FINE_
Color After:	YELLOW	Clarit	y After:		.	Art	ifacts	S: YES_
Comments: EC1S02 = EC	SS01S02							
ARTIFACTS =								
······································					:			
		······································						

LEVEL-V

EPA SAMPLE NO.

Lab Name: CEIM	IIC_CORPORAT	ION	Contract: S	W846	6		EC2501			
Lab Code: CCSI) Ca	se No.:	SAS No.	:		SE	G No.	: ROCKO2		
Matrix (soil/w	vater): SOIL			Lal	o Samp	le I	D: 60	517914		
Level (low/med	l): LOW_			Dat	te Rec	eive	ed: 05	/23/96		
% Solids:	_96.	1								
Co	ncentration	Units (ug,	/L or mg/kg dr	y we	eight)	: MG	KG			
	CAS No.	Analyte	Concentration	С	Q	М	REV Qual	Qual Code		
	7429-90-5 7440-36-0 7440-38-2 7440-39-3	Aluminum_ Antimony_ Arsenic_ Barium	16800 8.6 7.4 114	$\left \overline{\mathbf{B}} \right _{-}$	N	P P P P	*Z	G.		
	7440-41-7 7440-43-9 7440-70-2 7440-47-3	Beryllium Cadmium Calcium Chromium	0.91 0.06	B U		P_ P_ NR	h			
	7440-48-4 7440-50-8 7439-89-6 7439-92-1	Cobalt Copper Iron Lead	9.1 25.1			P_ P_ P_ NR P				
	7439-95-4 7439-96-5 7439-97-6 7439-98-7	Magnesium Manganese Mercury Molybdenu	0.07			NR NR CV		a		
	7440-02-0 7782-49-2 7440-22-4	Nickel Selenium_ Silver	26.0 0.46 0.73	บ บ		P_ P_ P_ P_	ur u u	8		
	7440-28-0 7440-62-2 7440-66-6	Thallium_ Vanadium_ Zinc	0.40 44.4 148			P P P P	ia.			
Color Before:	BROWN	Clarit	y Before:	, (<u></u> .		Tex	ture:	MEDIUM		
Color After:	YELLOW	Clarit	y After:			Art	ifact	s: YES		
Comments: EC2SO1 = EC ARTIFACTS =				`						

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EPA SAMPLE NO.

Lab Name: CEIM	IC_CORPORAT	ION	Contract: S	W84	16		EC2	D01
Lab Code: CCSD	Ca	se No.:	SAS No.	: _		SI	DG No.	: ROCK02
Matrix (soil/w	ater): SOIL			La	b Samp	le :	ID: 60	517915
Level (low/med): LOW_			Da	te Rec	eive	ed: 05	/23/96
% Solids:	_95.	1						
Со	ncentration	Units (ug	/L or mg/kg dry	y w	eight)	: M	G/KG	
	CAS No.	Analyte	Concentration	С	Q	М	REV QUAL	Contract to
	7429-90-5 7440-36-0 7440-38-2 7440-39-3	Aluminum_ Antimony_ Arsenic_ Barium	17800 6.3 6.3 116		N	P P P		a
	7440-41-7 7440-43-9 7440-70-2 7440-47-3	Beryllium Cadmium_ Calcium_ Chromium_	0.95 0.06 36.5	Մ —		P P NR P P	u	No. of the latest and
	7440-48-4 7440-50-8 7439-89-6 7439-92-1	Cobalt Copper Iron Lead	9.4	B - -		P P NR P		
	7439-95-4 7439-96-5 7439-97-6 7439-98-7	Magnesium Manganese Mercury Molybdenu	0.05			NR NR CV	и	
	7440-02-0 7782-49-2 7440-22-4	Nickel Selenium_ Silver	24.9 0.48	Ū		P_ P_ P_ P	u u u	
	7440-28-0 7440-62-2 7440-66-6	Thallium_ Vanadium_ Zinc	0.41 45.0 121	บ - -		P_ P_ P_	u	
	*			-				
Color Before:	BROWN	Clarit	y Before:	•		Тех	ture:	, MEDIUM
Color After:	YELLOW	Clarit	cy After:	······		Art	ifacts	s: YES
Comments: EC2D01_=_EC: ARTIFACTS_=								
					:			

EPA SAMPLE NO.

Lab Name: CEI	MIC_CORPORAT	ION	Contract: S	W84	16		EC2	S02				
						SDG No.: ROO						
Matrix (soil/					ab Samp							
Level (low/med	WO.I · (F				ate Rec							
	· ·			שכ	ice Rec	ET A	eu. 05	1.23/90				
% Solids:	_94.	3										
Co	oncentration	Units (ug	/L or mg/kg dry	у у	veight)	: M	G/KG					
	CAS No.	Analyte	Concentration	С	Q	М	REV Wal	(Non) Codé				
	7429-90-5	Aluminum	19800			P	***************************************	The second secon				
	7440-36-0	Antimony_	9.9	\overline{B}	N	P_	25	a				
	7440-38-2	Arsenic_	6.8	$ _{-} $		P_						
	7440-39-3	Barium	125			P_		1				
	7440-41-7	Beryllium Cadmium	The state of the s		***************************************	P_						
	7440-43-9 7440-70-2	Calcium	0.06	U		P	lu.	Obelia Private				
	7440-70-2	Chromium	35.0			NR						
	7440-48-4	Cobalt	11.5			P P						
	7440-50-8	Copper	21.1	-		P-		T per contraction of the contrac				
	7439-89-6	Iron	21.1	-		NR						
	7439-92-1	Lead	10.7	-		P		Y THE PARTY OF THE				
	7439-95-4	Magnesium		-		NR		n committee on				
	7439-96-5	Manganese	**************************************	-		NR						
	7439-97-6	Mercury	0.07	\overline{B}	· · · · · · · · · · · · · · · · · · ·	CV						
	7439-98-7	Molybdenu	0.96			P	us	e				
	7440-02-0	Nickel	26.2			P_		ř				
	7782-49-2	Selenium	0.84	\overline{B}		P_						
	7440-22-4	Silver	0.76	U		P	u.					
	7440-28-0	Thallium_	0.41	U		P P	u					
	7440-62-2	Vanadium_	48.7			P_						
	7440-66-6	Zinc	101			P_						

				-								
Color Before:	BROWN	Clarit	y Before:		-	Tex	kture:	COARSE				
Color After:	YELLOW	Clarit	y After:		_	Art	tifacts	s: YES				
Comments: EC2S02 = EC ARTIFACTS =					1							
		FC	ORM I - IN				٥	SW846				

LEVEL V

EPA SAMPLE NO.

Lab Name: CEIM	MIC_CORPORAT	ION	Contract: S	W84	6	_	EL1	S01
Lab Code: CCSI) Ca	se No.:	SAS No.	:		SI	OG No.	: ROCKO2
Matrix (soil/w	vater): SOIL	-		La	ıb Samp	le I	D: 60	517905
Level (low/med	l): LOW_			Da	te Rec	eive	ed: 05	/23/96
% Solids:	_97.	1						
Co	ncentration	Units (ug	/L or mg/kg dry	y w	eight)	: MG	G/KG	
	CAS No.	Analyte	Concentration	С	Q	М	REV Qual	Qual Code
	7429-90-5 7440-36-0 7440-38-2	Aluminum_ Antimony_ Arsenic_	16100 7.5 56.9		N	P_ P_ P_	J	۵
	7440-39-3 7440-41-7 7440-43-9 7440-70-2	Barium Beryllium Cadmium Calcium	109 0.78 0.21	B		P P P NR		Popularia de la compania del compania de la compania del compania de la compania del la compania de la compania de la compania de la compania de la compania del la compan
	7440-47-3 7440-48-4 7440-50-8	Chromium Cobalt Copper	22.5 8.0 11.0	— В		P P P		Approximation and the control operation of the control operation operation of the control operation operation of the control operation o
	7439-89-6 7439-92-1 7439-95-4	Iron Lead Magnesium	11.3			NR P NR		
	7439-96-5 7439-97-6 7439-98-7	Manganese Mercury Molybdenu	0.04 1.1			NR CV P_	u us	8
	7440-02-0 7782-49-2 7440-22-4	Nickel Selenium_ Silver	13.1 0.45 0.73	U		P_ P_ P_	u.	To the control of the
	7440-28-0 7440-62-2 7440-66-6	Thallium_ Vanadium_ Zinc	0.39 40.0 73.2	— —	W	P_ P_ P_	u	A SELECTION OF THE CONTRACT AND ADDRESS OF THE CONTRACT AN
				-				TOTAL PROPERTY OF THE PROPERTY
Color Before:	BROWN	Clarit	y Before:			Tex	ture:	COARSE
Color After:	YELLOW	Clarit	y After:			Art	ifact	s: YES
Comments: EL1S01 = EL ARTIFACTS =								

FORM I - IN



INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

Lab Name: CEIM	Lab Name: CEIMIC_CORPORATION Contract: SW846						PP3S01	
Lab Code: CCSI) Ca	se No.:	SAS No.	: _		S	DG No.	: ROCK02
Matrix (soil/w	ater): SOIL	magn.		La	ıb Samp	le :	ID: 60	517901
Level (low/med	l): LOW_	NAME OF THE PROPERTY OF THE PR		Da	te Rec	eiv	ed: 05	/23/96
% Solids:	% Solids:62.3							
Co	ncentration	Units (ug	/L or mg/kg dr	y w	eight)	: M	G/KG	
	CAS No.	Analyte	Concentration	С	Q	М	REV Qual	Qual Code:
	7429-90-5 7440-36-0 7440-38-2 7440-39-3 7440-41-7 7440-43-9 7440-47-3 7440-48-4 7440-50-8 7439-89-6 7439-95-4 7439-95-4 7439-96-5 7439-98-7 7440-02-0 7782-49-2 7440-22-4 7440-28-0 7440-62-2 7440-66-6	Aluminum_ Antimony_ Arsenic_ Barium_ Beryllium Cadmium_ Calcium_ Chromium_ Cobalt_ Copper_ Iron_ Lead Magnesium Manganese Mercury_ Molybdenu Nickel Selenium_ Silver_ Thallium Vanadium_ Zinc	12600 6.5 2.8 64.3 0.60 0.08 18.9 6.3 23.1 9.9 0.06 1.0 13.8 0.61 1.0 0.53 29.1 81.3	B U - B B U	N	P P P P P N P P P N P N R R R V P P P P P P P P P P P P P P P P	и .	&
Color Before:	BROWN	 Clarit	 zy Before:			Te\	ture:	MEDIUM
Color After:	YELLOW		y After:				cifacts	
Comments: PP3S01 = PP ARTIFACTS =		FC	PRM I - IN					

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EPA SAMPLE NO

	INORGANIC ANALYSES DATA SHEET					
Tab Names CETM	I a aonnon*m	LON	Onether of or	JO 4 C	R21	S01
Lab Name: CEIM	IC_CORPORAT	LON	Contract: SV	V846	l	
Lab Code: CCSD Case No.: SAS No.:					SDG No.	: ROCK02
Matrix (soil/water): SOIL_ Lab Sampl					le ID: 60	517911
Level (low/med): LOW_			Date Rece	eived: 05	/23/96
% Solids:	_80.	1				
Co	ncentration	Units (ug	/L or mg/kg dry	y weight)	: MG/KG	
	CAS No.	Analyte	Concentration	C Q	M REV	Qual Codes
	7429-90-5	Aluminum	4210		P	The first light Contract on the State Contract of Cont
	7440-36-0	Antimony	6.0	\overline{B} \overline{N}	P 2	a.
	7440-38-2	Arsenic	0.87		P_	
	7440-39-3	Barium	63.5		P	
	7440-41-7	Beryllium		B	P_	Market Control
		Cadmium	0.11		P ⁻	no.
	7440-70-2	Calcium	***************************************		NR	
	7440-47-3	Chromium	24.4		P	
	7440-48-4	Cobalt	7.1	B	P P	
	7440-50-8	Copper	14.3		P	
	7439-89-6	Iron			NR	
	7439-92-1	Lead	2.7		P	
	7439-95-4	Magnesium			NR	
	7439-96-5	Manganese			NR	
	7439-97-6	Mercury	0.03	Ū	CV u	
		Molybdenu	1.6	В	P us	В
	1	Nickel	32.6		P_	
	7782-49-2	Selenium_	0.49	Ū	P_ u	
	II.	Silver	0.79	U	P I IA	
		Thallium_	0.43	U	P_ u	
	7440-62-2		25.7		P_ P	
	7440-66-6	Zinc	39.8		P_	
•				_		
	1			_	! !	
Color Before:	BROWN	Clarit	ty Before:	and Total Security	Texture:	COARSE
Color After:	olor After: YELLOW : Clarity After: Artifacts: YES					s: YES
Comments:						
R21S01 = R2S	S01S01					
ARTIFACTS = PEBBLES						

FORM I - IN

SW846



INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SN1S01

Lab Name: CEIMIC_CORPORATION			Contract: S	W846		
Lab Code: CCSD Case No.:			SAS No.	•	SDG No	ROCK02
Matrix (soil/	water): SOII			Lab Samp	ole ID: 6	0517908
Level (low/med	Level (low/med): LOW			Date Rec	eived: 0	5/23/96
% Solids:	_72.	8				
Co	oncentration	Units (ug	/L or mg/kg dr	y weight)	: MG/KG	
	CAS No.	Analyte	Concentration	C Q	M G	V QUAL Gode
	7429-90-5	Aluminum	5480	-	$\left \frac{1}{P} \right = \frac{\alpha w}{1}$	47 COUR
	7440-36-0	Antimony	6.1		P 3	a
	7440-38-2	Arsenic -	1.2		P	
	7440-39-3	Barium	28.4		P_	
	7440-41-7	Beryllium	0.33	1 1	P	
	7440-43-9	Cadmium_	0.06	U	P_ и.	
	7440-70-2	Calcium_			NR	a de la companya de l
	7440-47-3	Chromium_	8.0	_	P_	Washington of
	7440-48-4	Cobalt	2.5		P_	Mary services to place
	7439-89-6	Copper	2.1	В	P	0.00
	7439-92-1	Lead	3.6		NR	##
	7439-95-4	Magnesium	3.0	-	P_ NR	and the second s
	7439-96-5	Manganese		-	NR	
	7439-97-6	Mercury	0.06	<u>u</u>	CV h	7
	7439-98-7	Molybdenu	0.84	U	P wir	В
	7440-02-0	Nickel	4.7	В	P	
	7782-49-2	Selenium_	0.62	В	P	organization of the control of the c
	7440-22-4	Silver	0.80	U	P u	
	7440-28-0	Thallium_	0.43	U	P_ u	and the second
	7440-62-2	Vanadium_	13.0		P_	L. Participano
	7440-66-6	Zinc	43.9		P_	4
			***************************************			e Arcangerous
						for delated in a commercial of the first
Color Before:	BLACK	Clarit	y Before:		Texture	: COARSE
Color After:	YELLOW	Clarit	y After:		Artifac	ts: YES
Comments: SN1SO1_=_SN ARTIFACTS_=						
		FC	DRM I - IN			SW846

Data Qualifier Reference Table

Qualifier	Organics	Inerganies
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
j	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
M	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
(/ j	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. (Note: Analyte may or may not be present).

Qualification Code Reference Table

Qualifier	Organics	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
С	Calibration %RSD or %D were noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
В	Presumed contamination from preparation (method) blank.	Presumed contamination from preparation (method) or calibration blank.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
Lavouri	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
i, Li	Presumed contamination from trip blank.	Not applicable.
4	False positive - reported compound was not present. Not applicable.	
*	False negative – compound was present but not reported.	Not applicable,
F	Presumed contamination from FB, or ER.	Presumed contamination from FB or ER.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.
D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
. A	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
#	Unusual problems found with the data that have been described in Section 1, "Data Validation Findings." The number following the asterisk () will indicate the subsection where a description of the problem can be found.	Unusual problems found with the data that have been described in Section 1, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found.



DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: IQD0378

Prepared by

MEC^X, LLC 12269 East Vassar Drive Aurora, CO 80014

I. INTRODUCTION

Task Order Title: Boeing SSFL RFI Group 8 Data Gap

Contract Task Order: 1261.500D.08.002

Sample Delivery Group: IQD0378

Project Manager: Dixie Hambrick

Matrix: soil QC Level: V

No. of Samples: 1
No. of Reanalyses/Dilutions: 0

Laboratory: Test America

Table 1. Sample Identification

Sample Name	Lab Sample Name	Sub-Lab Sample Name	Matrix	Collection	Method
BLBS0034S02	IQD0378-01	N/A	Soil	2/13/2007 12:05:00 PM	6010B

II. Sample Management

No anomalies were observed regarding sample management. The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the sample was received intact, on ice, and properly preserved, if applicable. The COC was appropriately signed and dated by field and/or laboratory personnel. As the sample was couriered directly from the field to the laboratory, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

1

Data Qualifier Reference Table

Qualifie	r Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

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Qualification Code Reference Table

Qualifier	Organics	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect
С	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.
В	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
Е	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
Α	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination as indicated by the trip blank results.	Not applicable.
+	False positive – reported compound was not present.	Not applicable.
-	False negative – compound was present but not reported.	Not applicable.
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.
?	TIC identity or reported retention time has been changed.	Not applicable.

Qualification Code Reference Table Cont.

D	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
Р	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.
*11, *111	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.

II. Method Analyses

A. EPA METHOD 6010B—Sodium

Reviewed By: P. Meeks

Date Reviewed: April 24, 2007

The sample listed in Table 1 for this analysis was validated based on the guidelines outlined in the MEC^{\times} Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Method 6010B and the National Functional Guidelines for Inorganic Data Review (2/94).

- Holding Times: The analytical holding time, six months for ICP metals, was met.
- Tuning: Review is not applicable at a Level V validation.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples: Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: The recovery was within laboratoryestablished QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: Not applicable to this analysis.
- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
 - Field Blanks and Equipment Rinsates: Sodium was detected in field blank FSQW0003F01 (183627), but not at sufficient concentration to qualify the site sample. This sample in this SDG had no identified equipment rinsate sample.
 - Field Duplicates: There were no field duplicate samples identified for this SDG.

5 Revision 0



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MWH-San Diego/Boeing

9444 Farnham Street, Suite 300

San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQD0378

Sampled: 02/13/07

Received: 04/04/07

METALS

			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								

Sample ID: IQD0378-01 (BLBS0034S02 - Soil)

Reporting Units: mg/kg dry

Sodium EPA 6010B 7D05093 28 58 230 0.995 04/05/07 04/06/07

LEVELV



# DATA VALIDATION REPORT

Boeing SSFL RFI Group 8 Data Gap

SAMPLE DELIVERY GROUP: IQC2078

Prepared by

MEC^X, LLC 12269 East Vassar Drive Aurora, CO 80014

#### I. INTRODUCTION

Task Order Title: Boeing SSFL RFI Group 8 Data Gap

Contract Task Order: 1261.500D.08.002

Sample Delivery Group: IQC2078

Project Manager: Dixie Hambrick

Matrix: Soil

QC Level: V No. of Samples: 3

No. of Reanalyses/Dilutions: 0

Laboratory: Test America

**Table 1. Sample Identification** 

Sample Name	Lab Sample Name	Sub-Lab Sample Name	Matrix	Collection	Method
BLBS0030S01	IQC2078-02	N/A	Soil	2/21/2007 1:59:00 PM	6010B
BLBS0031S01	IQC2078-01	N/A	Soil	2/12/2007 1:35:00 PM	6010B
BLBS0034S01	IQC2078-03	N/A	Soil	2/13/2007 12:00:00 PM	6010B

#### **II. Sample Management**

No anomalies were observed regarding sample management. The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved, if applicable. The COCs were appropriately signed and dated by field and/or laboratory personnel. As the samples were couriered directly from the field to the laboratory, custody seals were not required. If necessary, the client ID was added to the sample result summary by the reviewer.

1

## **Data Qualifier Reference Table**

Qualifie	r Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.

## **Qualification Code Reference Table**

Qualifier	Organics	Inorganics		
Н	Holding times were exceeded.	Holding times were exceeded.		
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used for the calibration was incorrect		
С	Calibration %RSD or %D was noncompliant.	Correlation coefficient is <0.995.		
R	Calibration RRF was <0.05.	%R for calibration is not within control limits.		
В	Presumed contamination as indicated by the preparation (method) blank results.	Presumed contamination as indicated by the preparation (method) or calibration blank results.		
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was not within control limits.		
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.		
E	Not applicable.	Duplicates showed poor agreement.		
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.		
Α	Not applicable.	ICP Serial Dilution %D were not within control limits.		
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.		
Т	Presumed contamination as indicated by the trip blank results.	Not applicable.		
+	False positive – reported compound was not present.	Not applicable.		
-	False negative – compound was present but not reported.	Not applicable.		
F	Presumed contamination as indicated by the FB or ER results.	Presumed contamination as indicated by the FB or ER results.		
\$	Reported result or other information was incorrect.	Reported result or other information was incorrect.		
?	TIC identity or reported retention time has been changed.	Not applicable.		

## **Qualification Code Reference Table Cont.**

The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.				
Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.				
The reported result is above the method detection limit but is less than the reporting limit.	The reported result is above the method detection limit but is less than the reporting limit.				
Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.	Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found.				
	be used because another more technically sound analysis is available.  Instrument performance for pesticides was poor.  The reported result is above the method detection limit but is less than the reporting limit.  Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be				

### **II. Sample Management**

### A. EPA METHODS 6010B, 6020, 7470A/7471A—Metals and Mercury

Reviewed By: P. Meeks

Date Reviewed: April 10, 2007

The samples listed in Table 1 for this analysis were validated based on the guidelines outlined in the  $MEC^{X}$  Data Validation Procedure for Metals (DVP-5, Rev. 0 and DVP-21, Rev. 0), EPA Method 6010B and the National Functional Guidelines for Inorganic Data Review (2/94).

- Holding Times: Analytical holding time, six months for ICP metals, was met.
- Tuning: Not applicable.
- Calibration: Review is not applicable at a Level V validation.
- Blanks: Method blanks and CCBs had no detects.
- Interference Check Samples Review is not applicable at a Level V validation.
- Blank Spikes and Laboratory Control Samples: Recoveries were within laboratoryestablished QC limits.
- Laboratory Duplicates: No laboratory duplicate analyses were performed.
- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed.
- Serial Dilution: No serial dilution analyses were performed.
- Internal Standards Performance: Not applicable.
- Sample Result Verification: Review is not applicable at a Level V validation. Reported nondetects are valid to the MDL.
- Field QC Samples: Field QC samples were evaluated, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. Any remaining detects were used to evaluate the associated site samples. Following are findings associated with field QC samples:
  - Field Blanks and Equipment Rinsates: Sodium was not detected in either the field blank BLQW0018F01 (IQB1202) or equipment rinsate BLQW0018E01 (IQB1486).
  - Field Duplicates: There were no field duplicate samples identified for this SDG.

5 Revision 0



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San Diego, CA 92123 Attention: Lisa J. Tucker Project ID: SSFL Group 8 - DOE

1891264

Report Number: IQC2078

Sampled: 02/12/07-02/21/07

Received: 03/20/07

#### **METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample l Result			Date Data Analyzed Qualifiers		
Sample ID: IQC2078-01 (BLBS0031S01 - Soil) Reporting Units: mg/kg dry				Sampled: 02/12/07						
Sodium	EPA 6010B	7C20108	28	58	71	1	03/20/07	03/21/07		
Sample ID: IQC2078-02 (BLBS003 Reporting Units: mg/kg dry	0S01 - Soil)				Sample	d: 02/2	1/07			
Sodium	EPA 6010B	7C20108	30	62	330	1	03/20/07	03/21/07		
Sample ID: IQC2078-03 (BLBS0034S01 - Soil) Reporting Units: mg/kg dry				Sampled: 02/13/07						
Sodium	EPA 6010B	7C20108	44	92	390	1	03/20/07	03/21/07		